Viz Trio

User's Guide

2.12

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1 Introduction

This is the user’s guide for Viz Trio version 2.12.1.

This section contains information on the following topics:

- About the Document
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1.1 About the Document

This manual covers the information needed in order to configure and operate Viz Trio version 2.12.1.

This section contains information on the following topics:

- Document Structure
- Related Documents
- Conventions

1.1.1 Document Structure

This user guide introduces and explains the different aspects of Viz Trio. Starting with an introduction to the user’s guide and Viz Trio’s latest and improved features in chapters 1 and 2.

Chapters 3 and 4 describe the basic requirements for Viz Trio and its integrated systems to run, and how to handle storage and backup.

Chapters 5 and 6 cover the installation, configuration and how to start Viz Trio and its most important integration points; the Media Sequencer and Viz Engine.

Chapters 7 and 8 cover all aspects of the user interface; for example how to use the Viz Trio keyboard, create shows, add templates and create pages of templates, how to configure the client’s output channels and so on.

Chapters 9, 10 and 11 cover Viz Trio’s scripting possibilties, its macro languange, macro commands and scripting events.

Chapters 12, 13 and 14 cover some of the design aspects of Viz Trio using Viz Trio’s built-in Designer tool, how to create a basic lower third and how to use transition effects. For more advanced scene design refer to the *Viz Artist User’s Guide*.

Chapters 15 and 16 cover the command line parameters and logging capabilities.

Chapter 17 describes the Preview Server, while chaopter 18 covers information on the old Cherry keyboard.

1.1.2 Related Documents

For complementary information, see the following documents:

- *Viz Artist User’s Guide*: How to create standalone and transition logic scenes.
- *Viz Content Pilot User’s Guide*: How to create a playlist in VCP that can be monitored in Viz Trio, and use the Newsroom Component to create newsroom data elements for a newsroom system playlist.
- *Viz Engine Administrator’s Guide*: How to configure your Viz Engines.
- *Viz One Administrator’s Guide*: How to configure your Viz One system.
- *Viz One - Studio User’s Guide*: How to work with your Viz One system.

1.1.3 Conventions

The following typographic conventions are used in this document:

- *Italic is used for non-hyperlink external references, such as related documents, books, or Internet pages. Italic is also used to emphasize words.*
- The color blue is used for hyperlinked external references, and also internal references to sections or document elements (such as tables or figures) in the current document.
- **Bold refers to GUI components.**

1. Numbered paragraphs are used to indicate tasks that must be carried out.

1.2 Words and Expressions

The following is a number of common words and expressions used throughout the documentation:

- **Control Plug-ins:** A graphics scene can contain all sorts of objects that can be controlled from a template such as text, back plates, images, colors and more. The graphics designer uses control plug-ins to expose objects as tab fields.
- **Control Object:** Every scene with control plug-ins must have one instance of the control object plug-in at the root level of a scene tree. Control Object reads the information from all other control plug-ins. When a scene is imported to Viz Template Wizard, it reads the information about other lower level control plug-ins through Control Object.
- **Forked Execution**: With the new profile configuration, Viz Trio now supports forked execution by having more than one graphics render engine per channel. Simply put, you can trigger the same scene on multiple render engines where one can act as your backup.

- **MAM-system:** A Media Asset Management (MAM) system takes care of ingestion, annotation, cataloguing, storage, retrieval and distribution of digital media assets. Viz Trio works together with Vizrt's MAM-system Viz One.
- **Newsroom Component:** In a Newsroom Computer System (NCS), the Newsroom Component (NrC) is used to add data elements to a story. The user is typically a journalist working on a story. The NrC is an embedded application in the NCS that connects to a database of templates. The templates can be filled with text, images, video and maps.
- **Page:** A page is based on a template and saved as a data instance of the template. A page contains a set of data and references to where data (e.g. images and video clips) can be found. When a page is loaded, all static elements will be loaded from the template and the variable elements (items/tab fields) will be set to what they were when the page was saved. Therefore, a page is not saved as a complete scene. Just the values of the tab fields are saved together with a reference to the template-scene.

  Note: Only pages can be taken on air.

- **Scene:** A scene is built in Viz Artist. It can be a single scene, or one part (layer) of a combination of scenes (transition logic).
- **Template:** A template is based on a Viz Artist scene, and is created by Viz Trio on-the-fly while importing it to Viz Trio. The template is used to create pages that are added to a show for playout. A template may be based on one or several (transition logic) scenes (known as a combination template).
- **Transition Logic Scene:** A set of scenes built in Viz Artist. It contains one scene that controls the state of or toggles a set of scenes (layers). The layered scenes are used by the controlling scene to toggle in and out the layered scenes, using pre-configured or customized transitions effects, without the need to take scenes already on-air, off-air. For example; A lower third may be on-air at the same time as a bug, and the lower third may be taken off-air without taking the bug off-air or reanimating it.
- **Viz Artist:** The design tool where the graphics scenes and all animations are created.
- **Viz Engine:** The output engine used for playout of graphics and video.

1.3 Customer Feedback and Suggestions

We encourage suggestions and feedback about our products and documentation.

To give feedback and, or suggestions, please identify your local Vizrt customer support team at www.vizrt.com.

1. Click on **Contact** (top of page).
2. The Vizrt office which is nearest to your location will be shown, or select from the list of Vizrt offices.
3. Click on the Contact button for the office you want.

4. Complete the required details in the window that opens.

> **Note:** If this message is for Customer Support, and there is a Support Contract in place, then click on the ‘For support requests, please visit our support portal’ link in the message window.

A Vizrt representative will contact you as soon as possible.

1.4 Customer Support Requests

Support Requests are supported by Vizrt if customers have a valid Service Agreement in operation. Customers who do not have a Service Agreement and would like to set up a Service Agreement should contact their regional sales representative (see Customer Feedback and Suggestions).

When submitting a Support Request, relevant and correct information should be given to Vizrt Support, to make sure that Vizrt Support can give the quickest and best solution to your Support Request.

This section contains information on the following topics:

- Before Submitting a Support Request
- Submitting a Support Request

1.4.1 Before Submitting a Support Request

Before a Support Request is submitted make sure that you:

Read:

- The relevant User Guide or Guides
- The release notes

and Check:

- That the system is configured correctly
- That you have the specified hardware, tested and recommended versions

Always refer to your Vizrt Service Level Agreement document.

1.4.2 Submitting a Support Request

When completing a Support Request, add as much information as possible.

Content of a Support Request

The report should contain information about these topics:

- **Problem description:** Include a good description of what the problem is and how to reproduce it. Specify your workflow. Remember to use simple English.
- **Screen shots and illustrations:** Use these to simplify the message. These are extremely useful for Vizrt Support.
- **Software configuration:** Add exact versions of software (-build) used. This is also extremely important information.
- **System locale:** Specify the Region and Language settings of the system.
- **System log files:** Send the system log files (see Logging).
- **Crash log files:** Send the error report and crash log files from the crash (e.g. Viz Trio program folder <viz install directory>).

> **Note:** Check: If the operating system is Windows 7 and up, dump files can be stored at: <userdir>\AppData\Local\VirtualStore\<viz install directory> (check user rights).

- **System Config file:** Send the system config file(s) (e.g. initialization files, Viz Engine config file, and default.xml for the Media Sequencer).
- **Hardware configuration:** Add exact versions of hardware used, especially for Viz Engine.

Optional:

- **System setup:** Describe differences in the installation, if any, from the recommended setup.
- **System Network:** Add a description of how the network, bandwidth, routers, and switches are configured.

Always refer to your Vizrt Service Level Agreement document.

To submit the Support Request:

1. On the www.vizrt.com page, click on Support.
2. Click on **Report a case**.
3. Click on **LOG IN** to login to the Customer and Partner portal.
4. At the top of the Case Management page, click on **Report a Case**.
5. In the online form complete the required minimum information (shown by a red asterisk) and click **SAVE**.
6. In the saved Support Case that opens, complete the various text boxes and upload any required documents, files, etc. (see Content of a Support Request).

To **track the status** of open support tickets, login to the Customer and Partner portal. Add information or communicate about the cases directly with the support team.

2 Viz Trio

Viz Trio is a graphics control system from Vizrt, which includes, but is not limited to, all the features of a typical character generator (CG) system. It is based on Viz Engine as the graphics system and Media Sequencer as the control engine. It allows users to trigger graphical elements stored as pages in a directory structure, with each page utilizing a unique callup code. It also supports content entry in a WYSIWYG (What You See Is What You Get) manner. In addition to the basic CG features, it has a set of advanced features that gives the operator powerful graphical and operational possibilities, such as connecting to multiple newsroom systems, doing seamless context switches on graphics, using specialized editors that can change almost any property of a graphics, producing on-the-fly graphics with a built-in design tool, and more.

As a client to the Media Sequencer, the Viz Trio client can run on any computer that has a network connection to the Media Sequencer. For the local preview to function properly the computer must have an above average graphics card with openGL support.

Viz Trio contains some JEDI Visual Component Library (JVCL) source code.

This chapter contains information on the following topic:

- New Features in this Version

2.1 New Features in this Version

Viz Trio 2.12.1

New features:

- Support for meta data in media search and Viz One keyword search
- Added the new macro commands `gui:get_callup_code` and `playlist:select_next_by_description`

For further details, see the *Viz Trio 2.12.1 release notes*.

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Main new features:

- Linking of tab-fields to ATOM feeds
- Timeline editing of video elements
- Improved Viz One integration
- Improvements in the render video clip window
- New script events

Other features:

- New editor for combo templates
- Added macro command to launch the feed streamer moderation tool
- Introduced saving of templates with field linking, default values and settings
- Improved access to show and template scripts
- Arm & fire macro commands to play out different elements on different channels simultaneously
- The media search can incrementally display more hits
- New macro commands for Viz Gateway configuration
- Playlists can apply filters on groups as well
- Configuration for as-run logging of the Media Sequencer
- The import scene window remembers the last used folder
- New macro command to clean up all channels of a profile
- Added license information for included 3rd party components
- Added last update time for MOS playlists
- Added command to load a single page on the program and preview channel: **`show:load_on_renderers`**

For further details, see the *Viz Trio 2.12 release notes*.

3 Requirements

This chapter describes general requirements, such as hardware, software, access rights and policies for a number of software components in your Viz work flow.

For more in-depth system information, see the relevant sections in your respective user and/or administrator guides.

IMPORTANT! Always check release notes for information on supported versions.

This chapter contains information on the following topics:

- General Requirements
- Hardware Requirements
- Software Requirements
- Shared Data
- Ports and Connections

3.1 General Requirements

There are some general requirements for any Vizrt system to run. These requirements apply when setting up a complete system with integration to other Vizrt and third party software products:

- All machines should be part of the same domain.
- Users of the Vizrt machines should ideally be separated in at least two groups, administrators and designers/operators.
- Most machines running desktop applications must be logged in with sufficient privileges to run Vizrt programs, while services by default do not require users to be logged in.
- Vizrt servers must have static IP addresses.

  Caution: Third party systems that provide Vizrt systems with files must only use Microsoft Windows operating system compatible characters as the file name.
- Vizrt has license restrictions on all Viz Engine and Viz Artist instances. To have an output of Vizrt generated graphics (preview and program channels), either an USB or a parallel port dongle on the renderer machine is required.

3.2 Hardware Requirements

Hardware requirements vary depending on the system purchased; however, every system delivered by Vizrt has an accompanying hardware specification sheet that, for a new system, matches the Software Requirements.

For older hardware that are used with newer versions of Vizrt software, such as Viz Engine, it is always recommended to check against the current hardware specifications for the new software version to make sure that the latest software can run on the old hardware specification.

Additional hardware must always be checked to see if it is compatible with existing hardware. For example, the GPI cards supported by Vizrt must fit in the Media Sequencer servers.

For more information on hardware specifications, please contact your local Vizrt customer support team.

3.3 Software Requirements

The following sections describe software requirements for the product described in this manual and a range of components that may be integrated with it. For more information see the following topics:

- Viz Anchor
- Viz Artist
- Viz Content Pilot System
- Viz Engine
- Preview Server
- Viz Gateway
- Viz Graphic Hub
- Viz One
- Media Sequencer
- Viz Multichannel
- Viz Trio
- Vizrt Maps
- EVS Video Server Control

3.3.1 Viz Anchor

Viz Anchor is a Vizrt application targeted at the presenter in the studio. The application runs natively on Apple’s iPad and allows users to control playlists with video and graphics directly from the handheld device.

Viz Anchor specifications

Software	Viz Anchor 1.0 or later, Media Sequencer 1.22 or later

Operating system	Apple iOS 3.2 or later
Network access	Uses the Bonjour protocol to automatically discover the Media Sequencer and Preview Server if the wireless router/switch allows it.
Hardware	Apple iPad 1, 2 or 3

3.3.2 Viz Artist

Viz Artist is an advanced real-time motion graphics authoring system for the creation of stunning real-time graphics. Built with an elegant and easy to use drag-and-drop user interface and sophisticated 3D animation and modeling tools, Viz Artist enables the digital artist to produce complex and engaging visual content for broadcast, virtual sets, and visualization in less time and with greater creative freedom.

Viz Artist specifications

Software	Viz Engine 3.5.1 or later, or Viz Engine 2.8 PL5 HotFix3 Viz World Client 12.0 or later (see Vizrt Maps) Viz DataPool 2.10 or later Extra Viz 2 plug-ins (for Viz 2.x) *Optional*: Mediaftp and Fsmon are used for the Viz One integration. Installers are bundled with Viz One. *Optional:* Viz Content Pilot with Viz Template Wizard, Media Sequencer, Viz Multiplexer and Thumbnail Generator. *Note*: Viz Engine 2.8 is not compatible with Viz One.
Executable(s)	viz.exe VizGui.exe vizSend.exe
Ports and Connections	TCP: 6100 (preview and playout) 14300 (Viz Multiplexer) 50007-50009 (multiplexing).
Local drive access	Read and write access to Windows 7: **`C:\%LOCALAPPDATA%\VirtualStore\Program Files\vizrt\viz3\`** Windows XP: **`C:\Program Files\vizrt\viz3\`**
Network access	Mapped drive to VOS still store folder and Viz Engine data root (see Shared Data)
Operating system	Windows XP SP2/SP3 (32-bit) and Windows 7 (64-bit)

The Viz Artist design machine should preferably have the same specifications as the Viz Engine playout renderers, especially if the designers need to test performance issues on demanding scenes.

If designers are creating templates for Viz Content Pilot System (VCP), it is recommended that VCP is installed on a separate machine for more accurate playout emulation on Viz Engine .

3.3.3 Viz Content Pilot System

Viz Content Pilot (VCP) is built on a client-server software model where the VCP client connects to the Viz Content Pilot Database (Oracle database server) for templates and content, and the Media Sequencer for playout.

- VCP requires an Oracle database as the back-end server.
- VCP requires a Media Sequencer for communication with Viz Engine and other systems.

On the server side, the database serves all clients storing and retrieving content data for the control, delivery and playout of videos, maps, audio, graphics and so on, on the Viz Engine.

This section contains information on the following topics:

- Viz Content Pilot Client
- Viz Content Pilot Database
- Viz Content Pilot Database Administrator
- Viz Content Pilot Newsroom Component
- Viz Content Pilot Thumbnail Generator
- Viz Template Wizard
- Vizrt Pilot Data Server
- Script Runner Service
- Crop Service

Viz Content Pilot Client

The shown below are machine specifications for a typical newsroom system setup, where VCP is the control application receiving the playlist.

Software	Viz Content Pilot 5.7 Media Sequencer 1.23 or later Oracle 10g Instant Client 32-bit Microsoft .NET Framework 4.0 (Full) *Optional*: Oracle 11g Instant Client 32-bit *Optional*: Oracle 11g or 10 g Runtime Client 32-bit *Optional*: Viz World Client, VCP TimeCode Monitor, Viz PreCut. *Optional:* If you are using a local Viz Engine to preview video clips from Viz One, Viz Engine must be installed with video codecs (e.g. MPEG-4 codec and Haali Media Splitter). *Optional:* Windows Media Player 11 for video clip preview in Viz Object Store.
Executable(s)	VizContentPilot.exe vizPreviewEngine.exe (local preview)
Local drive access	Access to Oracle client files and folders

	Read and write access to Windows 7: `C:\%LOCALAPPDATA%\VirtualStore\Program Files\vizrt\` Windows XP: `C:\Program Files\vizrt\`
Network access	Mapped drive to Viz Object Store still store folder *Optional:* If local preview using Viz Engine 2 is chosen, a mapped drive to Viz Engine’s data root is needed Also see Shared Data
Operating system	Windows 7 Professional 64-bit (recommended) Windows 7 Enterprise 64-bit Windows 7 Ultimate 64-bit Windows XP Professional 32-bit Windows 8

The Viz Content Pilot client gets its Viz One connection parameters from the VCP database.

Vizrt recommends the use of remote preview that has no need for a local Viz Engine or graphics cards on the client machine.

Viz Content Pilot Database

The VCP database is an Oracle database server. Usually two database servers are installed where one is used for manual failover and to hold the Viz Engine 2.x data root. Viz Engine 3.x graphics data is stored on the Viz Graphic Hub .

Software	Oracle 11g Database 64-bit Oracle 11g Administrator Client 64-bit (standard edition) *Optional*: Oracle 10g Database and Administrator Client 64-bit
Executable(s)	Please refer to official Oracle documentation.
Ports and Connections	1521 (queries)
Service(s)	Oracle database service TNS listener service
Local drive access	A shared folder on the second server (failover) has to be accessible for all machines showing the rendered graphics.
Operating System	Windows 2008 R2 Server 64-bit (with 8GB RAM or more)
Oracle Documentation	Oracle Database Documentation Library: 11g: http://www.oracle.com/pls/db112/homepage 10g: http://www.oracle.com/pls/db102/homepage

Viz Content Pilot Database Administrator

The Viz Content Pilot Database Administrator tool (VCP DBA) is a small application used for installing, upgrading, exporting, importing, and setting various parameters for the Viz Content Pilot Database . It is purely a DBA tool, and should therefore only be used by database administrators.

Software	Viz Content Pilot DBA tool Oracle 10g Administrator Client 32-bit *Optional*: Oracle 11g Administrator Client 32-bit
Executable(s)	VCPDBA.exe
Service(s)	Oracle database service TNS listener service
Operating system	Windows Server 2003 32-bit Windows XP 32-bit Windows 7 32-bit or 64-bit

Viz Content Pilot Newsroom Component

The newsroom client machine specification describes a basic setup for journalists and editors. For a more detailed view on available software options, see the Viz Content Pilot and other administrator guides for descriptions on different types of setup.

Software	VCP's Newsroom Component 5.7 Viz Object Store 5.7 Viz World Client 12.0 or later (see Vizrt Maps) Oracle 10g Instant Client 32-bit Microsoft .NET Framework 4 Newsroom system client *Optional*: Oracle 11g Instant Client 32-bit *Optional*: Oracle 11g or 10 g Runtime Client 32-bit *Optional:* If you are using a local Viz Engine to preview video clips from Viz One, Viz Engine must be installed with video codecs (e.g. MPEG-4 codec and Haali Media Splitter) *Optional:* Viz EasyCut or Viz PreCut for video clip editing.
Executable(s)	VCPAxFiller.ocx VCPAxNle.exe (NLE) viz.exe VizObjectStore.exe
Local drive access	Read access to Oracle client files and folders All users of machines installed with Viz Engine must have read and write access to: Windows 7: **`C:\%LOCALAPPDATA%\VirtualStore\Program Files\vizrt\`** Windows XP: **`C:\Program Files\vizrt\`**
Network access	Mapped drive to VOS still store folder. *Optional:* If local preview using Viz Engine 2 is chosen, a mapped drive to Viz Engine's data root is needed. Also see Shared Data .
Other	Registry settings for preview Registry settings for the MOS ID

Operating system	Windows 7 Professional 64-bit (recommended) Windows 7 Enterprise 64-bit Windows 7 Ultimate 64-bit Windows XP Professional 32-bit Windows 8

Vizrt recommends the use of remote preview that has no need for a local Viz Engine on the client machine; hence, local preview is not recommended.

The Newsroom Component gets its Viz One connection parameters from the VCP database.

Note: Newsroom Component’s timeline editor does not work on *virtual machines*.

Viz Content Pilot Thumbnail Generator

VCP’s Thumbnail Generator is an optional addition to a VCP setup that generates data element snapshots used as thumbnails to visualize graphics and video elements in the VCP client’s playlist.

It is recommended to install Thumbnail Generator on the Viz Graphic Hub or Viz Content Pilot Database machine.

It is also recommended to configure Viz Thumbnail Generator to fetch scene snapshots from one of the newsroom Viz Engine preview machines. If installed on a local Viz Engine, see also Viz Engine .

Caution: Do not use an on-air Viz Engine to generate thumbnails.

Software	Oracle 10g Instant Client 32-bit Viz Content Pilot’s Thumbnail Generator 5.7 *Optional*: Oracle 11g Instant Client 32-bit *Optional*: Oracle 11g or 10g Runtime Client 32-bit
Executable(s)	ThumbnailGenerator.exe
Operating system	Windows 7 Professional 64-bit (recommended) Windows 7 Enterprise 64-bit Windows 7 Ultimate 64-bit Windows XP Professional 32-bit Windows 2003 32-bit.

Viz Template Wizard

Viz Template Wizard (TW) is an easy-to-use software wizard, visual template editor, design and scripting tool. It is used to create, manage and categorize templates for graphics, with images, maps and video. Viz Template Wizard can also be used to create control templates for Viz Trio and Viz Ticker3D.

TW can be installed as a stand-alone product for editing and running VCP templates without a Viz Content Pilot DB server, for example for use with Viz Trio or Viz Ticker3D. In this case no Oracle Client is required, and the **`use_database`** setting in the ContentPilot.ini file (under the [TEMPLATE_WIZARD] section) must be set to \qn\q.

It is possible to install Viz Template Wizard on the same machine as Viz Artist ; however, it is recommended to install it on a separate design client for template designers.

Software	Oracle 10g Instant Client 32-bit Media Sequencer 1.23 Viz Template Wizard 5.7 Microsoft .NET Framework 4 *Optional:* Oracle 11g Instant Client 32-bit *Optional:* Oracle 11g or 10g Runtime Client 32-bit *Optional:* Windows Media Player 11 for video clip preview in Viz Object Store.
Executable(s)	scheduler.exe (when running in Console mode) VizTemplateWizard.exe
Operating system	Windows 7 Professional 64-bit (recommended) Windows 7 Enterprise 64-bit Windows 7 Ultimate 64-bit Windows XP Professional 32-bit Windows 8

Viz Template Wizard connects to the Media Sequencer for testing and previewing of template graphics. The Media Sequencer connection defaults to *localhost*. To use a different host set the command line option *-mse <host>* in Viz Template Wizard’s target path.

Vizrt Pilot Data Server

The Data Server is installed as an application layer on top of the Viz Content Pilot database. It acts as an application server for accessing VCP’s database and other services. The Data Server may be asked to handle requests from scripts to provide information on data elements, or to provide preview servers the information needed to resolve which scene and data is to be rendered by the preview server.

Software	Data Server 1.3 or later Oracle 11g Instant Client 32-bit (bundled with Data Server) Microsoft .NET Framework 4
Executable(s)	C:\Program Files (x86)\Vizrt\Vizrt Pilot Data Server \PilotAppServerHostService.exe
Service(s)	Viz Content Pilot Data Server
Ports and Connections	8177
Operating system	Windows 7 Professional 64-bit Windows 7 Enterprise 64-bit Windows 7 Ultimate 64-bit Windows XP Professional 32-bit Windows 2008 server 32-bit Windows 2008 R2 Server 64-bit (recommended) Windows 2008 Server 64-bit Windows 2008 R2 Server 32-bit

Script Runner Service

The Script Runner Service provides users with a simple way to use the Update Service without needing to create their own service.

For more information on the Update Service, see the *Viz Template Wizard User's Guide*.

Software	Comes packaged with the Vizrt Pilot Data Server software
Executable(s)	C:\Program Files (x86)\Vizrt\Vizrt Pilot Data Server \VCPScriptRunnerHostService.exe
Service(s)	Viz Content Pilot Script Runner
Ports and Connections	1981
Operating system	Same as Vizrt Pilot Data Server

Crop Service

The Crop Service is a tool that allows for basic cutting, zooming and rotating of images, and allows users to quickly add new images to a data element.

Software	Comes packaged with the Vizrt Pilot Data Server software. Microsoft .NET Framework 4
Executable(s)	C:\Program Files\Vizrt\Viz Content Pilot Crop Service \CropServiceHost.exe
Service(s)	Viz Content Pilot Crop Service
Ports and Connections	8178
Operating system	Windows 7 Professional 64-bit Windows 7 Enterprise 64-bit Windows 7 Ultimate 64-bit Windows 2008 R2 Server 64-bit (recommended) Windows 2008 Server 64-bit

3.3.4 Viz Engine

Viz Engine is an extremely powerful rendering engine and at the core of Vizrt's real-time graphics solutions. 2D and 3D animated scenes designed in Viz Artist are rendered in real-time as high-end animations, and the output can be SD or HD video. Viz Engine systems work with all other Vizrt products to provide users with the total solution for producing on-air graphics content.

This section also contains information on the Preview Server options for Viz Engine.

Note: Viz3.x is the standard and recommended Viz Engine to be used with VCP5.7 and later. Information specifically for Viz2.x users is listed in the Appendix of the *Viz Content Pilot User's Guide*.

To run Viz Engine as a program or preview (optional) machine, the following software and configuration is needed:

Viz Engine specifications

Software	Viz Engine 3.5.1 or later (or Viz Engine 2.8 PL5 HotFix3) Viz DataPool 2.10 or later Viz World Client 12.0 or later (see Vizrt Maps) Extra Viz 2 or 3 Plug-ins (only for Viz 2.x) *Optional*: When used for local preview of video clips from Viz One, Viz Engine must be installed with video codecs (e.g. MPEG-4 codec and Haali Media Splitter)
Hardware	Licensed dongle
Executable(s)	viz.exe
Ports and Connections	6100 (program and/or preview) 6800 (program when running two instances of Viz Engine on the same machine. Requires two graphics cards) 14300 (Viz Multiplexer) 50007-50010 (multiplexing)
Local drive access	*Local preview:* Read and write access to folder: Windows 7: **`C:\%LOCALAPPDATA%\VirtualStore \Program Files\vizrt\`** Windows XP: **`C:\Program Files\vizrt\`**
Network access	Mapped drive to VOS still store folder *Local preview:* Mapped drive to Viz Engine data root Also see, Shared Data
Operating system	Windows XP SP2/SP3 (32-bit) and Windows 7 (64-bit)

Machines setup for local preview need an OpenGL compatible graphics card and at least 512MB of memory (RAM) in addition to a reasonably new processor. Some graphics features on a preview machine will not be shown exactly as on a Viz Engine renderer. This is limitations in the OpenGL features on the graphics cards, and not related to Vizrt's software.

3.3.5 Preview Server

The Preview Server option is used in situations where one or more Viz Engines provide frames for snapshot/thumbnail generation. A typical use case is where the Preview Server is used by Viz Trio or the Newsroom Component to fetch previews of overlay graphics for the Timeline Editor. The Preview Server can run on the same machine as a Viz Engine, but it is also possible to specify additional Viz Engines in order to spread the load. The pool of Viz Engines is configured on the Preview Server Web Interface

Viz Engine Preview Server specifications

Software	Preview Server 3.0 or later Microsoft .NET Framework 4 Viz Engine 2.8 or Viz 3.2 and later
Hardware	Licensed dongle
Executable(s)	Preview Server-<version>.msi
Ports and Connections	54000 is used when connecting over http using the REST interface.
Network access	Uses the Bonjour protocol to announce available services.
Operating system	Windows XP 32-bit Windows 7 32-bit or 64-bit

3.3.6 Viz Gateway

Viz Gateway (GW) is Vizrt’s implementation of the MOS Protocol. It enables users of a Newsroom Computer System (NCS) to perform instant updates on playlists in Vizrt’s control applications (Viz Trio and VCP).

The Viz Gateway is a framework built to help in newsroom integration tasks. Currently GW support NCSs based on the MOS Protocol that is supported by the leading NCS vendors.

Via Gateway 2.0 is in principle an extension to the Media Sequencer; hence, any GW supported version of the Media Sequencer may be configured to run as a GW server using the Viz Gateway configuration tool.

Viz Gateway specifications

Software	Oracle 10g Runtime Client 32-bit Viz Gateway 2.0 Version 1.0.10 (beta) *Optional*: Oracle 11g Runtime Client 32-bit
Executable(s)	scheduler.exe (if running in Console mode) (GW 2.0)
Ports and Connections	10540 - 10541 (MOS lower and upper port) 10640 (DB event port) 10002 (Viz Gateway Controller Client)
Service(s)	vizgwservice.exe (GW 2.0)
Local drive access	Access to Oracle client files and folders. Read and write access to folder:

	Windows 7: **C:\%LOCALAPPDATA%\ VirtualStore \Program Files\vizrt\** Windows XP: **C:\Program Files\vizrt\**
Operating system	Windows 2003 32-bit (recommended) Windows XP 32-bit

3.3.7 Viz Graphic Hub

Viz Graphic Hub is delivered as a pre-installed system with recommended hardware and software. Viz Graphic Hub must be installed as a separate server; hence, it is not recommended to install anything else on the server that will cause the system to lose performance.

Note: The database directory cannot reside on a remote machine.

Viz Graphic Hub specifications

Software	Viz Graphic Hub 2.3 or later
Executable(s)	VizDbNamingService.exe VizDbTerminal.exe
Ports and Connections	19392-19396 (in most cases the ports are configurable).
Local drive access	Read and write access to database folders (configurable).
Operating system	Windows XP 32-bit

IMPORTANT! Do not run firewall or antivirus scanning software on the server.

3.3.8 Viz One

Viz One allows users to ingest images and video clips for use in graphics and as full screen video, supporting both SD and HD output.

Viz One can be used for finding and adding images and video to graphics using a range of different control applications for both preview and playout on Viz Engine.

IMPORTANT! Before Viz One is used the first time, it is important to decide upon the playout format. Ingesting and storing other formats on Viz One may lead to an undefined behavior if they are different from what is configured on Viz Engine.

Software	Viz One 5.2 or later

3.3.9 Media Sequencer

The Media Sequencer is middleware software primarily used by control applications to connect to for example render engines, newsroom systems and video server (e.g. Viz One) systems.

More concrete the Media Sequencer is a framework for defining and executing media elements. The media elements are defined in a tree-based schedule that the sequencer interprets. The schedule is saved as an XML file (named **default.xml**). The XML file, in short, contains the configuration settings and the playlists saved to it by the control application.

The Media Sequencer’s scheduler has a high-resolution timer that manages a Virtual Document Object Model (VDOM) that contains the schedule. The scheduler also performs the actual execution of the schedule by interpreting elements describing actions from the VDOM. The communication between end user products and the Media Sequencer mostly goes through a protocol named TreeTalk.

Media Sequencer specifications

Software	Oracle 10g Runtime Client 32-bit Media Sequencer 1.23 *Optional*: Oracle 11g Runtime Client 32-bit
Executable(s)	scheduler.exe (if running in Console mode)
Ports and Connections	8580 (REST), 8594 (Media Sequencer TreeTalk)
Service(s)	scheduler.exe
Local drive access	Access to Oracle client files and folders. Read and write access to the following folders: Windows 7: **`C:\%LOCALAPPDATA%\VirtualStore \Program Files\vizrt\`** Windows XP: **`C:\Program Files\vizrt\`** **`C:\Documents and Settings\All Users\ Application Data\Vizrt\Media Sequencer`**
Network access	Uses the Bonjour protocol to announce available services.
Operating system	Windows 2003 32-bit (recommended) Windows XP 32-bit

3.3.10 Viz Multichannel

The Viz Multichannel client is used by the traffic department to schedule programs that are controlled by automation systems in the master control room. It has a TCP connection to a Media Sequencer . The client gives the user access to creation, editing and playout of pages with graphics and video clips.

Viz Multichannel specifications

Software	Microsoft .NET Framework 4.0 or higher Windows XP Service Pack 1 or higher, or Microsoft Windows 7 (recommended) Viz Engine 3.5.1 or higher (lower versions do not support the Viz One integration). If you are using a local Viz Engine to preview video clips from Viz One, Viz Engine must be installed with video codecs (e.g. MPEG-4 codec and Haali Media Splitter) Viz One 5.4 or higher Media Sequencer 1.23 or higher Viz Multichannel 2.7 client Extra Viz 2 or 3 Plug-ins (only for Viz 2.x)
Executable(s)	PlaylistImporter.exe viz.exe VizRundown.exe
Service(s)	Viz Multichannel Schedule Collector
Operating system	Windows XP SP3 32-bit Windows 7 32-bit or 64-bit

3.3.11 Viz Trio

The Viz Trio client is the CG operator’s user interface. It has a TCP connection to a Media Sequencer . The client gives the user access to creation, editing and playout of pages with graphics. A Viz Engine for local preview renders the graphics within the Viz Trio client.

Viz Trio specifications

Software	Microsoft .NET Framework 4.0 or higher Windows XP Service Pack 1 or higher, or Microsoft Windows 7 (recommended) Viz Engine 3.6 or higher (old versions do not support the Viz One integration). If you are using a local Viz Engine to preview video clips from Viz One, Viz Engine must be installed with video codecs (e.g. MPEG-4 codec and Haali Media Splitter) Viz One 5.4 or higher Media Sequencer 1.23 or higher Viz Trio client 2.12.1 or higher Viz World Client 12.0 or later (see Vizrt Maps) Extra Viz 2 or 3 Plug-ins (only for Viz 2.x) *Optional*: Local Media Sequencer and Oracle 11g or 10g Runtime Client for connecting to the Viz Content Pilot Database .
Executable(s)	trio.exe trionle.exe viz.exe
Operating system	Windows XP SP3 32-bit Windows 7 32-bit or 64-bit

3.3.12 Vizrt Maps

Vizrt provides map solutions that offer branded maps and geographic animations using Viz World Classic and Viz World Client and Server.

Viz World Classic

Viz World Classic (previously known as Viz Curious Maps) is ideal for designers, program researchers, and producers who need to create high-quality map animations for news, documentary, promotional videos, and online. It is designed to be simple and intuitive to use, so that users with no specific training in computer graphics, or video editing, can create professional maps on demand and at short notice.

Viz Curious Maps specifications

Software	Viz Curious Maps 13.0 or later
Executable(s)	WorldMaps.exe
Ports and Connections	80, 8080 (Microsoft Bing and Imagery on Demand) 1947 Sentinel HASP Run-time Environment
Operating system	Windows XP 32-bit

It is possible to run the server and design machine at the same time on the same machine, but it is likely that this will impact the server performance.

Note: Requires a minimum screen resolution of 1280x1024, and display size of 96 DPI.

Viz World Client and Server

Viz World Client and Server integrates Viz World Classic mapping ability and database into Viz Artist and Viz Engine graphics. By utilizing a set of geographic referencing plug-ins and the maps produced by WoC, the creation of location based graphics using maps, 3D objects, texts, and so on, is seamless.

Viz World Client and Server specifications

Software	Viz World Client 12.0 or later Viz World Server 12.0 or later
Executable(s)	AxMapsClient.ocx (embedded editor) MapBuilder.exe MapConfigClient.exe ServerAllocator.exe ServerLauncher.exe
Ports and Connections	101, 102, 103 80, 8080 (Microsoft Bing and Imagery on Demand).

Operating system	Windows XP 32-bit (client and server) Windows Server 2003 32-bit (server)

See Also

- Viz World Client and Server documentation

3.3.13 EVS Video Server Control

An EVS Control Plug-in lets the Viz Engine control an EVS video server (like a tape deck over RS422). This gives Viz Engine the ability to load and control playback of EVS video server clips.

This section contains information on the following topics:

- Set Up Requirements
- RS422 and XtenDD35 Setup
- RS422 Controller Set Up Examples

Set Up Requirements

- The computer which runs the Viz Engine must be equipped with an RS422 controller that maps the controller ports to the Windows COM ports.
- The RS422 port must be connected to an RS422 remote controller port of the EVS video server.
- The EVS player, controlled by the RS422 port, must be set up to use the protocol *XtenDD35* (No other protocol is currently supported).

RS422 and XtenDD35 Setup

1. You need a RS422 controller that installs the RS422 port as a new COM port in Windows.
2. Set up the *XtenDD35* protocol on the used remote port of the EVS video server.

   IMPORTANT! This must be done before an attempt to connect.

3. Manually set the Windows COM port settings to:
   - *38400 baud*
   - *8 bytes*
   - *one stop bit*
   - *odd parity*

   IMPORTANT! This must be set before Viz Artist is started.

4. Usually, a special RS422 cable is required to connect the controller to the EVS video server. It is recommended to use a connector cable to connect

the RS422/DB9 connector to a standard RS422 cable. The RS422 cable should work with a normal EVS video server controller.

5. Every RS422 controller has a different pin-out setting and requires a different connector cable. The table below shows which signal of the RS422 controller must be connected to which pin on the EVS side:

RS422 pin-out for the connector cable

Signal type of RS422 controller	Cable pin on EVS side
RxD B+ (in)	7
TxD B+ (out)	3
TxD A- (out)	8
RxD A- (in)	2
Sig Ref / Gnd	1

RS422 Controller Set Up Examples

The connection of a RS422 controller to the EVS is always different for each controller. Here are just two examples:

Bluestorm LP

Setup for a Bluestorm LP RS422 PCI card

Viz Engine side (Bluestorm LP card)		EVS side	
Signal type	**Pin**	**Pin**	**Signal type**
TxD+	2	3	RxD+
TxD-	3	8	RxD-
RxD-	4	2	TxD-
RxD+	1	7	TxD+
Sig Ref	5	1	Sig Ref

ExSys EX-1303 USB to RS422

Setup for a ExSys EX-1303 USB to RS422 connector

Viz Engine side (ExSys EX-1303)		EVS side	
Signal type	**Pin**	**Pin**	**Signal type**

Viz Engine side (ExSys EX-1303)		EVS side	
TxD+	2	3	RxD+
TxD-	1	8	RxD-
RxD-	4	2	TxD-
RxD+	3	7	TxD+
Sig Ref	5	1	Sig Ref

3.4 Shared Data

Vizrt recommends that customers who use remote shares for storing data use UNC (Universal Naming Convention) paths directly in the configuration, instead of mapped drives.

Example: \\vosstore\images

3.5 Ports and Connections

This section contains information on the following topics:

- Port Numbers
- Multiplexing Port

3.5.1 Port Numbers

The table below lists all default server and listening port numbers that are used. It is, if possible, recommended to run the system on a network without a firewall.

Listening port numbers

Listener	Port(s)	Descriptions and Comments
Viz World Server	102-103	102 (TCP) is a Viz World Server listener port for Viz World Client connections when Server Allocator is not in use or only has one Viz World Server running. 103 (TCP) is a Viz World Server listener port for configuration tool connections to the first Viz World Server instance (as configurations are controlled by the first server instance). See also Vizrt Maps .

Microsoft Bing and Imagery on Demand	80, 8080	Web interface and client software. For download of Microsoft Bing and Imagery on Demand images. (service: HTTP)
Viz One Delivery	554	Real Time Streaming Protocol (service: TCP).
Oracle database	1521	For clients that connect to the Viz Content Pilot Database .
Sentinel HASP Run-time Environment	1947	Used to communicate with local and remote components. This relates to hardlock dongles used with Viz Curious Maps.
VCP Script Runner	1981	Used to communicate with the Update Service.
Video servers	5250	MVCP and Xlator control port for video servers. Note: this port is only necessary in combination with the video server extension (service: AVCP).
Viz Engine	6100 6700 6800	Ports are used by Media Sequencers that connect to a Viz Engine program and/or preview channel. Viz Engine’s default program and preview port is 6100. In a single channel setup where both program and preview output is on the same machine, the default preview port is set to 6800 to separate the program and preview channels. In a dual channel setup, the default program ports are 6100 and 6800 for channel 1 and channel 2, respectively. In a dual channel setup, when used for stereo production, the default program ports are 6700 and 6800 for channel 1 (left eye) and channel 2 (right eye), respectively.
Viz Trio	6200 6210	6200 is used for controlling the Viz Trio client over a socket connection. 6210 is used by the Viz NLE plugin to establish a connection to Viz Trio.
Newsroom Component	6220	Used by the Viz NLE Plugin to establish a connection to Viz Content Pilot’s Newsroom Component.
Viz NLE Editor	6230	Used by the Viz NLE Plugin to establish a connection to the Viz NLE Editor (on Mac).

Viz NLE Config	6240	Used by the Viz NLE plugin to establish a connection to the Viz NLE Configuration tool (on Mac).
Ticker Service	6300 6301	Ticker handler in Media Sequencer connects to port 6300 for feedback from Ticker Service. Ticker handler in Media Sequencer connect to port 6301 when controlling the ticker via a socket connection.
Viz Content Pilot	6484	Socket connection used for controlling Viz Content Pilot using macro commands.
Viz Preview License server	7452	For the Newsroom Component using an unlicensed Viz Engine for local preview with a connection to the Viz Preview License server (is not the same as the Preview Server).
Viz Content Pilot Data Server	8177	Used when connecting over http using the REST interface.
Media Sequencer	8580 8594	For clients connecting to the Media Sequencer . 8580 is specifically used when connecting over http using the REST interface.
Viz Gateway	10001 10002 10540 10541	For DB notification events. For Viz Gateway controller clients. For MOS object updates. For MOS playlist updates.
Viz World Server	10100 10200	10100 (TCP) is a Server Allocator listener port for Viz World Client connections, and is only used for clients to get connection details about Viz World Server(s). The first client connection will always be diverted to port 102. In case of multiple server instances port numbers are assigned according to a predefined schema (i.e. 10101, 10102 for server instance 2 and 3 and so on). In case there is no Server Allocator, Viz World Server will itself switch to port 102. 10100 (UDP) is a Viz World Server listener port for Server Allocator communication. 10200 (UDP) is a Server Allocator listener port for Viz World Server communication. Both UDP ports are internal ports used between the servers. For more information, please see the Viz World Client and Server 11.1 User’s Guide and later. See also Vizrt Maps .

Viz Content Pilot	10640	Used by Viz Gateway to establish a connection to Viz Content Pilot to send and receive updates on MOS messages (e.g. elements and playlists).
Viz Engine	14300	Alternative port used to avoid conflicts with port 6100 (e.g. when using Viz Multiplexer). Port 6100 is normally used by renderers that are on air, hence, it is (e.g. when running Viz Content Pilot version 4 or Viz NLE Plugin towards Viz 2.x) recommended to use another port. Port 14300 is an optional port. The default 6100 may also be used if the renderer is not used on air.
Viz Graphics Hub	19392-19396	Ports in use when connecting to different Viz Graphics Hub components.
Viz Connection Broker	21098	Connection to the Viz Connection Broker configuration interface (e.g. http://localhost:21098/)
Viz Engine		Ports 50007 - 50009 are all Multiplexing Port that enable Viz Engine to work on other scenes in sessions that are used for preview purposes:
	50007	**MUX Isolated port:** All connections to this port get its own session.
	50008	**MUX Shared port:** All connections from one single host shares one session.
	50009	**MUX Fixed port:** Same as shared port except that allocated resources are never cleared from memory.
	50010	**Still Preview port:** Enables a user to request a preview of the next scene to be put on air while another scene is on air.
Preview Server	54000	Used when connecting over http using the REST interface.

3.5.2 Multiplexing Port

Multiplexing Ports

Ports	**Viz Engine**
All other ports	

Ports	Viz Engine
Still Preview Port	
MUX Isolated Port MUX Shared Port MUX Fixed Port	

The multiplexer functionality is an integral part of Viz Engine. When using Viz Engine a session management takes place internally, with one default session for the GUI and internal/external commands, and additional sessions created on-demand for the multiplexing ports or the preview port.

With multiplex ports, other than the MUX Still Preview port, the Viz Engine state is only switched when a command is received, which means a new session is created; hence, ten consecutive commands from a client will only result in one state switch on the first command.

With the MUX Still Preview port the state is switched when a command is received and immediately switched back to the main session such that on air rendering will not be hindered in any way.

The MUX Fixed port is traditionally used by Viz Content Pilot 4’s Newsroom Component, and is the same as the MUX Shared Port, except that allocated resources are never cleared from memory. To avoid memory overload, it is recommended to clean up the Viz Engine regularly when this port is used.

The MUX Shared Port is a shared port where all connections from one single host shares one session. It is most often used by Viz Trio and the Newsroom Component to display preview frames.

The MUX Isolated Port is an isolated port where all connections get their own session. It is used, for example in an NLE setup, to deliver frames to the host NLE-system when rendering or scrubbing video clips with graphics. Using this port will also suppress bounding box commands.

Note: The MUX Isolated Port cannot be used by the Newsroom Component.

Note: All multiplexing ports are supported by all Viz Engine versions

4 Storage and Backup Recommendations

This section gives some general recommendations on storage and usage of data which can be divided in two main parts;

- Graphics, image and video storage and settings
- Control room and newsroom configuration storage and settings

The following sub sections divide these parts into more user specific areas in order to give an overview of what is stored where and what is important to maintain for each installation.

This section contains information on the following topics:

- Graphics Data
- Viz Content Pilot
- Media Sequencer
- Viz Trio

4.1 Graphics Data

Graphics data is where the scenes, images, fonts, objects, materials and animations are stored.

It is *important* to regularly take backups of the data as data is basically stored in a normal Windows directory structure.

Data is organized by graphics designers using Viz Artist. Data can also be organized using the Viz Graphic Hub Manager tool. Graphics data is structured as file objects on Viz Graphic Hub.

Default location for data is:

- Windows 7: **`%LOCALAPPDATA%\VirtualStore\Program Files (x86)\vizrt\VizDb`**
- Windows XP: **`C:\Program Files\vizrt\`**

IMPORTANT! In Windows 7 and later, it is not possible for a user to edit or save files directly in the program folder (**`C:\ Program Files)`**, so data must be stored in the VirtualStore (**`%LOCALAPPDATA%\VirtualStore`**) and appropriate backup and restore operations must be done on those files.

The location of the data root is configured by Viz Engine’s Viz Config tool, while the location of the database is configured by the Viz GH Terminal. Both data sets should ideally be placed on a dedicated machine.

IMPORTANT! Only offline backup operations are allowed as the server must be shut down during a backup process.

See Also

- *Viz Graphic Hub User's Guide*

4.2 Viz Content Pilot

In addition to information stored on the Media Sequencer and VCP's database, VCP's INI files and playlists are important to backup when needed. INI files are used for local configurations for the application itself, third party integrations, and overrides of database settings. All VCP playlists, both local and newsroom playlists, can be exported and imported for backup and transfer to other VCP installations.

The INI file *ContentPilot.ini* is used by VCP, Viz Template Wizard, and Viz Object Store. VCP's Thumbnail Generator has its own INI file named *ThumbnailGenerator.ini*.

Original versions of the INI files are stored in the program folder during installation

- Windows 7: **`C:\Program Files (x86)\Vizrt\Viz Content Pilot 5.x`**
- Windows XP: **`C:\Program Files\Vizrt\Viz Content Pilot 5.x`**

However, in Windows 7 and later, it is not possible for a user to edit or save the file directly in the program folder, so subsequent edits are made to a copy stored in the VirtualStore:

- **`%LOCALAPPDATA%\VirtualStore\Program Files (x86)\Vizrt\Viz Content Pilot 5.x`**

IMPORTANT! If using Windows 7 or later, backup and restore operations must be done to the INI files in the VirtualStore.

4.3 Media Sequencer

The file default.xml is a Media Sequencer file.

Microsoft Windows XP:

- C:\Documents and Settings\All Users\Application Data\Vizrt\Media Sequencer

Microsoft Windows Vista and 7:

- C:\ProgramData\Vizrt\Media Sequencer

The file holds a stored copy - of the memory held information - over control application client settings, user data for graphics templates, references to scenes on the database, stills in the still store and video clips.

For a backup it is recommended to set up the system, then save a copy of the *default.xml* remotely to more easily set up a new build of a similar machine in the event of a system failure.

The default.xml file stores all persistent data, and at regular intervals the Media Sequencer creates a backup file named default.xml.1, which again replaces the file default.xml.2. In a failure situation where default.xml may get corrupted, default.xml.1 is used to create a new instance of default.xml. If default.xml.1 is also corrupted it will try to use default.xml.2.

4.4 Viz Trio

Unlike Viz Content Pilot (VCP), Viz Trio does not use an INI file or a database (by default). Viz Trio is dependent on the Media Sequencer to keep local client specific configurations intact. The only exception is command line options used locally for each client. As with VCP, Viz Trio is able to export and import shows (similar to VCP’s playlists).

Generally it is recommended to do regular show exports in order to preserve the show if something is corrupt. A show export is performed using Viz Trio to create an archive of the show, its graphics templates, pages, settings and so on. For more information, see Viz Trio’s user guide on show export and import and the available options. For graphics export or archiving, see Viz Artist’s user guide.

It is also recommended to backup, at regular intervals, the Media Sequencer’s *default.xml* file as it stores a lot of the data used by Viz Trio and other control applications, except graphics data and external files, such as file scripts. This enables the system to be restored to a previous state. If the system must be reset entirely, a new default.xml file will be created. The latter requires that the Media Sequencer is shut down, the default.xml file deleted or removed, and the Media Sequencer restarted. This also requires that all configurations, shows with graphics and script references are setup.

If Viz Trio is used in combination with Viz Content Pilot, see the Viz Content Pilot User’s Guide for further information on use of VCP’s database and still store.

5 Installation

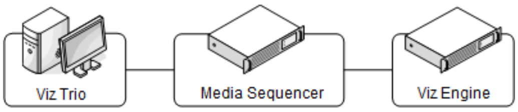
The following sections describe the different steps that are needed in order to have a multi client Viz Trio setup with a remote Media Sequencer connected to one or several Viz Engine output renderers.

Note: It is recommended that the installation is performed in the same order as the sections below.

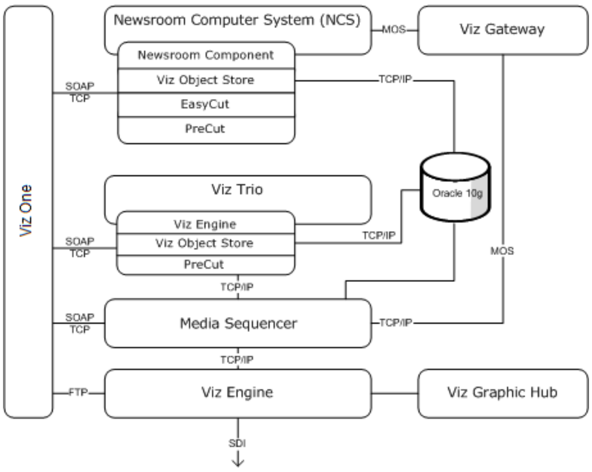
This section contains information on the following topics:

- System Overview
- Prerequisites
- Viz Engine
- Media Sequencer
- Viz Trio
- Video Codecs

5.1 System Overview



The system overview shown above depicts a basic setup of Viz Trio. The Viz Trio machine typically also has a Viz Engine for local preview.



A more advanced setup is the newsroom and video integration which involves several other Vizrt products such as a Vizrt MAM system, Viz Content Pilot, Viz Gateway and third party systems such as a newsroom and database system.

As a replacement on the newsroom side it is also possible to integrate Viz Trio with Avid iNEWS ControlAir using Viz Device Manger instead of Viz Gateway.

Note: The control application can also be Viz Content Pilot; however, Viz Content Pilot will also have a TCP/IP connection to the Oracle database.

5.2 Prerequisites

Before installing a Viz Trio system, make sure that the correct hardware and latest software is available. All needed software is accessible from Vizrt’s FTP server, which contains the latest official releases of all Vizrt software.

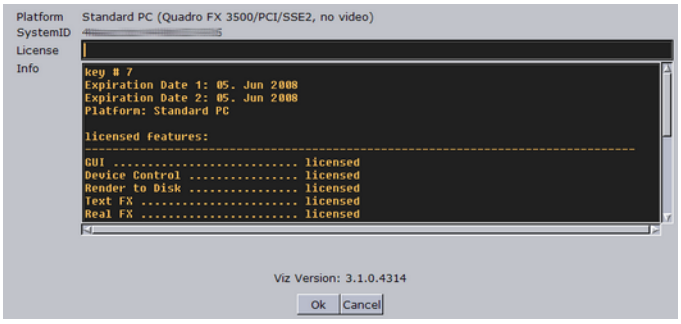
See Also

- Hardware Requirements
- Viz Trio software specifications
- Ports and Connections

5.3 Viz Engine

The Viz Engine is the output machine for Viz Trio, and is a separate installer. A renderer is needed in order for Viz Trio to playout graphics.

Viz Engine’s information window



Platform Standard PC (Quadro FX 3500/PCI/SSE2, no video)

SystemID [redacted]

License

Info

```
key # 7
Expiration Date 1: 05. Jun 2008
Expiration Date 2: 05. Jun 2008
Platform: Standard PC

licensed features:
--------------------------------------------------------------------------------
GUI ........................... licensed
Device Control ................ licensed
Render to Disk ................ licensed
Text FX ....................... licensed
Real FX ....................... licensed
```

Viz Version: 3.1.0.4314

A licensed Vizrt dongle must be attached to the USB or printer port on the machine. After installing the Viz Engine, make sure also to install additional plug-ins, such as Viz Datapool. The plug-ins needed will vary depending on the scene design and integrations.

To install Viz Engine

- Run the installer and follow the directions given by the installation wizard.

To activate the license key

1. Start Viz Engine and click the **information (i)** button, positioned in the upper right corner of the interface, to open Viz Engine’s information window.

2. Add the key to the License field, and click **OK**.

To configure preview of clips stored on Viz One

If you have installed the Viz Engine *VGA* version, please perform the following steps:

1. Open Windows Explorer.
2. Open the Viz Engine configuration file:

   `C:\Program Files (x86)\Vizrt\Viz3`
3. Locate **`SECTION TARGA3200`**.
4. Set **`vizlink_mode = 1`**.
5. Save the file.

If you have installed the Viz Engine *Video* version, please perform the following steps:

1. Start Viz Config.
2. Select the Video Board section and enable (On) the Viz Link option.
3. Click Save.

5.4 Media Sequencer

The Media Sequencer stores Viz Trio references and cache information. It is in most cases installed on a server acting as a middle tier between Viz Trio and Viz Engine.

To install the Media Sequencer

1. Run the installer and follow the directions given by the installation wizard.
2. *Optional:* Install the Oracle 10g Runtime Client.
   - Restart the Media Sequencer after installing the database client.
   - A database client is needed when connected to Viz Gateway for accessing the Viz Content Pilot database.

See Also

- Media Sequencer requirements

5.5 Viz Trio

Viz Trio is the control application used by the operator to manage Viz Trio shows and/or playlists from Viz Content Pilot and its integrated newsroom systems.

Before installing Viz Trio, install the Viz Engine, Extra Viz plug-ins, .NET Framework and the hardware dongle that is needed in order to run graphics preview within Viz Trio.

If running a single client setup, perform the Media Sequencer installation as well.

Note: Viz Trio versions 2.12 and later require the Microsoft .NET Framework 4.0 or later.

To install Viz Trio

- Run the installer and follow the directions given by the installation wizard.

This section contains information on the following topics:

- Keyboard
- Viz Content Pilot
- Upgrading

See Also

- Viz Engine installation
- Media Sequencer installation
- Viz Trio requirements

5.5.1 Keyboard

To install the Viz Trio keyboard, the keyboard’s USB connector must be connected to the computer’s USB port. The computer should be able to detect and automatically install the needed keyboard driver(s).

Note: To learn more about the keyboard’s technical specifications, visit http://www.devlin.co.uk/keyboards/semicust.html *DevlinGroup - Devlin Electronics Limited*.

To import the keyboard mapping file

1. Open Viz Trio and click the **Show settings** button.
2. In the **Show Settings** window that opens, click the **Keyboard** button.
3. In the **Macros for Current Show** window that opens, click **Import**.
4. In the **Import keyboard shortcuts** dialog that opens, click the folder button to browse for and import the *keyboard* file (extension *.kbd).
5. *Optional*: Select to merge the existing keyboard shortcuts with the new ones.
6. Click **Import**.

See Also

- Viz Trio Keyboard

5.5.2 Viz Content Pilot

In order to connect to Viz Content Pilot’s Oracle database, a runtime installation of an Oracle database client is required. It is also recommended to use the same client version as the database. After the client is installed, Viz Trio’s database connection can be configured.

See Also

- VCP Database

5.5.3 Upgrading

Notes

- When upgrading from Trio 2.11 to Trio 2.12 or higher:
  - If any VME Storage devices have been set in the profile configuration in Viz Trio 2.11, then they will have to be set up again after upgrading to Viz Trio 2.12 or higher. If this is not done, video transfers will fail. See To add a video device.

5.6 Video Codecs

If you are previewing proxy versions of video from Viz One using the Timeline editor, you will have to install video codecs. These are not part of Vizrt’s standard installation.

IMPORTANT! Due to licensing requirements, Vizrt does not provide the codecs required for local preview. Users must obtain and install their own codecs.

Note: Playout of high resolution versions on Viz Engine do not require these video codecs.

The following procedures will guide you through the necessary installation steps:

- Installation Options
- To install codecs for local preview
- To set a preferred decoder

Installation Options

Codecs are available from several suppliers. The list below includes several suggestions:

- FFDShow MPEG-4 video decoder and Haali Media Splitter
- LAV Filters video decoder and splitter

- MainConcept video decoder and splitter

> **Note:** The display accuracy of the Timeline editor can be effected by the type of codecs installed.

Some video decoders function in a way that limits the accuracy of the Timeline editor when displaying frames. This must be taken into account in workflows that involve accurate placement of data elements, mark-in and mark-out points, and poster frames using the Timeline editor.

If using the **FFDShow** video decoder, the displayed frame for the poster frame, mark-in and mark-out features may be up to 0.5 seconds away from the position the marker is at. Customers that need a high level of frame accuracy should consider using other solutions.

The video decoders from **MainConcept** and **LAV** operate in a different way, meaning that the Timeline editor displays frames accurately when using either of these video decoders.

Previewing videos in the Timeline editor works accurately, regardless of the video decoder used.

To install codecs for local preview

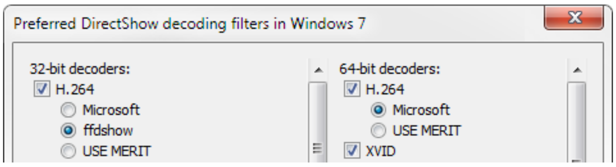
The example below sets up support for h.264 playback using the FFDShow MPEG-4 codec package and a Matroska Splitter fromHaali.

> **Note:** You need to have your own license for clip playback as FFDShow does not come with a decoding license.

1. Make sure you do not have any other codec packages installed on the machine that interfere with FFDShow or the media splitter.
2. **Download** the Matroska Splitter from Haali
3. **Download** the Windows 7 DirectShow Filter Tweaker
4. **Download** the FFDShow MPEG-4 Video Decoder
    - Make sure you have a license to use the codec.
    - Make sure you download a 32-bit version of the codec.
5. **Uninstall** older **64-bit** versions of the **MPEG-4 codec**.
6. **Install** the **Matroska Splitter from Haali**
7. **Install** the **Windows 7 DirectShow Filter Tweaker**
8. **Install** the **FFDShow MPEG-4 codec**
    - After installing the FFDShow codec package make sure that no applications are excluded, especially Viz Engine (there is an inclusion and exclusion list in FFDShow).
9. Set your **MPEG-4** 32-bit decoder to **FFDShow** (see how To set a preferred decoder).
    - You should now be able to preview video clips from Viz One.

To set a preferred decoder

1. **Run** the **Windows 7 DirectShow Filter Tweaker**.
2. In the appearing dialog box, click **Preferred decoders**



Preferred DirectShow decoding filters in Windows 7

32-bit decoders:

☑ H.264

○ Microsoft

● ffdshow

○ USE MERIT

64-bit decoders:

☑ H.264

● Microsoft

○ USE MERIT

☑ XVID

3. Set your **MPEG-4/H.264** 32-bit decoder to **ffdshow** and click **Apply & Close**.
4. Click **Exit**.

See Also

- Timeline Editor

6 Getting Started

This section describes how to connect Viz Trio to the Media Sequencer and Viz Engine. It also describes how to setup Viz Trio for playout.

Before the Viz Trio client is started make sure that it has a Media Sequencer, Viz Engine and Viz Engine database or data root configured and running.

This section contains information on the following topics:

- Hardware Configuration Versions
- Basic Configuration and Startup
- Configuring the Graphics Database
- Configuring the Media Sequencer

6.1 Hardware Configuration Versions

Viz Trio can be configured in various ways; the traditional Viz Trio setup requires multiple PCs in order to run, while the single PC solution makes it possible to run everything on one machine.

- Conventional Configuration
- Single Machine Configuration (Viz Trio OneBox)

6.1.1 Conventional Configuration

Traditionally, each Viz Trio system has required two standard desktop PCs in order to operate; one machine for the Viz Trio client and one for its companion renderer Viz Engine.

6.1.2 Single Machine Configuration (Viz Trio OneBox)

In addition to the traditional configuration type it is possible to run a complete Viz Trio system, including the Viz Engine, on a single standard PC (desktop or rack mountable). The single PC solution provides all the features of a conventional Viz Trio setup. Two powerful graphics cards on-board makes sure that there is no negative impact on graphics quality or rendering speed. With the Viz Trio single PC setup, both the VGA preview and final program signals (playout) can be viewed on the same machine. By consolidating two PCs down to one, the setup is suited for customers working in environments with limited space, such as mobile environments (OB vans and remote broadcasts) and smaller studios.

6.2 Basic Configuration and Startup

In order to start Viz Trio successfully, it needs a connection to the Media Sequencer and the local Viz Engine.

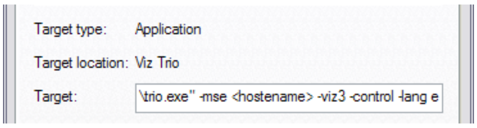
This section contains information on the following topics:

- Connecting to Media Sequencer
- Connecting to Viz Engine
- Starting Viz Trio

6.2.1 Connecting to Media Sequencer

Which connection a Viz Trio client has to the Media Sequencer is decided by parameters in the program target path. If no Media Sequencer target path parameter is set, Viz Trio will default to a local Media Sequencer.

To configure the Media Sequencer



Target type: Application

Target location: Viz Trio

Target: \trio.exe" -mse <hostname> -viz3 -control -lang e

- Right-click the Viz Trio desktop shortcut and set a parameter for the *-mse* setting in the **Target** path.

Example: C:\Program Files\Vizrt\Viz Trio\trio.exe -mse <hostname>

See Also

- Command Line Parameters
- Configuring the Media Sequencer

6.2.2 Connecting to Viz Engine

Viz Trio needs a local Viz Engine to run its preview and to be able to import scenes. Viz Trio will detect and run Viz Engine itself; however, if the machine has both Viz Engine 2 and 3 versions installed a command line option must be used to separate the two.

Example: C:\Program Files\Vizrt\Viz Trio\trio.exe -viz2

Viz Engine 3.x does not need a target path parameter as it is used by default if no other is specified.

All machines should be installed with the same Viz Engine version, and also share the same data.

IMPORTANT! For local preview, Viz Trio must have a hardware dongle installed.

See Also

- Command Line Parameters
- Viz Engine requirements
- Configuring the Graphics Database
- To configure preview of clips stored on Viz One

6.2.3 Starting Viz Trio

Viz Trio can be started in various ways.

To start Viz Trio

1. Double-click the Viz Trio icon on the desktop, or
2. Select the program from the Start menu (All Programs > Vizrt > Viz Trio > Viz Trio), or
3. Select the Viz Trio *.exe* file from the program directory.

> **Note:** For Viz Trio 2.9 and later the path is `C:\Program Files\Vizrt\Viz Trio`. For older versions it was `C:\Program Files\vizrt\Trio Client`.

See Also

- Command Line Parameters
- Configuring the Graphics Database
- Configuring the Media Sequencer

6.3 Configuring the Graphics Database

Viz Trio must be configured to access the same graphics data as the program and preview Viz Engine channels. The configuration is used for local preview in order to test and preview graphics before it is added to a show or playlist and played out on-air.

Viz Engine 2.x and 3.x have two different data setups, and are referred differently. A Viz Engine 2’s data is commonly referred to as the *data root*. Viz Engine 3’s data is stored on the Viz Graphic Hub.

As all Viz Artist and Viz Engine machines in a Viz Trio system must use the same data, it is also recommended that the data is located on a high performance machine.

For Viz 2.x: Configuring the data root for Viz Trio using Viz Engine’s Viz Config tool is the only way to configure Viz Trio’s access to graphics data using Viz 2.x.

For Viz 3.x: Configuring the Viz Graphic Hub database for Viz Trio using Viz Engine's Viz Config tool is the recommended way to configure Viz Trio's access to graphics data. An alternative is to configure it through Viz Trio.

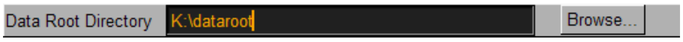
For Viz 3.x: Configuring the Viz Graphic Hub database using Viz Trio can be done in three ways; at startup using the Viz Engine login window, through Viz Trio's own configuration interface, or by setting command line options in Viz Trio's target path.

> **Note:** If Auto Login is set for Viz 3.x it is not possible for Viz Trio to alter the settings; however, this does not apply if Auto Login is set in the Viz Trio interface.

This section contains information on the following topics:

- To configure the Viz 2.x data root using Viz Config
- To configure the Viz 3.x database using Viz Config
- To configure the Viz 3.x database using Viz Engine's login window
- To configure the Viz 3.x database using Viz Trio's configuration window
- To configure the Viz 3.x database using Viz Trio's target path

To configure the Viz 2.x data root using Viz Config



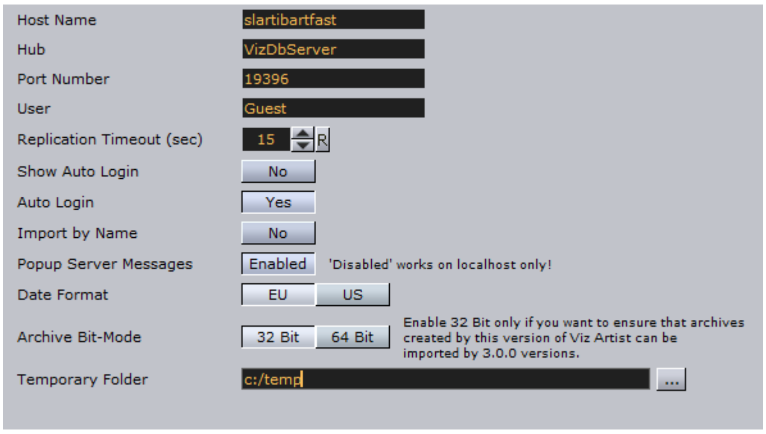
Data Root Directory K:\dataroot

1. Start the **Viz Config** tool and select the **Data Root Directory** section.
2. Click the **Browse...** button and select the data root directory, or type it manually.
3. Click **Save**, and close the application.

> **Note:** A shared data root directory can be mapped as a network drive (recommended) or entered as a Universal Naming Convention (UNC) path.

> **Example:** K:\<dataroot folder> *or* \\<hostname>\<dataroot folder>

To configure the Viz 3.x database using Viz Config



Host Name slartibartfast
Hub VizDbServer
Port Number 19396
User Guest
Replication Timeout (sec) 15 R
Show Auto Login No
Auto Login Yes
Import by Name No
Popup Server Messages Enabled 'Disabled' works on localhost only!
Date Format EU US
Archive Bit-Mode 32 Bit 64 Bit Enable 32 Bit only if you want to ensure that archives created by this version of Viz Artist can be imported by 3.0.0 versions.
Temporary Folder c:/temp ...

1. Start the **Viz Config** tool and select the Database section.
2. Enter the following connection parameters:
   - **Host Name:** Sets the database hostname.
   - **Hub:** Sets the database name.
   - **Port Number:** Sets the database port number. Default port is **84932**.
   - **User:** Sets the database user.
   - **Auto Login:** Sets login automatically when starting Viz Engine. If Auto Login is enabled it will override Viz Trio's database login and disable its *Database (Viz 3)* configuration section.
3. Click **Save**, and exit the application.

To configure the Viz 3.x database using Viz Engine's login window

1. Start Viz Trio.
2. During startup, a login window for the database will appear.
3. Enter the following connection parameters:
   - Name server host, database, username, and password
4. Select the **Auto Login** check box.
5. Click **OK** to continue.

To configure the Viz 3.x database using Viz Trio's configuration window

1. Start Viz Trio with the following target parameter: *-control*
2. Click the **Config** button (upper left) to open the Configuration Interface.
3. Select the **Viz Graphic Hub** section, and enter the following parameters:
   - Name server host, database, username, and password
4. Select the **Auto Login** check box.
5. Click **Apply** to save the settings, and exit the Configuration Interface.

The change of database is immediate, however, to see the change when importing scenes it might be necessary to refresh the *Import Scenes* view.

Note: If Auto Login is set using the Viz Config tool or Viz Engine login window (not Viz Trio) the Viz Trio *Viz Graphic Hub* configuration section will be disabled.

To configure the Viz 3.x database using Viz Trio’s target path

- Add the following parameters to Viz Trio\qs target path: *–vizdb <host>:<server>:<username>:<password>*

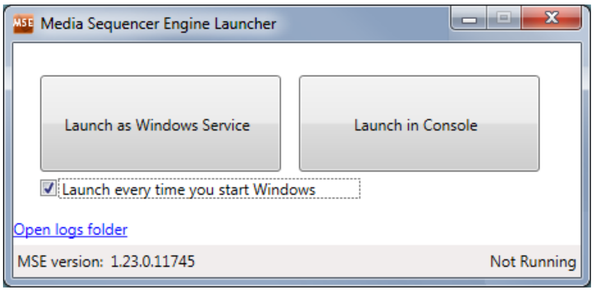
Note: Command line options will not override the database configuration if Auto Login is set using the Viz Config tool or Viz Engine login window (not Viz Trio), however, it will override settings configured using Viz Trio.

Tip: Check that the correct database is available when selecting Import Scenes.

See Also

- Requirements
- Graphics Data storage and backup recommendations
- *Viz Engine Administrator’s Guide*

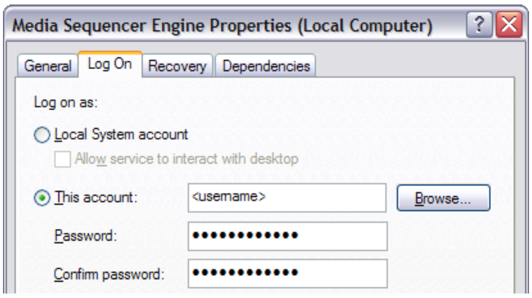
6.4 Configuring the Media Sequencer


Media Sequencer Engine Launcher
Launch as Windows Service
Launch in Console
☑ Launch every time you start Windows
Open logs folder

MSE version: 1.23.0.11745 Not Running

The Media Sequencer is a core component for managing shows and playlists.

The Media Sequencer can run in either service or console mode. It is generally recommended to run the Media Sequencer as a console application when installed on a server as this will enable a system administrator to monitor the application’s console. If the Media Sequencer is installed on the operator’s control PC/workstation it is recommended to run it as a service; however, mode selection also depends on the use. It is therefore recommended to run the Media Sequencer on a dedicated server for optimal performance.



Log on as:

○ Local System account

□ Allow service to interact with desktop

● This account: <username>

Password: ••••••••••••

Confirm password: ••••••••••••

When using Viz Content Pilot’s Oracle database an Oracle database client is needed. If the Media Sequencer is running as a service, it is recommended that the service logs on with a user account, and not with the default Local System account (SYSTEM). This is due to the fact that Oracle’s OCI library is installed per user, hence the System user is not able to read environment variables set for a user.

To allow the Media Sequencer service to log on with a user account

1. Open the **Administrative Tools** found under Windows’ Control Panel.
2. Open the **Services** window.
3. Right-click the **Media Sequencer** service, and on the appearing context menu, click **Properties**.
4. In the dialog box that appears, click the **Log On** tab.
5. Select the **This account** option, and enter the account information.
6. When done, click **OK**.

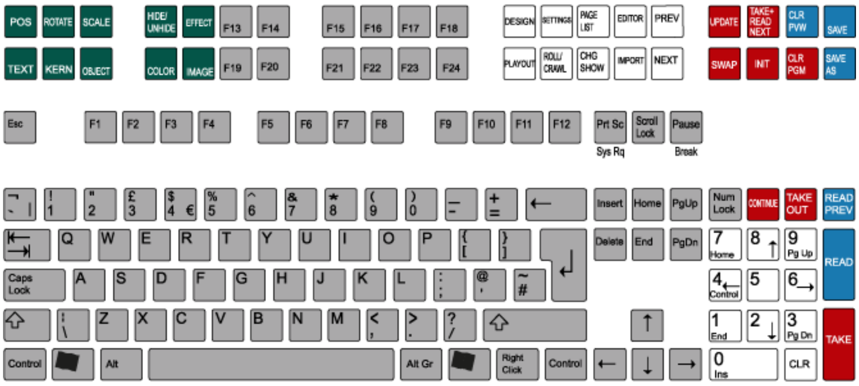
7 User Interface

This section describes the Viz Trio client’s user interface for playout. The Viz Trio client’s Designer and Configuration Interface is not described in this section.

This section contains information on the following topics:

7.1 Viz Trio Keyboard

Viz Trio is designed to be operated by mouse and keyboard or by keyboard only. In the explanation below, an overview of the Viz Trio keyboard is described. For users with the old Cherry keyboard, please refer to the Cherry Keyboard chapter.



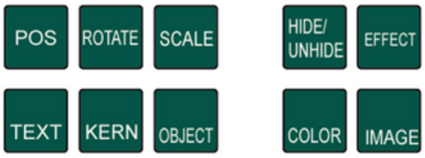
The keyboard contains two rows with extra function keys which have been assigned to different Viz Trio actions. The keyboard has its own configuration software. A Viz Trio configuration file must be loaded to create the correct keyboard map. In the Viz Trio client a keyboard mapping file must be imported to assign the correct actions to the keys. This is pre-installed on all Viz Trio clients, so normally these settings will not have to be changed.

For information on how to import a keyboard mapping file and assign shortcuts, see the Keyboard Shortcuts and Macros section.

This section contains information on the following topics:

- Editing Keys
- Navigation Keys
- Program and Preview Keys

Editing Keys



The green keys all perform editing operations. The current tab field must have the property of the key exposed for editing. If not, the key will have no effect and an error message will be written to the log file when the key is pressed.

- **POS**: Displays the position editor.
- **TEXT**: Displays the text editor.
- **ROTATE**: Displays the rotation editor.
- **KERN**: Displays the character kerning editor.
- **SCALE**: Displays the scaling editor.
- **OBJECT**: Displays the object pool where one can browse for 2D and 3D objects.

- **HIDE/UNHIDE**: Hides/shows the tab field.
- **COLOR**: Shows the pool of colors.
- **EFFECT**: Opens the Effect editor.
- **IMAGE**: Opens the Image pool.

Navigation Keys

DESIGN
SETTINGS
PAGE LIST
EDITOR
PREV
PLAYOUT
ROLL/ CRAWL
CHG SHOW
IMPORT
NEXT

The white keys allow a switch between different views and editors in the program.

- **DESIGN**: Opens Viz Trio in design mode displaying the designer tool user interface.
- **PLAYOUT**: Opens Viz Trio in playout mode displaying the playout user interface.
- **SETTINGS**: Displays the Show Settings dialog.
- **ROLL/CRAWL**: Opens the Scroll editor.
- **PAGE LIST**: Displays the Page List.
- **CHG SHOW**: Opens the Open Show window.
- **EDITOR**: Displays the Page editor.
- **IMPORT**: Opens the Import Scenes dialog.
- **PREV**: If extra page views are defined, this key shows the view above the one currently active, see the Add Page List View section.
- **NEXT**: If extra page views are defined, this key shows the view below the one currently active.

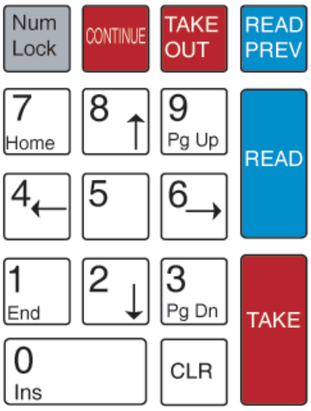
Program and Preview Keys

UPDATE
TAKE+ READ NEXT
CLR PVW
SAVE
SWAP
INIT
CLR PGM
SAVE AS

The red function keys all affect actions on the program channel. The blue keys all affect actions on the preview channel.

- **UPDATE**: When a change has been done to a page that is already on-air, hitting update will merge in the changes without running any animations. This is typically used for fixing typing errors. If a page is updated and Take is used instead of Update, all animation directors in the scene will be executed which normally creates an unwanted hard cut effect.
- **TAKE+ READ NEXT**: Takes the page currently read, and reads the next one in the list.

- **SWAP**: The swap key takes to air what is currently read and visible on the preview, and it takes off what is currently on-air and reads that page again.
- **INIT**: Initializes the current show on both the program and preview channel.
- **CLR PGM**: Clears all loaded content on the program channel.
- **CLR PVW**: Clears the preview channel.
- **SAVE**: Saves the page currently shown on the preview channel.
- **SAVE AS**: Saves the page currently shown on the preview channel to the page number typed in.

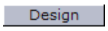


- **CONTINUE**: When a page halts at a stop point, hitting the Continue key will make the animation continue.
- **TAKE OUT**: If transition logic is used, the Take Out key will take out any page loaded in the layer that is currently read. If transition logic is not used, the Take Out key will perform a clear which will be a hard cut. To obtain a smooth out animation, the scene must be designed with a stop point and an out animation and the Continue key must be used to take out the page.
- **READ PREV**: Reads the previous page in the page list.
- **READ**: Reads the page currently highlighted by the cursor.
- **TAKE**: Performs a Take on the page that is currently read, and plays it out.

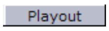
See Also

- Cherry Keyboard
- Page Editor

7.2 Playout and Design Mode

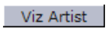


Selecting the Design button in the upper right corner, when in playout mode, will switch the user interface to design mode, displaying the Designer tool. Viz Trio provides a library of pre-defined design objects for easy creation of new scenes. The various design objects are grouped together in order to create more advanced graphics.

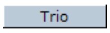


Click the Playout button (upper right corner of the Designer tool) to return to playout mode.

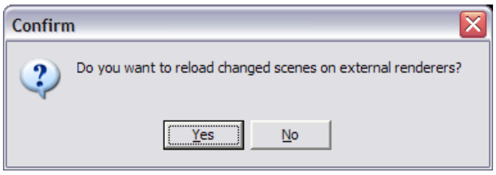
7.3 Viz Artist Mode



Viz Trio templates are based on scenes created in Viz Artist. By clicking the Viz Artist button, Viz Artist is started, opening the template’s scene that is currently loaded in Viz Trio’s preview window. In Viz Artist it is possible to edit the scene, and save the changes.



When in Viz Artist mode, Viz Artist will have a button labelled Trio in the upper right corner. Click the Trio button to return to Viz Trio.


Confirm

Do you want to reload changed scenes on external renderers?

When back in playout mode a confirmation dialog appears, asking if the page on the program and preview renderers should be reloaded. The template is reimported automatically.

7.4 On Air Mode

On the top bar to the right there is a button that takes Viz Trio on and off-air. When in on-air mode, the button is red.

7.5 Slave Mode

In the upper right corner of the Viz Trio client there is a Slave button. Click this button to enable slave mode. When in slave mode, the button is yellow. This means that any other Viz Trio client connected to the same Media Sequencer, which is not in slave mode, is in effect master.

A master will trigger the slaves to change the show folder when they change. This functionality typically make sense when the commands to change the folder are issued from a newsroom system, the newsroom system is then master.

To exit slave mode, press the button again.

7.6 Show Modes

Before version 2.11, Viz Trio supported two show modes; traditional shows where templates and pages were part of the same view, and Context-enabled Shows where templates and pages are split in two views. From version 2.11, Viz Trio only supports Context-enabled Shows.

This section contains informaiton on the following topics:

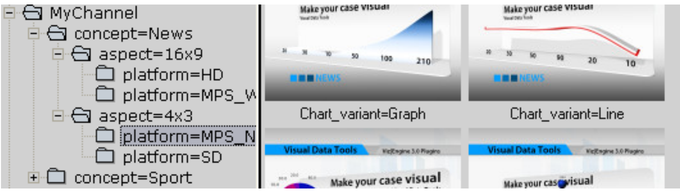
- Context-enabled Shows
- User-defined Contexts

7.6.1 Context-enabled Shows

A context-enabled show has the possibility to switch concepts and variants within a show. For example a News concept could be switched to a Sports concept. Within that concept there could be variants of a specific scene (e.g. lower and top third).

Graphics for all these variations must be made, but once they are available and imported into Viz Trio, they can literally be switched and played out by the touch of a button.

All variants of a scene, within a specific concept, will be shown as one template in Viz Trio’s Template List.



For a show to successfully use context-enabled scenes in Viz Trio, the folders and scene names in Viz must follow a certain naming convention, giving them properties and values for Viz Trio to recognize and use.

The conventions are as follows:

Type	Property		Name	Example

Concept (folder)	concept	=	<conceptname>	concept=<conceptname>
				concept=News
				concept=Sport
				concept=Weather

Context (folder)
User-defined
	<context>	=	<contextname>	<context>=<contextname>
				aspect=16x9
				aspect=4x3
				platform=HD
				platform=SD

Type	Property		Name	Example

Variant (file)	_variant	=	<variantname>	<scene>_variant=<variantname>
				banner_variant=Lower
				banner_variant=Top
				chart_variant=Graph
				chart_variant=Line
				adds_variant=Adds
				adds_variant=NoAdds
				weather_variant=3DayForecast
				weather_variant=1DayForecast

IMPORTANT! For the variants it is important to add an underscore "_" to separate the scene name from the variant’s keyword.

7.6.2 User-defined Contexts

Viz Trio supports the creation of user-defined contexts. The number of user-defined contexts are unlimited. However, user-defined contexts are only controllable through the Viz Trio commands command-line editor. The examples below show Viz Trio commands used with the user-defined contexts *Aspect* and *Platform*:

```
show:set_context_variable Aspect 16x9
show:set_context_variable Platform HD
show:set_context_variable X Y
```

Tip: User-defined contexts can be controlled using Viz Trio commands, which in turn can be used to create use-defined macro commands for use with scripts and shortcut keys.

See Also

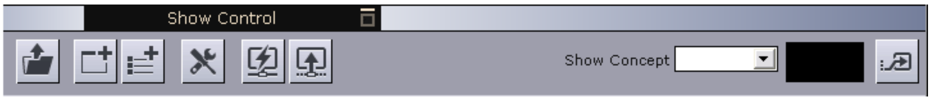
- Macro Commands and Events , and in particular the show commands.

7.7 Show Control

The Show Control user interface is used to manage the show before, during and after a show is taken on-air.

The Show control gives access to previous shows, Viz Content Pilot playlists, newsroom playlists and the possibility to create new shows and show playlists.

Note that there are differences between a show, show playlist and a playlist, especially in the way they are managed and monitored. This section and the following sub-sections will describe some of these differences.



The Show Control view contains several buttons that in turn opens different options. In short they can be described as such:

- **Change Show:** Displays the Show Directories pane.
- **Add Page View:** Opens the Add Page List View dialog box.
- **Create Playlist:** Opens the Create Playlist dialog box.
- **Show Settings:** Opens the Show Settings window.
- **Cleanup Renderers:** Cleans up all data on the renderer(s) (see the Cleanup Channels section).
- **Initialize:** Initializes the show on the renderer(s) (see the Initialize Channels section).
- **Show Concept:** Displays the show’s concept, for example Sport or News.
- **Callup Code:** Shows the callup code for the next page to be read from the page list.
- **Read Page:** Reads the page that has the callup code shown in the Page To Read window.

This section contains information on the following topcs:

- Show Directories
- Add Page List View
- Create Playlist
- Show Settings
- Cleanup Channels
- Initialize Channels
- Show Concept
- Callup Page

7.7.1 Show Directories

Clicking the **Change Show** button displays the Show Directories view.

A Shows tab and a Playlists tab are displayed by default. However, for compatibility with previous Viz Trio versions, a Viz Directories view is also available.

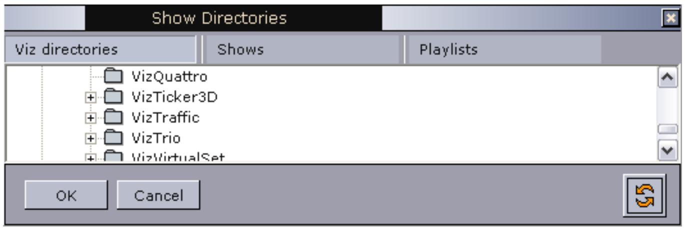
This section contains information on the following topics:

- Viz Directories
- Shows
- Context Menu
- Import Show
- Export Show
- Playlists Playlists Import Show Export Show To create a show folder To create a new show To import an exported show

Viz Directories

The Show logic is the recommended way of organizing pages. However, it is also possible to set the path by choosing a Viz Artist folder for each show. To do this, choose the **Viz directories** tab below the Show Directories heading.

> **Note:** The Viz directories tab is by default disabled. Open the Configuration, and in the User Interface/User Restrictions section enable *Browse viz directories when changing shows*.



When the Viz Artist folder is set and pages are imported, a show folder with the same path and name will be created in the Shows view. To keep using the Viz Artist directory workflow, where each show is tied to a Viz Artist folder, simply ignore the Shows view.

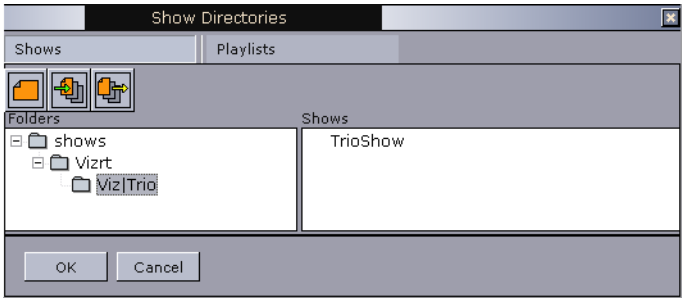
It is possible to switch at anytime to using the Shows view logic. However, after creating show folders with paths that differ from the Viz Artist scene data structure, and where there is more than one show per folder, these shows can only be accessed using the Shows view.

Shows

Before version 2.11, Viz Trio supported two types shows; the traditional show with scene- and transition-logic based templates, and the type of show that also is context-enabled which categorizes the same templates in concepts with variants of the same template or scene. From version 2.11, Viz Trio only supports Context-enabled Shows. Shows also has the possibility to create a Create Playlist in order to playout pages in a carousel like manner.

All scenes added to a show are added to the Templates list.

A show folder is used to organize shows that for instance belong to a certain show or production. Scenes from the whole Viz Artist scene tree can be imported into a show.



The two panes, Folders and Shows, have context menus that provide some options for show management.

The buttons are used for creating new shows, and to import and export shows. The Import and Export Show buttons allow a show to be exported or imported with all Viz Artist archives, Viz Trio pages, page views, local macros and key bindings, database setups, script units and so on.

Context Menu

Folders pane:

- **Add folder:** Creates a new show folder at any level in the tree structure.
- **Rename folder:** Renames any folder at any level in the tree structure.
- **Delete folder:** Deletes any folder at any level in the tree structure.

Caution: Export or delete all shows and sub-folders before deleting a root folder.

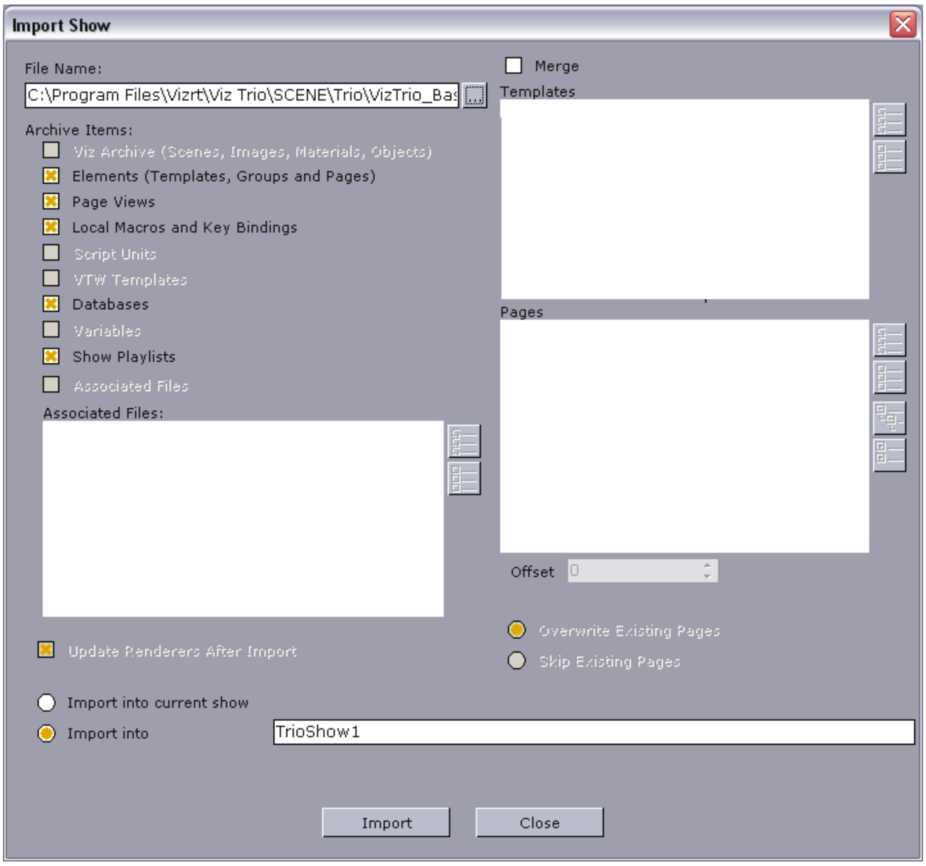
Shows pane:

- **Rename Show:** Renames an existing show.
- **Create Show:** Creates a new show.
- **Delete Show:** Deletes an existing show.
- **Export Show:** Exports an existing show. Selecting this option opens the Export Show window.

It is possible to **move a show** to a different Show folder by drag and drop. Select a show and drag and drop it into the new folder location.

Import Show

Clicking the Import show button opens the Import Show dialog.



Import Show

File Name: C:\Program Files\Vizrt\Viz Trio\SCENE\Trio\VizTrio_Ba:

Archive Items:

- □ Viz Archive (Scenes, Images, Materials, Objects)
- ☒ Elements (Templates, Groups and Pages)
- ☒ Page Views
- ☒ Local Macros and Key Bindings
- □ Script Units
- □ VTW Templates
- ☒ Databases
- □ Variables
- ☒ Show Playlists
- □ Associated Files

Associated Files:

☒ Update Renderers After Import

○ Import into current show

● Import into TrioShow1

□ Merge

Templates

Pages

Offset 0

● Overwrite Existing Pages

○ Skip Existing Pages

If importing a non context-enabled show, created when working with previous Viz Trio versions, a dialog will apper during import, asking if the show should be converted into a context-enabled show type. When confirming this question, the show will automatically be converted to context-enabled upon import.

- **File name:** Sets the path to the show to be imported. When clicking the browse button, a browse dialog opens allowing a show file (*.*trioshow*) to be selected.
- **Archive Items:** For details, see the Export Show section.
- **Update Renderers After Import:** Reloads all scenes on the renderers.
- **Import into current show:** Imports templates and pages into the current show.
- **Import into:** Imports templates and pages into a specified, suggested, or new show.
- **Merge:** When checked, this option will merge templates and pages into the existing show.
- **Templates:** Lists all templates in the file.
    - **Select all (button):** Selects all templates.
    - **Deselect all (button):** Deselects all templates.
- **Pages:** Lists all in the file.

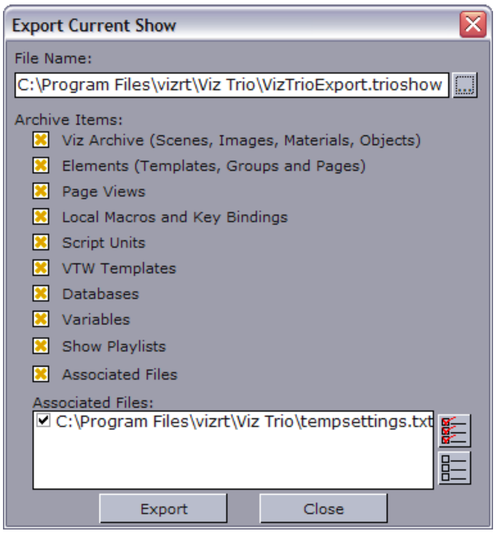
- **Select all (button):** Selects all pages.
- **Deselect all (button):** Deselects all pages.
- **Expand all (button):** Expands all nodes.
- **Collapse all (button):** Collapses all nodes.

- **Offset:** Sets the numeric value used for pages that are imported with offset values. If a page has callup code 1000, and the offset is 100, the new code will be 1100. Note that only pages can be merged with an offset.
- **Overwrite Existing Pages:** If the callup codes already exists in the show, the pages will be overwritten by the imported pages.
- **Skip Existing Pages:** If callup codes already exists in the show, the pages will not be overwritten by the imported pages.

Note: The default is to import all elements present in the show archive.

Export Show

Clicking the Export show button opens the Export Current Show dialog.



Export Current Show

File Name:

C:\Program Files\vizrt\Viz Trio\VizTrioExport.trioshow

Archive Items:

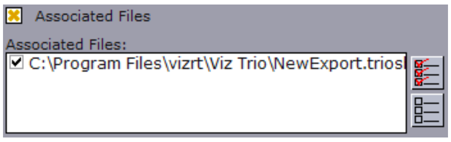
☒ Viz Archive (Scenes, Images, Materials, Objects)
☒ Elements (Templates, Groups and Pages)
☒ Page Views
☒ Local Macros and Key Bindings
☒ Script Units
☒ VTW Templates
☒ Databases
☒ Variables
☒ Show Playlists
☒ Associated Files

Associated Files:

☑ C:\Program Files\vizrt\Viz Trio\tempsettings.txt

- **Viz archive (scenes, images, materials, objects)**: Viz Engine archives should normally be included in an export. An exception is when the export is done to the same data root, or a data root with the same structure and content as the one exported from.
- **Elements (templates, groups and pages):** Includes all the show's templates, groups and pages.
- **Page views**: Maintains the show's page view organization.
- **Local macros and key bindings**: Includes the show's macro and key shortcut specifications (see the Show Settings sections).

- **Script units**: Includes the show's script units that are stored on the Media Sequencer (show scripts). File scripts must be added manually to *Associated files* (see the Show Settings section).
- **VTW** Templates: Includes the show's Viz Template Wizard templates.
- Databases: Includes the show's database setups.
- **Variables:** Includes the show's stored variables (for example a counter) and their intermediate information (see the Show Variables section).
- **Show Playlists:** Includes the show playlists that are created as part of the Viz Trio show, hence, this is not related to Viz Content Pilot and newsroom playlists.


☒ Associated Files

Associated Files:

☑ C:\Program Files\vizrt\Viz Trio\NewExport.trios

- **Associated Files:** Includes the show's associated files (see the Show Settings section).
  - **Select all (button):** Selects all associated files.
  - **Deselect all (button):** Deselects all associated files.

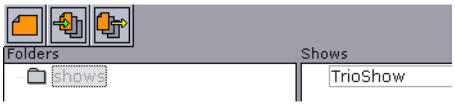
Note: The export file extension is *.trioshow.

To create a show folder

1. Click the **Change Show** (folder) button to open the Show Directories view, and click on the **Shows** tab.
2. Right click the Folders pane, and from the appearing context menu select **Add folder**.

To create a new show

1. Click the **Create show** button, or right-click the shows pane area and select **Create Show** on the appearing context menu.



2. Enter a name for the new show in the appearing text field.
3. Double-click the new entry in the show pane to open the show.

To import an exported show

1. From the Viz Trio main user interface, click the Change Show button.
2. In the Show Directories view under the Shows tab, click the Import Show button to open the **Import Show** dialog.
3. Browse for the show which is saved as a *.*trioshow* file.
   - When the file is selected the dialog will enable the archived elements.

4. Select the elements of the archive to import.
5. Select if the show should be merged into an existing show.
    - If the show is to be merged, select the templates and pages to import.
    - Set the page offset if pages are not to merged with pages using the same call-up code range.
    - Select whether to overwrite existing pages or to skip existing pages. This only has an effect on pages with the same callup code.
6. Select if the show should be imported into the current show or a new location.
7. Click the Import button to start the import.

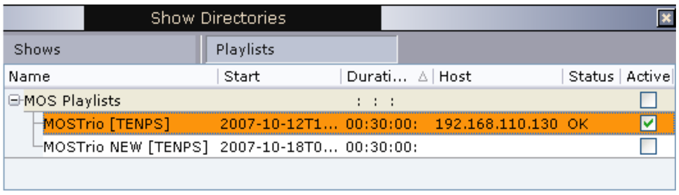
To export the current show

1. From the Viz Trio main user interface, click the Change Show button.
2. In the Show Directories view under the Shows tab, click the Export Show button to open the **Export Current Show** dialog.
3. Enter a filename for the archive.
4. *Optional*: Select what to include in the exported archive. By default all options are selected.
5. *Optional*: Browse and select a folder where the archive will be stored. The folder last used is selected as default.
6. Click the Export button to start the export.

IMPORTANT! The show being exported must be loaded in Viz Trio.

Playlists

The Playlists tab allows the operator to open a Viz Content Pilot (VCP) and/or newsroom playlist. With a VCP or newsroom system integration, Viz Trio can be used to playout VCP and newsroom elements.



Name	Start	Durati...	Host	Status	Active
⊟MOS Playlists		: : :			□
MOSTrio [TENPS]	2007-10-12T1...	00:30:00:	192.168.110.130	OK	☑
MOSTrio NEW [TENPS]	2007-10-18T0...	00:30:00:			□

- **Name:** Shows the names of the playlists provided by the newsroom control system.
- **Start**: Specifies the start time of the various playlists.
- **Duration**: Shows the duration of each playlist.
- **Host**: Indicates the host of a determined playlist.
- **Channel ID**: Shows the ID of the channel assigned to a playlist.
- **Status**: Indicates a playlist’s current state.
- **Active**: Indicates the currently active playlist.

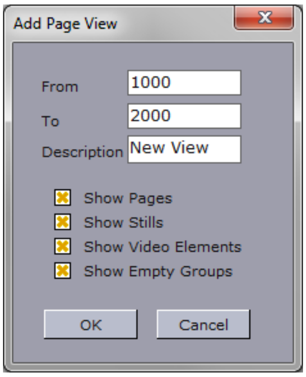
Note: Newsroom playlists are by default read only; however, there is a Import/Export Settings setting that can be disabled to allow editing of MOS playlists.

See Also

- Playlist Modes
- VCP Database
- MOS

7.7.2 Add Page List View

Clicking the **Create page view** button adds a filtered Page List view. There are no limits to the number of Page List views.



Add Page View

From 1000

To 2000

Description New View

☒ Show Pages
☒ Show Stills
☒ Show Video Elements
☒ Show Empty Groups

When a new view is created, a callup code range must be specified (for example 1000 to 2000). All pages within that range will be displayed in the new view. The original views, such as the template and/or page list, remain unchanged. The additional views are filtered views of the main view.

Note: The traditional show view will also list templates in the filtered Page List view.

7.7.3 Create Playlist

Clicking the **Create Playlist** button creates a show playlist that can be filled with Viz Trio pages, Viz Content Pilot and newsroom data elements.

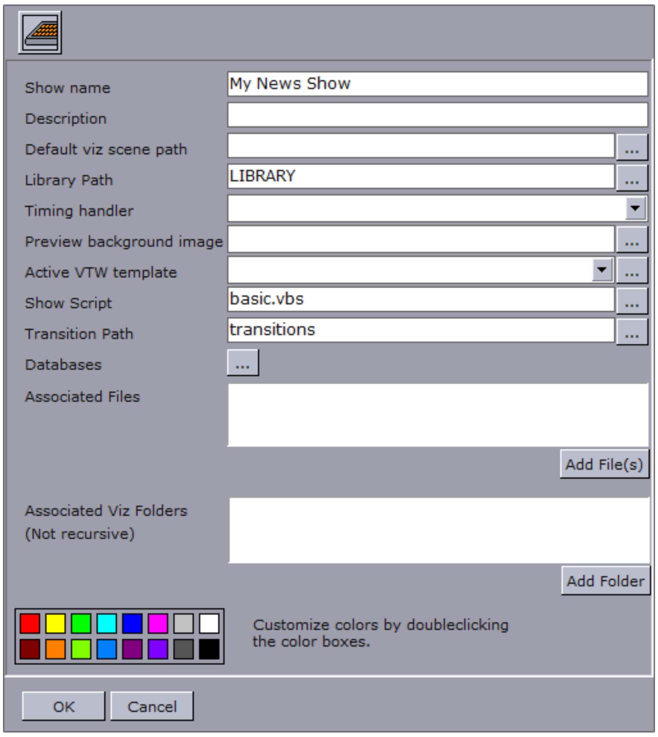
To create a show playlist

1. Click the **Create Playlist** button, and in the dialog that opens, enter a playlist description.
2. Drag pages from the current show to the Show Playlist.

See Also

- Playlist Modes

7.7.4 Show Settings



Show name	My News Show
Description	
Default viz scene path	
Library Path	LIBRARY
Timing handler	
Preview background image	
Active VTW template	
Show Script	basic.vbs
Transition Path	transitions
Databases	
Associated Files	
Associated Viz Folders (Not recursive)	

Customize colors by doubleclicking the color boxes.

- **Macros for current show (button)**: Opens the Macros for Current Show editor that allows macro commands and scripts to be assigned to keyboard shortcuts for the current show only. Show-specific macros or scripts should be saved here. For global commands, see the Keyboard Shortcuts and Macros section.
- **Show name**: Name of the show.
- **Description**: Description of the show.
- **Default Viz scene path**: Default Viz Engine path for imported scenes.
- **Library Path:** Sets the library path used by the Viz Trio Designer (see Resources).
- **Timing handler**: When a time code card is installed, a time code handler can be set (see the Time Codes section).
- **Preview background image**: Sets the image path for the preview background image. For more information about preview modes, see Preview modes RGB, Key and RGB with background image.
- **Active VTW template**: Sets a Viz Template Wizard template to be used for the current show. Clicking the browse button opens the VTW Templates:

Current Show window. From this window templates can be imported, exported or removed. When a template is set for a show it is displayed as part of the Show Control.

Note: For information on how to export Viz Content Pilot templates, see the *Viz Content Pilot User’s Guide* or *Viz Template Wizard User’s Guide*.

- **Show Script**: Sets a show script that acts as a global script for all templates and pages.
- **Transition Path**: Configures the show’s transition effects’ scene path. Effects are set per page.
- Databases (ellipse button): Opens the Database Config editor that allows you To create a new database connection for linking tab fields to values in a database or file (e.g. Microsoft Excel and Unicode Support).
  - In early versions of Viz Trio there was only support for database linking of text properties. It was possible to link a value of a single text property to one cell within a spreadsheet. This is called **scalar linking** as it is only possible to hold one value at a time.
  - In more recent versions of Viz Trio table properties were added, and introduced the concept of **table linking**, where the contents of the table property were linked to the contents within a Microsoft Excel spreadsheet. Thus it is possible to link several rows or columns at once.
  - It\qs important to understand the principle difference between the two as they manifest in different versions of the database link editor (see the Database Linking section).
- **Associated Files:** Displays a list of associated show files, for example video and audio clips to the show. The files are saved with the show when it is exported.
  - **Add File:** Opens a Windows file browser to browse for and add a file to the current Show Settings.
  - **Delete File(s):** Removes the selected file from the current Show Settings.
  - **Delete All:** Removes all associated files from the current Show Settings.
- **Associated Viz Folders (not recursive):** Displays a list of associated show folders. The files are saved with the show when it is exported. When imported it is imported as part of the *Viz archive* option.
  - **Add Folder:** Opens a Viz Engine browser to browse for and add scene, image, geom, material or font folders to the current Show Settings.
  - **Delete Folder:** Removes the selected folder from the current Show Settings.
  - **Delete All:** Removes all associated folders from the current Show Settings.
- **Customize colors by doubleclicking the color boxes:** Double-click on the color boxes to customize show specific character colors (see also how To edit the text color).

This section contains information on the following topics:

- To open show settings
- To set the transition effects path
- To create a new database connection
- To edit a connection
- To remove a connection

To open show settings

- Click the **Show settings** button.

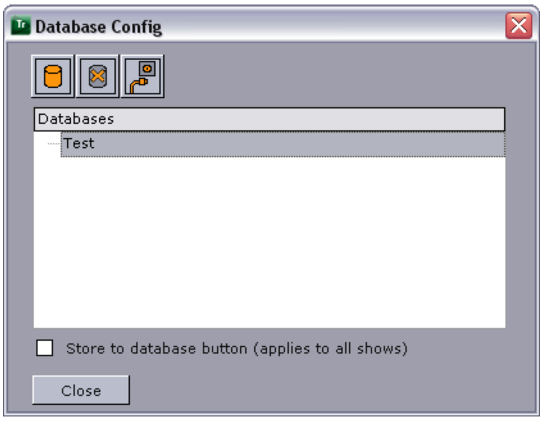
To set the transition effects path

1. Click the **Show Settings** button to open the Show Settings pane.
2. Click the **ellipse** (...) button next to the **Transition Path**.
3. Search Viz for the **transitions** effects folder, and click **OK**.
4. Click **OK** to close the Show Settings window.

Note: The effects folder should ideally be placed according to the Viz Content Pilot preferences which is at the root of the Viz database.

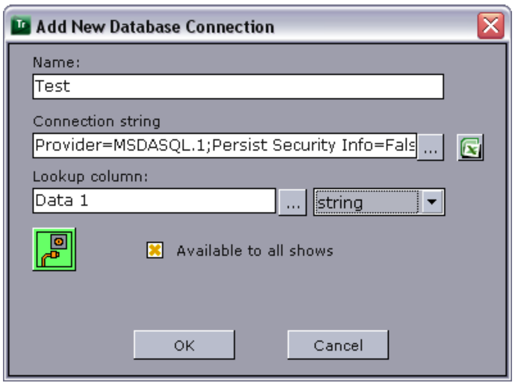
To create a new database connection

1. Click the Databases settings’ ellipse (...) button in the **Show Settings** section to open the Database Config.



☐ Store to database button (applies to all shows)

2. Click **Add database** to open the Add New Database Connection window.



Add New Database Connection

Name: Test

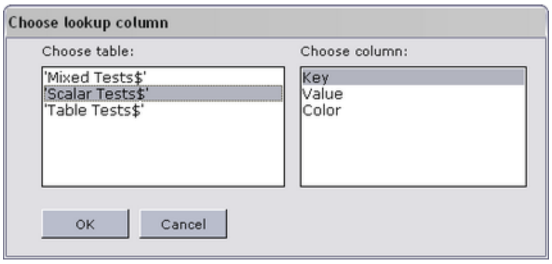
Connection string: Provider=MSDASQL.1;Persist Security Info=Fals

Lookup column: Data 1 — string

☒ Available to all shows

3. Enter a **Name** for the connection and select one of the following options:
4. *Option 1*: OLE DB
    1. Click the **Connection string**’s ellipse (**...**) button to configure the Data Link Properties
    2. Select an **OLE DB** provider, and click **Next**.
    3. Add the connection parameters.
    4. Click the **Test Connection** button.
5. *Option 2*: Microsoft Excel
    - Click the **Microsoft Excel** button to use a spreadsheet. Note that configuring an Excel spreadsheet will automatically set the correct provider.
6. Click the **Test connection** button.
7. Click the **Lookup column**’s ellipse (...) button to **choose lookup column**.

Note: When clicking the Lookup column’s ellipse (...) button, if connection parameters are correct, the connection button will turn green.



Choose lookup column

Choose table:
'Mixed Tests$'
'Scalar Tests$'
'Table Tests$'

Choose column:
Key
Value
Color

8. *Optional*: Select if the lookup column type should be string or integer.

Note: Specifying the lookup column is only necessary in scalar linking cases.

> **Note:** A Microsoft Excel spreadsheet column is used to match a key value in order to select the scalar value for the text property. For table linking it can be left blank.

9. Specify if the database should be Available to all shows.
   - **Available to all shows**: Shows/pages that are exported and imported into other shows will also import the Excel file and database link settings.
10. Click **OK** to save the database connection.

To edit a connection

- Double-click the database connection to open the **Edit Database Connection <name>** window.

To remove a connection

- Click the **Delete Database** button in the configuration dialog.

See Also

- Page Editor section on Database Linking
- Keyboard Shortcuts and Macros
- Macro Language
- Macro Commands and Events
- Scripting

7.7.5 Cleanup Channels

This function clears all loaded graphics from memory on the program and preview renderers for the output profile currently in use. It should be used before initializing a new show or in order to re-initialize the same show into the renderer’s memory.

> **Note:** Cleanup commands will affect all Viz Trio clients that are connected to the same Media Sequencer, and using the same output profile.

See Also

- Initialize Channels
- Macro Commands
  - trio:cleanup_channel

  - trio:cleanup_renderers

7.7.6 Initialize Channels

The **Initialize** button loads the current show's graphics on the preview and program renderers.

> **Note:** In case of transition logic scenes, the state of background scenes will be reset.

Initialize does not refresh everything (it performs a load, not a reload on the Viz Engine). If changes have been made to a scene that was already loaded, a Cleanup renderer command must be issued, and thereafter an Initialize command.

When initializing a show the Initialize button in the user interface changes color to yellow to indicate that the initialization process is running. When it is finished loading scenes to the renderer the button changes to a green color.

Several shows can be initialized if necessary. After having initialized the first, another show can be switched to and initialized. The graphics for the first one will still be there, ready for use.

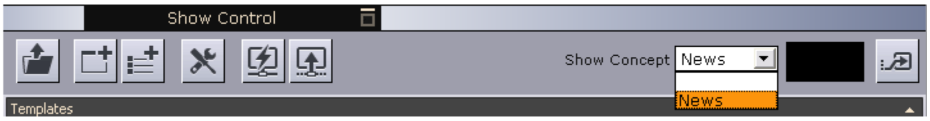
When initializing shows that require a lot of memory, please take the memory use on the program and preview renderers into consideration when loading the graphics. Too much graphics on the renderer(s) will use up all physical memory, causing the performance to drop below real-time, which in turn may cause the renderer(s) to become unstable.

> **Note:** Initialize commands will affect all Viz Trio clients that are connected to the same Media Sequencer, and using the same output profile.

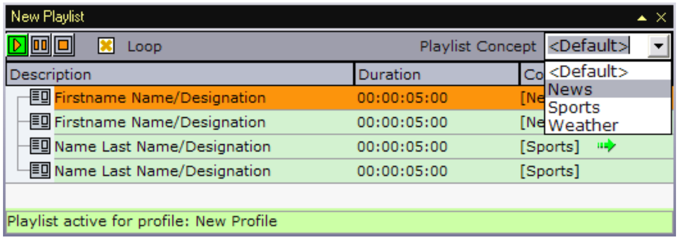
See Also

- Cleanup Channels
- Macro Commands
  - trio:initialize_show_or_playlist

7.7.7 Show Concept



A concept can be switched directly from the Show Control. It is also possible to switch concepts using context variables in a macro or a script.



New Playlist

Playlist Concept <Default>

Description	Duration	Co
Firstname Name/Designation	00:00:05:00	[Ne
Firstname Name/Designation	00:00:05:00	[Ne
Name Last Name/Designation	00:00:05:00	[Sports]
Name Last Name/Designation	00:00:05:00	[Sports]

Playlist active for profile: New Profile

Switching concepts for a show’s playlist is done in the same way as for a show; however, they can also be switched independently. Concept **<Default>** refers to the concept the page was saved with.

See Also

- Show, Context and Tab-field Commands

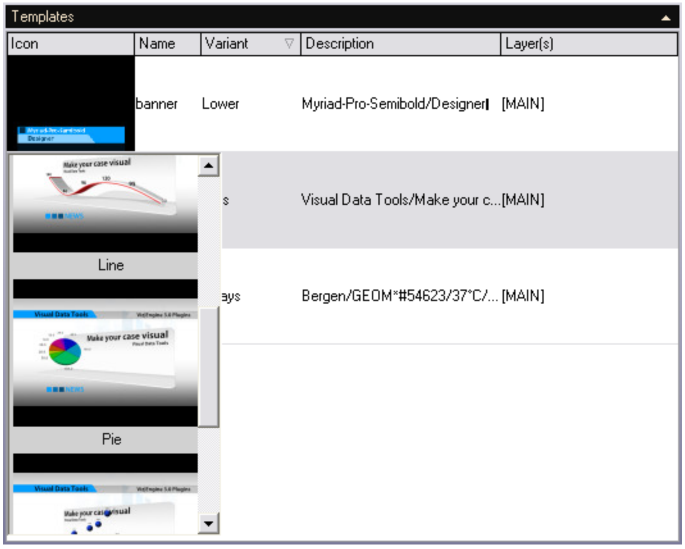
7.7.8 Callup Page

Part of the show control is a field and a button used for selecting and reading specific pages. When the pages are read, they are also opened in the Page Editor.

To read a page

- Enter the page’s **callup code** (number) using the keyboard’s **numeric pad**, and press the **plus (+)** key or the Read Page button to read the page.

7.8 Template List



Templates

Icon	Name	Variant	Description	Layer(s)
	banner	Lower	Myriad-Pro-Semibold/Designer	[MAIN]
		s	Visual Data Tools/Make your c...	[MAIN]
		ays	Bergen/GEOM*#54623/37°C/...	[MAIN]

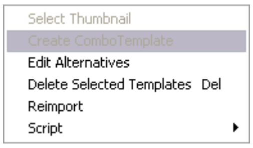
The Template List, unlike the traditional Page List, only contains templates. A separate Page List contains the pages derived from the templates.

Template variants can be switched directly from the Template List and Page List, or from the Page Editor. As with concepts, variants can also be switched using a macro command in a user-defined macro or a script.

This section contains information on the following topics:

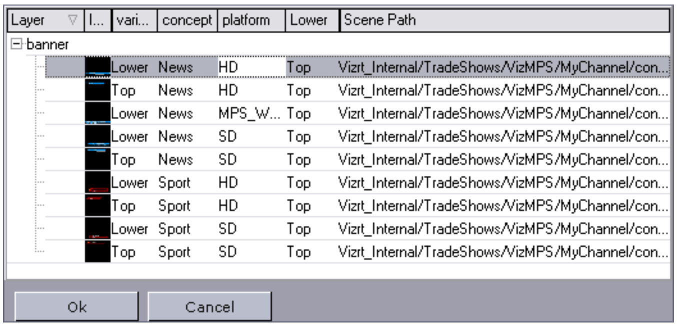
- Context Menu
- Columns
- Combination Templates
- To create a combination template

Context Menu



The Template List has its own context menu for creating combinations of templates, assigning scripts and so on.

- **Select Thumbnail:** Use this option to select which thumbnail to show for the template.
- **Create ComboTemplate:** Opens the Combo Template Editor, from where it is possible to create a combination template that contains all selected templates. This is only relevant for transition logic templates. All templates that are to be merged into a Combination Templates must be in different transition logic layers.



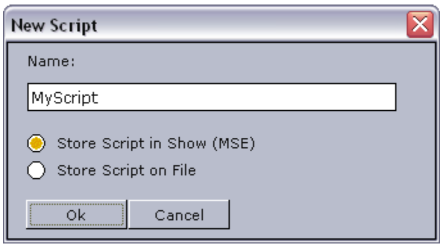
Layer	I...	vari...	concept	platform	Lower	Scene Path
banner						
		Lower	News	HD	Top	Vizrt_Internal/TradeShows/VizMPS/MyChannel/con...
		Top	News	HD	Top	Vizrt_Internal/TradeShows/VizMPS/MyChannel/con...
		Lower	News	MPS_W...	Top	Vizrt_Internal/TradeShows/VizMPS/MyChannel/con...
		Lower	News	SD	Top	Vizrt_Internal/TradeShows/VizMPS/MyChannel/con...
		Top	News	SD	Top	Vizrt_Internal/TradeShows/VizMPS/MyChannel/con...
		Lower	Sport	HD	Top	Vizrt_Internal/TradeShows/VizMPS/MyChannel/con...
		Top	Sport	HD	Top	Vizrt_Internal/TradeShows/VizMPS/MyChannel/con...
		Lower	Sport	SD	Top	Vizrt_Internal/TradeShows/VizMPS/MyChannel/con...
		Top	Sport	SD	Top	Vizrt_Internal/TradeShows/VizMPS/MyChannel/con...

- **Edit Alternatives:** Opens a dialog for viewing scene information, such as concept, variant, user-defined contexts (platform) and scene path, associated with a template.
- **Delete Selected Templates:** Deletes a template, or templates, from the Template List.
- **Reimport**:: Updates any scenes that have been changed.
- **Script:** Includes all script related options:

- **Edit Show Script:** Opens the **Choose Show Script** window, where it is possible to edit the script assigned to the show.

Tip: The Choose Show Script window can also be opened by selecting Edit Show Script from the Page Editor drop-down menu, or by clicking the Show Script browse button in the Show Settings window. See also To assign a script to a show.

- **Assign Script:** Assigns a script to a template. It is not possible to assign scripts to pages. A page references the template script.


New Script

Name:

MyScript

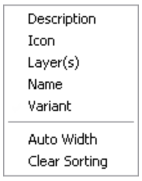
● Store Script in Show (MSE)

○ Store Script on File

- **New:** Creates a new blank script. The script can be saved to a local or shared repository, or to the Media Sequencer.
  - **File:** Clicking the Browse ... button opens a file browser on the local computer. This menu also includes a list of the names of the scripts already assigned to the selected template.
  - **Show:** Selects scripts placed on the Media Sequencer.
  - **Clear:** Clears the assigned script.

Note: To edit the show script, see the Scripting section.

Columns



- **Description:** Shows the contents of the template tab fields.
- **Icon:** Shows the thumbnail image of the scene.
- **Layer(s):** Shows which layer, [FRONT], [MAIN], [BACK], the scene belongs to.
- **Name:** Shows the name of the template.
- **Variant:** Shows the variants for the template. For example lower, top and full screen.
- **Auto Width:** Adjusts the column width automatically.
- **Enable Sorting:** Toggles the ability to sort by column on/off.

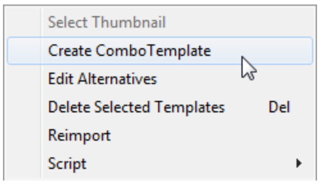
- **Clear Sorting:** Clears any sorting performed by the user when clicking the column headers.

Combination Templates

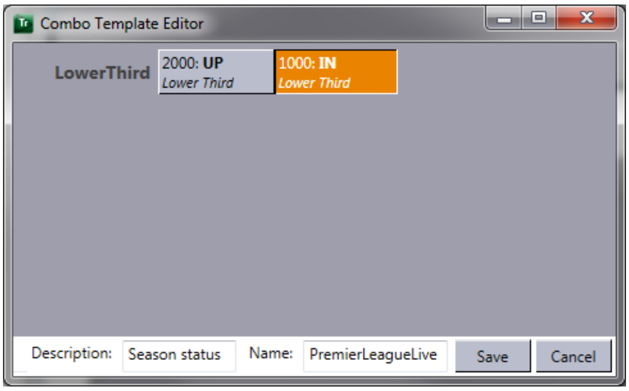
A combination template can only be created using transition logic templates. In order to create a combination template, the templates must be in different layers (view Layer information in the see the Template List’s Columns or the Page List’s Columns).

To create a combination template

1. Right-click a transition logic template in the Template List.



2. From the context menu that appears, click **Create ComboTemplate**.



Description: Season status Name: PremierLeagueLive

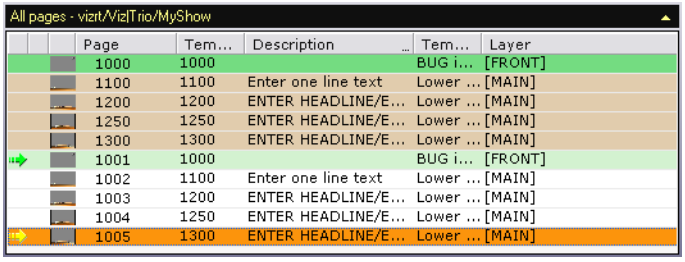
3. In the Combo Template Editor that opens:
   - Select the layers/states that should be activated for this combo template (only one state per layer can be selected).
   - Enter a **Description**.
   - Enter a **Name** (no space is allowed in the combo template name).
   - Click the **Save** button.

See Also

- Template list Context Menu and Columns
- Page list Context Menu and Columns

7.9 Page List

Non context-enabled page list

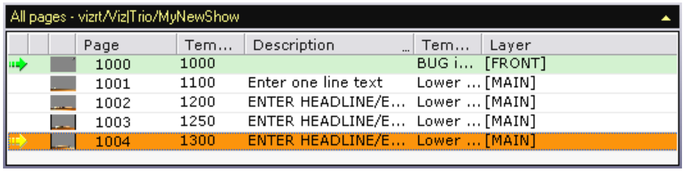


All pages - vizrt/VizITrio/MyShow

	Page	Tem...	Description	Tem...	Layer
	1000	1000		BUG i...	[FRONT]
	1100	1100	Enter one line text	Lower ...	[MAIN]
	1200	1200	ENTER HEADLINE/E...	Lower ...	[MAIN]
	1250	1250	ENTER HEADLINE/E...	Lower ...	[MAIN]
	1300	1300	ENTER HEADLINE/E...	Lower ...	[MAIN]
➡	1001	1000		BUG i...	[FRONT]
	1002	1100	Enter one line text	Lower ...	[MAIN]
	1003	1200	ENTER HEADLINE/E...	Lower ...	[MAIN]
	1004	1250	ENTER HEADLINE/E...	Lower ...	[MAIN]
➡	1005	1300	ENTER HEADLINE/E...	Lower ...	[MAIN]

The traditional Page List shows the list of accessible templates and pages. They are all identified by a number and a description. The description is by default the values of the template or page’s items and tab fields, separated by a slash.

Context-enabled page list



All pages - vizrt/VizITrio/MyNewShow

	Page	Tem...	Description	Tem...	Layer
➡	1000	1000		BUG i...	[FRONT]
	1001	1100	Enter one line text	Lower ...	[MAIN]
	1002	1200	ENTER HEADLINE/E...	Lower ...	[MAIN]
	1003	1250	ENTER HEADLINE/E...	Lower ...	[MAIN]
➡	1004	1300	ENTER HEADLINE/E...	Lower ...	[MAIN]

A Context-enabled page list contains pages and no templates. However, all features are the same, except the ones that are specific to templates which are now placed in the Template List’s context menu.

Template variants can be switched directly from the Template List and Page List, or from the Page Editor. As with concepts, variants can also be switched using a macro command in a user-defined macro or a script.

A page can be played out from a page list or from a show playlist. The page list can play its pages one by one. A show playlist has the option of creating a carousel, playing the items like a scheduled playlist. It can also be looped.

Pages are edited using the Page Editor Controls , and its available editors. Most page editors are made available to the operator by the scene designer through exposed scene properties within the scene. Others, like a database connection, are made available through the Show Settings window or by using more advanced features such as Macro Commands and Events.

This section contains information on the following topics:

- Context Menu
- Columns
- Create Groups
- Colors
- Channel Not Found

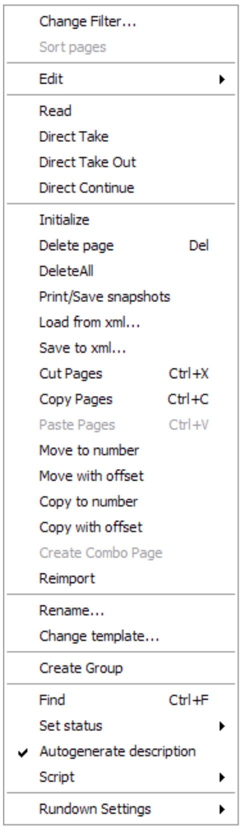
- Manually Sorting Pages
- Time Codes
- Arm and Fire
- To create a page
- To read a page
- To edit a page
- To take pages on-air
- To delete a page
- To save to XML ...
- To load from XML...
- To select a variant from the page list

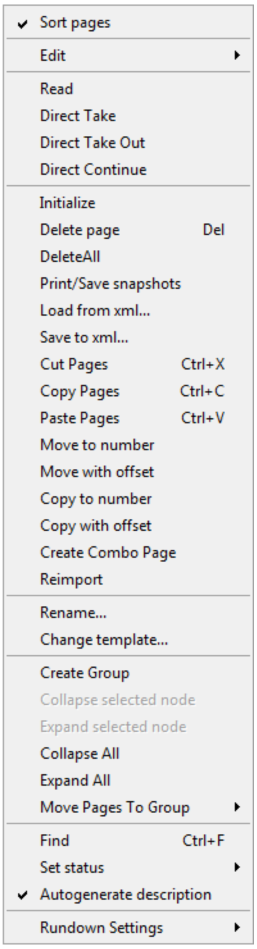
Context Menu

A right-click on any element in the page list activates the context menu. Select a menu item to perform an action or define a setting for a template or a page. The traditional Page List contains both templates and pages. Thus, some changes to settings in the traditional Page List can only be made to templates and others only to pages. This is explained in the list below.

Note: Clicking an image icon will open a drop-list of available template variants.

The following images shows the traditional page list (left), and the new page list (right):





Note: The menu options Create Combo Page and Script are now part of the Template List ’s context menu.

The items have been moved because template combinations can only be made using templates, and scripts can only be assigned to templates. The latter is due to the fact that pages reference scripts, just as a page references a template. Hence, pages cannot be assigned a script or create combinations of pages. Template scripts can be edited by opening a page and clicking the Edit script button in the Page Editor. However, this will change the behavior of all pages that reference the same script.

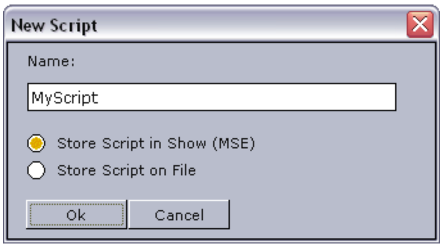
- **Change Filter ...:** Changes the Page List filter. This menu option is enabled when a Page List filter is created, see the Add Page List View section.
- **Sort pages:** When enabled, the page list will be sorted according to the column being selected. When disabled, it is possible to drag and drop pages freely to create other page orders.
- **Edit:** Opens a submenu for page (not template) description editing.
- **Read:** Performs a read on the selected template or page.

- **Direct Take:** Performs a direct take on the selected page.
- **Direct Take Out:** Takes out the selected page, or any that is loaded in the same transition logic layer as the selected page.
- **Direct Continue:** Continues the animation on the selected page, or any that is loaded in the same transition logic layer as the selected page.
- **Initialize:** Loads the selected page(s) on the program and preview renderer.
- **Delete page:** Deletes the selected page(s).
- **Delete All:** Deletes all pages in the page list.
- **Print/Save snapshots:** Opens a dialog box where snapshots can be taken and either being saved to file or sent to a printer.
- **Load from XML:** Imports a page list from an XML file (see To load from XML...).
- **Save to XML:** Saves the selected pages to an XML file (see To save to XML ...).
- **Cut Pages (CTRL+X)**: Cuts the given page(s) to the clipboard.
- **Copy Pages (CTRL+C)**: Copies the given page(s) to the clipboard.
- **Paste Pages (CTRL+V)**: Pastes the given page(s) from the clipboard to the current show.
- **Move to number:** Moves a page, or pages, to a given callup number. For example pages 1001 and 1002 that are moved to number 2000 will restart the numbering of the pages and give them the callup codes 2000 and 2001.
- **Move with offset:** Moves a page, or pages, with a given offset. For example pages 1001 and 1002 with offset 100, will move pages and give them the new callup codes 1101 and 1102.
- **Copy to number:** Copies a page, or pages, to a given callup number. For example pages 1001 and 1002 that are copied to number 4000 will restart the numbering and give the copied pages the callup codes 4000 and 4001.
- **Copy with offset:** Copies a page, or pages, with a given offset. For example pages 1001 and 1002 with offset 10, will create page copies with callup codes 1011 and 1012.
- **Create Combo Page:** Creates a combination template that contains all selected transition logic templates of foreground scenes. This menu option is only enabled for transition logic templates. All templates that are to be merged into a combination template must be in different transition logic layers (see the Template List section for the Create Combo Template menu option).
- **Reimport:** Re-imports the selected page.
- **Rename:** Sets a new name for the page. It is possible to disable this option from the User Restrictions section of the Configuration.
- **Change template:** Opens the Change Template dialog box.
- Set external c**ursor:** Sets the global cursor to the selected template or page. This setting is related to GPI or Automation setups.

- Clear external curs**or:** Clears the current global cursor.
- **Create Group:** Creates a group node in the page list.

> **Note:** The external cursor option must be enabled in the Configurations window, see the Page List/Playlist section.

- **Collapse selected node:** Collapses the selected node of a group.
- **Expand selected node:** Expands the selected node of a group.
- **Collapse All:** Collapses all nodes of all groups.
- **Expand All:** Expands all nodes of all groups.
- **Move Pages To Group:** Allows one or more pages to be moved to groups within the show. Available groups are listed in the appearing submenu. Selecting the Root option will move the selected page(s) outside of the group.
- **Find (CTRL+F):** Opens a text search editor. Perform searches in the page list for a certain word or expression. The page ID, description, template description and layer name columns are searchable. Hidden columns are not searchable.
- **Set status:** Tags pages with a status icon to indicate whether the page is finished and ready or is unfinished.
- **Autogenerate description:** For pages (not templates) with this option disabled, it is possible to enter a custom description for these pages in the list. When enabled, the description for a page will consist of the contents of its tab fields separated by dashes.
- Scr**ipt:** Displays a submenu with two options, Assign script and Edit Show Script.
  - **Assign Script:** Assigns a script to a template. It is not possible to assign scripts to a page. A page references any scripts that are assigned to the template the page derives from.



Name: MyScript

● Store Script in Show (MSE)
○ Store Script on File

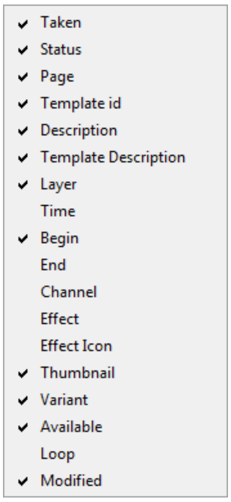
- **New:** Creates a new blank script. The script can be saved to a local or shared repository, or to the Media Sequencer.
  - **File:** Clicking the Browse ... button opens a file browser on the local computer.
  - **Show:** Selects scripts placed on the Media Sequencer.
  - **Clear:** Clears an assigned script.
  - **Edit Show Script:** This option allows an assigned show script to be edited. For further details on scripts, see the Scripting section.

- **Rundown settings:** Allows a user to lock/unlock the column widths and set the image size for the page thumbnails
  - **Show Pages:** Displays the pages in the page list.
  - **Show Templates:** Displays the scene templates in the page list.
  - **Lock column widths:** Locks the column widths.
  - **Image Size:** Sets the image icon size in the page list to Small (default), Medium, Large or Extra Large.

Note: It is not possible to browse for scripts on the Media Sequencer from the template or page list. Use the Show Script browse button in Show Settings, or the Manage Show Scripts button in the Page Editor.

Columns

Select the columns that should be visible in the page list. Right-click one of the existing columns, and the Page List columns context menu appears:



Choose the columns to add or remove.

- **Taken:** Shows the arrow that depicts the status of the page. A yellow arrow (➡) depicts the last previewed page, a green arrow (➡) depicts the last taken page, and a red arrow (➡) depicts a page taken on-air using an external cursor (GPI).
- **Status:** Shows the status of the selected page. Page status indicators are Finished (✓), Unfinished (🕒) and None. See the macro command page: set_pagestatusVizCursiv in the Macro Commands and Events section.
- **Page:** Shows the page ID that usually is a numeric callup code.
- **Template id:** A page references a template, thus showing the template's ID. The ID is usually a numeric callup code.

Note: Template and Page IDs are usually numeric. However, Alphanumeric IDs can be allowed. See the General section and enable *Allow Alphanumeric Imports*.

- **Description:** Shows by default the text entered in the editable tab fields (or the element name, if the element is a stand-alone media file). Only a page’s Description field can be changed.
- **Template Description:** Shows the template’s description. Usually information about the kind of template it is. For example lower third, bug and full screen. Descriptions are predefined by the scene designer.
- **Layer:** Shows the layer information. This can be [FRONT], [MAIN] and [BACK].
- **Begin:** *Not supported by Viz Trio*.
- **End:** *Not supported by Viz Trio*.
- **Channel:** Selects the playout channel the graphics will be rendered on.
- **Effect:** Opens the Choose Effect dialog when the clicking the browse button.
- **Effect Icon:** Shows a thumbnail image of the transition effect.

Note: Transition effects cannot be used for transition logic scenes.

- **Thumbnail:** Shows a thumbnail image of the graphics. See the Page List section for more information on adjusting rundown and image size settings.
- **Variant:** Shows the template variant text. To view a list of variants with thumbnails, left-click the text field.
- **Progress:** Displays the progress of video transfer to video playout engines such as Viz Engine and Quantel.
- **Loop:** Loop enables a loop mode for scenes or a full screen video clip on the video channel. Note that a full screen video clip will play once by default; however, video clips in graphics loop by default. A complete playlist (see control bar) or video clip may be looped; however, it is of course not recommended to set more than one of these modes to loop at once.
- **Modified:** Displays the time when the element (graphic, still image, or video) was modified/created. This feature is mostly used for sorting, and note that sorting must be enabled in the page list context menu in order for this to work.

Change Template

For standalone scene templates it is possible To change a template a page is using without having to retype its content. This will work under the following conditions:

- The tab fields in the original, and the new template, must be of the same type. If tab field 1 is of type text in the original template, the changed template must have text in tab field 1 too. The same is the case for images.

- Be aware of restrictions or differences between the two templates such as character limits. A property exposed on the source template might not be exposed in the target. As a general rule the templates should be quite similar in their logical structure.
- The total number of tab-fields should be the same.
    - If the source template for instance has three bullet points (exposed as three tab-fields) and the target has four, the first three will be filled with existing values and the fourth will have a default value.
    - If the source template has four bullet points and the target has only three, the last bullet will not be shown. If no new text have been saved or added, it is possible to change back and the original template will be restored.

See also how To change a template using a macro command.

Create Groups

It is possible to create groups in a page list to organize pages. To create a group, right click in the page list and choose Create group. A new group appears with the default name new_group. Click on the name once to edit, or right click and choose edit/name.

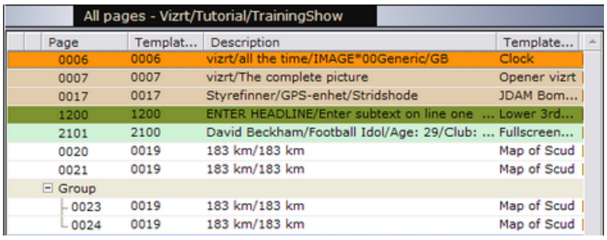
To add pages to the group, drag and drop elements onto the right side of the group element. A page added to a group is added as a child node of the group when it is dropped onto the group. To move pages out of a group, drag and drop it outside the group, or use the context menu option Move Pages To Group, and select Root.

Note: Pages cannot act as groups for other pages.

An alternative option is to use the Move Pages To Group option available on the Page List context menu. Select one or more pages in the page list, then press the right mouse button and select the Move Pages To Group option from the appearing menu.

Note: Stories imported from an Avid Newstar newsroom system will automatically appear as groups (one group per story). This is similar to a MOS playlist, and is built using the traditional show type. Hence, it has no support for context switching (concept and variants).

Colors



All pages - Vizrt/Tutorial/TrainingShow

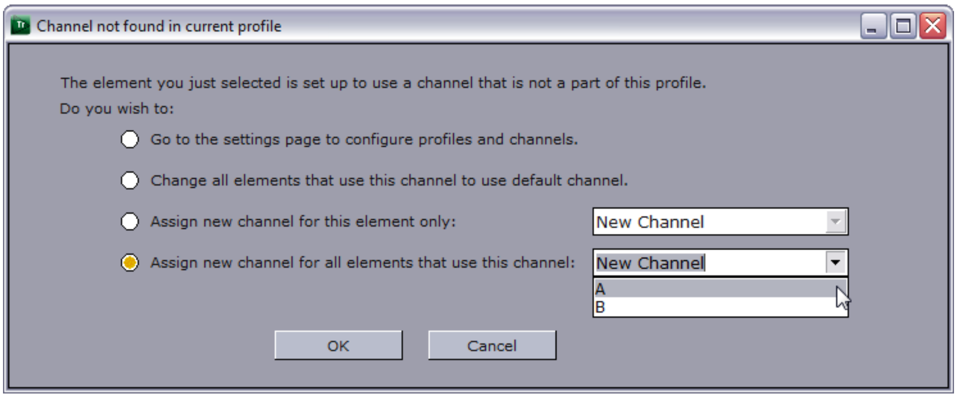
Page	Templat...	Description	Template...
0006	0006	vizrt/all the time/IMAGE*00Generic/GB	Clock
0007	0007	vizrt/The complete picture	Opener vizrt
0017	0017	Styrefinner/GPS-enhet/Stridshode	JDAM Bom...
1200	1200	ENTER HEADLINE/Enter subtext on line one ...	Lower 3rd...
2101	2100	David Beckham/Football Idol/Age: 29/Club: ...	Fullscreen...
0020	0019	183 km/183 km	Map of Scud
0021	0019	183 km/183 km	Map of Scud
⊟ Group			
0023	0019	183 km/183 km	Map of Scud
0024	0019	183 km/183 km	Map of Scud

The items in the page list can have seven different colors:

- Brown indicates a template.
- Orange indicates the currently selected page.
- White indicates a normal page.
- Red indicates a page whose template is deleted.
- Beige indicates a group.
- Dark green indicates an initialized template.
- Light green indicates an initialized page.

The page list Colors can be customized as needed.

Channel Not Found



Channel not found in current profile

The element you just selected is set up to use a channel that is not a part of this profile.
Do you wish to:

○ Go to the settings page to configure profiles and channels.

○ Change all elements that use this channel to use default channel.

○ Assign new channel for this element only: New Channel

● Assign new channel for all elements that use this channel: New Channel

The channel not found dialog box opens if a channel has been set for a page (or template) that does not exist in the current profile. This occurs if a page has been configured to use a specific channel (e.g. C) and that channel has for example been deleted.

The easiest way to avoid this scenario it to always use the default assignment [PROGRAM] as this refers to the status of the channel, and not the channel name.

Manually Sorting Pages

Disable sorting in the page list to move pages up and down by drag and drop. This possibility can for example be used for creating a sequenced playlist.

Time Codes

A time code reader is a handler that reads time-codes from some source, and prepares and executes elements by comparing the received time-codes with the begin time-codes specified on the elements. How the time-code reader receives the time-codes will vary between different time-code readers, but in most cases it will involve specific hardware for decoding time-code signals embedded in video signals.

Viz Trio supports the use of time code reader hardware. Currently a card from *Alpermann+Velte Electronic Engineering GmbH*, named PCL PCI D is supported.

Contact Vizrt for instructions on how to configure Viz Trio to work with the card. The card can be used as a timing handler for a show. The card enables start times on the pages to be set. The time code from the video system will trigger the pages on-air.

Arm and Fire

With the *arm & fire* feature it is possible to play out two or more different elements on two different channels simultaneously. By using the commands **`page:arm`** and **`page:arm_current`** several elements can be cued up on their respective channel before firing them: channel A, C and D - take. The commands **`page:fire`** and **`page:fire_all`** execute actions (take, continue, out, and so on) on all relevant channels that are armed. **`page:unarm`**, **`page:unarm_all`** and **`page:unarm_current`** clears channels from being executed.

To read a page

1. Select a page from the Page List.
2. Double-click the page in the page list, or
3. Right-click the Page and from the appearing context menu select **Read**, or
4. Press the Read key on the Cherry Keyboard.

Note: When reading the page it will be displayed in the preview window and opened for editing in the Page Editor.

To take pages on-air

1. Select a page from the Page List.
2. **Read** the page.
3. Click the **OnAir** button in the upper right corner to set Viz Trio in on-air mode.
4. Click the **Take** button or the Take key on the keyboard.
5. Click the **Continue** button to continue the animation if the scene has stop-points.
6. Click the **Take Out** button or Take Out key on the keyboard to take the page off air.

To delete a page

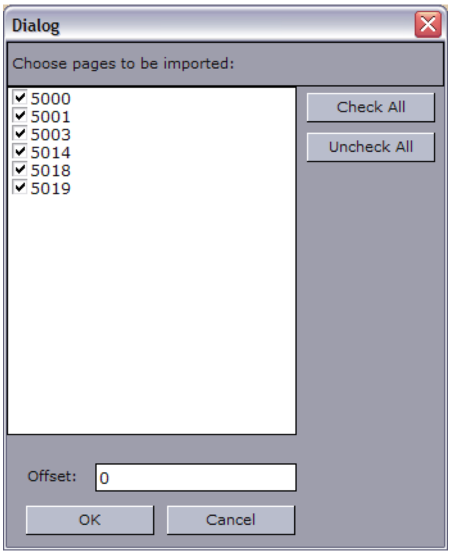
1. Select and right-click a page from the Page List, and from the appearing context menu select **Delete page**, or
2. Press the **Delete** key on the keyboard.

Note: It is also possible to multi-select pages by holding the SHIFT or CTRL button and selecting the range or individual pages to be deleted.

To save to XML ...

1. Right-click the page list, and from the appearing Context Menu select the **Save to XML...** option.
2. Specify the file name and location in the appearing file dialog.
3. Click **Save**.

To load from XML...



Dialog

Choose pages to be imported:

☑ 5000
☑ 5001
☑ 5003
☑ 5014
☑ 5018
☑ 5019

Offset: 0

1. Right-click the page list, and from the appearing Context Menu select the **Load from XML...** option.
2. Choose the pages to be imported from the list.
   - Click Check All to select all pages.
   - Click Uncheck All to deselect all pages.
3. *Optional*: Set an Offset for the imported page numbers such that the imports do not conflict with existing page numbers.

To change a template

1. Select the pages to change a template for (use CTRL or SHIFT to multi-select).
2. Right-click the page(s), and from the appearing context menu select **Change template...** .
3. Enter the template name/number for the template to change to.

   Note: The name of the template is case sensitive.

4. Click **OK**.

To change a template using a macro command

1. Assign the macro command *page:change_template(string templateName)* to a keyboard shortcut.
2. Press the keyboard shortcut assigned to the *change_template* command to perform the change.

   Note: The name of the template is case sensitive.

3. Click **OK**.

To select a variant from the page list

- Right-click the Scene Icon column and select the variant from the appearing drop-list.

To add transition effects using the page list

1. Right-click a show’s page list column header, and from the appearing context menu select **Effect** and **Effect Icon** (last is only for visual reference)
   - This will display the Effect and Effect Icon columns
2. Click the **ellipse** button in the **Effect** column and from the appearing dialog box select a transition effect.

See Also

- Creating Transition Effects
- Keyboard Shortcuts and Macros
- Show Settings
- Transition Effects

7.10 Playlist Modes

There are three playlist modes available in Viz Trio:

- Viz Trio show playlists are created using the Create Playlist button and exists only as part of the show.
- Viz Content Pilot Playlists are requested by the Viz Trio operator and modified when integrated with a Viz Content Pilot system. Note that a VCP playlist element cannot be edited, only the structure of the playlist. The VCP playlist elements can be added to a Viz Trio show playlist, but not a page list.
- Newsroom Playlists are requested by the Viz Trio operator, but not modified by default (see General user interface settings). Edits to any element in the newsroom playlist will by default be discarded as soon as it is updated by the newsroom system. Therefore in most cases, when monitoring newsroom playlists, Viz Trio is only used to read and play out its elements.

For the playout of newsroom playlists to work, the Media Sequencer must establish a connection to Viz Gateway (see MOS integration).

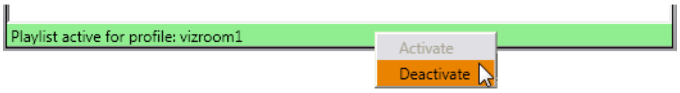
All shows and playlists are stored on the Media Sequencer for playout.

All Show Playlists can be monitored, stopped and started from the Active Tasks window.

This section contains information on the following topics:

- Playlist
- To activate or deactivate a playlist
- To take pages on-air from a show playlist
- To show or hide columns in the playlist

To activate or deactivate a playlist



Playlist active for profile: vizroom1

1. Create Playlist or open Playlists
2. Right-click the bar at the bottom of the playlist, and from the appearing context menu select Activate or Deactivate to activate or deactivate the playlist.
   - Activating a playlist will initialize the elements and start the transfer of video clips to Viz Engine.

To take pages on-air from a show playlist

1. Add pages to the playlist.
   - *Optional:* Enable looping.
   - *Optional:* Set the concept for the playlist or for each element.
   - *Optional:* Set the variant for each element.
   - *Optional:* Set the duration for each element.
2. Click the **Play** button to start the carousel.
3. Click the **Pause** or **Stop** button to pause or stop the playlist.

IMPORTANT! Scenes with stop-points and out-animations are being cut as they are **not** automatically continued when used in a playlist.

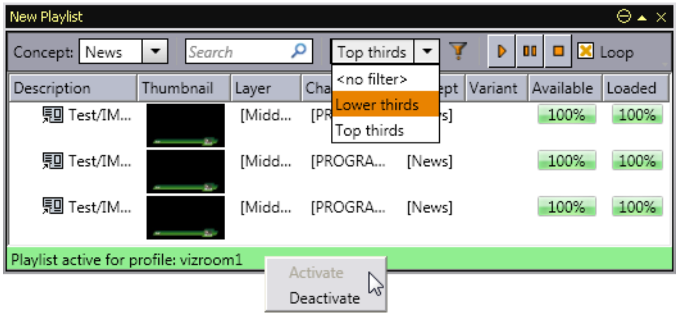
To show or hide columns in the playlist

- Right-click the playlist’s header and from the appearing menu select the columns to display or hide.
  - The *Auto width* option enables automatic resize of columns within the MOS Playlist area.
  - Disable the *Auto width* option to manually resize the columns.

See Also

- Playlists
- Create Playlist
- Macro Commands and Events
- Macro Language
- Monitoring Playlists
- MOS configuration
- Viz Gateway Administrator’s Guide
- Viz Content Pilot User’s Guide
- Creating Transition Effects

7.10.1 Playlist



Description	Thumbnail	Layer	Cha	ept	Variant	Available	Loaded
Test/IM...		[Midd...	[PR	s]		100%	100%
Test/IM...		[Midd...	[PROGRA...	[News]		100%	100%
Test/IM...		[Midd...	[PROGRA...	[News]		100%	100%

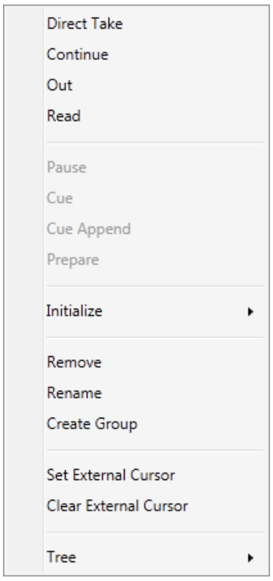
Playlist active for profile: vizroom1

The control bar is used to set the concept, search, set filters, manage filters, run, pause, stop and loop the playlist. Available concepts are the same as for the show. However, a concept set for the show does not override the playlist’s concept and conversely.

This section contains information on the following topics:

- Context Menu
- Columns
- Playlist Filters

Context Menu



The Playlist’s context menu provides options to manage pages and data elements in the playlist.

> **Note:** On composite groups containing video, only the following operations can be performed; *Direct Take*, *Read*, and *Out*. On standalone videos, all commands can be performed (*Cue*, *Pause*, *Prepare*, and so on).

- **Direct Take:** Performs a direct take on the selected data element.
- **Continue**: Continues the playout of an element.
- **Out**: Takes the element out (hard cut).
- **Read**: Reads the element, opening it in the page editor and local preview.
- **Initialize:** Initializes the selected playlist or element (loads graphics) on the external output channels.
- **Remove**: Removes the element from the playlist.
- **Rename**: Renames the Description property of the element.
- **Create Group**: Creates a group in the playlist. Groups can be nested.
- **Set External Cursor:** Sets the global cursor (normally related to GPI or Automation system setups) to the selected data element. This requires that the Show External Cursor (GPI) option has been enabled in the User Interface configuration dialog, see the Page List/Playlist and Cursor sections for further details.
- **Clear External Cursor:** Clears the current global cursor.
- **Tree:** The Tree option contains submenus for selecting, expanding, collapsing, and moving data elements in the playlist.
  - **Select All:** Selects all data elements in the playlist.
  - **Select Inverse**: Inverts the selection.
  - **Select None**: Removes all selections.

- **Expand All:** Expands all nodes in the tree, revealing the grouped data elements.
- **Collapse All:** Collapses all nodes in the tree, hiding the grouped data elements.
- **Hide Empty Groups**: Hides empty groups. This setting only affects the current playlist. In order to make this setting global for all playlists, enable the *Store as Default* option in the playlist column context menu.
- **Wrap Text**: Wraps all text properties of the element, adjusting the row height accordingly.
- **Font...**: Opens the Font Chooser to set a different font for the playlist.
- **Keep Selected Row In View**: Keeps the selected row in view at all times.

Columns

- **Available**: Displays the status of external resources needed by the Viz Engine (e.g. transferred video, and if it is avaiable on the video playout engines). Errors are shown as tooltips. This column was previously named *Progress*.
- **Begin Time:** Shows the activation start time for a group (format hh:mm:ss).
- **Channel:** Shows which output channel an element should be sent to. Various elements can be sent to different output channels. The output channels can be set directly in the column. By default the main *[PROGRAM]* output channel is selected, but this can be overruled by setting an alternative channel for this element only or in a template (that all data elements made from it will have). By creating a group and placing elements within it, all elements in the group will be organized by having the same channel. The Channel column is presented by default.
- **Concept:** Shows which concept(s) the data element is associated with.
- **Description**: Shows the description of the element. By default this will show the path of the scene (or the element name of a stand-alone media file). Viz Trio page descriptions may be edited in the Page List/Playlist .
- **Duration:** Shows the length of the element. The parameter is set by VCP or a newsroom system. This cannot be set using Viz Trio.
- **Effect:** Opens the Choose Effect dialog, which makes it possible to select a transition effect between two pages.
- **End Time:** Shows the activation end time for a group (format hh:mm:ss).
- **Layer:** Allows loading of graphics in separate layers on Viz Engine (front, middle, back). For example, a lower third can be shown in front of a virtual studio set or any other background, or a bug can be shown in the front layer while a lower third is shown in the middle layer. This column is presented by default.
- **Loaded**: Shows the loaded status (in memory) of the scene and images used for a data element of that scene. Errors are shown as tooltips.

- **Loop**: Displays a column that enables looping to be set per element or group instead of the whole playlist.
- **Mark In**: Sets mark in times for video clips.
- **Mark Out**: Sets mark out times for video clips.
- **Story #:** Shows the story number for stories in MOS playlists. This is only supported from the ENPS newsroom system.
- **Template Description**: Shows the template description (e.g. name).
- **Template Id**: Shows the template ID.
- **Thumbnail:** Shows thumbnails of the scenes.
- **Timecode:** The timecode is an offset time on format *hh:mm:ss:ff*. It indicates that an element should be played out relative to the parent group or video. This is used for instance in composite groups with a video and overlay graphics that is played out on a timeline.
- **Variant:** Select a concept's variant from the drop-list (see the Concept column).
- **Store as Default**: Stores the layout as the default.
- **Use Default**: Reverts to the default layout.
- **Auto Fit Columns**: Automatically fits all displayed columns to the given width of the playlist.

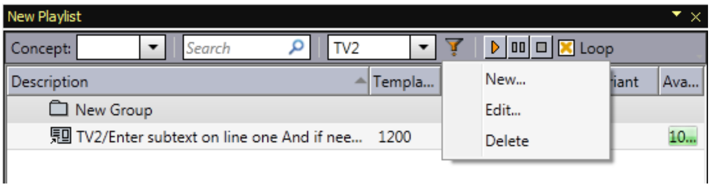
Playlist Filters

In order to narrow down the list of playlist items, it is possible to add a filter to the playlist.

This section contains information on the following topics:

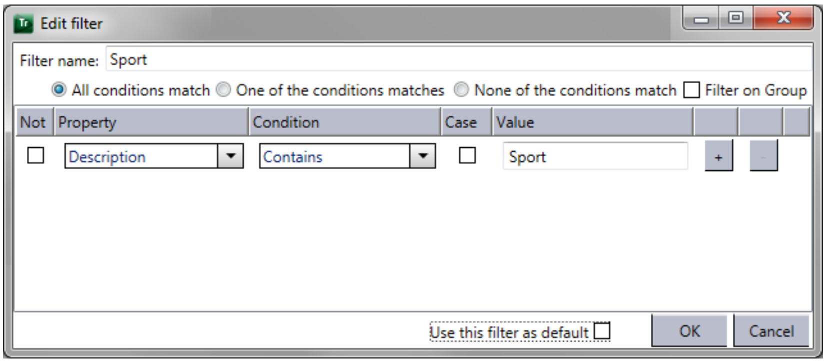
- To create a playlist filter
- To add a default playlist filter
- To add a filter to the playlist

To create a playlist filter



1. From the playlist menu, click the **Manage filter(s)** button.
2. In the menu that opens, click **New**.

3. In the Edit filter window that opens, type a descriptive name for the filter.



Filter name: Sport

● All conditions match ○ One of the conditions matches ○ None of the conditions match □ Filter on Group

Not	Property	Condition	Case	Value
□	Description	Contains	□	Sport

Use this filter as default □

4. Fill in the filter values, for example properties and conditions.
5. Click the **OK** button.

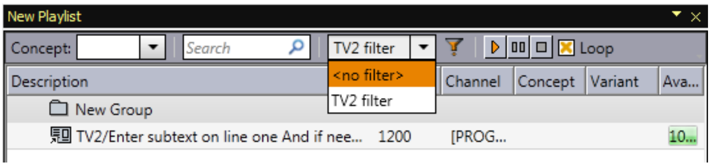
The filter then becomes available in the Playlist filter list.

To add a default playlist filter

1. Create a playlist filter, see To create a playlist filter.
2. Select the **Use this filter as default** check box in the Edit filter window.
3. Click the **OK** button.

When enabling the default filter option, all playlists of that Viz Trio client will always use the selected filter. The default filter affects only one Trio client. The default filter is saved an will still be activated when restarting the Trio client.

To add a filter to the playlist

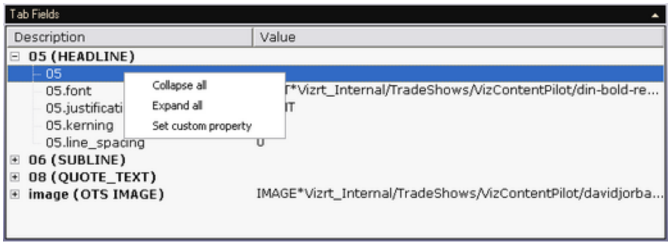


- From the Playlist filter list, select a pre-defined filter.

See Also

- To create a playlist filter

7.11 Tab Fields Window



Description	Value
⊟ **05 (HEADLINE)**	
05	
05.font	T*Vizrt_Internal/TradeShows/VizContentPilot/din-bold-re...
05.justificati	IT
05.kerning	
05.line_spacing	0
⊞ **06 (SUBLINE)**	
⊞ **08 (QUOTE_TEXT)**	
⊞ **image (OTS IMAGE)**	IMAGE*Vizrt_Internal/TradeShows/VizContentPilot/davidjorba...

The Tab Fields window shows the tab fields for the page or template currently loaded. Click on a tab field to display the editor for an element.

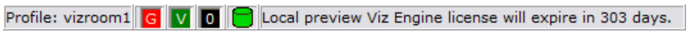
When a tab field for graphics elements is selected, a bounding box highlights the object in the preview window.

When a tab field for video elements is selected, the Search Media editor is opened. A page containing video elements will automatically search for the video and preview it (see the Video Preview section).

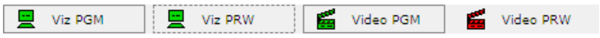
The tab-field window has a context menu for collapsing or expanding all nodes. The Set custom property is used to set a custom variable assigned to a tab field. For more information on how to use custom properties, see the Tab-field Variables section.

7.12 Status Bar

In the lower left corner of Viz Trio there is a status bar showing general status information and the Media Sequencer's connection status to devices such as Viz Engine and Viz Gateway.



Local preview Viz Engine license will expire in 303 days.



The following icons can be displayed:

- **Profile**: Shows the currently active profile.
- **G:** Shows the Media Sequencer's connection status to Viz Gateway. The icon implies that a newsroom system, or several, is available. If no connection is established, the symbol is not visible. A Viz Gateway connection is used to retrieve and control playout of Create Playlist . Double-click the icon to edit the Viz Gateway connection parameters (see the MOS section).
- **VME:** Shows the Media Sequencer's connection status to the MAM system. The icon implies that one or more MAM systems, such as Viz One, are connected. A MAM connection is used to send shows and playlists, containing references to media such as video, to the MAM system. Double-click the icon to edit the Proxy connection. The indicator icon is not shown if a MAM system is not configured.
- **Active Tasks (0-n):** Indicates the number of playlist tasks that are active for the current profile(s). For details, see the Active Tasks section.
- **Database:** The green cylinder shows the Media Sequencer's connection status to the VCP database. If no connection is established, the symbol is not visible.
- **Messages:** Shows messages to and from the system. For example error messages, commands sent to the Media Sequencer and so on. Error messages are collected in the Error log. The log can be viewed directly from the status bar by clicking the Errors button (a small red error count label will be displayed on the button if errors occur).

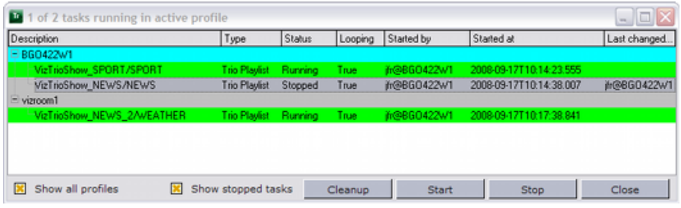
- **Channel**: Displays the channel status for all channels configured for the currently selected profile.

This section contains information on the following topics:

- Active Tasks
- To configure a profile
- To change profile
- To change channel assignment
- To check memory usage

Active Tasks

To open the Active Tasks window, double-click the Active Tasks icon in the Status Bar.



1 of 2 tasks running in active profile

Description	Type	Status	Looping	Started by	Started at	Last changed...
BGO422W1						
VizTrioShow_SPORT/SPORT	Trio Playlist	Running	True	jfr@BGO422W1	2008-09-17T10:14:23.555	
VizTrioShow_NEWS/NEWS	Trio Playlist	Stopped	True	jfr@BGO422W1	2008-09-17T10:14:38.007	jfr@BGO422W1
vizroom1						
VizTrioShow_NEWS_2/WEATHER	Trio Playlist	Running	True	jfr@BGO422W1	2008-09-17T10:17:38.841	

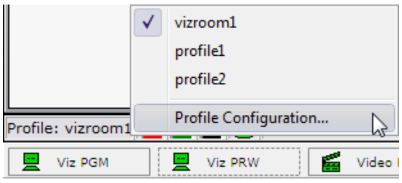
☒ Show all profiles ☒ Show stopped tasks

The Active Tasks window displays show specific playlists that are running in active profiles. As Viz Trio is able to operate with more than one profile this status window will show if there are active tasks running in other profiles as well as different show playlists within one profile.

The Active Tasks window has the following options:

- **Show all profiles:** Shows all profiles with Show Playlists.
- **Show stopped tasks:** Shows all stopped tasks.
- **Cleanup:** Removes all information about stopped tasks.
- **Start:** Starts the selected Show Playlist.
- **Stop:** Stops the selected Show Playlist.
- **Close:** Closes the Active Tasks window.

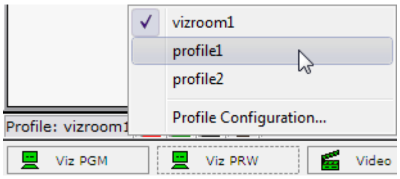
To configure a profile



- Right-click the currently active profile (displayed on the statusbar) and select Profile Configuration (see Profile Setups).

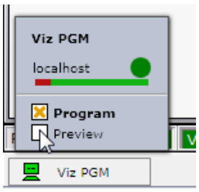
Note: You cannot change profiles unless you have the -control parameter set.

To change profile



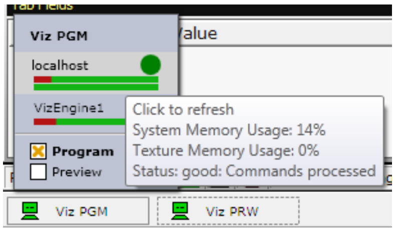
- Right-click the currently active profile (displayed on the statusbar) and select a new profile from the appearing pop-up menu.

To change channel assignment



- Right-click a channel and select whether it should be assigned as a program or preview channel.

To check memory usage



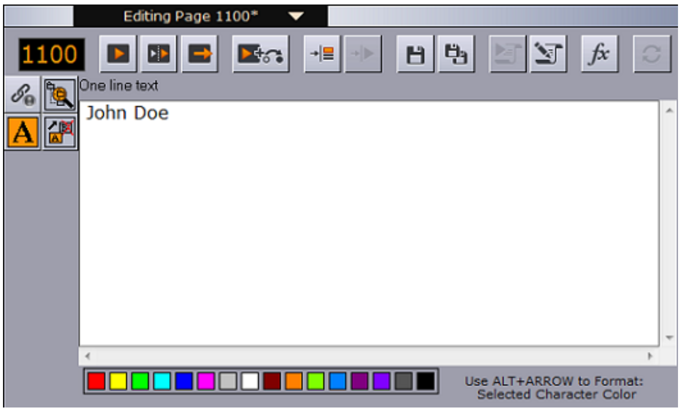
Click to refresh
System Memory Usage: 14%
Texture Memory Usage: 0%
Status: good: Commands processed

- Right-click a channel and hover your mouse pointer over one of the bars to see the total system and texture memory usage (in percent as depicted above).

See Also

- Configuration Interface
- Show Modes
- Playlist Modes

7.13 Page Editor



The page editor is used for editing pages, and depending on the template or page edited it can display a wide range of specialized editors. Page Editing is done using a wide range of editors; For example the text, database and scroll editors. All are covered in this section.

When pages have editable elements it is possible to jump from element to element by pressing the Tab key. It is also possible to select elements by clicking on the elements in the local preview window.

The page editor is placed in the upper right corner of the user interface and shown as the default view when starting Viz Trio.

To edit a page

The following example uses a page to edit common text properties.

1. **Double-click** or **Read** a page from the Page List to open it in the page editor.
2. Click the **Kerning** button, or press the Cherry Keyboard’s Kern key.
3. Click the **Text** button to go back to text editing mode, or press the keyboard’s Text key.
4. Click the **Take** button to play out the page on-air, or press the Take key on the keyboard.
5. Click the **Save** or **Save As** button, or press the Save or Save As key on the keyboard.

Note: It is not necessary to save a page before playing it out on air; however, a template cannot be played out before it is saved as a page.

This section contains information on the following topics:

- Controls
- Text
- Database Linking

- Images
- Transformation Properties
- Tables
- Clock
- Maps

7.13.1 Controls

The main functionality of the editor window consists of the playout, script, save and transition effect buttons. In addition to the main functionality, a range of editors can be used to edit the different properties of a template or page.

This section contains information on the following topics:

- Callup Code
- Field Linking
- Playout Buttons
- Save Buttons
- Script Buttons
- Transition Effects
- Refresh Button
- Variants
- To create a page
- To add transition effects using the page editor
- To apply a transition effect
- To select a variant from the page editor

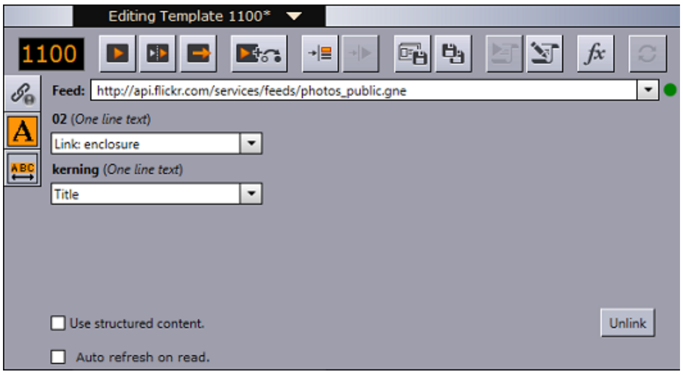
Callup Code

1000

The callup code field is used to save callup codes for the pages. The callup code can be set when saving a template as a page the first time, or when saving a page as a new page.

Field Linking

When working with templates (not pages), the field linkingbutton becomes available in the properties area of the Page Editor. Clicking the button opens a panel, where it is possible to define a feed URI and also how tabfield properties in the template are linked to properties in the external feed.



Feed: http://api.flickr.com/services/feeds/photos_public.gne

02 (*One line text*)

Link: enclosure

kerning (*One line text*)

Title

☐ Use structured content.

☐ Auto refresh on read.

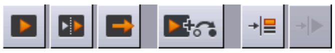
Feed URIs can for example link to Twitter, Flickr, and so on. After the feed has been defined, a new property icon appears in the page editor.

Clicking the select values button displays a panel where it is possible to browse for items from the specified feed, which can be used as tabfield values. The list of feed items can be presented and sorted in various ways, and a filter can be added to narrow down the search.

See Also

- Field Linking and Feed Browsing in Viz Trio

Playout Buttons



Located above the page editor are the control buttons for playout of pages.

Note: Only pages (data instances of templates) can be taken on air.

The **Take** button runs on-air the page that is currently displayed in the local preview, assuming that the client is set in on-air mode.

The **Continue** button continues the animation in the page currently loaded if it contains any stop points.

The **Take Out** button takes out the page that is in the preview window. If a page is in the preview window, that is not on-air, and the Take Out button is clicked, Viz Trio will take out any element that is in the same layer as the page currently displayed in the preview.

The **Take + Read Next** button takes the page currently read, and reads the next one in the page list.

The **Cue** button cues the page specified as parameter or the selected page if the parameter is empty.

The **Cue append** button cues the video after the currently playing video. This button is only enabled for video elements.

The **Pause** button pauses the video. This button is only enabled for video elements.

Save Buttons

When working with a template in the Page Editor, the **Save template** and **Save as** buttons are available. Clicking the **Save template** button saves all modifications to the template; feed linking information, feed browser layout, and default tab-field values. Clicking the **Save as** button creates a new page based on the template. The page’s callup code is by default set to be the highest callup code (number) in the page list + one (1). The page’s callup code is shown in the Callup Code field. Press **ENTER** to save the new page.

When working with a page in the Page Editor, the **Save page** and **Save as** buttons are available. Clicking the **Save page** button saves all modifications to the page without any changes to the callup code. Clicking the **Save as** button creates a new page. The page’s callup code is by default set to be the highest callup code (number) in the page list + one (1). The page’s callup code is shown in the callup code field. Press **ENTER** to save the new page.

Script Buttons

The **Execute script** button is used to execute a template’s script (see execute_script macro) and perform a syntax check. The show script is not executed unless the template script calls procedures or functions within the show script. For the button to work the script that is to be executed must have an *OnUserClick* function wrapped around it.

```
Sub OnUserClick ()
...
End Sub
```

The **Edit script** button opens the Script Directory. The editor by default opens the assigned script.

Transition Effects

Creating Transition Effects is done using Viz Artist and can be applied to pages or playlist elements to create custom transition effects from one scene to the other. If an effect is applied, the effect will be shown when the scene is taken on-air. Effects are typically wipes, dissolves, alpha fades and so on.

The Transition Path to the transition effect scenes is set in the Show Settings window.

Refresh Button

For pages with linked tab-fields (Field Linking), the user may want to refresh the data of all tab-fields in the page. A typical use case is for example weather data or financial data.

The refresh button in the Page Editor is only enabled when at least one tab-field is linked to a feed which provides self links. Pressing the button, updates the data. While refreshing, the icon on the button changes to a cross, and pressing the button again cancels the refresh operation.

On a template level, data is automatically refreshed upon read.

Various script commands are related to the refresh procedure:

- `page:refresh_linked_data`: Refreshes the linked data in a blocking way (useful for scripts that manipulates the refreshed data afterwards).
- `page:refresh_linked_data_async`: Refreshes the linked data in a non-blocking way so that the GUI stays responsive.
- `page:cancel_refresh_linked_data`: Cancels a refresh started with `page:refresh_linked_data_async`.

Variants

Template variants can be switched directly from the Template List and Page List, or from the Page Editor. As with concepts, variants can also be switched using a macro command in a user-defined macro or a script.

To create a page

1. Double-click a template from the Page List to open the template in the Page Editor.
2. Edit and save it as a page with a new Callup Code.

To add transition effects using the page editor

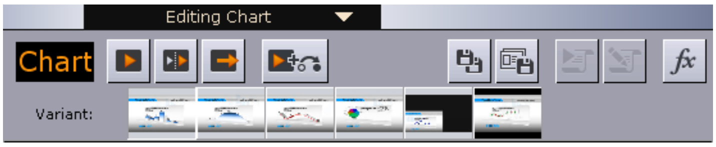
1. Open a page in the Page Editor.
2. Click the Transition Effects button and select, from the appearing dialog box, a transition effect.

To apply a transition effect

1. Right-click the column headers, and from the appearing context menu select **Effect** and **Effect Icon** (last is only for visual reference)

2. Click the **ellipse** button in the Effect column and select, from the appearing dialog box select a transition effect.

To select a variant from the page editor



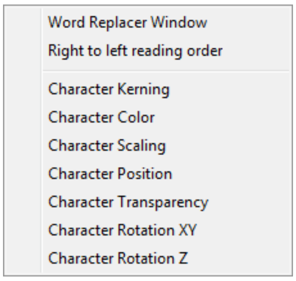
1. Open the template or page in the Page Editor.
2. Click the thumbnail images to select the variant.

See Also

- Scripting
- To set the transition effects path
- To add transition effects using the page list
- Creating Transition Effects in Viz Artist

7.13.2 Text

Text editor’s context menu



The text editor is the main editor for most users. Within the text editor it is possible to do a number of operations if the scene’s text editing properties are exposed, such as setting text color or adjusting the position and scale of the text.

In order to enable character formatting, the scene’s Control Text plug-in must have its **Use formatted text** property enabled (*On*). This is done by the Viz Artist designer. The following can be formatted if enabled:

Mode	Command	Procedures
Color	text:set_color_mode	To edit the text color
Alpha	text:set_alpha_mode	To edit the text transparency (alpha)
Kerning	text:set_kerning_mode	To edit the text kerning
Position	text:set_position_mode	To edit the text position

Mode	Command	Procedures
Replace character	text:show:replace_list	To replace a word
Rotation X, Y and Z	text:set_rotate_xy_mode text:set_rotate_z_mode	To edit the text rotation
Scaling	text:set_scale_mode	To edit the text scaling

The desired text manipulation mode can be assigned to a shortcut key or used in scripts. See the User Interface section for how to assign shortcut keys. The active mode is indicated in the lower right corner of the Page Editor’s window. The default mode is Color editing. For more information on text commands, see the Macro Commands and Events section.

Tip: Text commands can be used in scripts or as assigned keyboard shortcuts to switch between text manipulation modes.

If text effects are used in graphics there might, in some situations, be conflicts with editing of parameters such as scaling, alpha and position. For example; If the text effect controls the scaling of text, it is not possible to change the scaling of the fonts from the text editor. The text effect’s control over that parameter will override any changes made in Viz Trio. Text effects are Viz Artist plug-ins like TFX Color, Scale and Rotation that are used by scene designers.

Word Replacement

The Word Replacement function allows the user to substitute a typed character with a word from a list of predefined substitution options.

The list of substitution options becomes available in the text editor when pressing an assigned shortcut key for the *text:show_replace_list* command, see the Keyboard Shortcuts and Macros section. The editor matches a typed character with the list of key characters that are configured.

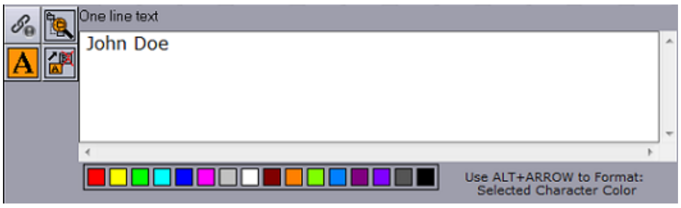
This section contains information on the following topics:

- To edit a text item
- To edit the text color
- To edit the text kerning
- To edit the text position
- To edit the text rotation
- To edit the text scaling
- To edit the text transparency (alpha)
- To replace a word

To edit a text item

1. Open the appropriate template or page, and select a text element in the Tab Fields or Preview window.
2. To edit the next item, press the Tab key or select the item from the Tab Fields list or right-click the graphical elements in the Preview window.
3. To perform character specific changes, right-click to open the text editor’s context menu, and select one of the options.

To edit the text color



One line text

John Doe

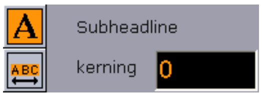
Use ALT+ARROW to Format:
Selected Character Color

1. Open the appropriate template or page, and select a text element in the Tab Fields or Preview window.
2. Right-click the text editor, and from the Text editor’s context menu select **Character Color**.
3. To change the color of a character or selected characters, click a color in the color palette, or hold the **ALT** key down while using the right and left arrow keys to switch between the available colors.

Tip: Color can also be set using the command *text:set_color_mode* when enabled by the designer.

See also Show Settings on how to customize the color palette.

To edit the text kerning



Subheadline

kerning 0

1. Right-click the text editor, and from the Text editor’s context menu select **Character Kerning**.
2. Select one or more characters, and hold down the **ALT** key while using the right and left arrow keys to change the kerning, or
3. Click the **Kerning for whole text** button.
4. Click the **Text editing mode** button to switch back to the text editor.

Tip: Character kerning can also be set using the command *text:set_kerning_mode* when enabled by the designer.

Note: The Control Text plug-ins’ Expose kerning property enables the Page Editor’s kerning button.

To edit the text position

1. Right-click the text editor, and from the Text editor’s context menu select **Character Position**.
2. Select a character or multiple characters.
3. Hold the **ALT** key down while using the arrow keys.

Tip: Position can also be set using the command *text:set_position_mode* when enabled by the designer.

To edit the text rotation

1. Right-click the text editor, and from the Text editor’s context menu select **Character Rotation XY** or **Character Rotation Y**.
2. Select a character or multiple characters.
3. Hold the **ALT** key down while using the arrow keys.

Tip: Rotation can also be set using the commands *text:set_rotate_xy_mode* or *text:set_rotate_z_mode* when enabled by the designer.

To edit the text scaling

1. Right-click the text editor, and from the Text editor’s context menu select **Character Scaling**.
2. Select a character or multiple characters.
3. Hold the **ALT** key down while using the arrow keys.

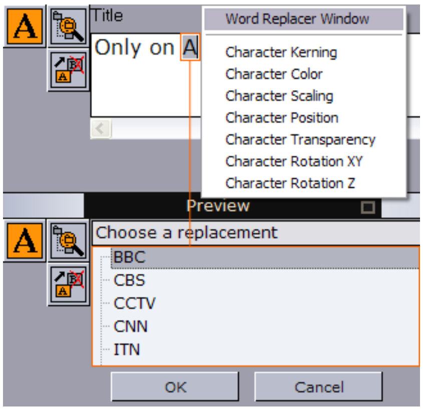
Tip: Scaling can be also set using the command *text:set_scale_mode* when enabled by the designer.

To edit the text transparency (alpha)

1. Right-click the text editor, and from the Text editor’s context menu select **Character Transparency**.
2. Select a character or multiple characters.
3. Hold the **ALT** key down while using the arrow keys.

Tip: Transparency can be also set using the command *text:set_alpha_mode* when enabled by the designer.

To replace a word



1. **Type** a character in the text editor. Make sure the cursor is placed after the character that will be replaced.
2. Click the word replacement button or right-click the text editor and select **Word Replacer Window**.
3. Select a replacement word from the list and click **OK**, or press the **Enter** key to return to the text editor.
4. To close the word replacement window without changes click **Cancel**, or press the **ESC** key to quit the operation and return to the text editor.

7.13.3 Database Linking

In order to automate the way a page is filled with content, an external data source, like a database or a Microsoft Excel spreadsheet, can be used to link a page’s tab field to a value, or several values, in a database or Microsoft Excel spreadsheet (see Show Settings and how To create a new database connection).

There are two variants of the database link editor. The type of editor depends on the type of control plug-ins used in the scene. Table plug-ins such as Control List and Control Chart have their own table editor. Clicking the Database link button, shown below, opens one of the editors that can be used to link data to a page.

Database link: Opens one of the database link editors.

Save to database: Saves the updated data back to the data source.

This section contains information on the following topics:

- Database Link Editor Common Properties
- Database Link Editor for Scalar Linking

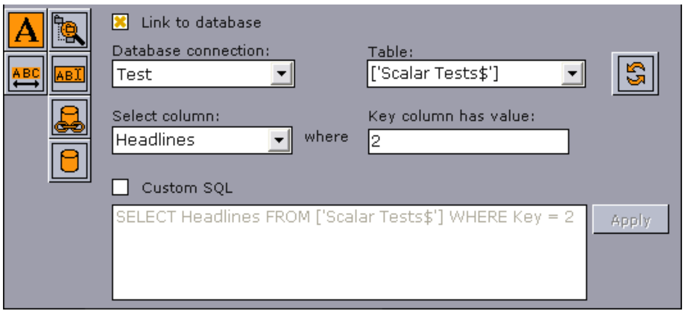
- Database Link Editor for Table Linking
- Microsoft Excel and Unicode Support

Database Link Editor Common Properties

The Data Link editors common properties are:

- **Link to database:** Enables the database link.
- **Database connection:** Sets the connection to a selected database link defined in the Show Settings’ Databases settings.
- **Table:** Sets the database table for the lookup.
- **Refresh:** Refreshes the dataset.
- **Custom SQL:** Displays by default the resulting SQL query to get the value (scalar or table) from the database. The query can be overridden to perform enhanced queries. This is mostly useful for table properties, for example to restrict the number of rows or apply a different sorting for the rows.
- **Apply:** Applies the Custom SQL query.

Database Link Editor for Scalar Linking



☒ Link to database

Database connection: Test

Table: ['Scalar Tests$']

Select column: Headlines where Key column has value: 2

□ Custom SQL

SELECT Headlines FROM ['Scalar Tests$'] WHERE Key = 2

The database link editor used for text properties (scalar linking) has the following properties:

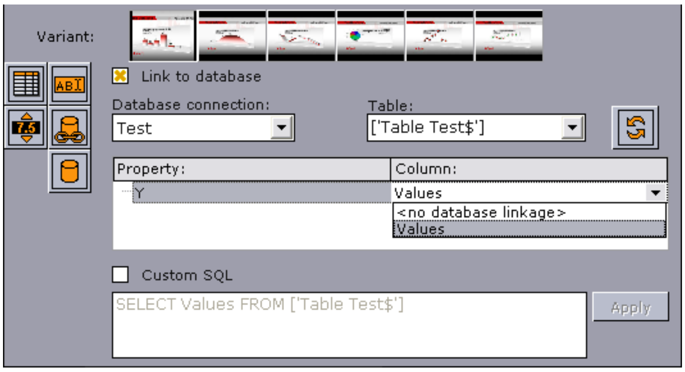
- **Select column:** Sets the Microsoft Excel spreadsheet column, from which the text value is selected.
- **Key column has value:** Specifies the key value to match with the lookup column, which is specified in the Databases settings (see Show Settings). This mechanism selects the row of the value to use.

To restrict which rows from an Microsoft Excel spreadsheet will be inserted, a custom SQL query can be specified in the text box at the bottom of the database link editor (below is a Microsoft Excel spreadsheet example).

```
SELECT Value, Color FROM [Sheet1$] where Key > 2
```

Note: Setting both Column and Key determines both column and row of the scalar value for the text property.

Database Link Editor for Table Linking



☒ Link to database

Database connection: Test

Table: ['Table Test$']

Property:	Column:
Y	Values

□ Custom SQL

SELECT Values FROM ['Table Test$']

The database link editor used for table linking has the following properties:

- **Property:** The scenes table property that is linked with the column of the data source.
- **Column:** The data source column that is linked with the property of the scene.

Note: Mapping a tab-field property with a data source immediately updates the graphics.

Microsoft Excel and Unicode Support

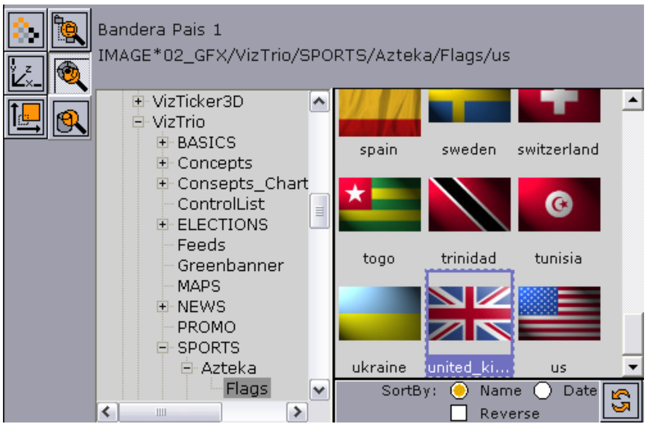
Viz Trio supports the use of Microsoft Excel spreadsheets to provide templates with data.

Note that Unicode characters can be used in Microsoft Excel table names and in cell values of a table, but not as column names. Supporting Unicode column names is not possible with the current implementation.

See Also

- To create a new database connection
- The dblink macro commands for use with scripting.

7.13.4 Images



When the page’s tab field or item is an image, the Page Editor will look like the image above. When the template contains an image you can, given that the properties are exposed, choose to load an image from file, Viz Graphic Hub, Viz Object Store or a Vizrt MAM system.

Browse File: Opens a standard Windows file browser.

Browse Viz Artist: Opens a browser in the Page Editor for browsing images on the Viz Engine. It is possible to sort by name and date. For convenience both sorts can be reversed and refreshed.

Browse: Opens the Search Media pane for browsing images, video clips and person information.

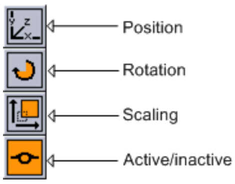
Note: Additional Browse buttons will appear if other image repositories are used.

7.13.5 Transformation Properties

It is possible for scene designers to expose transformation properties for a tab field, as well as an active or inactive toggle. The following properties can be edited if enabled:

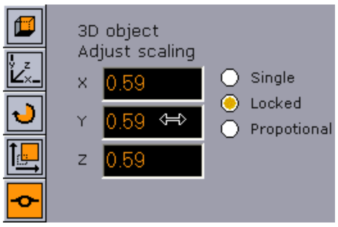
- Active
- Position
- Rotation
- Scaling

The properties are displayed as buttons on the left side of the editor:



Clicking the Position-, Rotation- or Scale button opens an editor which can be used To set transformation properties.

To set transformation properties



3D object
Adjust scaling

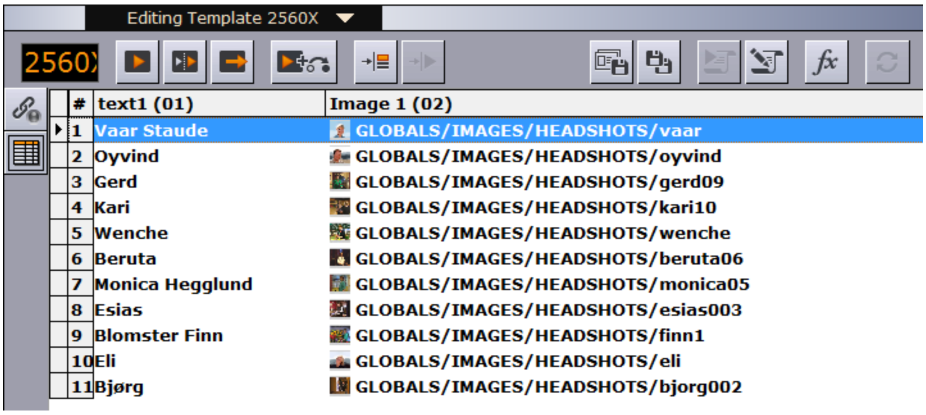
X 0.59
Y 0.59
Z 0.59

○ Single
● Locked
○ Propotional

1. Enter the new values with the keyboard, or
2. Left-click the value field and drag in horizontal directions. Move between the fields using the CTRL + TAB keys.
3. To return to the previous selection mode, click the top button.

Note: The selection mode icon varies, depending on the type of object exposed. Others could be image, text and so on. The image above depicts a Geom.

7.13.6 Tables

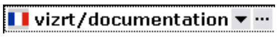


#	text1 (01)	Image 1 (02)
1	Vaar Staude	GLOBALS/IMAGES/HEADSHOTS/vaar
2	Oyvind	GLOBALS/IMAGES/HEADSHOTS/oyvind
3	Gerd	GLOBALS/IMAGES/HEADSHOTS/gerd09
4	Kari	GLOBALS/IMAGES/HEADSHOTS/kari10
5	Wenche	GLOBALS/IMAGES/HEADSHOTS/wenche
6	Beruta	GLOBALS/IMAGES/HEADSHOTS/beruta06
7	Monica Hegglund	GLOBALS/IMAGES/HEADSHOTS/monica05
8	Esias	GLOBALS/IMAGES/HEADSHOTS/esias003
9	Blomster Finn	GLOBALS/IMAGES/HEADSHOTS/finn1
10	Eli	GLOBALS/IMAGES/HEADSHOTS/eli
11	Bjørg	GLOBALS/IMAGES/HEADSHOTS/bjorg002

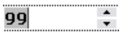
If a scene contains a Control List plug-in, a table editor will be shown for that tab field when the scene is edited in Viz Trio.

The cells will have different editors depending on the data type they display. Changes made in the table editor will immediately be updated in the preview window. In addition to text fields, the table editor can show the following special editors in the table cells.

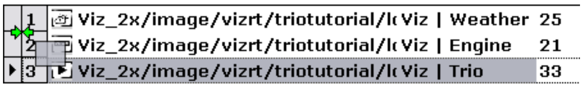
- **Image Cells:** The drop-list shows a list of all images currently available for a specific column. This provides a quick way of choosing images when many cells are to show the same image. The browse button to the right opens the image pool.

  
  vizrt/documentation ▼ ···

- **Number Cells:** Scenes with exposed numbers, with and without decimals, get a small text editor with a spin button functionality. Click the spin buttons, use the arrow keys, or enter them directly by keyboard to change the value.

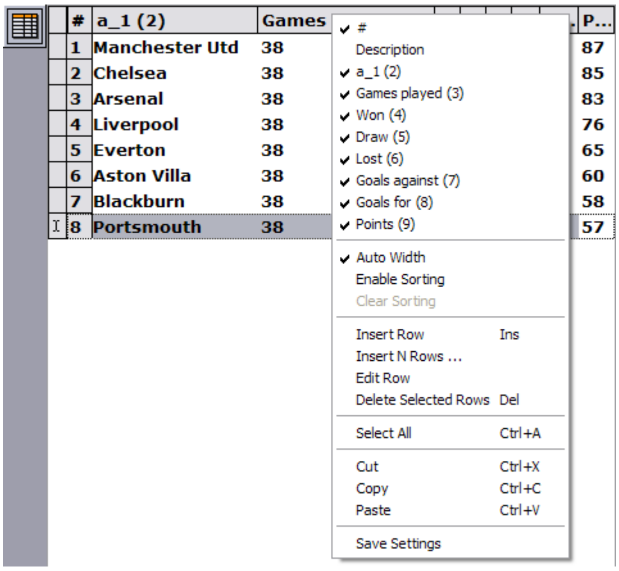
  
  99

- **Checkbox Cells:** For Boolean values, such as hide and show, a checkbox will be displayed.
- **Table Keyboard Navigation:** To move between the cells, use the arrow keys on the keyboard.
- **Sorting:** The table can be sorted manually by clicking on the header bar of the column to sort by. Rows can be rearranged manually by drag and drop. Click on the row once and hold the mouse button to drag and drop it to its new location.

1	Viz_2x/image/vizrt/triotutorial/l	Viz | Weather	25
2	Viz_2x/image/vizrt/triotutorial/l	Viz | Engine	21
3	Viz_2x/image/vizrt/triotutorial/l	Viz | Trio	33

- **Customizing a Table View:** By right-clicking on the table header bar, a context menu appears. Columns can be hidden or shown by selecting or unselecting the column. The table editor context menu contains the following columns:

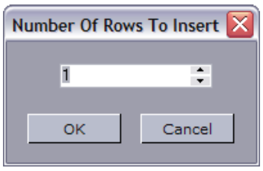
  

#	a_1 (2)	Games	P...
1	Manchester Utd	38	87
2	Chelsea	38	85
3	Arsenal	38	83
4	Liverpool	38	76
5	Everton	38	65
6	Aston Villa	38	60
7	Blackburn	38	58
8	Portsmouth	38	57

  - **#:** Shows the row number (#)

- **Description:** Shows the description field. Descriptions can only be edited in Viz Artist by the designer.
- **Auto Width:** When disabled the column width can be set manually.
- **Enable Sorting:** Enables manual sorting of the table.
- **Clear Sorting:** Clears any sorting and take the table back to its initial state
- **Insert Row (Ins):** Inserts a single row.

- **Insert N Rows ...:** Opens a small input dialog for multiple row insert. The number of rows allowed to add are limited by the scene design.



- **Edit Row:** Edit the row data.
- **Delete Selected Rows (DEL):** Deletes selected rows. For multiple select use CTRL + Left mouse key or SHIFT + Arrow keys up or down.
- **Select All (CTRL+A):** Selects all rows.
- **Cut (CTRL+X):** Cuts rows out of the table. Press CTRL+V to re-add the row(s).
- **Copy (CTRL+C):** Copies rows from the table. Press CTRL+V to add the new row(s).
- **Paste (CTRL+V):** Adds the cut or copied rows to the table.
- **Save Settings:** Saves the column setting for an active template.

Note: The number of rows that can be inserted or deleted depends on the configuration of the plug-in. See the Chart and List plug-ins in the Viz Artist User’s Guide.

Populating Tables Using Macro Commands

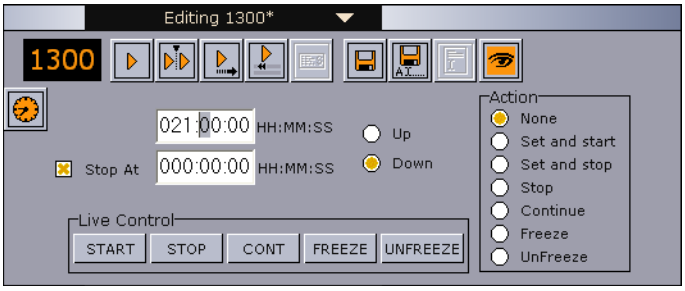
By using Viz Trio’s macro language, a table can be populated with data through a script, or through an external application that connects via a socket connection. To populate a table, the macro *table:set_cell_value* is used. The macro takes 4 arguments:

- The field identifiers for the **table** (string) and the **column** (string), the table’s **row** number (integer: starts at 0), and the **data** to be inserted.
- The example shown below will insert the text string test, in row 4, in the column with id 1, in the table with id 1.

```
table:set_cell_value 1 1 3 test
```

7.13.7 Clock

If the template contains a clock object that is made editable with the Control Clock plug-in, a clock editor opens when tabbing to the clock’s tab field.



Editing 1300*

1300

021:00:00 HH:MM:SS

☒ Stop At 000:00:00 HH:MM:SS

○ Up

● Down

Action

● None

○ Set and start

○ Set and stop

○ Stop

○ Continue

○ Freeze

○ UnFreeze

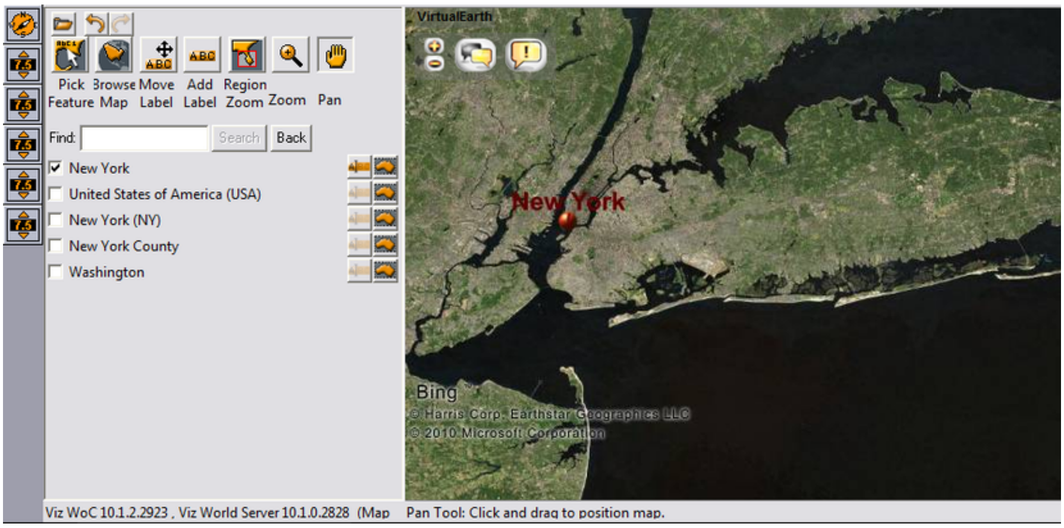
The clock editor has two main functions:

1. **Normal editor**: Specify what should happen when the page is taken on-air.
2. Live Control: With a page on-air, a clocks counting can be started, stopped, continued, frozen, or unfrozen.

The clock editor’s properties are:

- **Start At**: Sets the starting time for the clock.
- **Stop At**: If enabled, a stop time for the clock can be set in the template.
- **Up/Down**: If enabled, the direction the clock should run can be chosen in the template.
- **Action**: Select what the clock is to do when the page is taken on-air. Either:
  - **None:** The time is just set and the clock must be started with the Live Control Start button.
  - **Set and start**: The time is set and the clock is started.
  - **Set and stop**: The time is set and the clock is stopped.
  - **Stop**: The clock is stopped when the page is taken on-air. This can be used to create a shortcut that stops the clock. Just create a page that stops the clock and link it to a key shortcut.
  - **Continue**: Similar use as with stop.
  - Freeze: The clock is frozen when the page is taken on-air.
  - Unfreeze: The clock is unfrozen when the page is taken on-air.

7.13.8 Maps



☑ New York
□ United States of America (USA)
□ New York (NY)
□ New York County
□ Washington

Viz WoC 10.1.2.2923 , Viz World Server 10.1.0.2828 (Map

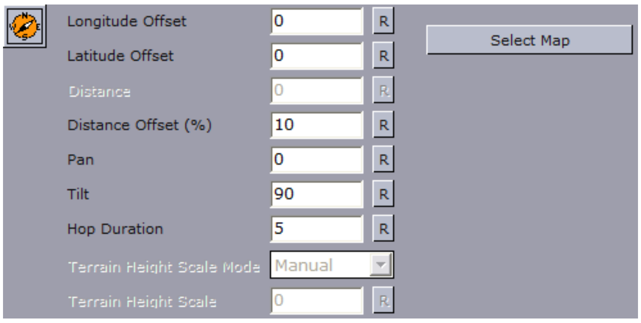
Pan Tool: Click and drag to position map.

There are two versions of the Viz World Client available to Viz Trio. A simplified version and a full version. The simplified version is enabled in the configuration window, see General settings under the User Interface section.

Edit Map: If the map’s tab-field property has more than one property exposed, clicking this button will open the corresponding editors (for example text and text kerning).

Browse Viz World: Opens the full version of the Viz World Client. To use the full version, disable the small version.

Control World plugin interface



Longitude Offset	0	R
Latitude Offset	0	R
Distance	0	R
Distance Offset (%)	10	R
Pan	0	R
Tilt	90	R
Hop Duration	5	R
Terrain Height Scale Mode	Manual	
Terrain Height Scale	0	R

In addition to the Viz World Client editor, Viz World also provides an easy to use control interface when using the Control World plugin. The control is a replacement for the Control Map plugin with much more options and on-the-fly feedback from Viz.

Note: The two controls are not compatible. The new control will not work with Viz Content Pilot, and is only a part of Viz 3.3 and later.

The control can expose different fields based on the container it resides on. When tabbing to the control (in a navigator scene) the camera will jump to the map location and all feedback (exact camera position) will be immediate.

- **Longitude Offset**: Sets the longitude offset.
- **Latitude Offset**: Sets the latitude offset.
- **Distance**: Sets the distance.
- **Distance Offset** (%): Sets the distance offset in percentage.
- **Pan**: Sets the pan.
- **Tilt**: Sets the tilt.
- **Hop Duration**: Sets the hop duration.
- **Terrain Height Scale Mode**: Sets the scale mode of the terrain height.
- **Terrain Height Scale**: Sets the scale of the terrain height.
- **Select Map (button)**: Opens the Viz World Editor. If the control is configured to use the simple Viz World Editor, Viz Trio must be configured to do the same.

See Also

- General settings for switching to simple Viz World Editor
- Viz Artist User's Guide for information on Control World
- Viz World Client and Server User's Guide

7.14 Create New Scroll

Creating a scroll allows the user in an easy way to create credit lists or any other scroll, either vertical, horizontal, with ease points and so on. When creating a scroll from scratch Viz Trio automatically creates a scroll scene on Viz which the user can redesign.

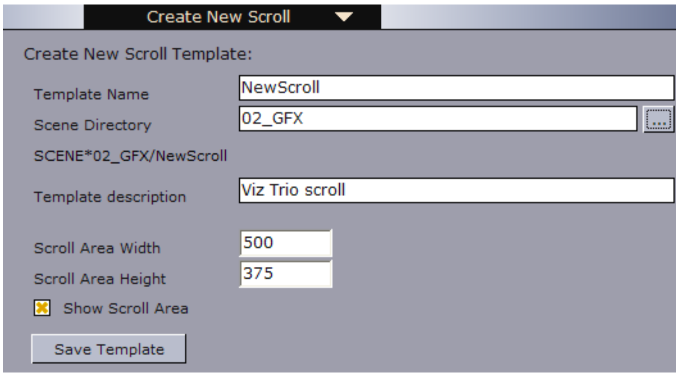
Note: New scrolls must be created using the scroll function.

This section contains information on the following topics:

- Create New Scroll Editor
- Scroll Elements Editor
- Scroll Configuration
- Scroll Live Controls
- Scroll Control
- Element Spacing
- Easepoint Editor

- Working with Scrolls

7.14.1 Create New Scroll Editor



Create New Scroll

Create New Scroll Template:

Template Name: NewScroll

Scene Directory: 02_GFX

SCENE*02_GFX/NewScroll

Template description: Viz Trio scroll

Scroll Area Width: 500

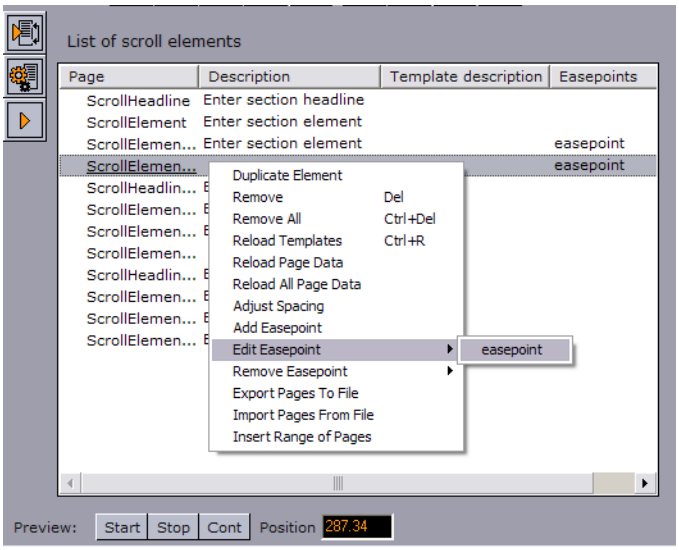
Scroll Area Height: 375

☒ Show Scroll Area

- Template Name: Enter a name for the template.
- Scene Directory: Specify the path to a scene in which to save the template, or select a show by pressing the Browse button.
- Template description: Enter a description for the template.
- Scroll Area Width: Sets the width of the scroll area.
- Scroll Area Height: Sets the height of the scroll area.
- Show Scroll Area: Enable this option to show the scroll area in the preview window.
- Save Template: Saves the template in the specified scene directory.

The Scroll Elements editor opens automatically when saving or opening an already saved scroll template. A scroll is created by compiling a set of templates or pages.

7.14.2 Scroll Elements Editor



List of scroll elements

Page	Description	Template description	Easepoints
ScrollHeadline	Enter section headline		
ScrollElement	Enter section element		
ScrollElemen...	Enter section element		easepoint
ScrollElemen...			easepoint
ScrollHeadlin...	E		
ScrollElemen...	E		
ScrollElemen...	E		
ScrollElemen...			
ScrollHeadlin...	E		
ScrollElemen...	E		
ScrollElemen...	E		
ScrollElemen...	E		

Position 287.34

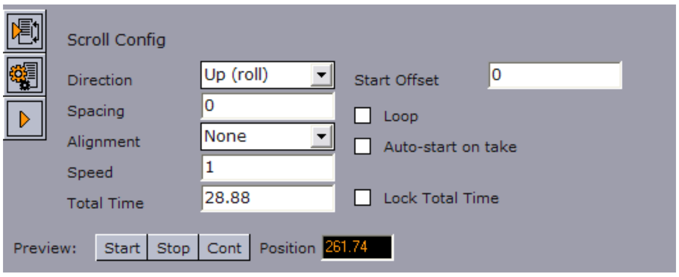
Right-click on any element in the scroll list and a menu appears where actions can be performed and parameter settings defined.

The different options in the Scroll list context menu are:

- **Duplicate Element:** Makes a copy of the selected scroll element and adds it to the scroll list.
- **Remove:** Removes the selected element from the scroll list.
- **Remove All:** Removes all elements from the scroll list.
- **Reload Templates:** Reloads the original templates.
- **Reload Page Data:** Reloads the original page data of the selected scroll element.
- **Reload All Page Data:** Reloads the original page data of all the elements in the scroll list.
- **Adjust Spacing:** Opens the Element Spacing editor which allows the user to adjust the distance before and/or after the selected scroll element.
- **Add Easepoint:** Opens the Easepoint Editor which allows the user to add an easepoint to the selected scroll element.
- **Edit Easepoint:** Opens the Easepoint Editor to adjust the easepoint settings of the selected scroll element.
- **Remove Easepoint:** Removes the ease point from the selected scroll element.
- Export Pages To File: Exports all scroll elements in the currently selected scroll to an XML-file.
- Import Pages From File: Imports a set of scroll elements from an XML-file to the scroll. Note that this option will erase the scroll elements currently in the scroll.
- **Insert Range of Pages**: This option allows the user to insert one or more pages in the scroll. Specify the range of pages to be inserted in the appearing dialog.

7.14.3 Scroll Configuration

Clicking the Scroll Config button opens the scroll main property page.



Scroll Config

Direction: Up (roll)

Spacing: 0

Alignment: None

Speed: 1

Total Time: 28.88

Start Offset: 0

□ Loop

□ Auto-start on take

□ Lock Total Time

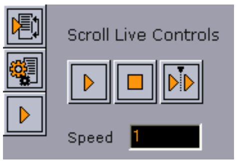
Preview: Start Stop Cont Position 261.74

- **Direction**: Sets the direction of the scroll.

- **Spacing**: Adjusts the distance between the pages in the scroll.
- **Alignment**: Aligns the elements of the scroller to each other. The bounding box of the elements is used for aligning the objects.
- **Speed**: Sets the speed of the scroll.
- Total Time: Shows the total scroll time in seconds.
- **Start Offset**: Set an offset position from where the scroll should start.
- **Loop:** If enabled, the scroll elements will be looped.
- **Auto-start on take:** If enabled, the scroll will start automatically on take.
- **Lock Total Time:** Lock the total time the scroll is running. This option distributes the time evenly for all pages. Pages with more or less content are not taken into account. See the Scroll Elements Editor section for how to add and edit ease points.

7.14.4 Scroll Live Controls

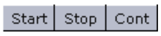
Clicking the Scroll Live Controls button, opens the Scroll Live Controls sub page, which controls the start, stop, and continue actions of a scroll on-air.



To activate the Scroll Live Controls, first click the Take button in the Scroll Editor. When active, the Live Control buttons will be green and can be used as follows:

- **Start:** Takes and starts the scroll that is currently displayed in the local preview on-air, assuming that the client is set in on-air mode.
- **Stop**: Stops the scroll.
- **Continue:** Resumes the scroll.
- **Speed:** Adjusts the speed of the scroll while on-air.

7.14.5 Scroll Control



The **Start**, **Stop** and **Continue** buttons in the lower left corner of the Scroll Elements editor enables a preview of the scroll in the local preview renderer window.

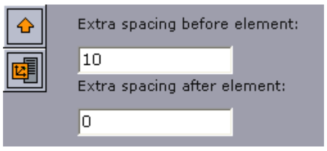
- **Start:** Starts the current scroll in the local preview window.
- **Stop**: Stops the scroll.
- **Cont:** Resumes the scroll.

- **Position:** Use the Position slider to manually run a preview of the scroll. Click the value field, keep the button pressed and move the mouse horizontally. The cursor will change to an arrow to indicate that the position value can be changed.

The Scroll Elements editor has two sub-pages, Scroll Configuration and Scroll Live Controls. Set parameters for the scroll using the Scroll Configuration editor, and control the scroll while on-air through the Scroll Live Controls editor.

7.14.6 Element Spacing

Open the adjust element spacing editor to adjust the distance before and/or after a single scroll element:



Extra spacing before element: 10

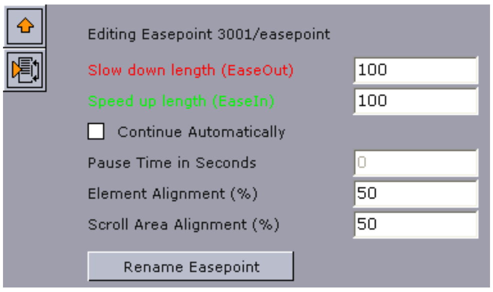
Extra spacing after element: 0

The Adjust Spacing editor’s properties are:

- Extra spacing before element: Sets the extra distance before the element.
- Extra spacing after element: Adjusts the extra distance after the element.

7.14.7 Easepoint Editor

The Easepoint editor allows for ease point parameters to be set for a scroll element.



Editing Easepoint 3001/easepoint

Slow down length (EaseOut): 100

Speed up length (EaseIn): 100

□ Continue Automatically

Pause Time in Seconds: 0

Element Alignment (%): 50

Scroll Area Alignment (%): 50

The Easepoint editor’s properties are:

- Slow down length (EaseOut): Specifies the slow down length of an ease point.
- Speed up length (EaseIn): Sets the speed-up length of an ease point.
- Continue Automatically: When enabled, the scroll continues automatically after the specified pause-time.
- Pause Time in Seconds: Sets the pause-time in seconds.
- Element Alignment (%): Aligns the bounding box of an element relative to the position of an ease point.

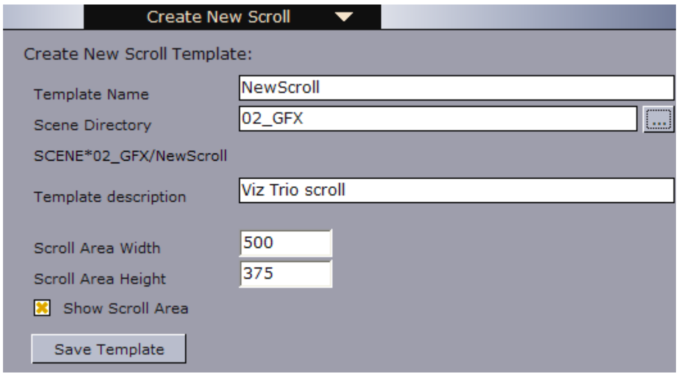
   - The default element alignment is 50%, which aligns the center point of the element’s bounding box with the ease point.
   - When creating rolls, selecting an element alignment of 0% aligns the bottom of the element’s bounding box with the ease point, while 100% adjusts the bounding box’s top with the ease point.
   - When creating crawls, an element of 0% aligns the left side of the bounding box with the ease point, while 100% adjusts the bounding box’s right side to the ease point.
- Scroll Area Alignment (%): Adjusts the position of an ease point relative to the screen’s center point. Scroll area alignment is defined in percentage of the scroll area.
   - The default scroll area alignment is 50%, which aligns the ease point with the center point of the screen.
   - For rolls a scroll area alignment of 0%, aligns the ease point with the scroll area’s lower side, while 100% adjusts it to the upper side.
   - For crawls, a scroll area alignment of 0% corresponds with the scroll area’s left side, while 100% aligns it at the right side.
   - When in ease point edit mode, the current position of the ease point is indicated by a line in the local preview window.
- **Rename Easepoint**: Click the button to rename the ease point. Enter the new name in the appearing dialog.

7.14.8 Working with Scrolls

This section contains information on the following topics:

- To create a scroll
- To configure the scroll
- To edit a scroll element
- To copy an element in the scroll elements list
- To test a scroll

To create a scroll



Create New Scroll

Create New Scroll Template:

Template Name: NewScroll

Scene Directory: 02_GFX

SCENE*02_GFX/NewScroll

Template description: Viz Trio scroll

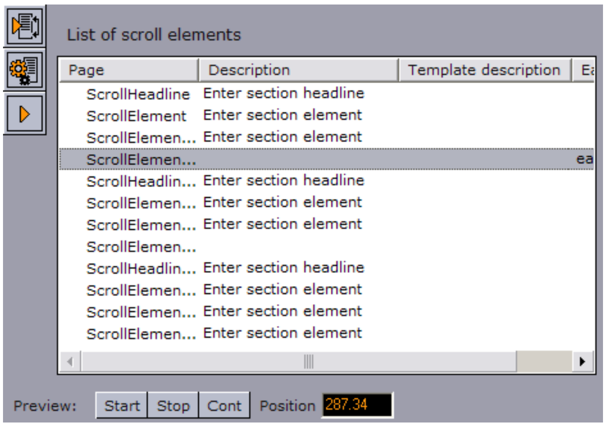
Scroll Area Width: 500

Scroll Area Height: 375

☒ Show Scroll Area

1. Select **Create New Scroll** from the editor’s drop-list menu.

2. Enter a **Template Name**.
3. Select a **Scene Directory**.
4. Enter a **Template description**.
5. Set the **Scroll Area Width** and **Height**.
6. Check the **Show Scroll Area** to show the scroll area in the preview window.



List of scroll elements

Page	Description	Template description	Ea
ScrollHeadline	Enter section headline		
ScrollElement	Enter section element		
ScrollElemen...	Enter section element		
ScrollElemen...			ea
ScrollHeadlin...	Enter section headline		
ScrollElemen...	Enter section element		
ScrollElemen...	Enter section element		
ScrollElemen...			
ScrollHeadlin...	Enter section headline		
ScrollElemen...	Enter section element		
ScrollElemen...	Enter section element		
ScrollElemen...	Enter section element		

7. Drag and drop templates and/or pages into the Scroll Elements Editor.

Note: Different templates for different scroll elements are needed, so the graphics designer should create templates to fill the need for scroll elements.

To configure the scroll

1. Click the Scroll Configuration button to adjust the scroll’s parameters for layout and animation speed.
2. Adjust spacing before and/or after a single scroll element using the Element Spacing editor.
3. Add and configure easepoints using the Easepoint Editor editor.
4. Click **Save** (CTRL+S) to save the scroll.

To edit a scroll element

1. Double-click a scroll element in the Scroll Elements Editor list to open the element’s editor.
2. Click the **Read Parent Page** (arrow) button to switch back to the Scroll Elements Editor.

To copy an element in the scroll elements list

1. Right-click the list of scroll elements, and select **Duplicate Element** from the appearing context menu, or
2. Drag and drop an element into the scroll list while pressing the **CTRL** button.

To test a scroll

- Click the Scroll Control buttons in the lower left corner of the scroll, or scrub the **Position** value with the mouse or arrow keys on the keyboard.

7.15 Edit Show Script

Select *Edit Show Script* from the Page Editor drop-down menu. This will open the **Choose Show Script** window, where it is possible to edit the script assigned to the show.

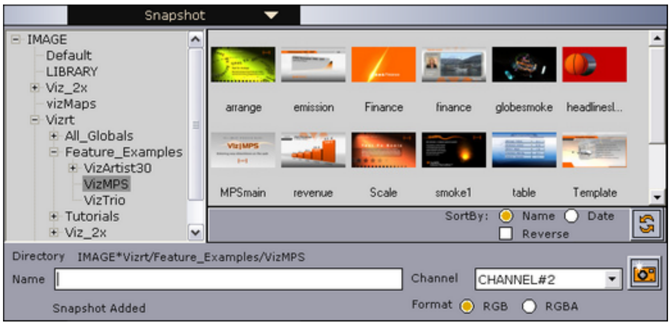
> **Tip:** The Choose Show Script window can also be opened by selecting **Script > Edit Show Script** from the Template List context menu, or by clicking the Show Script browse button in the Show Settings window.

See Also

- To assign a script to a show

7.16 Snapshot

Select Snapshot from the Page Editor drop-down menu. This opens a window that enables a snapshot of the current view on the on-air renderer to be taken.



SortBy: ● Name ○ Date

□ Reverse

Directory IMAGE*Vizrt/Feature_Examples/VizMPS

Name

Channel CHANNEL#2

Format ● RGB ○ RGBA

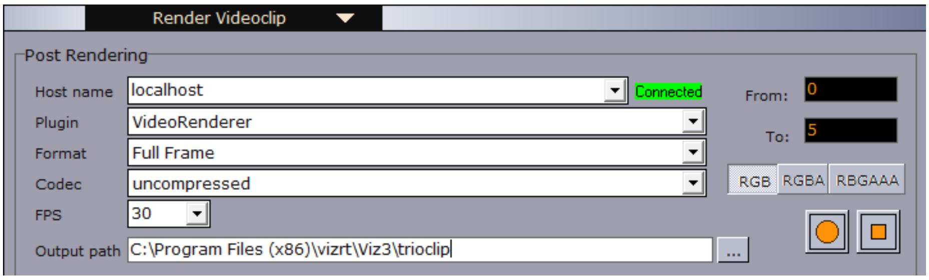
Snapshot Added

Specify the channel to take a snapshot from, and select the preferred format. Browse the Image database to select the folder where the snapshot is to be placed. The images can be sorted by Name or Date. Select the Reverse checkbox to reverse the sorting. To refresh the content of the selected folder, click the Refresh button.

Then enter a name for the image and press the Take Snapshot button to the right. A thumbnail of the snapshot will then be visible, and the snapshot is shown in the preview window.

> **Note:** Snapshots can only be deleted from Viz Artist.

7.17 Render Videoclip



Host name: localhost — Connected

Plugin: VideoRenderer

Format: Full Frame

Codec: uncompressed

FPS: 30

Output path: C:\Program Files (x86)\vizrt\Viz3\trioclip

From: 0

To: 5

The Render Videoclip option from the drop down menu exposes an editor for post rendering of pages to a device specified in Viz Artist, such as an AVI or a tape recorder.

Post rendering is used to create images or video files of graphical scenes. The files can be used for playout on Viz Engine. Selecting a video plug-in will create one file; however, selecting an image plug-in will render an image according to the configured frame rate. For example; Rendering a scene for five seconds will result in 250 images if the frame rate is 25 frames per second (fps).

Rendered data elements can be full screen graphics or graphics with Alpha values such as *lower thirds* and *over the shoulder* graphics.

The Viz 2.x render devices must be activated and set up in Viz Config. The render devices for Viz 3.x are automatically setup and do not need any configuration.

Note: Only scene-based pages can be post rendered.

The settings in the post render frame is continued throughout Viz Trio client restarts.

- **Host name**: Sets the Viz machine that will post render the scene. It is also possible to define the port number (**`<host-name>:<port-number>`**).
- **Plugin:** Sets the renderer device.
- **Format**: Sets the format. Available options are full frame, fields top, fields bottom, full frame/interlaced top, full frame/interlaced bottom and full frame skip. The options vary depending on the Plugin selected.
- **Codec:** Sets the codec to be used.
- **FPS**: Sets frame per second. Available options are 30, 60, 29.97 and 59.94.
- **Output path:** Sets the output path. A corresponding browse button is available when localhost is selected as host. As Viz Trio cannot browse the file system on other machines, manually make sure that the output path is valid if defining the path on anouther machine. A full or relative path can be added. If no path is given, the file is stored in the Viz program folder on the rendering machine.
- **From**: Sets the start time in seconds.

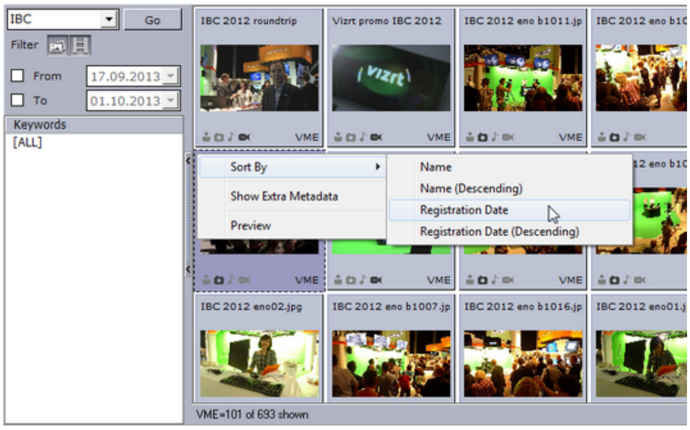
- **To**: Sets the end time in seconds.
- **RGB:** Sets the pixel format to RGB.
- **RGBA:** Sets the pixel format to RGBA which includes the alpha channel (blending/transparency).
- **Record button (circle):** Starts the rendering process.
- **Stop button (square):** Stops the rendering process before the configured stop time.

7.18 Search Media

To open the Search Media editor, select Search Media from the top right drop-down menu. The Search Media editor allows you to search the connected Viz Object Store database and MAM system for images and video clips. Viz Object Store traditionally stores still images and person information. The Vizrt MAM system Viz One traditionally stores video, audio and video stills. The Search Media feature combines all the sources into one.

Note: Viz Trio does not support the use of audio files.

Media items can be dragged and dropped into a show, show playlist, playlist, template or page (e.g. as full screen or part of the graphics). Double-clicking an image or video clip in any of the aforementioned scenarios will open the Search Media editor.



The left pane shows the Search and Filter Options and a list of categories, while the right pane displays the search result.

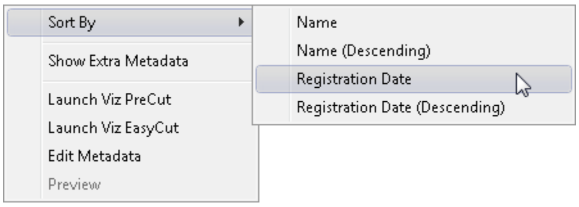
Tip: The number of fetched media files can be specified in the General section of the Trio Configuration. Scrolling down to the bottom of the list will fetch addtional media files.

When the media search frame is shown and you have many hits only the first N hits are shown. When scrolling down in the result list the next N hits will be fetched. There is no more button. The next chunk of hits get automatically searched when scrolling down to the bottom.

This section contains information on the following topics:

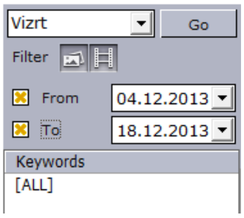
- Media Context Menu
- Search and Filter Options

Media Context Menu



- **Sort By:** Displays a sub menu with sort options.
  - **Name/Name (Descending):** Sorts by name in ascending and descending order.
  - **Registration Date / Registration Date (Descending)**: Sorts by registration date in ascending and descending order.
- **Show Extra Metadata:** Switches the media icons to display meta data such as complete filename, creation date, and clip length and so on.
- **Launch Viz PreCut:** Opens the selected video clip(s) in Viz PreCut for editing.
- **Launch Viz EasyCut:** Opens the selected video clip(s) in Viz EasyCut for editing.
- **Edit Metadata:** Enables the user to edit the meta data for the selected clip (in Viz One).
- **Preview:** Previews images using the *Windows Picture and Fax Viewer*. Is only available for Viz Object Store items.

Search and Filter Options


Vizrt

☒ From 04.12.2013
☒ To 18.12.2013

[ALL]

- **Search field:** Combo box for entering a search criterion. Previously entered search criteria are remembered per session.
- **Filter:** Enables/disables the image or video filters.
- **From/To:** Filters the search result based on From and To registration dates.
- **Keywords:** Filters the search result based on keywords.

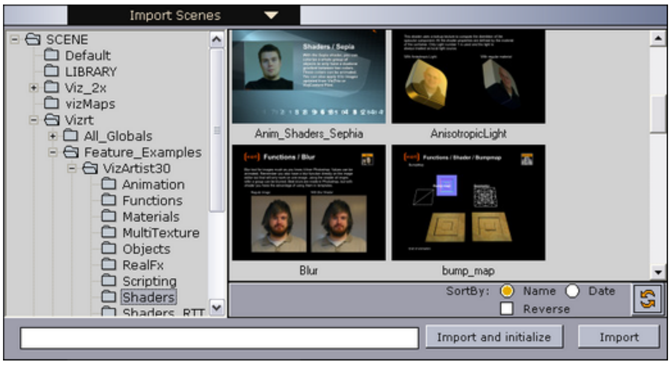
Note: Viz Trio does not support the use of audio files.

See Also

- Picture Database Settings
- Media Engine

7.19 Import Scenes

From the drop-down menu select Import Scenes. This menu item opens a browser window where Viz Artist scenes can be selected and enabled for Viz Trio.



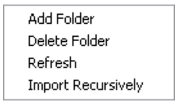
Choose the scene, or scenes, to import into the template list and click the Import button. It is possible to multi-select scenes and import scenes from any scene folder. To make the scenes ready for playout as fast as possible, press the Import and Initialize button. This will load all scenes on the program and preview renderer (Viz Engine).

The scenes can be sorted by Name or Date. Select the Reverse check-box to reverse the sorting. To refresh the content of the selected folder, click the Refresh button.

This section contains information on the following topics:

- Import recursively
- Import scenes with Toggle or Scroller Plugin

Import recursively



Another import option is to import a whole folder, or folder tree structure. This option is a recursive import, and it does not initialize the show on the renderers.

To import recursively, right-click the folder in the scene tree and select Import Recursively on the context menu.

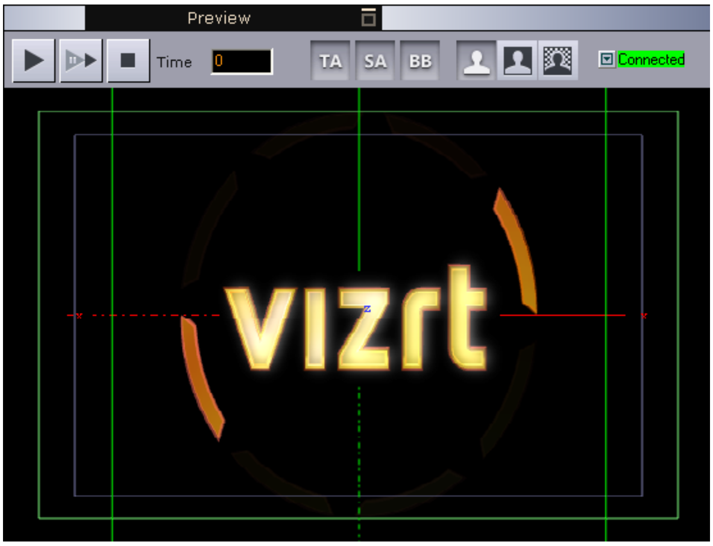
Caution: A scene with the same name as an existing template in the current show will be attempted to be merged with the existing template (e.g. scene 1000 with template 1000).

Import scenes with Toggle or Scroller Plugin

When importing a scene with a Toggle or Scroller plugin, in combination with Control Object, you will be given a choice to import that scene or not. Under normal circumstances you will not import scenes with Toogle or Scroller plugin, but in those cases where you are using Toggle or Scroller plugin in scenes that are not Transition Logic or ticker related you will have the option of importing them as templates.

7.20 Graphics Preview

Real-time rendered graphics and video



The local Preview window shows a WYSIWIG (what you see is what you get) representation of the graphics and video. In addition it will show the defined title and safe area and the bounding boxes. Bounding boxes are related to the graphics scene's editable elements (see the Tab Fields Window section). For the full screen video preview there is also a timeline for scrubbing of full screen videos.

This section contains information on the following topics:

- Graphics Control Buttons
- Connection Status
- Video Control Buttons

7.20.1 Graphics Control Buttons

Above the Preview window is a button bar with some buttons and a timeline display:

▶

The Play button starts the scene animation currently loaded in the local preview.

⏩

The Continue button continues the scene animation currently loaded if it contains any stop points.

■

The Stop button stops the scene animation.

With the Time slider it is possible to scrub the timeline manually by clicking in the value field, keeping the button pressed and moving the mouse horizontally back and forth. The cursor will change to an arrow to indicate that the time value can be changed.

TA

Click this button to show or hide the Title Area in the Preview window.

SA

Click this button to show or hide the Safe Area in the Preview window.

BB

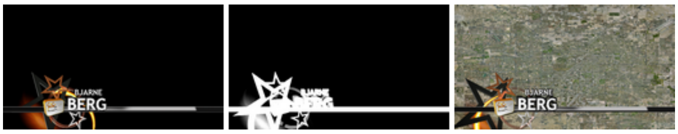
Click this button to show or hide the Bounding Box for the tab field currently selected in the Preview window.

Preview modes RGB, Key and RGB with background image.

The three buttons can be used to see the previewed graphics in three different modes.

- The first shows the graphics in an RGB mode with a default background color (black).
- The next shows the graphics in Key mode, showing how the key signal looks like.

- The last option provides an example of an RGB preview with a background image. This will illustrate how the graphics appear on top of a video.
- For example:



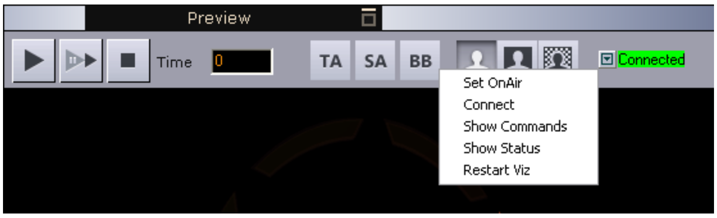
See Also

- Show Settings and how to set the Preview background image

7.20.2 Connection Status

Connected

In the upper right corner of the Preview window, the connection status of the local Viz renderer can be seen. Clicking the adjacent arrow button will display a context menu.



These functions are mainly for debug purposes:

- Set OnAir: Only relevant if the local preview function is on an external machine. Then this function will force the renderer in on-air mode.
- Connect: Only relevant if the local preview function is on an external machine. This function will reconnect to the external machine.
- Show Commands: Opens the command shell for the local Viz Engine renderer.
- Show Status: Shows a status box for the local Viz Engine renderer.
- Restart Viz: Restarts the local preview process if it has crashed.

7.21 Video Preview

The local preview window can also show, in addition to the Graphics Preview , the compressed version of full screen video clips. Full screen video clips are added directly to the show or playlist.

This section contains information on the following topics:

- Video Control Buttons

See Also

- Graphics Control Buttons

7.21.1 Video Control Buttons

Above the full screen video clip preview window is a button bar with some buttons and a timeline display:

The **Play** button starts the video clip currently loaded in local preview. Press the Play button to start the clip. Press it again and it will stop. If a Mark in point has been set it will jump back to the Mark in point. When loading the clip in Preview it will play the clip automatically.

The **Pause** button pause the video clip currently loaded in local preview. Press the Pause button to freeze the clip. Press it again to continue playing the clip.

The **Stop** button stops and rewinds the video clip currently loaded in local preview. If a Mark in point has been set it will jump back to the Mark in point.

The **Timeline** has a marker and the possibility to set Mark in and out points. It also shows the actual length of the clip in hours, minutes, seconds and milliseconds.

If a Mark in and out point has been set, the length of the clip will show the time of the clip marked by the in and out points.

Use the Mark in and out points to create new time code references for Viz Engine. Save the video clip and Viz Engine will only play out the frames between the Mark in and out points. Use Save As to create new and edited versions of the original clip.

Note: Mark in and out only creates references for Viz Engine; hence, it does not create new clips that are saved back to the MAM system. New clips are made using Viz EasyCut or Viz PreCut. For Viz Trio users this is limited to Viz PreCut.

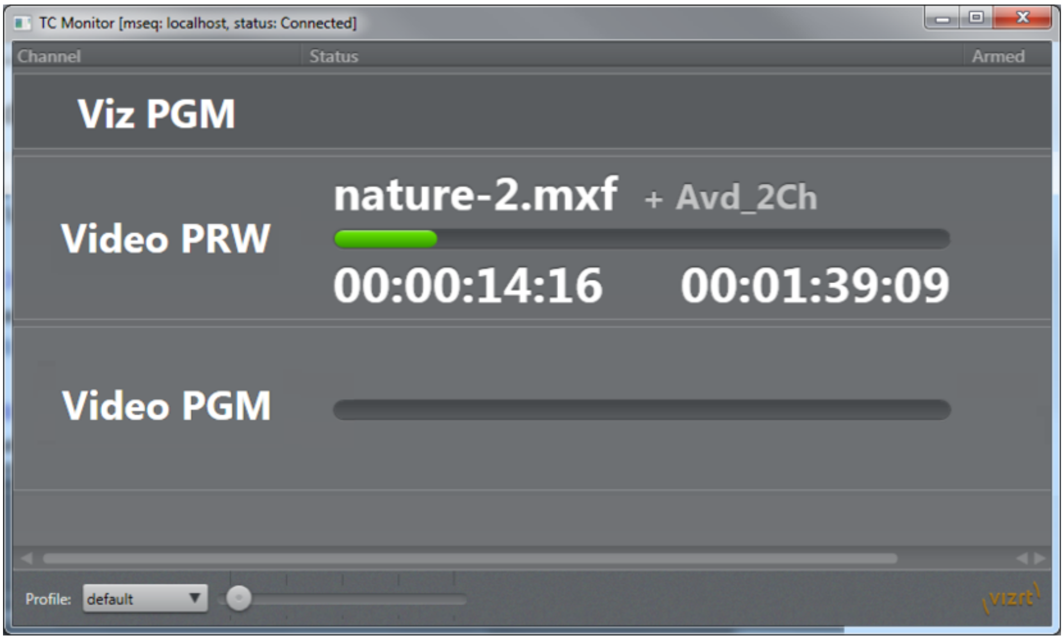
See Also

- Graphics Control Buttons
- Search Media

7.22 TimeCode Monitor

The TimeCode Monitor (TC Monitor) shows the progress of the current video clip on a certain channel.

TC Monitor



TC Monitor [mseq: localhost, status: Connected]

Channel	Status	Armed
Viz PGM		
Video PRW	nature-2.mxf + Avd_2Ch 00:00:14:16 00:01:39:09	
Video PGM		

Profile: default

For a Trio operator, it is important to monitor the progress of a playing video clip. The indication that a video clip is nearing it’s end is especially important.

In addition to the basic TC Monitor that opens in a separate window, an inline TimeCode Monitor becomes available above the local Preview panel in Viz Trio whenever playing a video.

Note: The TimeCode Monitor keeps track of the time code and the video server channels; hence, it will only work if the system is configured to be integrated with a video server. Also, in order to monitor video clips embedded in graphics, the render engine must also be defined as a video channel (see the Output section).

This section contains information on the following topics:

- TimeCode Monitor Options
- To enable the TimeCode Monitor
- To disable the TimeCode Monitor
- To monitor the time code of a video

TimeCode Monitor Options

The TimeCode Monitor displays three columns: Channel, Status and Armed.

- **Channel:** Name of the Channel. Video channels appear as light grey rows, with progress information in the Status column. Non-video channels are shown as dark grey rows without status.
- **Status:** The name of the current item, followed by any cued item, is displayed above the progress bar. Current Location time and Remaining

time are shown below the progress bar. The progress bar changes colour to indicate status:

- *Green:* Video playing
- *Red:* Video playing, less than 10 seconds remaining
- *Blue:* Video finished

- **Armed:** Displays the armed state of an element on a channel. See Arm and Fire.

The rows in the list can be shown or hidden using the context menu on each item:

- **Hide:** Hide the selected channel
- **Show All:** Show all channels

At the bottom of the window is the zoom function to adjust the display size, and the Profile selector which displays the current profile name, and allows selection of other profiles.

The Timecode Monitor opens in full screen by default. Press the ESC key to exit full screen mode.

To enable the TimeCode Monitor

- To activate the TimeCode Monitor, use the command

```
gui: show_timecode_monitor
```

When activated, the time code status will be shown in the TC Monitor whenever a video is played.

To disable the TimeCode Monitor

- To disable the TimeCode Monitor, use the command

```
gui: hide_timecode_monitor
```

To monitor the time code of a video

1. Make sure that the TimeCode Monitor is activated, see To enable the TimeCode Monitor.
2. Double-click a video or composite element (grapics and video combined).
3. Play the video.

The progress of the video should be displayed in both the TC Monitor, and the inline TC Monitor above the local Preview panel.

See Also

- Macro Language
- Macro Commands and Events

7.23 Field Linking and Feed Browsing in Viz Trio

Viz Trio supports browsing tab-field values from external sources. Instead of editing tab-field values manually, values from an external feed can be selected.

Note: Viz Trio only supports the Atom 1.0 feed standard.

This section contains information on the following topics:

- Workflow
- Overview
- Technical
- Field Linking
- Feed Browsing

7.23.1 Workflow

1. Import a regular scene as template in Trio.
2. Read the template.
3. On top of each tab-field of the template, a link button opens the collection picker, which lets the user specify a feed URI. Additionally the user has to specify which part of the selected feed item should be used as value; title, content, a link with a certain link relation, entry or locator.

   Note: The link button is not available for pages. Linking to an Atom feed is the property of a template in Viz Trio and is therefore shared by all pages using that template.

4. Press the **Save template** button.
5. When establishing a valid feed connection, the tab-field value can be selected from the feed items.

7.23.2 Overview

Feed URIs can be defined in the control object of the scene design in Viz Artist. Additionally, the feed URI for a tab-field in a template can be defined from within Viz Trio. Each page then uses the feed browser to edit the tab-field value. The specified feed URI in Viz Trio overwrites any existing feed URI from the control object. A reimport of the scene does not reset the specified feed URI by the field definition specified in control object.

A tab-field in general has several properties. Each property relates to a control plug-in in the scene. Properties are grouped under a tab-field by a naming convention.

Example: The ControlText plug-ins specifying the field identifiers 1.name, 1.score and 1.image will form a tab-field 1 with the properties name, score and image. Selecting a feed item for the tab-field 1 should apply the parts of the selected item to the properties name, score and image at once. The individual property values should be editable as usual. The feed item selection works a pure fill-in help.

The feed linking is usable across all tab-field types.

Note: Make sure to define matching object types; a thumbnail link for control image tab-fields, and so on.

Field linking in Viz Trio is a two-step procedure:

1. **Field Linking:** Linking the fields in a template to various parts of data that comes from entries in a feed. This is a setup step that is usually done once for a template.
2. **Feed Browsing:** After field linking has been set up and saved for a template, a new property editor for selecting an entry from a feed will be available. This feed browser lets you select an item in a feed that contains the values that should be applied to the field values.

Note: Viz Trio only supports the Atom 1.0 feed standard.

The feed browser supports two types of feeds:

- Flat feeds
- Hierarchical feeds (folder structrure)

Tabfield Grouping

To be able to set multiple tabfield values from the same feed entry, the tabfields must be grouped together. This is done by giving them the same prefix followed by the period character. For example, the following tabfield names will generate two groups of tabfields (**`candidate1`** and **`candidate2`**):

```
candidate1.name
candidate1.image
candidate2.name
candidate2.image
```

7.23.3 Technical

The following XML Namespace Prefixes are used when referring to XML elements:

XML Namespace Prefixes

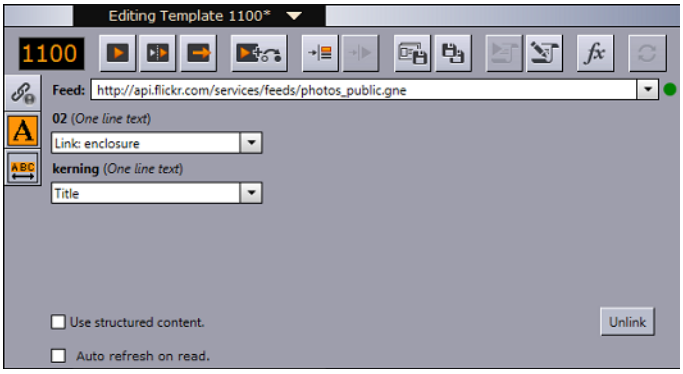
Prefix	URL
atom	http://www.w3.org/2005/Atom
viz	http://www.vizrt.com/types
vaext	http://www.vizrt.com/atom-ext
media	http://search.yahoo.com/mrss/
thr	http://purl.org/syndication/thread/1.0
opensearch	http://a9.com/-/spec/opensearch/1.1/

Example: The notation `<atom:entry>` is to be interpreted as referring to the same element as `<entry xmlns="http://www.w3.org/2005/Atom">`.

The keywords MUST, MUST NOT, REQUIRED, SHALL, SHALL NOT, SHOULD, SHOULD NOT, RECOMMENDED, MAY, and OPTIONAL in this document are to be interpreted as described in RFC 2119.

7.23.4 Field Linking

Field linking is the process of linking the fields in a template to various parts of data that comes from entries in a feed.



Editing Template 1100*

1100

Feed: http://api.flickr.com/services/feeds/photos_public.gne

02 (*One line text*)

Link: enclosure

kerning (*One line text*)

Title

□ Use structured content.

□ Auto refresh on read.

This section contains information on the following topics:

- The Following Fields can be Linked
- The Following Fields cannot be Linked
- Elements in atom feed
- Elements in atom entry

The Following Fields can be Linked

- `<atom:author>`

The personal details of the author of the selected **`<atom:entry>`**, which might be an individual person or an organization. The data is provided in child elements as follows:

  - **`<atom:name>`**: The name of the author. The value of the **`<atom:name>`** element inside the first **`<atom:author>`** element that applies for the entry is recorded as the field value. This child element is required if you are specifying the **`<atom:author>`** element.
  - **`<atom:uri>`**: A URL associated with the author, such as a blog site or a company web site. The value of the **`<atom:uri>`** element inside the first **`<atom:author>`** element that applies for the entry is recorded as the field value. This child element is optional.
  - **`<atom:email>`**: The e-mail address of the author. The value of the **`<atom:email>`** element inside the first **`<atom:author>`** element that applies for the entry is recorded as the field value. This child element is optional.

- **`<atom:content>`**
  - Both inline and URL content is supported.
  - There is no type match, so it is up to the Trio operator to figure out what content can be used.
  - For URL content the resource is downloaded first and then applied as the value. If you just want the URL you should use **`<atom:link>`**.
- **`<atom:entry>`**

  The whole entry XML.
- **`<atom:link>`**

  This element defines a reference from an entry to a Web resource; in other words this is the value of the **`href`** attribute.
- **`<vaext:locator>`**

  The text of the Vizrt Atom Extension **`<vaext:locator>`** element which has a **`vaext:type`** attribute equal to the mediatype attribute of **`<viz:fielddef>`** element in the model.
- **`<atom:published>`**

  This element is a Date construct indicating the initial creation or first availability of the entry. The value of the **`<atom:published>`** element in the entry is recorded as the field value.
- **`<atom:summary>`**

  This element is a Text construct that conveys a short summary, abstract, or excerpt of an entry. The content of the **`<atom:summary>`** element in the entry is recorded as the field value.
- **`<atom:thumbnail>`**
- The value of the url attribute of the first thumbnail element in the entry is recorded as the field value.
- **`<atom:title>`**

  This element is a Text construct that conveys a human-readable title for an entry or feed; the title of the selected **`<atom:entry>`**.

- **`<atom:updated>`**

  This element is a Date construct indicating the most recent instant in time when the selected **`<atom:entry>`** was modified. The value of the **`<atom:updated>`** element in the entry is recorded as the field value.

The Following Fields cannot be Linked

- **`<atom:category>`**
- **`<atom:id>`**
- **`<atom:rights>`**
- Any other elements.

Elements in atom feed

Elements that should be present in the **`<atom:feed>`** for the full user experience:

- **OpenSearch link:**

  ```
  <atom:link rel="search" type="application/opensearchdescription+xml"
   href="http://example.com/opensearchdescription.xml"/>
  ```

- Optional, needed for support for server side searching.
  - The opensearchdescription xml file must contain a template node that returns search results as an atom feed:

  ```
  <opensearch:Url type="application/atom+xml" template="http://..." />
  ```

- See http://www.opensearch.org/Specifications/OpenSearch/1.1 for more details.
- **Up link:**

  ```
  <atom:link rel="up" type="application/atom+xml;type=feed"
   href="http://..." />
  ```

- Optional, needed for nested collections.
  - The up link should link to the parent folder feed for hierarchical feeds.
  - The up link must have a type string equal to "**`application/atom+xml;type=feed`**".

Elements in atom entry

Elements that should be present in the **`<atom:entry>`** for the full user experience:

- **Self link:**

  ```
  <atom:link rel="self" type="application/atom+xml;type=entry"
   href="http://..." />
  ```

- The self link must link to the url that will return the **`<atom:entry>`** xml.
  - The self link must have a type value equal to "**`application/atom+xml;type=entry`**".
  - Needed for refresh/update of values from the item to work.

  - Needed in combination with the up link for remembering and showing the selected feed entry in a hierarchy of feeds (folder structure). Not needed for remembering selection in flat feeds since then the **atom:id** will be used.
- **Up link:**

```
<atom:link rel="up" type="application/atom+xml;type=feed"
 href="http://..." />
```

- The up link must have a href value that is the url of the feed the entry is in.
  - The up link must have a type value equal to **"application/atom+xml;type=feed"**.
  - Needed in combination with the self link for remembering and showing the selected feed entry in a folder structure.
- **Down link:**

```
<atom:link rel="down" type="application/atom+xml;type=feed"
 href="http://..." />
```

- Needed if this **<atom:entry>** is to be considered a subfolder instead of a normal **<atom:entry>**.
  - The down link must have a type value equal to **"application/atom+xml;type=feed"**.
  - The down link must have a **href** value that is the url of the feed (folder) the entry represents.
  - Link may contain **thr:count** attribute (RFC4685) indicating how many children there are. If the value of **thr:count** is 0 (zero) then the folder will not be loaded since it is empty. This is an optimization.
- **Thumbnail link:**

```
<media:thumbnail url="http://..."/>
```

- Needed for thumbnail icons to display on the entries in the feed browser.
  - The URL value must reference a JPEG or PNG image resource.
  - If many thumbnails are defined the first one will be selected as the default. This is according to Media RSS Specification Version 1.5.0.
- **Locator**

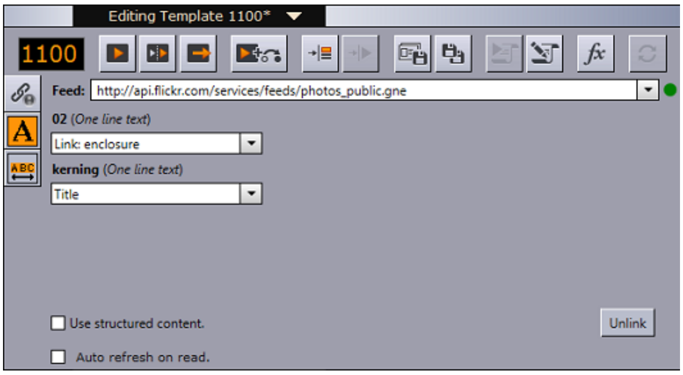
```
<vaext:locator type="application/vnd.vizrt.viz.geom">GEOM*Vizrt/
Tutorials/VizTrio/...</vaext:locator>
```

- Needed to be able to link a tabfield to a locator. A locator is a path that is not representable with the URI **href** in an **<atom:link>**. The selected value is the text node in the locator, so it can in theory be used for any kind of text.
  - For Viz Trio it is meant to be used to select paths to resources that are not URIs, like the resources on the Viz Graphics Hub that is currently in use.
  - The **type** must match the tabfield type.
  - The value from the first locator that matches will be used.
  - If no locators matches an error message will be logged in Trio.

  - The Viz Engine types are:
- TEXT : **`text/plain`**
  - RICHTEXT: **`application/vnd.vizrt.viz.richtext+xml`**
  - MATERIAL : **`application/vnd.vizrt.viz.material`**
  - DUPLET : **`application/vnd.vizrt.viz.duplet`**
  - TRIPLET : **`application/vnd.vizrt.viz.triplet`**
  - FONT : **`application/vnd.vizrt.viz.font`**
  - CLOCK : **`application/vnd.vizrt.viz.clockcommands`**
  - GEOM : **`application/vnd.vizrt.viz.geom`**
  - IMAGE : **`application/vnd.vizrt.viz.image`**
  - AUDIO : **`application/vnd.vizrt.viz.audio`**
  - VIDEO : **`application/vnd.vizrt.viz.video`**
  - MAP : **`application/vnd.vizrt.curious.map+xml`**
  - TRIOSCROLL : **`application/vnd.vizrt.trio.scrollelements+xml`**
- **Other links:**

  ```
  <link rel="..." href="http://..." type="..."/>
  ```
- Needed in order to select the URL to external resources. This can be images, videos, text, and so on.
  - Limitation 1: The atom 1.0 specs allow multiple links with the same relation, but when linking a tabfield to a link in Trio, only the first link will be selected.
  - Limitation 2: Trio can only use the **`href`** URL as the value. It cannot download the resource at the URL and use its contents as the value. The Viz Engine control plugin for the property has to be able to understand the URL and download the resource.

7.23.5 Feed Browsing



Feed: http://api.flickr.com/services/feeds/photos_public.gne

02 (One line text)

Link: enclosure

kerning (One line text)

Title

□ Use structured content.

□ Auto refresh on read.

- **Authentication:**

  The feed browser supports basic HTTP authentication. The server must return a HTTP header based on the HTTP standard, like this:

  ```
  WWW-Authenticate: Basic realm="..."
  ```

- **Searching and Filtering:**

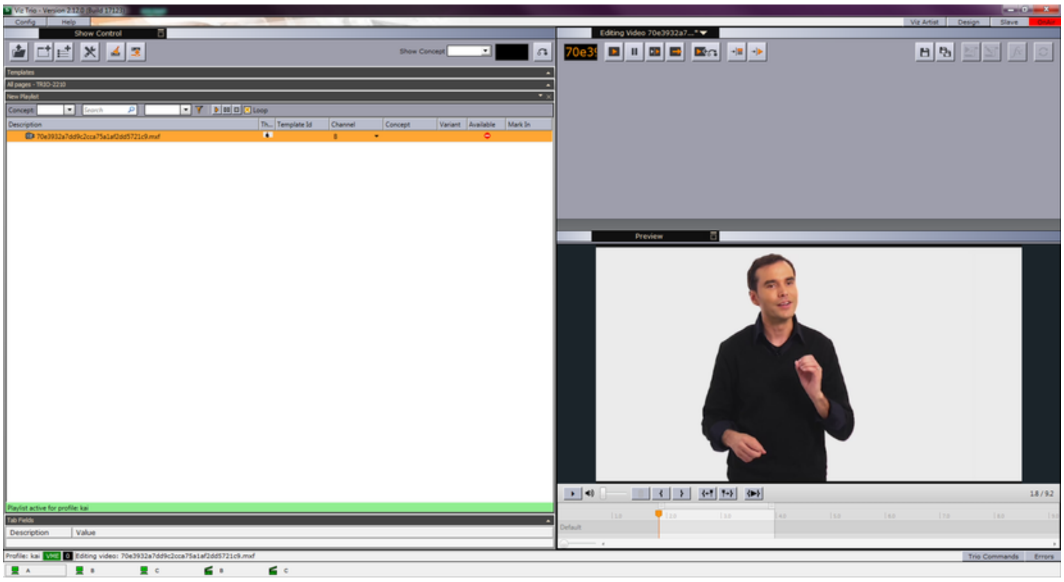
  If the feed supports OpenSearch then the search box will be enabled and all searches will be done on the server. If not then the search box will be a local text filter box.

See Also

- Field Linking

7.24 Timeline Editor

The Timeline Editor is used to add graphics to a video timeline.



In short you search for a video using the Search Media editor. When you have found the appropriate video, it is possible to open the video in the Timeline editor.

The Timeline editor offers basic functionality for adding graphics to the video timeline.

When using data elements (graphics), the Timeline editor will add them as placeholders on the video timeline. The placeholders will display snapshots of the graphics as video overlays (fetched from Viz Preview Server). The placeholders can of course be manually adjusted on the timeline.

A story item containing clip and graphics references from the Timeline editor will appear as a group in the playlist. Issuing a `Take` command on the group will trigger the video clip and timed graphics.

This section contains information on the following topics:

- Timeline Editor Functions
- Working with the Timeline Editor

- [Troubleshooting and Known Limitations]

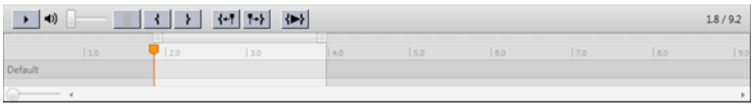
7.24.1 Timeline Editor Functions

This section contains information on the following topics:

- Editor Control Bar Functions
- Multiple Tracks in the Timeline Editor
- Keyboard Shortcuts for Timeline Editor

Editor Control Bar Functions

The Timeline editor is divided in two; a control bar and a preview window.

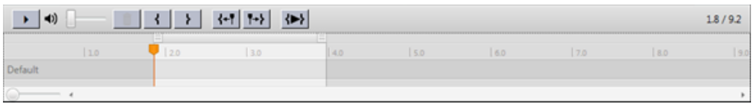


The control bar contains the following functions.

Timeline Editor functions

Function	Description
▶ ⏸	Play or Pause the clip.
🔊	Adjust the volume of the clip.
Delete	Delete the currently selected graphics from the timeline.
▾	Scrub marker (cursor). Drag to scrub the clip.
{	Set the mark-in point to the current position of the cursor.
}	Set the mark-out point to the current position of the cursor.
{←	Jump the cursor to the mark-in point.
→}	Jump the cursor to mark-out point.
{▶}	Play only the area between the mark-in and mark-out points.
─○─	Drag the Zoom control to increase or decrease the time scale shown on the timeline.

Multiple Tracks in the Timeline Editor



The Timeline editor supports multiple tracks for transition logic scenes. This allows graphics to overlap and play out correctly, but requires that all data elements are based on the same transition logic set.

The tracks reflect the layers in the transition logic scene. A track is displayed in the Timeline editor if an element using that layer has been added.

Graphics from the same layer should not be overlapped, and the Timeline editor will indicate a possible conflict by coloring the graphics placeholders red.

Keyboard Shortcuts for Timeline Editor

Key	Description
Mouse wheel	Zoom in and out
CTRL + ‘+’	Zoom in
CTRL + ‘-’	Zoom out
CTRL + ‘0’	Reset zoom
Insert	Add new graphics
Enter	Open selected data element for editing
Del	Remove currently selected graphics from timeline
Space	Play/Pause
SHIFT + Space	Play only the area between the mark-in and mark-out points
CTRL + Arrow	Move graphics in small steps back and forth on the timeline
CTRL + SHIFT + Arrow	Move graphics in big steps back and forth on the timeline
CTRL + ALT + Arrow	Increase or decrease duration by a small amount
CTRL + ALT + SHIFT + Arrow	Increase or decrease duration by a large amount
CTRL + L	Move the selected graphics next to the one to the left
CTRL + R	Move the selected graphics next to the one to the right

Key	Description
CTRL + ALT + L	Stretch the selected graphics next to the one to the left
CTRL + ALT + R	Stretch the selected graphics next to the one to the right
CTRL + H	Sets video position to start of the clip
CTRL + E	Sets video position to end of the clip

Note: Media keyboard shortcuts for play, pause and mute should also work.

See Also

- Working with the Timeline Editor

7.24.2 Working with the Timeline Editor

This section contains information on the following topics:

- To add graphics to a video clip timeline
- To edit a composite element
- To set the Mark-in or Mark-out point
- To view the Mark-in or Mark-out point
- Known Limitations

To add graphics to a video clip timeline

1. Drag a video from the Search Media editor to a playlist.

   Note: The video must be dragged to a *playlist* in order to add graphics and create a composite element. Videos that are dragged to a page list cannot have graphics added.

2. Double-click the video item.
   - The item will open in the Timeline editor.
   - If the video does not appear in the Timeline editor as expected, read the important notes in the Troubleshooting and Known Limitations section.
3. To add graphics, drag an item from the page list to the timeline.
   - A graphics placeholder will appear on the timeline.
4. Use the mark-in/mark-out points to adjust the duration of the animation.
5. *Optional*: Repeat steps 3 and 4 to add more graphics.

Note: Graphics may be overlaid on the timeline; however, graphics that use the same layer (front, middle, back or transition logic layer) will not play out correctly.

6. Click the **Save** button in the upper right corner to create a new composite element, consisting of both the video and graphics combined.
   - The composite element is presented in the playlist with the video element as parent, and the graphics items as children.

To edit a composite element

1. First, create a composite element, consisting of both video and one or more graphics items, see To add graphics to a video clip timeline.
2. Double-click the composite element in the playlist.
   - The item will open in the Timeline editor.
3. Add graphics by dragging it to the timeline.
4. Click the **Save as** button in the upper right corner to update the composite element.

To set the Mark-in or Mark-out point

1. In the Timeline editor, scrub the cursor to the desired frame.
2. Click the **Set Mark-in** or **Set Mark-out** button.

To view the Mark-in or Mark-out point

1. In the Timeline editor, click the **Jump to Mark-in** or **Jump to Mark-out** button.

7.24.3 Troubleshooting and Known Limitations

The following notes may be helpful if you are having problems working with the Timeline editor:

- Video Codecs
- Viz Engine Configuration
- Known Limitations

Video Codecs

If you are previewing proxy versions of video clips from Viz One using the Timeline editor you must install video codecs that are not part of the basic Viz Trio installation.

Note that the setup procedures of Video Codecs are only relevant when using the Timeline editor and not Viz Trio as such. Playout of high resolution versions on Viz Engine do not require these codecs.

See Also

- Installation of Video Codecs

Viz Engine Configuration

In order to work with video clips from Viz One in the Timeline editor, Viz Engine must be configured accordingly.

See Also

- To configure preview of clips stored on Viz One

Known Limitations

- Graphics may be overlaid on the timeline; however, graphics that use the same layer (front, middle, back or transition logic layer) will not play out correctly. The Timeline editor will always indicate a possible conflict by coloring the graphics placeholders red. To use overlapping graphics based on transition logic scenes, see Multiple Tracks in the Timeline Editor.
- Current limitations on the Media Sequencer will cause the following behavior:
    1. If you issue a **`Take`** on a timed group (1), and while that group is played out issue a **`Take`** on an graphics in another layer (2), the Media Sequencer will, when issuing the timed **`Take Out`** command (for the timed graphics), take out the last taken element instead (2).
    2. Hence, it is currently not recommended to take other data elements on-air while a timed group is being played out.
- The Timeline editor may behave unexpectedly in somt virtual machine- or remote desktop-environments.

8 Configuration Interface

The **Config** button opens the Trio Configuration window where the user interface, output channels, Viz Graphic Hub and other settings are applied.

The configuration window has four buttons that apply for all configuration settings made.

- **OK:** Applies any changes, and closes the window.
- **Cancel:** Closes the window
- **Apply:** Applies any changes without closing the window (ref. OK).
- **Reset:** Resets all changes made, unless they are applied locally.

This section contains information on the following topics:

- User Interface
- Output
- Viz Graphic Hub
- VCP Database
- Connectivity
- Import/Export Settings
- About

8.1 User Interface

This section contains the user interface settings that are specific to the local Viz Trio client. It does not affect any other Viz Trio clients using the same Media Sequencer.

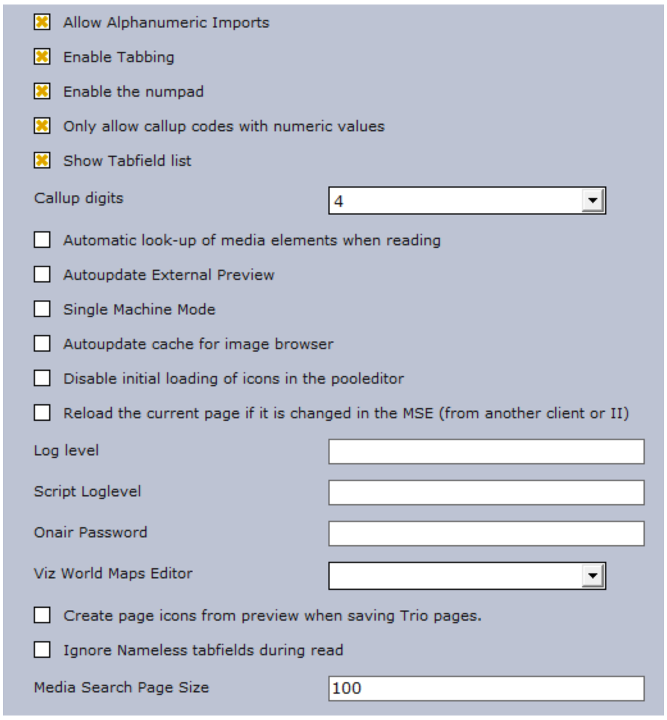
This section contains information on the following topics:

- General
- Keyboard Shortcuts and Macros
- Text Editor
- Page List/Playlist
- Paths
- Local Preview
- User Restrictions

8.1.1 General

To view the General configuration settings, click **User Interface > General** in the Trio Configuration.

General configuration settings



☒ Allow Alphanumeric Imports

☒ Enable Tabbing

☒ Enable the numpad

☒ Only allow callup codes with numeric values

☒ Show Tabfield list

Callup digits: 4

□ Automatic look-up of media elements when reading

□ Autoupdate External Preview

□ Single Machine Mode

□ Autoupdate cache for image browser

□ Disable initial loading of icons in the pooleditor

□ Reload the current page if it is changed in the MSE (from another client or II)

Log level:

Script Loglevel:

Onair Password:

Viz World Maps Editor:

□ Create page icons from preview when saving Trio pages.

□ Ignore Nameless tabfields during read

Media Search Page Size: 100

- **Allow Alphanumeric Imports:** Enables import of scenes with alphanumeric names.
- **Enable Tabbing:** Use this setting to enable or disable the default behavior of the tabulator key. When enabled tabbing will iterate through the tab-fields of the element currently read.
- **Enable the numpad:** Use this setting to enable or disable the default behavior of the numeric keypad (numpad). When enabled, the numpad will type directly into the callup field. Holding down the CTRL button will disable this function
- **Only allow callup codes with numeric values:** When checked, this setting will only allow callup codes with numeric values when a page is read or saved. When unchecked, this setting will allow all values.
- **Show Tabfield List**: Select this option for the tab field list to be visible.
- **Callup digits**: Select how many digits to use for the callup codes.
- **Automatic look-up of video elements when reading:** When enabled, this option will automatically display the video in the video search area when a video element is read. Note that this will slow down the reading of the element.
- **Autoupdate external preview**: When selected, the external preview channel will be automatically updated when a page is edited in the Viz Trio client. When not selected, the external preview channel will only update its preview when the page is saved.
- **Single Machine Mode**: This should be set on Viz Trio NV (no video) systems where the machine both functions as client- and output machine.

This is to separate the control commands that goes to the output machine from those going to the local preview.

- **Autoupdate cache for image browser**: When enabled (default), the Viz Trio client will update the local image browser cache automatically and add any images that are new and update those which have changed. With very large image trees this update process might slow down the system response. To achieve better system response when the image tree is very large, disable this option.
- **Disable initial loading of icons in the pooleditor:** When enabled, this setting will prevent the Viz pool browser from being loaded the first time a tab field, with for example Viz geometries or images, is selected. The icons are loaded when clicking in the browser or changing the path.
- **Reload the current page if it is changed on the MSE (from another client or II):** If this setting is on, the currently read page is reloaded (read again) if it changes on the server.
- **Loglevel**: Defines what kind of log messages that should be logged. Possible levels are: 0, 1, 2, 5, and 9. For mor information, see Viz Trio Log Levels.
- **Script Loglevel**: Sets which log level to use when running scripts. It defaults to -1 , which is no logging. So if a script triggers a viz command, the script log level must be set to 9 to see the Viz Engine command in the log file.
- Onair Password: Sets an on-air password. When set, all users will be prompted for the password when trying to take a Viz Trio client off- or on-air.
- **Viz World Maps Editor:** Defines the Viz World Map Editor (WME) to be launched when a map is added to the template. For more information on how to work with maps, please read the *Viz World User's Guide*.

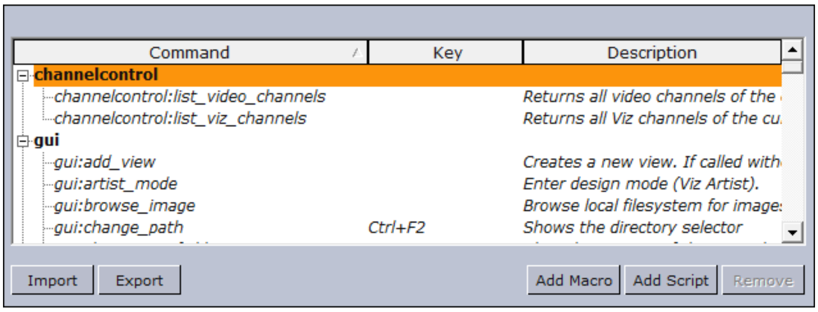
  > **Note:** The WME component requires a Viz World Client installation locally and a connection to one or more Viz World Server(s) or a Server Allocator.

  - **Lite Edition (Inline):** This embedded Map Editor has reduced functionality for map selection.
  - **Classic Edition:** Classic is the default editor. All the map features are exposed and the user has full control over the map selected.
  - **Second Edition (SE):** Second Edition is the next generation map editor. It is more user friendly and will soon have a full set of features.
- **Create page icons from preview when saving Trio pages:** When enabled, this setting will create page icons (thumbnails) from the local preview when creating pages of templates.
- **Ignore Nameless tabfields during read:** When enabled, this setting will discard error messages for tab fields with no name.
- **Media Search Page Size:** Defines how many media items will be fetched at once when searching for images or videos.

8.1.2 Keyboard Shortcuts and Macros

To view the Keyboard Shortcuts and Macros configuration settings, click **User Interface > Keyboard Shortcuts and Macros** in the Trio Configuration.

Keyboard Shortcuts and Macros configuration settings



Command	Key	Description
channelcontrol		
channelcontrol:list_video_channels		Returns all video channels of the
channelcontrol:list_viz_channels		Returns all Viz channels of the cu
gui		
gui:add_view		Creates a new view. If called with
gui:artist_mode		Enter design mode (Viz Artist).
gui:browse_image		Browse local filesystem for image
gui:change_path	Ctrl+F2	Shows the directory selector

In this section keyboard shortcuts can be defined for the different operations in the program. These shortcuts are global, which means that they are valid for all page folders. Local keyboard shortcuts can be specified per show by adding keyboard shortcuts and macros under the Show Settings.

- **Import and Export:** The Import and Export function can be used to import and export shortcut settings to and from an XML-file for backup and reuse of typical configurations.

  Note: The keyboard file has a *.kbd file extension.

- **Add Macro**: The Add Macro button allows an operator to write a Viz Trio macro command, and link it to a shortcut key.
- **Add Script**: The Add Script button allows an operator to write a Visual Basic script, and link it to a shortcut key.

If a key combination is already in use, you are given the option of overriding it. This will leave the other command without an assigned keyboard shortcut.

Macros and scripts that are custom made can be removed using the Remove button. Select the custom made shortcut and click Remove. Note that no warning is issued when performing this operation.

IMPORTANT! Avoid using SHIFT as part of a command as this will disable the possibility to use the assigned key when writing characters (e.g. in upper case).

See Also

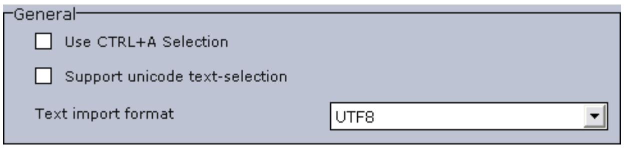
- Macro Language
- Macro Commands and Events
- Scripting

8.1.3 Text Editor

To view the Text Editor configuration settings, click **User Interface > Text Editor** in the Trio Configuration.

The text editor contains general settings related to text formats and how to replace key characters.

General



General

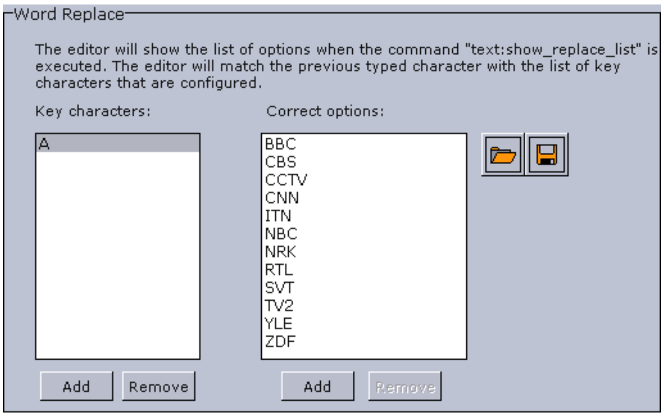
□ Use CTRL+A Selection

□ Support unicode text-selection

Text import format: UTF8

- **Use CTRL+A Selection**: When deselected, the normal key combination for selecting all text, CTRL+A will be disabled.
- Support Unicode text-selection: Use this setting to enable or disable support for Unicode text-selection. This option is used if the default language for non-Unicode programs in Windows is set to a Unicode language. For example: If copying text from a text editor that by default does not support Unicode language into Viz Trio. The representation of text would not be correct.
- **Text import format**: This option allows a character set to be specified for text imported and interpreted by Viz Trio. By default this is set to UTF-8.

Word Replace



Word Replace

The editor will show the list of options when the command "text:show_replace_list" is executed. The editor will match the previous typed character with the list of key characters that are configured.

Key characters:

A

Correct options:

BBC
CBS
CCTV
CNN
ITN
NBC
NRK
RTL
SVT
TV2
YLE
ZDF

Word replace allows key characters to have replace words defined. The list of replacement options becomes available in the text editor when running the `text:show_replace_list` command, see the User Interface section for how to define keyboard shortcuts.

The text editor matches the typed character with the list of key characters configured, and displays the corresponding replacement list. The word correction function is case sensitive, making it possible to define replacement options for both lower and upper case letters. The list of word correction options is local.

- Key characters: Shows a list of defined replacement key characters.
- Correct options: Shows a list of a key character's corresponding replacement options.
- **Add:** To add *Correct options*, a key character must be added first. To add *Correct options*, select the key character, and click the associated Add button.
- **Remove:** Select a list item to remove, and click the associated Remove button.
- **Folder:** Imports a predefined list exported to an XML file.
- **Save:** Exports the predefined list to an XML file.

Example

```
<entry name="customcharacters">
<entry name="A">
   <entry name="CBS"></entry>
   <entry name="CNN"></entry>
   <entry name="BBC"></entry>
   <entry name="ITN"></entry>
   <entry name="NBC"></entry>
   <entry name="NRK"></entry>
   <entry name="YLE"></entry>
   <entry name="SVT"></entry>
   <entry name="CCTV"></entry>
   <entry name="TV2"></entry>
   <entry name="ZDF"></entry>
   <entry name="RTL"></entry>
</entry></entry>
```

8.1.4 Page List/Playlist

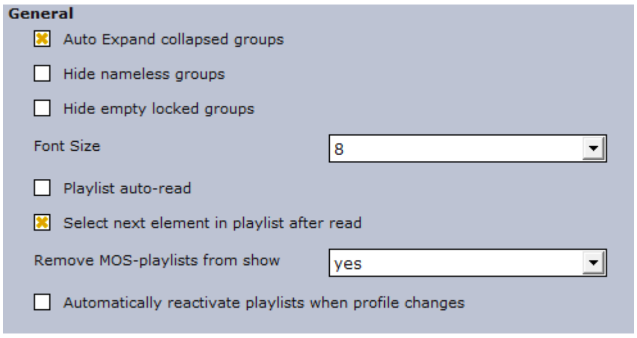
To view the Page List/Playlist configuration settings, click **User Interface > Page List/Playlist** in the Trio Configuration.

This section contains general settings as well as cursor and color settings for the Page List.

This section contains information on the following topics:

- General
- Cursor
- Colors

General



General

☒ Auto Expand collapsed groups

☐ Hide nameless groups

☐ Hide empty locked groups

Font Size: 8

☐ Playlist auto-read

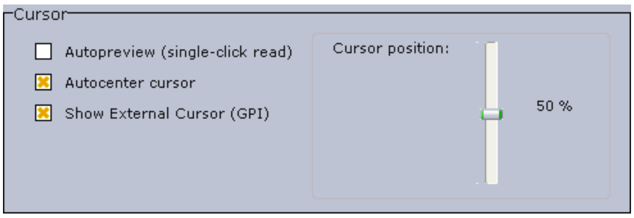
☒ Select next element in playlist after read

Remove MOS-playlists from show: yes

☐ Automatically reactivate playlists when profile changes

- **Auto Expand collapsed groups:** This setting will turn on or off automatic expansion of collapsed groups when doing a read.
- **Hide nameless groups:** This setting will prevent groups without a name from being displayed in the page list.
- **Hide empty locked groups:** This setting will prevent locked groups with no pages from being displayed in the page list.
- **Font Size:** Sets the font size for the Show and Page views. Show Playlist and newsroom playlists have their own font setting in the context menu (see Create Playlist).
- **Playlist auto-read:** When enabled, the page will automatically be read when selecting a page in a playlist.
- **Select next element in playlist after read:** When enabled, the next element in the playlist will automatically be selected after a read operation.
- **Remove MOS-playlist from show:** Removes newsroom playlists that are monitored using the MOS protocol when the show is closed. Setting this to Yes will also affect other clients connected to the same Media Sequencer. The available options are: Yes, No and Ask.
- **Automatically reactivate playlists when profile changes:** If enabled, active playlists are reactivated when the current profile is changed.

Cursor



Cursor

☐ Autopreview (single-click read)

☒ Autocenter cursor

☒ Show External Cursor (GPI)

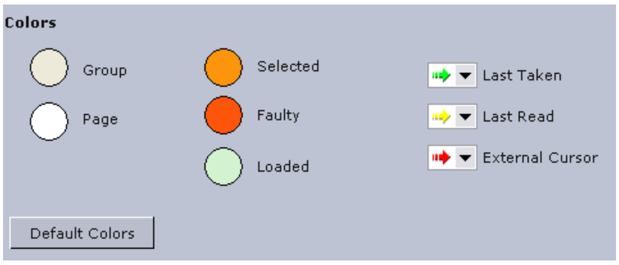
Cursor position: 50 %

- **Autopreview (single-click read):** When enabled, a page will be read as soon as it is selected.
- **Autocenter cursor**: With this function enabled, the cursor will have a static position when the page list is longer than the Page List window. In these situations the window is provided with a scrollbar on the right side. With Autocenter Cursor enabled, as long as some pages are hidden in the direction the list is browsed, the cursor will remain static and the list items

will move instead. When the last item is revealed, the cursor will start to move again.

- **Show External Cursor (GPI):** This property is only relevant if Viz Trio is set up to be controlled by GPI. When enabled, a red arrow will show the global cursor for the GPI integration. When a "take and advance" command is issued through a GPI, the page where the cursor is, will be taken to air and the cursor will advance to the next page in the list.
- **Cursor position:** When Autocenter cursor is active, it decides where in the window the cursor stays in the situations described above. The position can be adjusted by moving the slider control.

Colors



The Page List's color section provides an overview of the currently defined colors of the different elements in the page list. The element colors can be customized as needed. To change the color of an element, select the colored circle adjacent to the appropriate element label. This displays the Colors dialog, which allows the color of the selected element to be customized.

It is also possible to change the colors of the cursors (arrows) indicating the last taken and last read elements, as well as the external cursor (GPI).

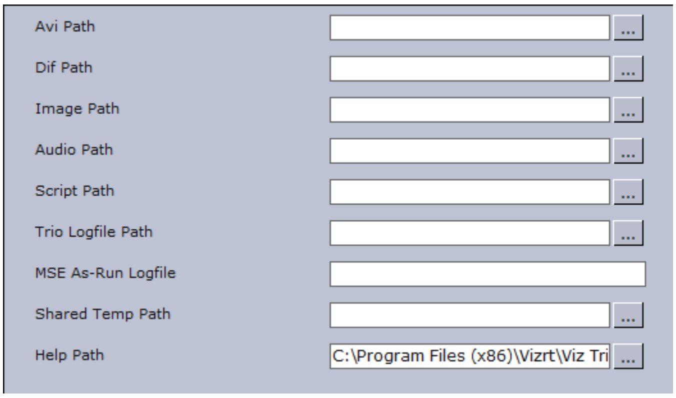
Click the Configuration Interface's global Apply button to apply the changes. Clicking the Default Colors button resets the page list element colors and cursor arrows to the default color settings.

8.1.5 Paths

To view the Paths configuration settings, click **User Interface > Paths** in the Trio Configuration.

This section describes the directories settings for several functions. All settings are local to the specific Viz Trio client.

Paths configuration settings



Avi Path	
Dif Path	
Image Path	
Audio Path	
Script Path	
Trio Logfile Path	
MSE As-Run Logfile	
Shared Temp Path	
Help Path	C:\Program Files (x86)\Vizrt\Viz Tri

- Avi Path: Sets the default location when browsing for AVI files.
- Dif Path: Sets the default location when browsing for DIF files.
- Image Path: Sets the default location when browsing for Image files.
- Audio Path: Sets the default location when browsing for Audio files.
- Script Path: Sets the path to the directory Viz Trio will use as a temporary running directory for scripts. The scripts themselves are stored in the server’s repository.
- **Trio Logfile Path**: Sets the path to the directory where the Viz Trio client should store log files. For more information, see To change the Viz Trio log file path.
- **MSE As-Run Logfile:** Sets the path to the Media Sequencer *as-run* log file. This log file offers a Media Sequencer logging mechanism for all elements that have been taken on air. The as-run log file is an additional debugging tool which a Viz Trio administrator may want to enable to verify that the communication between the Media Sequencer and the playout engine is working properly. The file name may be given with either relative or absolute path.

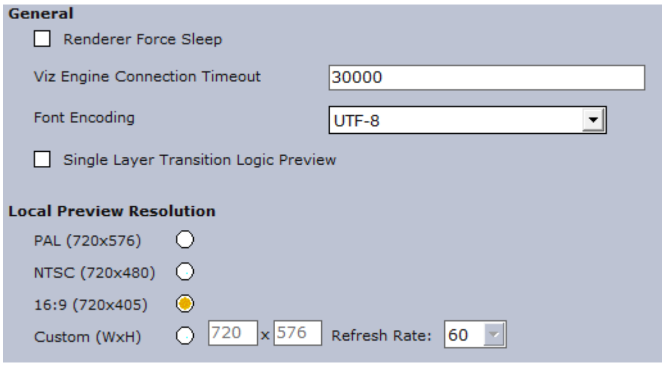
  Note: This is a global setting, affecting all clients connecting to the specified Media Sequencer. Also note that the as-run log file ends up on the Media Sequencer host, not on the local Viz Trio machine. Read more abot the as-run log file in the Media Sequencer documentation at *http://<mse-host>:8580/mse_manual.html#as-run-log*.

- **Shared Temp Folder**: Used for temporary files when importing or exporting Viz Trio shows on an external Viz Engine. This must be a network share that is both accessible for the client and the external Viz Engine.
- **Help Path:** Sets the path for the help file. By default this is the HTML version of the help file. The help file is opened by clicking the Help button in the user interface (next to Config), or by pressing the F1 key unless it has been assigned to another action (e.g. macro).

8.1.6 Local Preview

To view the Local Preview configuration settings, click **User Interface > Local Preview** in the Trio Configuration.

Local Preview configuration settings



General

☐ Renderer Force Sleep

Viz Engine Connection Timeout: 30000

Font Encoding: UTF-8

☐ Single Layer Transition Logic Preview

Local Preview Resolution

PAL (720x576) ○

NTSC (720x480) ○

16:9 (720x405) ●

Custom (WxH) ○ 720 x 576 Refresh Rate: 60

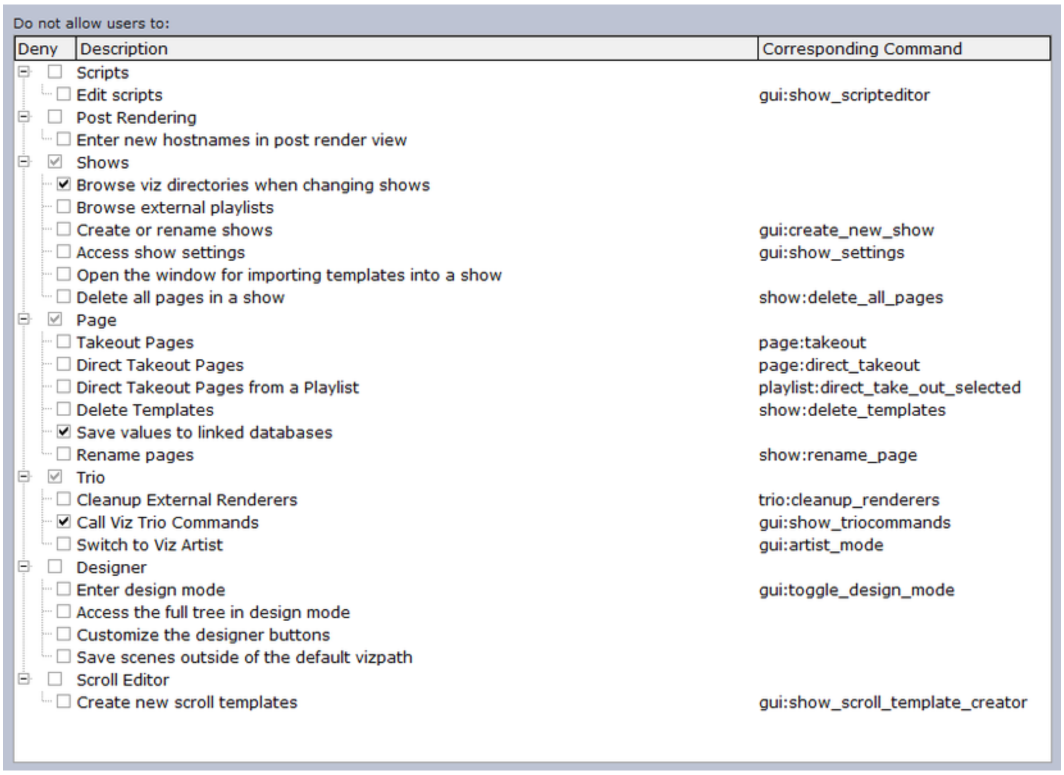
- **Renderer Force Sleep:** Check this option if an NVIDIA G-Force graphics card is installed on the Viz Trio Client machine. Otherwise the machine might, in some cases, use a lot of CPU power.
- **Viz Connection Timeout:** Sets the number of milliseconds until the local Viz Engine renderer times out. Changes to this setting requires a restart of Viz Trio.
- **Font Encoding:** Sets the font encoding format of text sent to the local preview. This setting overrides the local Viz preview and requires a restart of Viz Trio to take effect. Note that this does not have an effect on remote Viz Engines; hence, the font options for Viz must be set accordingly. Also note that the Viz Trio interface only supports the font encoding set for the operating system under the *Regional and Language Options* settings (i.e. support for complex script, right-to-left and East Asian languages).
- **Single Layer Transition Logic Preview:** Enable previewing of single-layer pages in the background scene. If this setting is disabled, only Combo pages will be previewed in the background scene.

In the *Local Preview Resolution* section the aspect ratio for the local preview window can be set, and the systems refresh rate defined (normally 50 for PAL and 60 for NTSC).

8.1.7 User Restrictions

To view the User Restrictions configuration settings, click **User Interface > User Restrictions** in the Trio Configuration.

User Restrictions configuration settings



Do not allow users to:

Deny	Description	Corresponding Command
□	Scripts	
□	Edit scripts	gui:show_scripteditor
□	Post Rendering	
□	Enter new hostnames in post render view	
☑	Shows	
☑	Browse viz directories when changing shows	
□	Browse external playlists	
□	Create or rename shows	gui:create_new_show
□	Access show settings	gui:show_settings
□	Open the window for importing templates into a show	
□	Delete all pages in a show	show:delete_all_pages
☑	Page	
□	Takeout Pages	page:takeout
□	Direct Takeout Pages	page:direct_takeout
□	Direct Takeout Pages from a Playlist	playlist:direct_take_out_selected
□	Delete Templates	show:delete_templates
☑	Save values to linked databases	
□	Rename pages	show:rename_page
☑	Trio	
□	Cleanup External Renderers	trio:cleanup_renderers
☑	Call Viz Trio Commands	gui:show_triocommands
□	Switch to Viz Artist	gui:artist_mode
□	Designer	
□	Enter design mode	gui:toggle_design_mode
□	Access the full tree in design mode	
□	Customize the designer buttons	
□	Save scenes outside of the default vizpath	
□	Scroll Editor	
□	Create new scroll templates	gui:show_scroll_template_creator

The User Restrictions section allows an administrator to deny the operator from performing certain actions in Viz Trio.

- **Designer**:
  - **Access the full tree in design mode**: When checked, prevents the operator from accessing the Full Tree view when using Viz Trio Designer.
  - **Customize the designer buttons**: When checked, disables the option to customize and create new resource buttons.
  - **Enter design mode**: When checked, disables the Design button (upper right) preventing the operator from going into Designer mode.
  - **Save scenes outside of the default vizpath**: When checked, prevents the operator from saving scenes outside the default Viz scene path set under Show Settings.
- **Page**:
  - **Delete Templates**: When checked, prevents the operator from deleting templates from the show. Command: `show:delete_templates`.
  - **Direct Takeout Pages**: When checked, prevents the operator from issuing a direct take out command on pages in a show. This also disables the context menu option for the show. Command: `page:direct_takeout`.
  - **Direct Takeout Pages from a Playlist**: When checked, prevents the operator from issuing a direct take out command on pages in a playlist. Command: `playlist:direct_take_out_selected`.

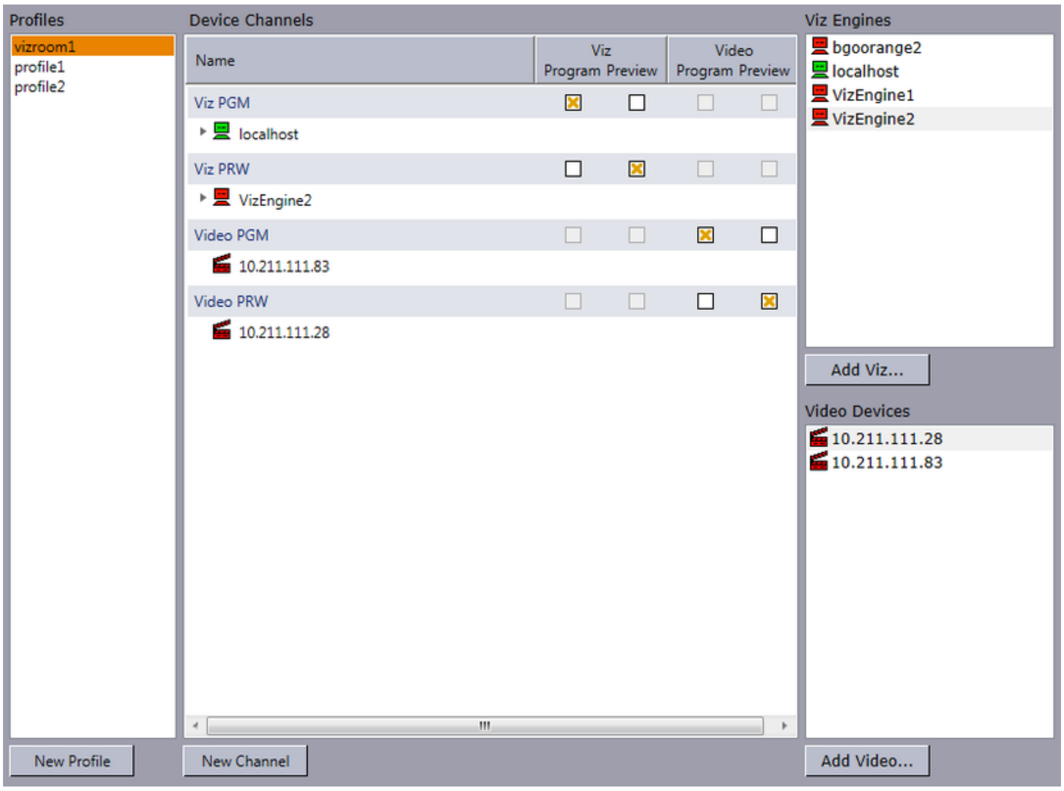
  - **Rename pages:** When checked, it is not possible to rename saved pages in the page list.
  - **Save values to linked databases**: When checked (default), prevents the operator from saving values back to the database.
  - **Takeout Pages**: When checked, prevents the operator from using the Take Out command. This also disables the Take Out button in the Page editor. Command: `page:takeout`.
- **Post Rendering**:
  - **Enter new hostnames in post render view**: When checked, prevents the operator from adding new hostnames to the Render Videoclip editor.
- **Scripts**:
  - **Edit scripts**: When checked, prevents the operator from editing the script using the Edit Script button in the Page editor. Command: `gui:show_scripteditor`.
- **Scroll Editor**:
  - **Create new scroll templates**: When checked, prevents the operator from creating new scroll templates. Command: `gui_show_scroll_template_creator`.
- **Shows**:
  - **Access show settings**: When checked, prevents the operator from accessing the Show settings. Command: `gui:show_settings`.
  - **Browse external playlists**: When checked, disables the Playlists tab under Show Control, and consequently preventing the operator from browsing for playlists on the Media Sequencer.
  - **Browse viz directories when changing shows**: When checked, disables the Viz Directories tab under Show Control, and consequently preventing the operator from browsing the Viz directory to set a show path.
  - **Create or rename shows**: When checked, prevents the operator from creating new Shows or renaming existing shows.
  - **Delete all pages in a show**: When checked, prevents the operator from selecting and deleting all pages in the show in one operation. Normal page by page and page group deletion is still possible.
  - **Open the window for importing templates into a show**: When checked, prevents the operator from importing new scenes from Viz Graphic Hub (Viz 3.x) or the data root (Viz 2.x).
- **Trio**:
  - **Call Viz Trio Commands**: When checked, prevents the operator from manually calling Trio Commands. This does not prevent scripts from doing the same. Command: `gui:show_triocommands`. See Working with Macro Commands.
  - **Cleanup External Renderers**: When checked, prevents the operator from issuing a cleanup renderer command. Command: `trio_cleanup_renderers`.

- **Switch to Viz Artist**: When checked, prevents the operator from switching to Viz Artist mode. Command: `gui:artist_mode`.

8.2 Output

To view the Output configuration settings, click **Output** in the Trio Configuration.

Output configuration settings



Profiles: vizroom1, profile1, profile2

Name	Viz Program	Viz Preview	Video Program	Video Preview
Viz PGM	☒	□	□	□
localhost				
Viz PRW	□	☒	□	□
VizEngine2				
Video PGM	□	□	☒	□
10.211.111.83				
Video PRW	□	□	□	☒
10.211.111.28				

Viz Engines: bgoorange2, localhost, VizEngine1, VizEngine2

Video Devices: 10.211.111.28, 10.211.111.83

An important part of the output configuration is to create profiles for different purposes. For example; Profile Setups can be created where different channels have the program and preview function. This makes it fast and easy to switch between different output settings.

In the Output channels section profiles can be defined with different program and preview channels. Most common is to define a studio with channels mapped to renderer machines (Viz Engine hosts).

Single Machine Configuration (Viz Trio OneBox) Viz Trio setups with more than one Graphical Processing Unit (GPU) may run both preview and program channels locally. The first time Viz Trio starts, and detects more than one GPU, it will automatically add a Viz Engine host named *LocalProgramChannel* with host *localhost:6800*.

Note: The LocalProgramChannel host will only be set once unless the Media Sequencer is reset.

Currently Viz Trio supports four methods for resolving which channel is the local program channel. If an unsupported method is used, the Connection Status button will not show up in the Status Bar. Consequently the operator will not be able to control the local program channel status.

Valid methods for resolving the local program channel name

Method	Comment
localhost	For the program channel remember to add the port 6800.
127.*.*.*	Not only 127.0.0.1 refers to localhost.
Hostname	Name of computer without domain.
IP	The computer’s IP. If the computer has multiple IPs (e.g. it has multiple network cards), it may still fail.

IMPORTANT! The computer may have several names (e.g. in /etc/hosts), but only the NetBIOS name can be used (i.e. the one obtained when running the "hostname" command). It is also not possible to add the domain (e.g. <hostname>.domain.internal).

This section contains information on the following topics:

- Program and Preview Channels
- Profile Setups
- Forked Execution
- Working With the Profile Configuration
- Upgrading Old Profiles

8.2.1 Program and Preview Channels

Local preview is Viz Trio’s embedded render window. It is placed in the lower right corner and always shows the last read page. It displays the graphics in a true WYSIWYG manner (what you see is what you get) when editing a page. Text and images change immediately as text and images are added to the page. Select which elements to edit by pointing and clicking on them with the mouse directly in the render window.

External preview (optional) is a separate Viz Engine renderer with its own reference monitor that displays a true preview. It shows how the program channel will look like before the page is taken to air.

Program is a separate Viz Engine renderer that renders the content that is taken on-air.

8.2.2 Profile Setups

Profile setups

Profile	Program	Preview
Main	A (Viz 1)	B (Viz 2)
Backup	B (Viz 2)	

A typical profile setup is a two-channel setup, program and preview, with one render engine assigned to each channel. A more advanced setup is the use of forked execution. As the term suggests, forked execution is a way to configure a single output channel to contain multiple render engines.

Profiles are used to create different setups. An example for when it makes sense to use different setups would be in a backup configuration where a switch from a main renderer to a backup is needed. For example if two output renderers are named A and B, where A is program and B is preview, a profile named "Main" will then have channel A=program and channel B=preview.

A profile named "Backup" could, if the renderer that is acting as program (A) in the "Main" profile fails, have channel B=Program.

The playout can also be controlled through a General Purpose Input (GPI), for instance through hardware such as a vision mixer.

When GPI is enabled, the external cursor (the GPI system’s cursor) will be displayed/shown in any client that is using the same profile as the external system. A typical setup would be that one Viz Trio client is in the same profile as the GPI system, and functions as a "prepare station" for the producer sitting at the vision mixer desk. Data elements are then made ready and displayed on a preview visible to the producer, and then the elements are triggered from the vision mixer. This configuration needs a separate "GPI" profile that is not used by other control application clients. Other clients can be in other profiles and produce content to the same output channels. However, they need to be on other transition layers or on another Viz layer so that they will not interfere with the graphics controlled by the external system.

A channel can be designated as a Program or Preview channel by selecting the check box in the appropriate columns (Program or Preview). The program and preview channels are reciprocally exclusive - only one channel can be set to program, and only one channel can be set to preview. If for example A is set to program and B is set to preview, and then C is set to program, A will no longer be set as program.

When configured to use video in graphics from a video server (for example Viz One), it is currently recommended to use IP addresses for both the Viz and Video channels in order to visualize the transfer progress correctly; hence, a hostname on the Viz channel will work, but not on the Video channel. They must also match the video configuration for both program and preview.

The Video device configuration is used when configured to trigger video elements in a video server setup, hence, it is not used for other video server configurations. The Video device configuration is only used for playout of video clips from video servers.

IMPORTANT! Current limitations require both the graphics and video channel(s) to use an IP address.

See Also

- Forked Execution

8.2.3 Forked Execution

Forked execution can be used with standalone and transition logic scenes. It also replaces the execution of visible containers.

This section contains information on the following topics:

- Standalone scenes
- Transition logic scenes
- Visible containers

Standalone scenes

Forked execution supports standalone scenes by executing the same graphics with different concepts on two or more render engines. Concepts are defined per channel when Working With the Profile Configuration tool.

As an option you can also use this setup to handle fail situations by having the same graphics concept rendered on both engines.

Transition logic scenes

As with Standalone scenes, forked execution supports setting concepts for Transition Logic scenes. In addition Transition Logic scenes, by defining channels with different render engine setups, can show different states of the same scene on a per engine basis. All states are synchronized for all engines (at all times) in order to achieve an artifact-free and smooth morphing of the graphics from one state to the other.

If for example you have three render engines you can set up a range of channels with different combinations of render engines per channel.

Channel	Viz Engines
A	1,2,3
B	1,3
C	1

Channel	Viz Engines
D	2,3
E	2

If for example you have a scene with four layers each layer can be controlled separately from the other layers (see table below). By setting a state per layer you can achieve a varied output depending on the channel used and how that channel is configured in terms of render engines (see table above).

- Layer 1: Shows and hides a geometry (e.g. a cube)
- Layer 2: Shows and hides some text
- Layer 3: Positions the geometries
- Layer 4. Animates the layer 1 geometry by showing the next image or a logo

States for layer 1	States for layer 2	States for layer 3	States for layer 4
Show cube	Show text	Position left	Next image
Hide cube	Hide text	Position right	Show logo
<ignore>	<ignore>	Position center	<ignore>
		<ignore>	

With the aforementioned scene layers and configured channels you can have the following output on each of the three engines.

Channel	Layer state	Output on Viz Engine 1, 2 and 3
Channel C (Viz 1)	Show cube Pos left Show text Show logo	
Channel D (Viz 2,3)	Show cube Pos right Show Text Show Logo	
Channel E (Viz 2)	Pos center Hide text	
Channel A (Viz 1,2,3)	Next image	

Channel	Layer state	Output on Viz Engine 1, 2 and 3
Channel A (Viz 1,2,3)	Next image	
Channel A (Viz 1,2,3)	Show text Next image	
Channel A (Viz 1,2,3)	Show logo	
Channel B (Viz 1,3)	Hide cube	
Channel E (Viz 2)	Hide cube	

Visible containers

Viz Trio still support, though it is considered **deprecated**, a behavior similar to that of forked execution. By designing a standalone scene where each root container is a variant of the other, you can configure each render engine to render specific containers (by name). In effect a scene with two or more root containers can have one or several containers assigned and rendered visible by one render engine.

Due to potential performance issues when using large textures (e.g. HD) this option is no longer recommended. Concept and variant design of standalone and transition logic scenes is therefore the recommended design convention.

See Also

- Output
- Working With the Profile Configuration
- *Viz Artist User’s Guide* on Transition Logic

8.2.4 Working With the Profile Configuration

This section contains information on the following topics

- Profile configuration:
  - To open the profile configuration
  - To add a new profile
  - To rename a profile
  - To delete a profile
- Channel configuration:
  - To add an output channel to the Channels list
  - To rename an output channel in the Channels list

- To remove an output channel from the Channels list
- To add an output device to the Channels list
- To remove an output device from the Channels list
- To add a concept override for a channel’s output device

- Output device configuration:
  - To add a Viz Engine
  - To add a video device
  - To edit a Viz Engine or video device
  - To delete a Viz Engine or video device
  - To enable scene transitions
  - To enable still preview
  - To render specific scene containers
  - To set a different font encoding

To open the profile configuration

1. Click the **Config** button (upper left), and then select **Output**.
2. Right-click the profile on the status bar (lower-left) and select **Profile Configuration...** from the appearing context menu.

To add a new profile

- In the Profile Configuration window click the **New profile** button, and in the appearing text field enter a new unique profile name, and press **Enter**.

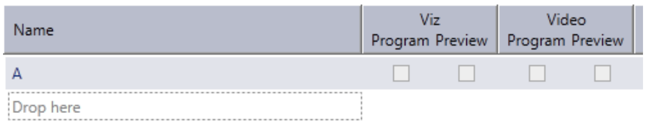
To rename a profile

1. Right-click the profile and from the appearing context menu select **Edit Profile Name**, or simply double-click it and enter the new name.
2. When finished editing the name, press **Enter** or click the cursor outside the Profiles list.

To delete a profile

- Right-click the profile and from the appearing context menu select **Delete Profile**, or simply select it and press the **Delete** button.

To add an output channel to the Channels list



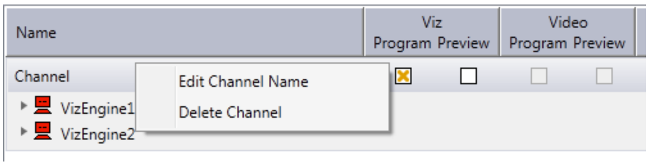
Name	Viz Program Preview		Video Program Preview	
A	□	□	□	□
Drop here				

- Click the **New channel** button, or drag and drop a Viz Engine or video device to the Channels list.

To rename an output channel in the Channels list

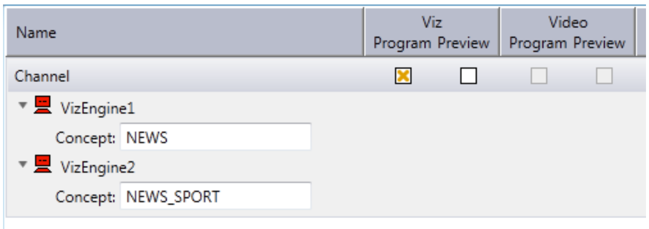
- Right-click the channel and select Edit Channel Name from the appearing context menu, or double-click the name.

To remove an output channel from the Channels list



- Right-click the channel entry and selecte Delete channel from the appearing context menu, or select the channel and press the Delete button.

To add a concept override for a channel's output device



VizEngine1

Concept: NEWS

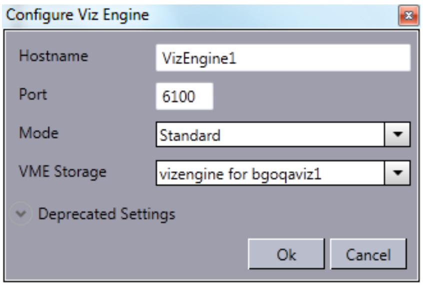
VizEngine2

Concept: NEWS_SPORT

1. **Expand** the channel's output device and append the concept name.
   - This will override any concepts set elsewhere
2. Click **OK**.

Caution: Note that concept names are case sensitive.

To add a Viz Engine



Hostname: VizEngine1

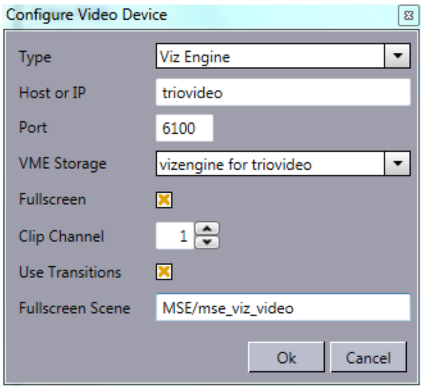
Port: 6100

Mode: Standard

VME Storage: vizengine for bgoqaviz1

1. Click the **Add Viz...** button in the Profile Setups window to open the **Configure Viz Engine** dialog box.
2. Enter the hostname and port (optional).
3. Click **OK**.
   - A status indicator will show if the renderer is on-air.

To add a video device



Type: Viz Engine
Host or IP: triovideo
Port: 6100
VME Storage: vizengine for triovideo
Fullscreen: ☒
Clip Channel: 1
Use Transitions: ☒
Fullscreen Scene: MSE/mse_viz_video

1. Click the **Add Video...** button in the Profile Setups window to open the **Configure Video Device** dialog box.
2. Select the video server **Type**.
3. Type the **Host or IP** address.
4. Enter the **Port** number (optional).
5. Select a publishing point from the **VME Storage** list, so that stand-alone clips and clips used in pages or data elements are transferred to the right location (the specified Viz Engine) for playout.
6. If the **Fullscreen** check box is selected, it is possible to define additional values (**Use Transitions** and **Fullscreen Scene**) in order to provide transition effects from one video to another.

   Note: The fullscreen values are only available for Viz Engines, not MVCP video devices.

7. Select the **Clip Channel** to use.

   Note: Viz 3.6 support up to 16 clip channels which can be used for playout. A clip channel might be unavailable for various reasons; it is configured to be inactive in Viz Config, the license only covers a limited number of clip channels, and so on.

8. Click **OK**.
   - A status indicator will show if the video device is online.

Tip: If you to transfer video from Vizrt’s MAM systems you can use the *default* profile (unless you configure a profile manually in both systems yourself).

To edit a Viz Engine or video device

- Right-click the device and select **Edit** from the appearing context menu, or simply **double-click** it.

To delete a Viz Engine or video device

- Right-click the device and select **Delete** from the appearing context menu, or simply select it and press the **Delete button**.

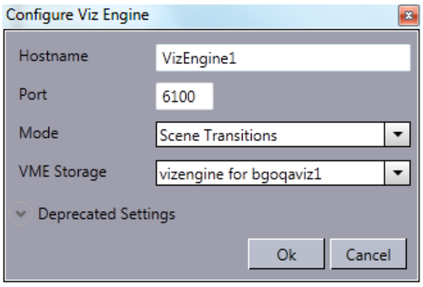
To add an output device to the Channels list

- Simply **drag and drop** a Viz Engine or video device onto the channel in the Channels list, or select it and from the appearing context menu select **Add to profile** (creating a new channel) or **Add to selected channel**.

To remove an output device from the Channels list

- Right-click the Viz Engine or video device and from the appearing context menu select **Delete Output**, or simply select it and press **Delete**.

To enable scene transitions



Configure Viz Engine

Hostname: VizEngine1

Port: 6100

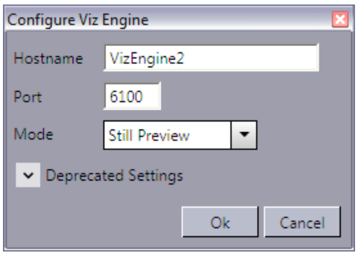
Mode: Scene Transitions

VME Storage: vizengine for bgoqaviz1

1. Configure the Viz Engine settings as seen in how To add a Viz Engine
2. Set the **Mode** to **Scene Transitions**
   - **Scene Transitions**: Allows the renderer to copy (or snapshot) the scenes to create a transition effect between them.
3. Open the Show Settings, and set the Transition Path.
   - See also Transition Effects
4. Click **OK**
5. Add the program renderer to the program channel

Note: To see the effects the program channel must be configured and on-air.

To enable still preview



Configure Viz Engine

Hostname: VizEngine2

Port: 6100

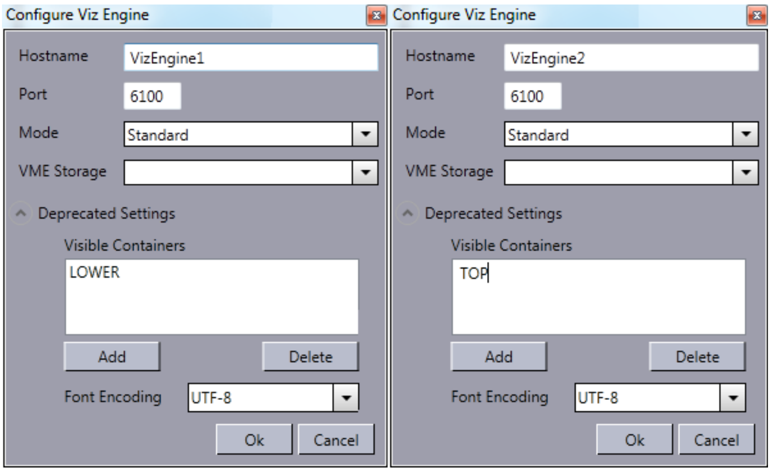
Mode: Still Preview

1. Create two channels, one for program and one for preview

2. Configure the same render engine twice as seen in how To add a Viz Engine
3. For the second render engine set the **Mode** to **Still Preview**
   - **Still Preview**: Allows you to use the program output to get a still preview. To achieve this the Media Sequencer creates a copy of the scene being read and sends commands to your program output renderer asking for a snapshot of the scene while the current scene on air is being rendered.
4. Click **Ok**
5. Add the program renderer to the program channel and the still preview renderer to the preview channel

Warning: This setup requires sufficient ring buffer on the program renderer in order for the rendered still preview not to cause the scene on air to drop frames; hence, this setting is deprecated.

To render specific scene containers



Hostname: VizEngine1
Port: 6100
Mode: Standard
VME Storage:
Visible Containers: LOWER
Font Encoding: UTF-8

Hostname: VizEngine2
Port: 6100
Mode: Standard
VME Storage:
Visible Containers: TOP
Font Encoding: UTF-8

1. Configure the Viz Engine settings as seen in how To add a Viz Engine.
2. Click the **Deprecated settings** button to expand the editor.
3. Enter the scene’s container name(s) that should be rendered visible to the Visible containers field.
4. *Optional*: Press **Enter** to add another container name
5. Click **Ok**

To set a different font encoding

1. Configure the Viz Engine settings as seen in how To add a Viz Engine
2. Click the **Deprecated settings** button to expand the editor
3. Select the **Font encoding**
   - **Font encoding**: Sets the font encoding of the Viz Engine. The encoding can either be set to UTF-8 or ISO-8859-1. Default is UTF-8.

4. Click **Ok**.

8.2.5 Upgrading Old Profiles

If you are running Viz Trio versions prior to 2.10.1, and you want to reuse your current profile setup you need to be aware of the following facts:

When Viz Trio starts, it makes copies of the old profiles and give them a new name using the old name with a *tag* appended at the end:

```
<profile name> (Upgraded)
```

The **old profile** name will be kept as is, and can only be used by Viz Trio versions older than 2.10.1.

- Old profiles from older versions are disabled in the new profile configuration; however, you can delete them.
- Old profiles will not show up in the profile selector on the status bar, the intelligent interface configuration or the VDCP configuration.
- Old profiles have a tool tip with the name of the upgraded profile.

The **new profile** name (with the **`Upgraded`** tag) should be used by Viz Trio 2.10.1 and later.

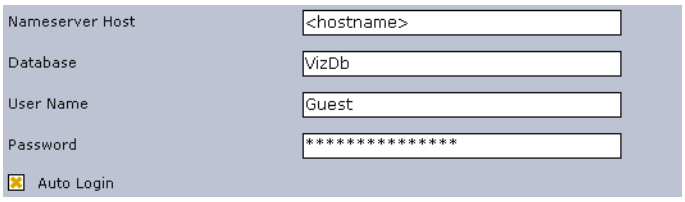
- New profiles can be renamed without any problems.
- New profiles (both the upgraded ones and manually created ones) will be usable from old clients, but changes done will not have any effect.

Tip: When you have upgraded all clients, the old profiles can be deleted.

8.3 Viz Graphic Hub

To view the Viz Graphic Hub configuration settings, click **Viz Graphic Hub** in the Trio Configuration.

Viz Graphic Hub configuration settings



Nameserver Host	<hostname>
Database	VizDb
User Name	Guest
Password	***************

☒ Auto Login

The Viz Graphic Hub category contains settings for logging onto the Viz Graphic Hub. All settings are local to the specific Viz Trio client.

- **Nameserver Host:** Sets the hostname or IP address for the Viz DB server.
- **Database:** Sets the name of the database.
- **User Name:** Sets the user name used for logging on to the database.

- **Password:** Sets the password used for logging on to the database.
- **Auto Login:** Enables Viz Trio to log on automatically at startup.

Note: If the local Viz Engine’s Auto Login is enabled, this section is disabled.

8.4 VCP Database

This section is used for Viz Content Pilot (VCP) specific integrations such as the database that holds all data elements and thumbnails used in playlists, and the Viz Object Store image database setup.

This section contains information on the following topics:

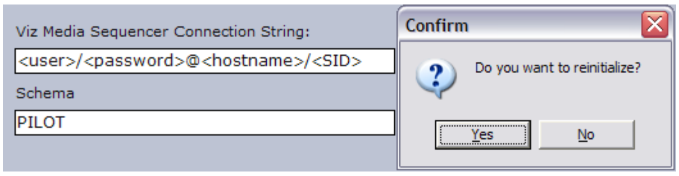
- Database Settings
- Picture Database Settings

8.4.1 Database Settings

To view the Database configuration settings, click **VCP Database > Database Settings** in the Trio Configuration.

The VCP Database pane is used to configure a VCP database connection.

Note: Before configuring a Viz Content Pilot (VCP) database connection, an Oracle 10g Runtime client must be installed.



Viz Media Sequencer Connection String:

<user>/<password>@<hostname>/<SID>

Schema

PILOT

Confirm

Do you want to reinitialize?

- **Media Sequencer Connection String**: The connection string field is used to configure a connection to the database. Specify the connection string using a TNS name alias or connection string.
  - **TNS name alias:** <username>/<password>@<tns alias>
  - **Connection string:** <username>/<password>@<hostname>/<SID>
- **Schema**: Enter the name of the Oracle schema.

To configure the Viz Content Pilot database connection

1. Click the **Config** button (upper left) to open the Configuration Interface.
2. Select the **Database Settings** under the **VCP Database** category, and enter the database connection string and schema.
   - Example: pilot/pilot@10.10.10.1/VizrtDB.
   - Default schema: *PILOT*.

3. Click **Apply** to save the settings to the Media Sequencer.
4. Close the configuration window and check that Viz Trio’s Status Bar shows a green status indicator for the database (cylinder).

Note: The database schema name should always be written in upper case.

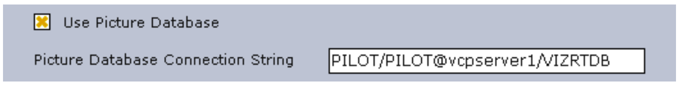
See Also

- Picture Database Settings
- Viz Content Pilot User’s Guide

8.4.2 Picture Database Settings

To view the Picture Database configuration settings, click **VCP Database > Picture Database** in the Trio Configuration.

The picture database is a connection to Viz Content Pilot’s database that allows you to Search Media stored by Viz Object Store (VOS). In order to take advantage of VOS, two configuration steps are needed.



☒ Use Picture Database

Picture Database Connection String PILOT/PILOT@vcpserver1/VIZRTDB

- **Use Picture Database:** Enables or disables the VOS picture database.
- **Picture Database Connection String:** Sets the database connection string or TNS name alias.

To configure the picture database

1. Map the shared image drive used by Viz Object Store (VOS) on the Viz Trio and Viz Engine machines.
2. Enable the **Use Picture Database** option, and add the VCP database connection string.
3. Click **Apply**.

Note: If a TNS name alias is configured it can be used as a replacement for the hostname and SID in the connection string.

See Also

- Database Settings
- Viz Content Pilot User’s Guide
- Viz Object Store User’s Guide

8.5 Connectivity

The connectivity section is used to configure different protocols that Viz Trio interfaces with. These are the Media Object Server (MOS) protocol, Intelligent Interface (IIF), General Purpose Input (GPI), Video Disk Communication Protocol (VDCP), Newstar MCU/AVS, and socket object settings that allows Viz Trio to act as client or a server in a socket connection.

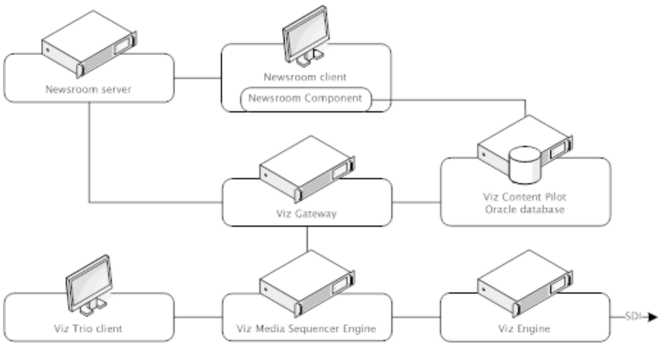
This section contains information on the following topics:

- MOS
- Intelligent Interface
- General Purpose Input (GPI)
- Video Disk Communication Protocol (VDCP)
- MCU/AVS
- Socket Object Settings
- Proxy
- Media Engine

8.5.1 MOS

To view the MOS configuration settings, click **Connectivity > MOS** in the Trio Configuration.

MOS newsroom integration



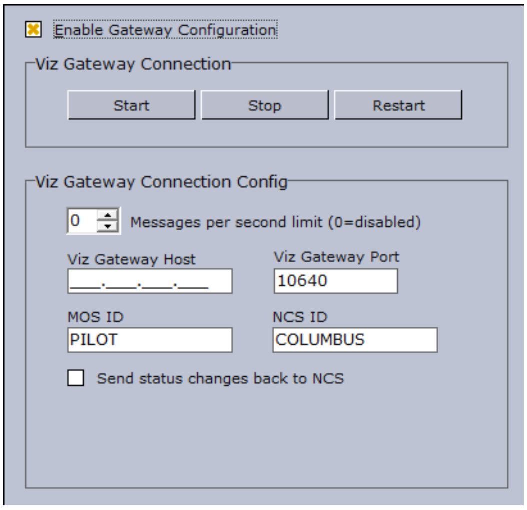
A Viz Gateway (i.e. MOS) connection allows Viz Trio to monitor playlists (see Playlist Modes) from any Newsroom Computer System (NCS) that supports the Media Object Server (MOS) protocol.

Newsroom Computer Systems (NCS) that support the MOS protocol can deliver newsroom playlists to Viz Trio through the Viz Gateway and Viz Content Pilot’s database; hence, a MOS integration requires a Viz Gateway, an Oracle database and Viz Content Pilot’s Newsroom Component.

To establish a MOS connection, the NCS and Viz Gateway must be pre-configured with an NCS and MOS ID. These ID’s are set in the newsroom system.

Note: Most newsroom systems support the Media Object Server (MOS) protocol and/or the Intelligent Interface (IIF) protocols (e.g. Avid iNEWS ControlAir).

Viz Gateway, MOS configuration settings



☒ Enable Gateway Configuration

Viz Gateway Connection

Viz Gateway Connection Config

0 Messages per second limit (0=disabled)

Viz Gateway Host: ___.___.___.___

Viz Gateway Port: 10640

MOS ID: PILOT

NCS ID: COLUMBUS

□ Send status changes back to NCS

- **Enable Gateway Configuration:** When selected, enables the user to configure the Viz Gateway connection. When enabled, an icon is also visible in the Status Bar.
- **Viz Gateway Connection:** The controls in the Viz Gateway Connection section allows a start, stop, and restart action to be performed on a Viz Gateway connection.
  - **Start**: Starts the Viz Gateway connection.
  - **Stop**: Stops the Viz Gateway connection.
  - **Restart**: Restarts the Viz Gateway connection.
- **Viz Gateway Connection Config:** Define Viz Gateway connection settings.
  - **Messages per second limit:** Sets how many messages per second that should be sent from Viz Gateway to the NCS. This is done to prevent flooding of the NCS. *0* disables the message throttling.
  - **Viz Gateway Host**: IP address of the Viz Gateway host.
  - **Viz Gateway Port**: Connection port for the Viz Gateway.
  - **MOS ID**: Enter the ID of the connecting MOS device.
  - **NCS ID**: Specify the ID of the newsroom control system.
- **Send status changes back to NCS:** Sends new status changes to the NCS.
- **Send timeline changes back to NCS:** Sends new timeline changes to the NCS.

The Database Settings for the VCP Database on the Media Sequencer must be established in order for the Viz Gateway integration to work.

Note: MOS and NCS ID are not needed for Viz Gateway versions 2 and newer.

To configure a Viz Gateway connection

1. Click the **Config** button to open the Configuration Interface.
2. Select the **MOS** section found under the **Connectivity** category, and enter Viz Gateway’s IP address and port number (default port is*10640*).
3. Click Apply to save the settings to the Media Sequencer.
4. Close the Configuration Interface and check that Viz Trio’s status bar shows a green status indicator for Viz Gateway (G).
5. Click the **Change Show** button, and select the **Playlists** tab to test that Playlist Modes are available.

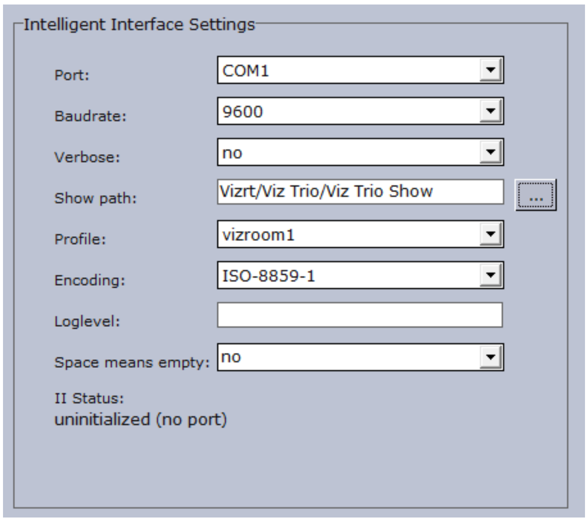
IMPORTANT! It is required that Viz Trio sets the NCS and MOS IDs when connected to Viz Gateway versions prior to 2.0.

See Also

- Database Settings
- Ports and Connections
- Viz Gateway Administrator’s Guide
- Viz Content Pilot User’s Guide on Newsroom Component

8.5.2 Intelligent Interface

To view the Intelligent Interface configuration settings, click **Connectivity > Intelligent Interface** in the Trio Configuration.



Intelligent Interface Settings

Port:	COM1
Baudrate:	9600
Verbose:	no
Show path:	Vizrt/Viz Trio/Viz Trio Show
Profile:	vizroom1
Encoding:	ISO-8859-1
Loglevel:	
Space means empty:	no

II Status:
uninitialized (no port)

The intelligent interface (IIF) configuration is used to set the parameters the automation system use to connect to the Media Sequencer over the intelligent interface protocol. Further it defines the Viz Content Pilot playlist or Viz Trio show the automation system can control and on which output profile.

The Media Sequencer listens to a communications port and acts as the Character Generator (CG) device side of the intelligent interface. The Media Sequencer expects the other side of the communications port to be connected to a newsroom system or similar system that knows how to talk one of the supported dialects of intelligent interface.

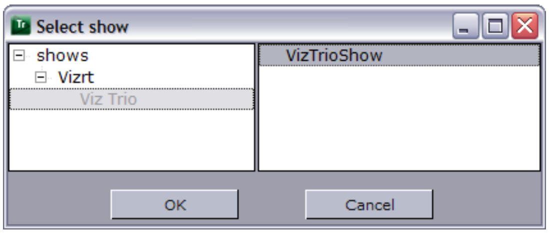
The Media Sequencer has two primary tasks:

- Receive callup data from a newsroom system and store it in the schedule.
- Trigger actions based on simulated keyboard commands it receives.

Properties and Parameters

- Port: Sets the serial communications port to be used.
- Baudrate: Sets the appropriate baud rate for the connection.
- Verbose: Makes the messages from the Intelligent Interface driver get displayed in the Media Sequencer console. This feature is useful when setting up the system.
- Show path: Sets the path of the playlist or show.

  Select Show:



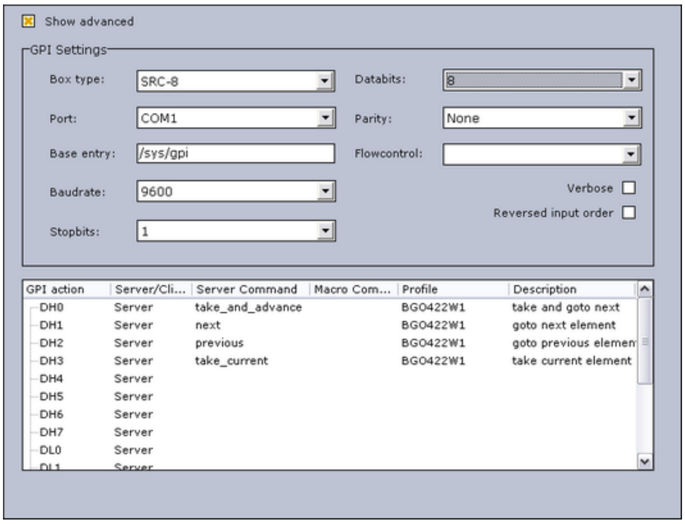
- Profile: Sets the appropriate profile to be used.
- **Encoding**: Sets the appropriate font encoding for the connection.
- **Loglevel:** Sets the Media Sequencer Logging for the Media Sequencer.
- **Space means empty:** If set to **Yes**, the graphics template's default text (when creating an element) is replaced with a space. If set to **No**, the graphics element will show the default text unless it is manually changed and saved with no text.

See Also

- Media Sequencer Logging

8.5.3 General Purpose Input (GPI)

To view the GPI configuration settings, click **Connectivity > GPI** in the Trio Configuration.



☒ Show advanced

GPI Settings

Box type: SRC-8
Port: COM1
Base entry: /sys/gpi
Baudrate: 9600
Stopbits: 1
Databits: 8
Parity: None
Flowcontrol:
Verbose □
Reversed input order □

GPI action	Server/Cli...	Server Command	Macro Com...	Profile	Description
DH0	Server	take_and_advance		BG0422W1	take and goto next
DH1	Server	next		BG0422W1	goto next element
DH2	Server	previous		BG0422W1	goto previous elemen
DH3	Server	take_current		BG0422W1	take current element
DH4	Server				
DH5	Server				
DH6	Server				
DH7	Server				
DL0	Server				
DL1	Server				

The GPI settings allows the Media Sequencer to be configured to handle GPI commands. The commands can be handled by the Media Sequencer itself (Server Command) or forwarded to the Viz Trio client (Macro Command).

Both server and client side commands are profile specific (see Output), meaning that the profile determines which Viz Trio client and potentially which Viz Engine(s) should execute a client and/or server command. It is therefore very important to assign the correct profile for each GPI action as they refer to unique profiles configured per client.

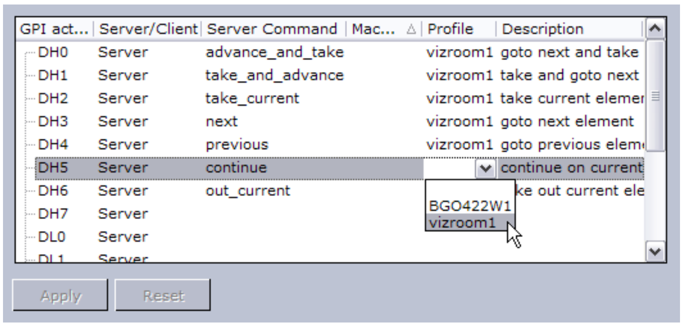
For example; A Viz Trio client has its own profile with two Viz Engines (program and preview) and receives a client command from a GPI on the Media Sequencer. The command executes some logic on the Viz Trio client that issues commands to the program renderer. If the correct profile is not set, such commands might end up on the wrong Viz Trio client and potentially on the wrong program renderer. The same would happen if the GPI action was defined as a server command; however, it would then trigger commands from the Media Sequencer to the Viz directly and not through the Viz Trio client.

- **Show advanced:** Displays all the settings in the GPI Settings frame.
- **Box Type:** Select the type of GPI box that is being configured. The Box Type can be set to SRC-8, SRC-8 III or SeaLevel.
- **Port:** Sets the port that the GPI box is connected to. The Port can be set to COM1-COM17, or None.
- **Base Entry:** This is the node in the Media Sequencer’s data structure where the systems look for the GPI actions. The base entry is by default set to /sys/gpi.
- **Baudrate:** Sets the maximum rate of bits per second (bps) that you want data to be transmitted through this port. The Baud rate can be set to

110-921600. It is recommended to use the highest rate that is supported by the computer or device that is being used.

- **Stopbits:** Sets the interval (bps) for when characters should be transmitted. Stop bits can be set to 1, 1.5, or 2.
- **Databits:** Sets the number of data bits that should be used for each transmitted and received character. The communicating computer or device must have the same setting. The number of data bits can be set to 5, 6, 7 or 8.
- **Parity:** Changes the type of error checking that is used for the selected port. The communicating computer or device must have the same setting. The parity can be set to:
  - **Even:** A parity bit may be added to make the number of 1\qs in the data bits even. This will enable error checking.
  - **Odd:** A parity bit may be added to make the number of 1\qs in the data bits odd. This will enable error checking.
  - **None:** No parity bit will be added to the data bits sent from this port. This will disable error checking.
  - **Mark:** A parity bit set to 0 will be added.
  - **Space:** A parity bit set to 1 will be added.
- **Flowcontrol:** Changes how the flow of data is controlled. The flow control can be set to:
  - **None:** No control of data flow.
  - **XonXoff:** Standard method of controlling the flow of data between two modems. XonXoff flow control is sometimes referred to as software handshaking
  - **Hardware:** Standard method of controlling the flow of data between a computer and a serial device. Hardware flow control is sometimes referred to as hardware handshaking.
- **Verbose:** If enabled, the Media Sequencer’s GPI handler outputs log information. This information is useful for debugging.
- **Reversed Input Order:** Note that this check box is only available if Box Type is set to SRC-8. If enabled, the signal line that originally triggered GPI action DL0/DH0 will now trigger GPI action DL7/DH7, the signal line that originally triggered GPI action DL1/DH1 will now trigger GPI action DL6/DH6, and so on.
- **GPI action**: Shows a list of the available GPI actions.

Commands and actions list:



GPI act...	Server/Client	Server Command	Mac...	Profile	Description
DH0	Server	advance_and_take		vizroom1	goto next and take
DH1	Server	take_and_advance		vizroom1	take and goto next
DH2	Server	take_current		vizroom1	take current elemer
DH3	Server	next		vizroom1	goto next element
DH4	Server	previous		vizroom1	goto previous elem
DH5	Server	continue			continue on current
DH6	Server	out_current			ke out current ele
DH7	Server				
DL0	Server				
DL1	Server				

- **Server/Client**: Shows a drop-down list box in every row, where the selected GPI action should apply to either the Media Sequencer (Server option) or the local Viz Trio client (Client option).

> **Note:** The server and client actions are reciprocally exclusive.

- **Server Command**: Shows a drop-down list box in every row, where the action to be performed on this GPI line can be selected. Server commands are GPI actions that apply to the Media Sequencer. When right-clicking an item in a Create Playlist or Playlist Modes, a context menu opens. In this menu, select Set External Cursor. A red arrow appears next to the selected element in the playlist, which indicates that this is the current GPI cursor. The server commands can be set to:
  - **advance_and_take:** The cursor shifts to the next element in the playlist, and then runs the Start operation.
  - **take_and_advance:** Runs the Start operation on the current element, and then shifts to the next element in the playlist.
  - **take_current:** Runs the Start operation on the current element (the element with the cursor).
  - **next:** Shifts to the next element in the playlist.
  - **previous:** Shifts to the previous element in the playlist.
  - **continue:** Runs the Continue operation on the current element.
  - **out_current:** Runs the Take Out operation on the current element.
- **Macro Command**: Macro commands are silent GPI actions. Clicking the ellipsis (...) button opens the Add Command window.
- **Profile**: Sets the profile to be used for the GPI action. This profile must match the profile set for the playlist that is to be triggered by the GPI actions. The drop-down list shows the profiles configured on the Media Sequencer.
- **Description**: Shows the description of the GPI action, as it was specified in the Add Command window.

This section contains information on the following topics:

- To assign a Server Command
- To assign a Client Command

- To add a macro command

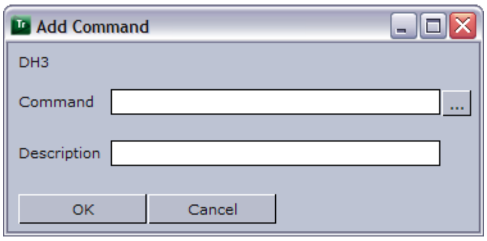
To assign a Server Command

1. Select a GPI action, and select **Server** in the Server/Client column.
2. Select a **Server Command**.
3. Select a **Profile**.
4. Click **Apply**.

To assign a Client Command

1. Select a GPI action, and select **Client** in the Server/Client column.
2. Select or create a **Macro Command**.
3. Select a **Profile**.
4. Click **Apply**.

To add a macro command



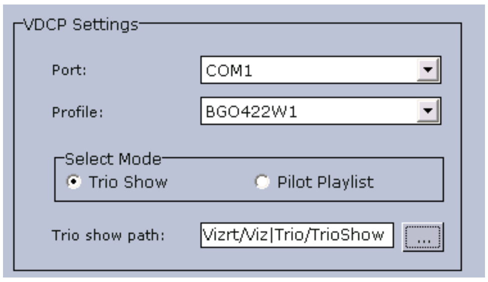
1. Select the **Macro Command** column, and click the small ellipse (...) button to open the Add Command dialog box.
2. Enter the command in the **Command** text field, or alternatively click the ellipse (...) button to open the Predefined Functions window.

See Also

- Profile Setups

8.5.4 Video Disk Communication Protocol (VDCP)

To view the VDCP configuration settings, click **Connectivity > VDCP** in the Trio Configuration.



Port: COM1

Profile: BGO422W1

● Trio Show ○ Pilot Playlist

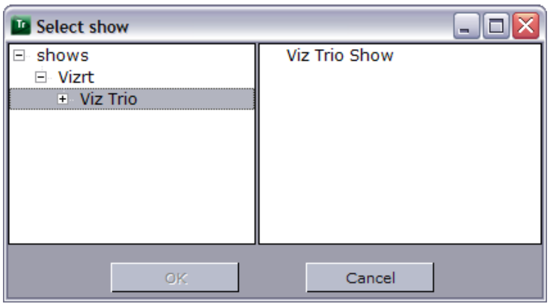
Trio show path: Vizrt/Viz|Trio/TrioShow

The Video Disk Control Protocol (VDCP) configuration allows a VDCP connection for Media Sequencer to be established in order to externally control a Viz Content Pilot playlist or Viz Trio show.

With VDCP the Media Sequencer acts like a server that controls the graphics through the VDCP protocol. It sets up a serial connection, and on the other end of the connection typically a video controller is placed. Over this connection VDCP commands are sent, and in this way the video controller is able to control a playlist/show.

The configuration of the Media Sequencer is twofold. There are the general VDCP settings, and there is the configuration for which playlist to control.

The VDCP protocol defines recommended serial settings, but if you for some reason need to use different settings please refer to the Media Sequencer manual’s VDCP section, and in particular the section on "Electrical and Mechanical Specifications", for information on how to configure this.

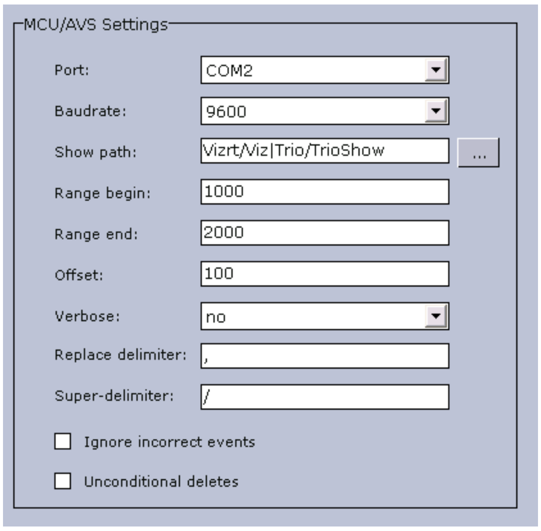


- **Port**: Select the appropriate COM port for the communication.
- **Profile:** Select the profile to use.
- **Select Mode:** Select a Viz Trio show or a Viz Content Pilot playlist path mode.
- **Trio path / Pilot playlist:** Sets the base directory for the VDCP integration. Video clips will be placed here.

8.5.5 MCU/AVS

To view the MCU/AVS configuration settings, click **Connectivity > MCU/AVS** in the Trio Configuration.

MCU/AVS configuration settings



MCU/AVS Settings

Port: COM2

Baudrate: 9600

Show path: Vizrt/Viz|Trio/TrioShow

Range begin: 1000

Range end: 2000

Offset: 100

Verbose: no

Replace delimiter: ,

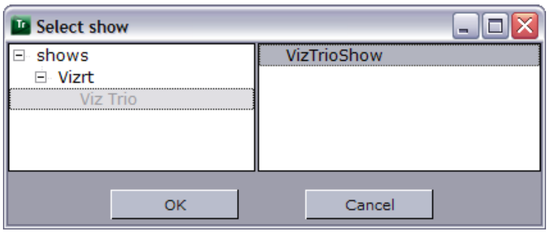
Super-delimiter: /

□ Ignore incorrect events

□ Unconditional deletes

This configuration is primarily used for configuring settings for a Newstar (News*) newsroom system connection.

- **Port**: Select the appropriate Com port for the communication.
- **Baudrate**: Select the appropriate baud rate.
- **Show path:** Base directory for the MCU/AVS integration. Newsroom stories will be placed here.



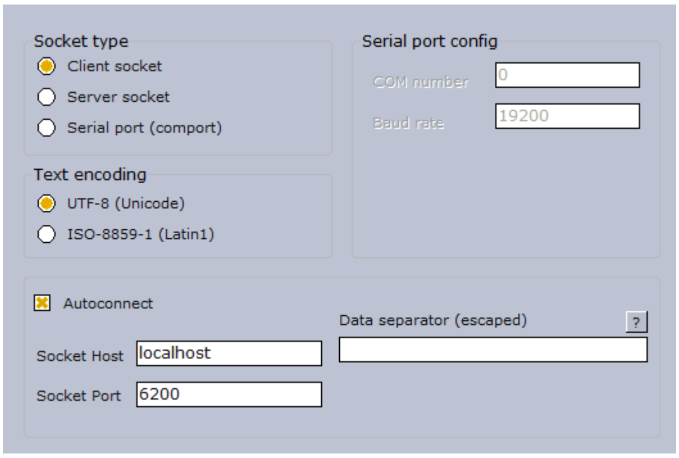
- **Range begin and Range end**: Pages received from the newsroom system will be numbered within this range.
  - Example: If Range Begin is 1000 and Range End is 5000 and Offset is 100. Then Callup pages in story 1 will be numbered 1000, 1001, 1002, and so on. Callup pages in story 2 will be numbered 1100, 1101, 1102, and so on.
- **Offset**: Sets the offset value that will be used to separate pages from different stores.
- **Verbose**: Enables notification messages from the MCU/AVS driver. The messages will show on the Media Sequencer console. This feature is useful when setting up the system.
- **Replace delimiter**: Replaces a character with the super-delimiter. For example if set to ‘|’. slashes ‘/’ can be put into tab-fields by entering ‘|’.
- **Super-delimiter**: Delimiter used in News* to separate tab-fields. Standard value is ‘/’.

- **Ignore incorrect events**: Incomplete scripts from News* will send invalid protocol data. Typically template specifications and supers could be missing. If this option is set to "Yes", then the system accepts incomplete/ incorrect story descriptions. Should be set to "Yes" in most cases.
- **Unconditional deletes**: Removed in version 1.10. On older versions of Viz Trio, this option should be enabled. This means that a transfer of messages from Newstar starts with deleting existing messages within the specified range. To maintain a proper state handling this method must be used.

8.5.6 Socket Object Settings

To view the Socket Object configuration settings, click **Connectivity > Socket Object Settings** in the Trio Configuration.

Socket Object configuration settings



Socket type
- ● Client socket
- ○ Server socket
- ○ Serial port (comport)

Serial port config
- COM number: 0
- Baud rate: 19200

Text encoding
- ● UTF-8 (Unicode)
- ○ ISO-8859-1 (Latin1)

☒ Autoconnect

Data separator (escaped)

Socket Host: localhost

Socket Port: 6200

The Socket Object Settings section allows for socket connections to be defined for the Viz Trio client. It can either act as client or a server in a socket connection. A serial port connection which uses the same command set can also be set up.

- **Socket type:**
  - **Client socket**: When Viz Trio is set up to be a client socket it will connect to the specified server socket. Specify a host name and a port for the machine that runs the server socket.
  - **Server socket**: When Viz Trio is set up to be a server socket it will wait for a client socket connection. Specify the port it should listen on.
  - **Serial port (Com port)**: The serial port connections work in principle as a socket connection, but instead of using TCP/IP it uses a null modem cable. The command-set is the same.
- **Text encoding**: Select a text encoding for the connection.
- **Serial port config**: If a serial port connection is to be set up the COM port number and the data baud rate must be specified here.
- **Autoconnect**: With this option set, a server socket or a serial port connection will be open/active at all times, but a client socket will first be

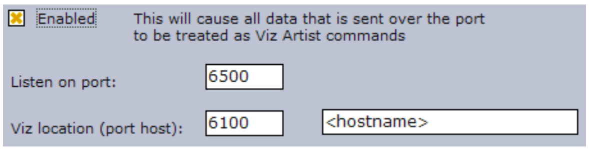
active when data is sent. If this option is not checked, a "connect_socket" command must be sent before sending the data.

- **Socket Host**- The socket server’s host name must be set here if the Viz Trio client is to function as a client socket.
- **Socket Port**: For client and server socket a port number must be specified here.
- **Data separator (escaped)**- Specifies a data separator for incoming data.
    - Receiving data separator will trigger the OnSocketDataReceived event in Scripts. If unprintable ASCII characters are used as data separators, special character sequences called "escape codes" are needed. All escape codes start with a backslash. For details, see Escape Sequences .
    - When the socket object receives the data separator, the *OnSocketDataReceived* event is triggered, and the data received since the last separator is issued (not including the separator itself). If Data separator has no value, the *OnSocketDataReceived* is called continuously as long as data is received.

8.5.7 Proxy

To view the Proxy configuration settings, click **Connectivity > Proxy** in the Trio Configuration.

Proxy configuration settings



☒ Enabled — This will cause all data that is sent over the port to be treated as Viz Artist commands

Listen on port: 6500

Viz location (port host): 6100 <hostname>

The proxy function is mostly relevant when Viz Trio and Viz Engine are set up with a direct network link to be controlled by an external control application. A dedicated network card on the Viz Trio client together with a crossed network cable directly to Viz is the normal way to make such a link.

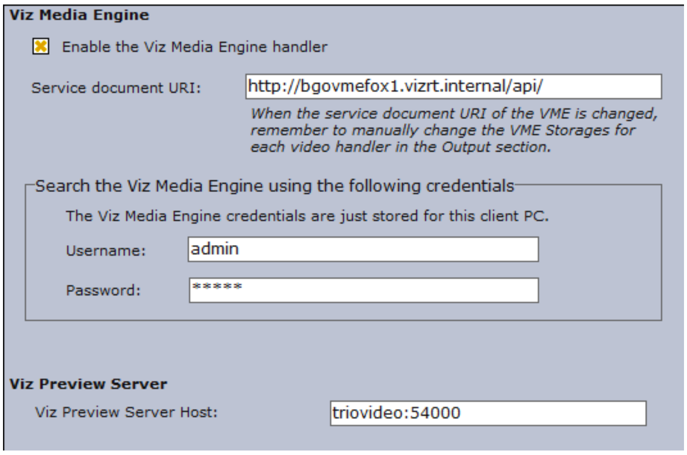
All data sent over the configured listener port will be treated as Viz commands and forwarded by the Viz Trio client to Viz. With the proxy function enabled, the data sent over the configured listener port will be treated as Viz commands by the Viz Trio client. Viz Trio does this by acting as a proxy transmitting commands back and forth between Viz and the external control application.

- **Enabled:** Enables the proxy feature.
- **Listen on port:** Sets the listener port for Viz Trio that the sender will use.
- **Viz location (port host):** Sets the listener port for Viz Engine and the hostname (default is 6100 and localhost).

8.5.8 Media Engine

To view the Media Engine connectivity settings, click **Connectivity > Media Engine** in the Trio Configuration.

Media Engine connectivity settings



Viz Media Engine

☒ Enable the Viz Media Engine handler

Service document URI: http://bgovmefox1.vizrt.internal/api/

When the service document URI of the VME is changed, remember to manually change the VME Storages for each video handler in the Output section.

Search the Viz Media Engine using the following credentials

The Viz Media Engine credentials are just stored for this client PC.

Username: admin

Password: *****

Viz Preview Server

Viz Preview Server Host: triovideo:54000

The Media Engine section is used to apply Viz One settings to the Media Sequencer, which will enable the Media Sequencer to initiate transfer of Viz One elements in Viz Trio shows and playlists to the Viz Engine.

The Media Sequencer’s communication with Viz One is related to all Media Sequencer show and playlist elements that contain Viz One elements residing on the Viz One that are initialized for playout.

- **Enable the Media Engine handler:** If selected, enables the Viz One handler.
- **Service document URI:** Defines the Viz One instance to use.

Note: When the service document URI of the Viz One is changed, remember to manually change the Viz One storages for each video handler in the Output section of the configuration. A Viz One storage points to a Viz Engine where the Viz One files are sent for playout. For more information, see To add a video device.

It is possible to define the Viz One server instance based on either an IP address or hostname. It is recommended to use hostname. Host comparisons in the system are generally done by string comparison, not by lookup. This is why *either* IP or hostname must be selected. This also means that you should not mix hostnames and fully qualified domain names; *http://vme01.vizrt.com/thirdparty* is not the same as *http://vme01/thirdparty*, even if it is possible to ping both. The system allows using both *http* and *https*, although *http* is recommended. Whatever options being selected (IP vs. hostname, hostname vs. domain name, http vs. https), choose one or the other, and stick with it throughout the entire setup process.

Note: Viz One version 5.3 uses */api* and not */thirdparty*.

- **Username:** Searches Viz One using the following Viz One username.
- **Password:** Searches Viz One using the following Viz One password.
- **Viz Preview Server Host:** Specify the host of the Preview Server (*hostname:port*). This service is used to generate preview graphics in the timeline editor. If the *ZeroConf* service is installed and running, you can also select servers on the local network.

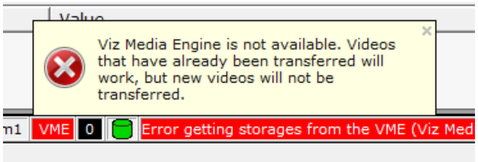
To configure a Viz One connection

1. Make sure that the **Enable the Media Engine handler** check box is selected.
2. Type the hostname of the relevant Viz One in the **Uri to service document** box.
3. Enter working login credentials in the **Username** and **Password** boxes.

If the Viz One configuration is successful, a green VME icon will appear in the Status Bar.

Viz One error message

If the configuration is not working properly, the VME icon will be red. Scenarios where the icon is red can for example be a Viz One-search that fails, or a more serious error; a non-responsive Viz One with no video playout. In such serious situations where the Viz One is unavailable, the following Viz One error message will appear, stating that videos that have already been transferred to Viz will still work, but any new videos will not be transferred.



Viz Media Engine is not available. Videos that have already been transferred will work, but new videos will not be transferred.

Error getting storages from the VME (Viz Med

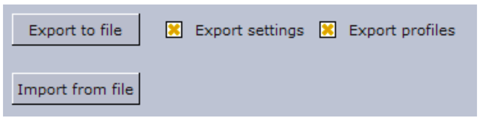
See Also

- Search Media
- *Viz One Administrator’s Guide*
- *Viz One - Studio User’s Guide*

8.6 Import/Export Settings

To view the Import/Export configuration settings, click **Import/Export Settings** in the Trio Configuration.

Import/Export configuration settings



The Import and Export Settings function is used to import and export the configuration settings from and to an XML-file. This allows customized settings to be applied to one or more Viz Trio clients without manually configuring the settings each time.

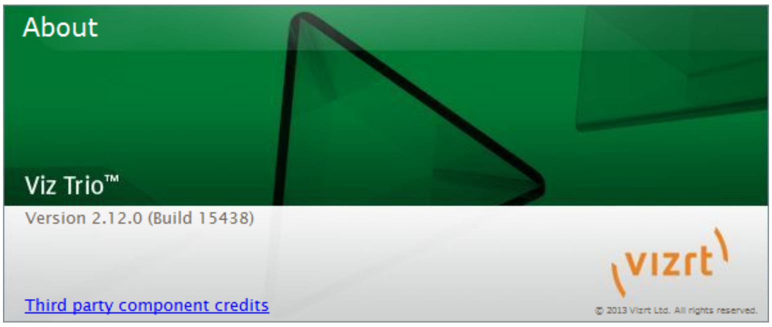
Export: Enables the export of Viz Trio settings and profile configurations to an XML file. The following settings cannot be exported:

- Keyboard Shortcuts and Macros settings (can be exported separately).
- Word replace settings under the Text Editor settings (can be exported separately).
- VCP Database settings.
- All Connectivity settings.

Import: Enables the import of Viz Trio settings and profile configurations from an XML file. Note that such an operation will overwrite existing settings and profiles, and that Viz Trio must be restarted for the new configurations to take effect.

8.7 About

To view the Viz Trio About screen, click **About** in the Trio Configuration.


About
Viz Trio™
Version 2.12.0 (Build 15438)
Third party component credits
vizrt
© 2013 Vizrt Ltd. All rights reserved.

The about information shows which version and build of Viz Trio has been installed on your machine. When reporting issues to Vizrt you should always attach this information.

The **Third party component credits** link opens up the license page in the default browser.

9 Scripting

Scripts in Viz Trio can be stored in two ways; on the Media Sequencer on a per show basis, or as files on a drive (preferably shared). A show script is only accessible to the machines connected to the same Media Sequencer using the same show. Scripts can be assigned to templates and shows. Note that it is only possible to assign one script per show or template; however, you can include other scripts as part of the "main" script in order to extend its funtionality.

All edits to a script is done using the Viz Trio Script Editor. Changes made to a show script will only affect the selected show and those clients that control the same show. Changes made to a script file on a shared script repository will have an affect on all shows that use the same script.

Note: File scripts are read into the show each time a show is opened.

Only templates can have scripts assigned. All instances of a template will inherit the template script.

This section contains information on the following topics:

- Viz Trio Scripting
- Viz Template Wizard Scripting

See Also

- Viz Graphic Hub
- Macro Language
- Macro Commands and Events

Tip: Always remember to escape backslashes correctly.

9.1 Viz Trio Scripting

In Viz Trio a VBScript can be attached to any show or template. This enables custom functionality to be implemented for that show or template. Typical applications for scripting can be import of data from database sources, guidance to users, and so on. All template instances with a script will inherit the script.

Viz Trio supports a set of Macro Commands and Events that may be used as part of the script.

This section contains information on the following topics:

- Script Directory

- Script Editor
- Script Backup
- Script Errors

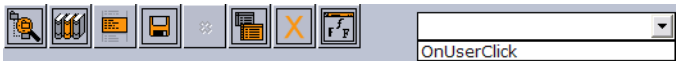
See Also

- Template List and the Script context menu options
- Page List and the Script context menu options
- Viz Graphic Hub settings for local or shared script path configuration
- The dblink macro commands for use with scripting

9.1.1 Script Directory

All show scripts are stored on the Media Sequencer. However, a local directory is still needed for script files that are stored as files. Open the Configuration window, and set the *Script Path* under the User Interface/Paths section.

9.1.2 Script Editor



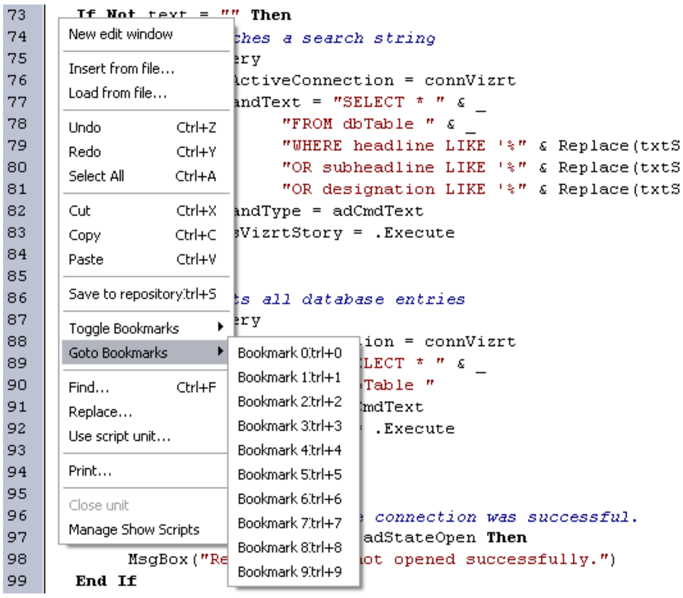
- **Predefined Functions -** Opens the Predefined Functions window which contains a set of Commands and Events that can be used in the script(s).
- **Show Library Scripts -** Opens the Library Scripts window displaying scripts which can be attached to a template as a ‘USEUNIT reference.
- **Syntax check -** Checks the syntax to verify that the it is correct.
- **Save script -** Saves a script to the server. It is also possible to save the script by right-clicking within the script window and choose Save to repository from the appearing Context Menu. On this menu an option that lets units to be saved to a file can also be found.
- **Close unit -** Closes the selected script unit.
- **Manage show scripts -** Opens the Script Manager for the currently open show.
- **Close all units -** Closes all script units.
- **Change font -** Changes the font settings for the script editor.
- **Combo box -** Jumps between script functions and procedures within the same script.

This section contains information on the following topics:

- Context Menu
- Shortcut Commands
- Predefined Functions
- Library Scripts
- Script Manager

- To assign a script to a show
- To assign a script to a template
- To add a predefined function
- To add a library script unit
- To edit a show script
- To edit a script
- To execute a script

Context Menu



```
    If Not text = "" Then
                   ches a search string
                   ery
                   ActiveConnection = connVizrt
                   andText = "SELECT * " & _
                          "FROM dbTable " & _
                          "WHERE headline LIKE '%" & Replace(txtS
                          "OR subheadline LIKE '%" & Replace(txtS
                          "OR designation LIKE '%" & Replace(txtS
                   andType = adCmdText
                   VizrtStory = .Execute


                   ts all database entries
                   ery
                                ion = connVizrt
                                LECT * " & _
                                Table "
                                mdText
                                  .Execute



                                  connection was successful.
                                adStateOpen Then
          MsgBox("Re            ot opened successfully.")
    End If
```

- **New edit window** - Opens a new edit window.
- **Insert from file** - Inserts script from file.
- **Load from file** - Loads script from file in a new tab window.
- **Undo** - Undoes latest change.
- **Redo** - Redoes latest undo.
- **Select All** - Selects the whole script.
- **Cut** - Cuts selected text.
- **Copy** - Copies selected text.
- **Paste** - Pastes clipboard content.
- **Save to repository** - Saves the script.
- **Toggle Bookmarks** - This option toggles between inserting and removing a bookmark at/from the currently selected row.
- **Go to Bookmarks** - Moves the cursor to the selected bookmark.
- **Find** - Opens a search window. Search for text strings and expressions.
- **Replace** - Opens a search and replace window. Search for a string to be replaced by another.

- **Use script unit** - Opens a window with a list of accessible units. Select one to use with another script or script unit.
- **Print** - Opens a print window.
- **Close unit** - Closes the unit
- **Manage show scripts** - Opens a dialog box to allow for import, export, and deletion of script from a template.

Shortcut Commands

- **CTRL + TAB -** Switches between the open scripting tabs.
- **CTRL + SPACE -** Displays the Code Insight Window displaying a list of parameters, variables, functions, and so on available to the currently open script or in attached sub scripts.
- **CTRL + SHIFT + SPACE -** Displays the code completion hints.
- **CTRL + Left mouse button -** Opens the highlighted function (works across units). This works across scripts and scripts units, but not within the same script. For this to work the script needs to add the *‘ USEUNIT <scriptname>* notation in order to link the scripts together.

Predefined Functions

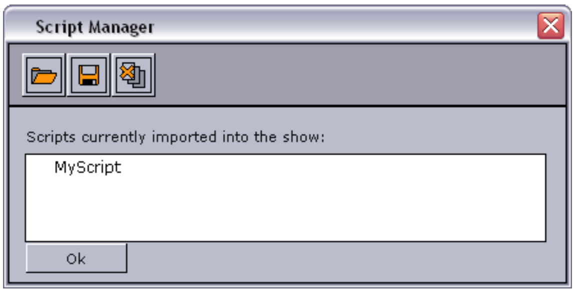
Almost all script functions in Viz Trio are macro Commands that can be wrapped in the *TrioCmd("macro_command")* format. The predefined functions window also makes available a set of Events that can be added to the script(s).

Note that `TrioCmd()` supports UTF16. If you need UTF8 support, you can use `TrioCmdUTF8()`.

Library Scripts

Script units can be added to an assigned template script. This opens up the possibility to write generic and specialized script units that are useful for more than one template. When using script files a local or shared script path must be configured under the Viz Graphic Hub settings.

Script Manager



Scripts currently imported into the show:

MyScript

The Manage Show Scripts button opens a window where it is possible to import, export, and delete VBScript files from the current show.

To assign a script to a show

1. Open the Show Settings.
2. Click the browse button next to the Show Script field.
3. From the Choose Show Script window select either a file script (local or shared) or an Media Sequencer script.
4. Click OK.

To assign a script to a template

1. Right-click on a template and select **Script > Assign script > New**.
2. *Optional*: Assign an existing script from the **File** or **Show** options.
3. Enter a **name** for the script, and select to store the script on the Media Sequencer or to a local or shared script path (see Viz Graphic Hub).
4. Click **OK**.

To add a predefined function

1. Open a template with an assigned script.
2. Click the **Edit script** button (see Controls).
3. Click the **Predefined functions** button in the Script Directory.
4. Select a function, and click **Add**.

To add a library script unit

1. Open a template with an assigned script.
2. Click the **Edit script** button (see Controls).
3. Click the **Library scripts** button in the Script Directory.
4. Select a script unit to use, and click **OK**.

To edit a show script

- Right click the Template list pane and from the appearing context menu select **Script** and **Edit Show Script**.

To edit a script

- Open a template with an assigned script, and click the **Edit Script** button (see Controls).

To execute a script

- Open a template with an assigned script, and click the **Execute Script** button (see Controls).

9.1.3 Script Backup

It is recommended that scripts created for a specific show is saved with that show on the Media Sequencer. Thus, a backup of the Media Sequencer files are necessary.

See Also

- Media Sequencer

9.1.4 Script Errors

If the script contains an error, the script window will automatically open highlighting the script error location. Additionally the script error is reported in the Error Messages Window.

9.2 Viz Template Wizard Scripting

In Viz Trio, a Viz Template Wizard template can be used to further extend a show’s functionality.

This section contains information on the following topics:

- Dynamically adding components
- Set and get component values
- Set and get show values

Dynamically adding components

Viz Trio has support for the **`CreateVTWComponent`** function in Viz Template Wizard for dynamically adding components at run-time.

The following is an example where a text box and a button is used to generate a label at run-time.

```
curY = AddButton.Top + AddButton.Height + 5
Sub AddButtonClick(Sender)
   lbl = CreateVTWComponent("TTWUniLabel", Sender.Parent)
   lbl.Parent = Sender.Parent
   lbl.Left = Sender.Left
   lbl.Top = curY
   curY = curY + lbl.Height + 2
SetUnicodeValue lbl, GetUnicodeValue(SampleEdit)End Sub
```

Set and get component values

Viz Trio has support for the **`SetUnicodeValue`** and **`GetUnicodeValue`** functions in Viz Template Wizard.

The following is an example of a text box being used to get and set a value in another text box without using TrioCmd.

```
Sub TWUniEdit1Change(Sender)
   Text = GetUnicodeValue(TWUniEdit1)
   SetUnicodeValue TWUniEdit2, Text
End Sub
```

Set and get show values

Using Viz Template Wizard to create standard templates for a show is quite useful as it enables the show to execute default commands for an entire show. It is therefore possible to set and get show values; however, there are some subtle differences in how to achieve both.

For example, when issuing a command such as **`TrioCmd("page:read 1000")`** within a Viz Template Wizard template, the page numbered 1000 will be read and previewed.

However, in order to return (get) values a command must be properly triggered by another event because all Viz Trio commands are queued; hence, the return value will be QUEUED. When a top-level command is executed (from the GUI or a macro) it is added to an internal queue and executed after other queued commands are finished.

In order to get return values the code using **`TrioCmd()`** must be issued by another top-level command. In a VTW template this is achieved by adding Viz Trio commands to events.

```
Function OnMyButtonClick(Sender)
   TrioCmd("page:read 1000")
   TrioCmd("vtwtemplate:run_vtw_script GetDescription")
   TrioCmd("page:read 1100")
   ...
End Function
Function GetDescription()
   returnvalue = TrioCmd("page:getdescription")
   msgbox returnvalue
End Function
```

In the above example the second command **`vtwtemplate:run_vtw_script`** will be triggered within **`GetDescription`** and return the description value.

See Also

- Show Settings and the **Active VTW template** setting

- Viz Template Wizard User’s Guide
- The dblink macro commands for use with scripting

10Macro Language

With the Viz Trio macro language it is possible to script many of the operations that are normally done in the graphical user interface. The general syntax is:

```
Command [argument]
```

Some commands take several arguments, for instance the command scaling that must have both the x-, y- and z-axis specified. See the command list for reference.

Macro commands can be used in three ways: As part of a shortcut key using the Keyboard Shortcuts and Macros window, as part of a script using the Script Editor or as part of an external application where commands are executed over a socket connection.

When macros are used, it is often desirable to use commands that normally would trigger a dialog for user input such as *page:delete 1000*. The latter example would normally ask a user to confirm whether to delete the page or not. To avoid this issue it is possible to set the following modes:

- **gui:set_silent_mode -** Sets silent mode which controls whether to show dialogs to the user or not.
- **gui:set_interactive_mode -** Sets interactive mode which controls whether to show dialogs to the user or not.

This section contains information on the following topics:

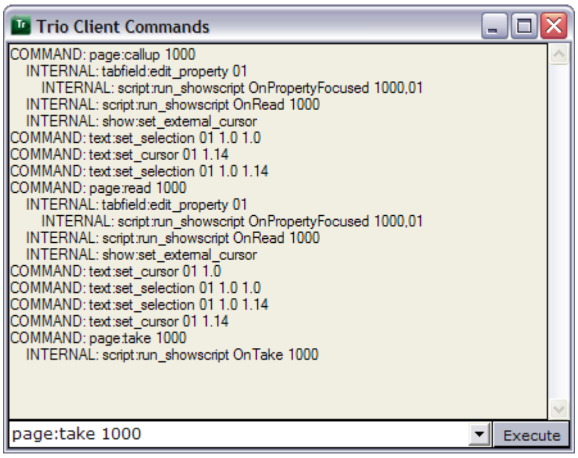
- Working with Macro Commands
- Working with Macro Commands over a Socket Connection
- Working with Shortcut Keys

See Also

- Scripting
- Macro Commands and Events

10.1 Working with Macro Commands

Trio Client Commands window



```
COMMAND: page:callup 1000
   INTERNAL: tabfield:edit_property 01
      INTERNAL: script:run_showscript OnPropertyFocused 1000,01
   INTERNAL: script:run_showscript OnRead 1000
   INTERNAL: show:set_external_cursor
COMMAND: text:set_selection 01 1.0 1.0
COMMAND: text:set_cursor 01 1.14
COMMAND: text:set_selection 01 1.0 1.14
COMMAND: page:read 1000
   INTERNAL: tabfield:edit_property 01
      INTERNAL: script:run_showscript OnPropertyFocused 1000,01
   INTERNAL: script:run_showscript OnRead 1000
   INTERNAL: show:set_external_cursor
COMMAND: text:set_cursor 01 1.0
COMMAND: text:set_selection 01 1.0 1.0
COMMAND: text:set_selection 01 1.0 1.14
COMMAND: text:set_cursor 01 1.14
COMMAND: page:take 1000
   INTERNAL: script:run_showscript OnTake 1000
```

page:take 1000

The Viz Trio user interface basically uses the same macro commands as the scripting support uses. To help find the commands that are executed when different user interface operations are performed, use the commands window and look at which commands are sent.

The actual commands are what can be seen after the colon.

```
page:read 1000
```

The Trio Client Commands window can be very helpful when learning the system and the macro commands. Enter commands in the text field at the bottom. Use this to test a customized command, and click the Execute button to run it.

To enable the Trio Client Commands button

- Click Viz Trio’s **Config** button, and in the **User Interface > User Restictions** section, clear the **Call Viz Trio Commands** check box.

To open the Trio Client Commands window

- Click the **Trio Commands** button in the lower-right corner of the application window.

This section contains information on the following topics:

- Apropos and Help Commands
- Show, Context and Tab-field Commands

10.1.1 Apropos and Help Commands

The Trio Client Commands window has some features that is helpful when searching for information about a command.

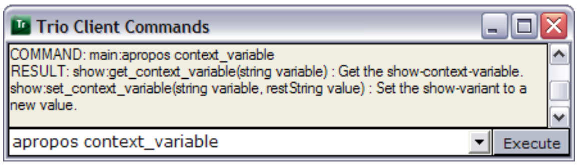
The keywords **apropos** and **help** can be used to do lookups in the available set of commands.

- **apropos -** Searches command names and descriptions for a string.
- **help -** Shows help for the specified command, or lists commands.

This section contains information on the following topics:

- Example I: Apropos
- Example II: Help

Example I: Apropos

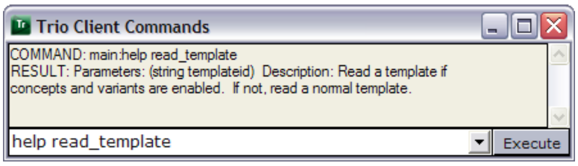


```
COMMAND: main:apropos context_variable
RESULT: show:get_context_variable(string variable) : Get the show-context-variable.
show:set_context_variable(string variable, restString value) : Set the show-variant to a
new value.
```

apropos context_variable

```
COMMAND: main:apropos context_variable
RESULT: show:get_context_variable(string variable) : Get the show-
context-variable.
show:set_context_variable(string variable, restString value) : Set the
 show-variant to a new value.
```

Example II: Help



```
COMMAND: main:help read_template
RESULT: Parameters: (string templateid) Description: Read a template if
concepts and variants are enabled. If not, read a normal template.
```

help read_template

```
COMMAND: main:help read_template
RESULT: Parameters: (string templateid) Description: Read a template if
 concepts and variants are enabled. If not, read a normal template.
```

10.1.2 Show, Context and Tab-field Commands

Show variables are global variables as all variables are stored on the Media Sequencer. Meaning that all Viz Trio applications using the same Media Sequencer can set and get the variables, and any script within a show can access the variable.

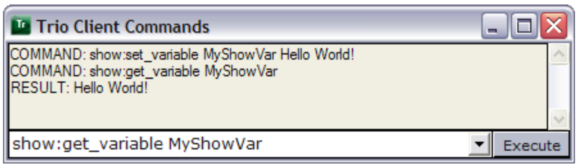
This section contains information on the following topics:

- Show Variables
- Concept, Context and Variant Variables
- Commands
- Tab-field Variables

See Also

- Macro Commands and Events

Show Variables



```
COMMAND: show:set_variable MyShowVar Hello World!
COMMAND: show:get_variable MyShowVar
RESULT: Hello World!
```

show:get_variable MyShowVar

Use the Trio Client Commands window to set show variables. The variables can be used by scripts as a means of storing intermediate values such as counters.

Commands:

- show:set_variable - Set the value of a show variable
- show:get_variable - Get the value of a show variable

Example commands:

```
COMMAND: show:set_variable MyShowVar Hello World!
COMMAND: show:get_variable MyShowVar
RESULT: Hello World!
```

Script example:

```
Sub OnUserClick()
   dim myLocalShowVar
   myLocalShowVar = TrioCmd("show:get_variable MyShowVar")
 MsgBox("Variable value is: " & myLocalShowVar)
   myLocalShowVar = InputBox("Enter a new Value:","New Value")
   TrioCmd("show:set_variable MyShowVar " & myLocalShowVar)
End Sub
```

Concept, Context and Variant Variables

Use the Trio Client Commands window to set context variables. Context variables are different than Show Variables as context variables are used to select the context a page is taken on-air with. The following contexts are available to Viz Trio users:

- **Concept -** A concept can be News or Sports or any other concept. Graphics in the same concept are created as individual scenes belonging to a specific concept.
- **Variant -** A concept can have different variants of the same scene. This can be a scene with the same tab-fields, but displayed as a top or lower third.
- **Context -** Additional user-defined contexts can be used to further differentiate a concept and its variants. For example the context Platform could have SD, HD, Mobile phones, web and so on defined within the concepts News and Sport.

Commands

If a concept, context or variant for a show is set using one of the show commands, for example *show:set_variant top*, this will override the selection done in the page list's user interface, marking the variant with square brackets. Issuing the same command, without the variant name (*show:set_variant)* resets the variant to the initial selection done using the page list user interface.

Note: A get command cannot retrieve a variable's value if not a set command is issued first.

Available commands:

- **show:enable_context() -** Enables concept and variant for the current show. This will also separate templates and pages into their own lists.
- **show:set_concept(restString concept) -** Sets the show's concept to a new value.
- **show:get_concept() -** Gets the show's concept if set by a set command.
- **show:set_context_variable (string variable, restString value) -** Sets the show's variant to a new value.
- **show:get_context_variable (string variable) -** Gets the show's context variable if set by a set command.
- **show:set_variant (restString variant) -** Sets the show's variant to a new value.
- **show:get_variant() -** Get the show's variant if set by a set command.
- **playlist:set_concept(string value) -** Sets the concept for a show playlist.

Note: The *set_variant* and *get_variant* commands are aliases for the context commands when setting and getting variants, and are not applicable for other contexts.

Example commands:

```
COMMAND: show:set_context_variable concept Sport
COMMAND: show:set_context_variable variant Lower
COMMAND: show:set_context_variable platform HD
COMMAND: show:get_context_variable concept
RESULT: Sport
COMMAND: show:get_context_variable variant
RESULT: Lower
COMMAND: show:get_context_variable <contextname>
RESULT: HD
```

A parameter must be set using the commands, before it can be shown using the commands. An output will normally differ depending on the scene design, therefore not all the output is shown.

IMPORTANT! Command parameters are case sensitive.

Tab-field Variables

Use the Viz Trio's commands window to set custom properties for tab-fields. The property can be used for scripting to set intermediate properties for tab-fields.

Commands:

- set_custom_property (string tabfieldName, string value)
- get_custom_property (string tabfieldName)

Example commands:

```
COMMAND: tabfield:set_custom_property 01 string
COMMAND: tabfield:get_custom_property 01
RESULT: string
```

10.2 Working with Macro Commands over a Socket Connection

Viz Trio can be controlled using custom made control applications over a TCP/IP socket connection on port 6200. This feature gives the possibility to use macro commands that can trigger actions in Viz Trio.

This section contains information on the following topics:

- Sending Macro Commands
- Unicode Support
- Escape Sequences
- Error Messages

See Also

- Commands

10.2.1 Sending Macro Commands

This section gives a quick overview of how to establish a connection with Viz Trio over a socket connection in order to send Macro Commands to control Viz Trio. The following procedures will use Telnet as an example.

This section contains information on the following topics:

- To configure Viz Trio for socket connections
- To connect to Viz Trio using telnet
- To send commands to Viz Trio using telnet
- To enable telnet for Windows 7

To configure Viz Trio for socket connections

1. Open the Configuration Interface and select Socket Object Settings.

2. In the appering pane set the following:
   - Set Socket type to Server socket
   - Set Text encoding to UTF-8
   - Check Autoconnect and set Socket Host to localhost and Socket Port to 6200.
3. Click OK.

To connect to Viz Trio using telnet

1. Open Telnet by clicking the Start button, typing Telnet in the Search box, and then clicking OK.
2. Type telnet localhost 6200 and press Enter.

Note: Windows 7 users must turn on Telnet as it is by default turned off.

To send commands to Viz Trio using telnet

1. Create a page in Viz Trio with the page number 1000.
2. Open a telnet connection to Viz Trio, type **`page:read 1000`** and press Enter.

To enable telnet for Windows 7

1. Click the Start button, click Control Panel, click Programs, and then click Turn Windows features on or off. If you are prompted for an administrator password or confirmation, type the password or provide confirmation.
2. In the Windows Features dialog box, select the Telnet Client check box.
3. Click OK. The installation might take several minutes.

10.2.2 Unicode Support

Commands that can set and get text values (such as *set_value* and *getproperty*) supports the full set of Unicode characters. The internal format is UTF-16 (WideString). However, when communicating with Viz Trio over a socket connection on port 6200, an 8-bit string must be used, and the default (and preferred) encoding is therefore UTF-8. It is also possible to use latin1 (ISO-8859-1, western european) encoding.

To toggle the socket encoding

- To toggle the socket encoding, send one of the following commands to the socket: **socket_encoding latin1** or **socket_encoding utf8**.

Note: The socket_encoding command is not a macro command, and can only be used with socket communication.

See Also

- sock commands

10.2.3 Escape Sequences

A socket command is terminated by a new line. To support setting and getting multi-line parameters and results, some characters have to be escaped; that is, represented by sequences of other characters. Backslash (\) is used as the escape character for socket commands.

See the table below for currently supported escape sequences.

Escape Sequences

Escape Sequence	Meaning
\n	New line
\r	Carriage return
\xHH	Two-digit hexadecimal character code.
\\	Back slash (\)

10.2.4 Error Messages

When controlling Viz Trio over a socket connection you can enable error messages using the commandserver command.

```
commandserver:enable_error_messages true
commandserver:enable_error_messages false
```

Note: Typing **`commandserver`** is optional

Enabling error messages will send error messages to the connected client as well as being displayed in the GUI (on a per socket connection). The client will receive all error messages that is normally just displayed in the Viz Trio user interface.

Note that not only the error messages generated by the client will be sent - all errors will be sent. For example an operator using Viz Trio at the same time and tries to read a non-existing page will result in error messages being sent to all clients connected over a socket connection.

Errors have this format:

```
ERROR: <Error message>
```

If error handling is turned off, the client will still get errors caused by commands not being found and commands that return an error.

This command is only implemented for the command server on port 6200, and is not related to the Socket Object Settings in the Configuration Interface.

10.3 Working with Shortcut Keys

Viz Trio allows you to assign macro commands and scripts to shortcut keys; however, there are two ways of doing this; On a per show or global basis. Shortcut keys assigned on a global level are assigned through the Configuration Interface, whereas show specific shortcut keys are assigned through the Show Settings.

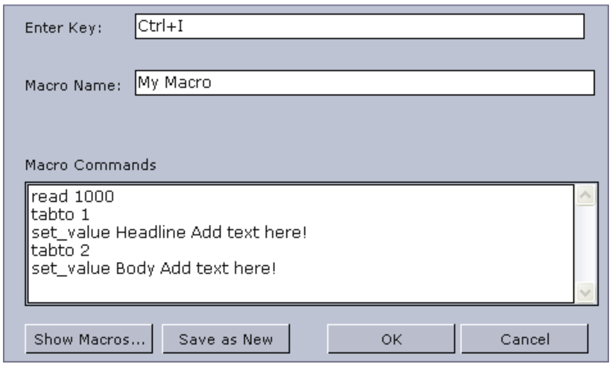
This section contains information on the following topics:

- To assign a macro or script to a shortcut key
- To reassign a shortcut key
- To remove a shortcut key
- To add a predefined function to a Macro or Script

To assign a macro or script to a shortcut key

1. Click the **Add Macro** or **Add Script** button.

   The **Macro Commands editor** will open:



Enter Key: Ctrl+I

Macro Name: My Macro

Macro Commands

```
read 1000
tabto 1
set_value Headline Add text here!
tabto 2
set_value Body Add text here!
```

2. Select the keyboard keys for the shortcut (e.g. combinations of CTRL, SHIFT, ALT, ALT GR with other characters).
   - If the selected shortcut key is already in use you may override it, removing it from the other macro or script.
3. Enter a Macro or Script Name and Description of the macro orscript.
   - If the macro name is already in use, the **Save as New** button appears.
4. Add the macro or script commands to the Macro or Script text area.
5. Click **OK** to confirm the selected key combination.

To reassign a shortcut key

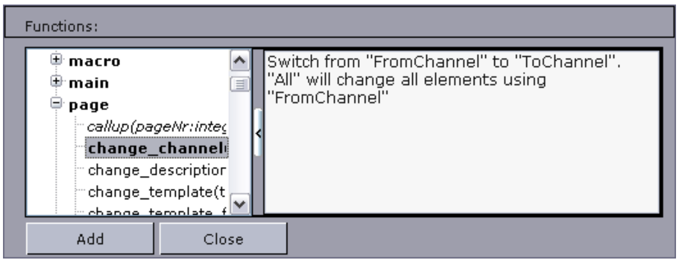
- Double-click the Command in the list and perform the changes.

To remove a shortcut key

1. Right-click a Macro or Script that has been manually added and from the appearing context menu select **Remove**, or
2. Select a Macro or Script and click the **Remove** button, or
3. Select a Macro or Script and press the **Delete** button on the keyboard.

To add a predefined function to a Macro or Script

1. Open a Macro or Script for editing.
2. Click the **Show Macros ...** button in the Macro Commands editor to open a list of predefined functions.
3. Select the function and click **Add**



Switch from "FromChannel" to "ToChannel". "All" will change all elements using "FromChannel"

Note: Predefined macro commands can also be applied to scripts.

See Also

- Keyboard Shortcuts and Macros
- Macro Commands and Events

11Macro Commands and Events

This section contains reference information on the following topics:

- Commands
- Events

See Also

- Scripting
- Macro Language

11.1 Commands

The commands are grouped as follows:

- channelcontrol
- commandserver
- config_settings
- dblink
- gui
- macro
- main
- page
- playlist
- proxy
- rundown
- script
- scroll
- scroll2
- settings
- show
- sock
- tabfield
- table
- text
- trio
- util
- viz
- vtwtemplate

channelcontrol

Command name and Arguments	Description
add_channel (restString channelName)	Adds a new channel to the active profile. The named channel must not exist.
get_active_profile	Returns the name of the active profile.
get_preview_channel	Gets the name of the currently configured Viz preview channel. Returns an empty string if no Viz preview channel is defined.
get_program_channel	Gets the name of the currently configured Viz program channel. Returns an empty string if no Viz program channel is defined.
get_video_preview_channel	Gets the name of the currently configured video preview channel. Returns an empty string if no video preview channel is defined.
get_video_program_channel(restString channelName)	Gets the name of the currently configured video program channel. Returns an empty string if no video program channel is defined.
list_profiles	Returns a list of existing profiles, separated by line breaks.
list_video_channels	Returns all video channels of the current profile as comma separated list.
list_viz_channels	Returns all Viz channels of the current profile as comma separated list.
remove_channel (restString channelName)	Removes the channel with the given name from the active profile. The channel name must be valid.
set_active_profile (restString profileName)	Change the active channel profile.
set_channel_hosts (string channelname, restString hostlist)	Changes the list of Viz hosts for a channel. The referenced channel must exist. The list of hosts can be space/comma/semi-colon separated.

set_preview_channel (restString channelName)	Changes the Viz preview channel. The channel name must be valid. If empty the Viz preview channel will be undefined.
set_program_channel (restString channelName)	Changes the Viz program channel. The channel name must be valid. If empty the Viz program channel will be undefined.
set_video_channel_hosts(string channelname, restString hostlist)	Changes the list of video hosts for a channel. The referenced channel must exist. The list of hosts can be space/ comma/semi-colon separated.
set_video_preview_channel(restString channelName)	Changes the video preview channel. The channel name must be valid. If empty the video preview channel will be undefined.
set_video_program_channel(restString channelName)	Changes the video program channel. The channel name must be valid. If empty the video program channel will be undefined.
wait_vizcmd_to_channel (string channel, restString cmd)	Sends a Viz Engine command to a named channel and waits for the returned answer.

commandserver

Command name and Arguments	**Description**
enable_error_messages true *or* false	Enables error messages when Viz Trio is controlled over a socket connection. See Working with Macro Commands over a Socket Connection.

config_settings

Command name and Arguments	**Description**
set_channel_mode (string channel, restString mode)	Set channel mode.
single_machine_mode (boolean doSetSingleMachineMode)	Make trio go to single machine mode.

dblink

Command name and Arguments	Description
link_database (string property key, string connection name, string table name)	Links a property of a page to a table of a database connection. Example 1: **`TrioCmd("dblink:link_database 1 ExcelTest ""[\qScalar Tests$\q]""")`** Example 2: **`TrioCmd("dblink:link_database 1 ExcelTest ""[\qTable Tests$\q]""")`** 1 refers to the Control List, Chart or Text’s Field Identifier that in Viz Trio can be identified as the template’s tab field 1. **`ExcelTest`** refers to the name of the configured database connection made in the Database Config window. (See To create a new database connection). **`Scalar Tests`** and **`Table Tests`** refers to the table that is chosen in order to select the lookup column.
map_database_column (string table key, string property column key, string database field name)	Maps a column of a table property to a database field. Example: **`TrioCmd ("dblink:map_database_column 1 3 Name")`**. **`1`** refers to the Control List’s or Control Chart’s Field identifier property that in Viz Trio can be identified as the template’s tab field 1. **`3`** refers to the Control Text Field identifiers in the scene that make out column number 3 that in Viz Trio can be identified as the table column in the page editor. **`Name`** refers to the column the data should be read from.
select_value (string property key, string value column, string key column, string key value)	Selects a single value (scalar linking) of a database and links it to the property. The value is selected from the <value column> where the <key column> matches the <key value>. Example: **`TrioCmd("dblink:select_value 1 Color Key 2")`** **`1`** refers to the Control Text’s Field identifier property that in Viz Trio can be identified as the template’s tab field 1.

	Color refers to the column the data should be read from. **Key** refers to the lookup column defined in the Database Config window. (See To create a new database connection). **2** refers to the row the data should be read from.
store_to_database (string property key)	Stores a linked property of a page to its value in the database. Example: **TrioCmd("dblink:store_to_database 1")** **1** refers to the Control Text’s Field identifier property that in Viz Trio can be identified as the template’s tab field 1.
update_from_database (string property key)	Updates a linked property of a page with its value in the database. Example: **TrioCmd("dblink:update_from_database 1")** **1** refers to the Control Text’s Field identifier property that in Viz Trio can be identified as the template’s tab field 1.
use_custom_sql (string property key, restString custom SQL)	Uses a custom SQL clause to select the database value. An empty SQL clause disables the usage of custom SQL. Example: **TrioCmd("dblink:use_custom_sql 1 SELECT Text FROM [\qTable Tests$ \q]")** **1** refers to the Control List’s or Control Chart’s Field identifier property that in Viz Trio can be identified as the template’s tab field 1. **Text** refers to the column the data should be read from. **Table Tests** refers to the database table (i.e. a single spreadsheet in Microsoft Excel).

gui

Command name and Arguments	**Description**

add_view (title min max elementTypeList)	Creates a new view. If called without any parameters, the PageView dialog will be shown. **`Min`** and **`max`** may optionally be specified to filter elements with numeric names. Elements with non-numeric names will always be included. **`elementTypeList`** is an optional space-separated list of types of elements to include in the view. Possible values are: pages stills videos empty_groups. If none are specified, all will be included. Example 1: gui:add_view "The Title" 2000 3500 pages stills. This will show pages and stills in the range between 2000 and 3500. Videos will not be shown and empty groups will be hidden. Example 2: gui:add_view title2 videos. This will show all videos, nothing else.
artist_mode	Enter design mode (Viz Artist).
browse_image	Browse local file system for images.
change_path	Shows the directory selector.
clear_page_field	Clears the content of the page edit's text field.
copy_selected_pages_to_number (restString destnumber)	Copy the selected pages to number or show a dialog if no number is supplied.
copy_selected_pages_with_offset (restString destnumber)	Copy the selected pages with an offset or show a dialog if no number is supplied.
create_new_show	Create a new show in the currently selected directory. A unique name is generated and the new show path is returned.
design_mode	Enter Trio design mode.
edit_begin_time	Shows the in place editor for the selected page.
edit_end_time	Shows the in place editor for the selected page.
edit_group_name	Shows the in place editor for the selected page.

edit_page_description	Shows the in place editor for the selected page.
edit_page_program_channel	Shows the in place editor for the selected page.
edit_scroll	Show the scroll editor.
edit_template (restString templateName)	Edit the specified template in a dialog. This only works for templates in concept-enabled shows.
error_message (restString message)	Display an error message in the status bar. The message will also be logged.
find	Shows the find dialog.
focus_active_view	
focus_next_view	
focus_prev_focused_view	Focus the previous focused view.
focus_prev_view	
get_callup_code	Gets the value of the callup code window.
get_selected_pages	Retrieves the currently selected pages as a space separated list.
goto_config	Opens Viz Trio’s Configuration Interface.
hide_timecode_monitor	Hides the TimeCode monitor. See also show_timecode_monitor.
hit_test (x:integer, y:integer)	Test if a tab field exists on the X,Y coordinate.
load_image_from_db	Show the image database browser for the current tab field.
load_image_from_viz	Show the viz image browser for the current tab field.
log_message (restString message)	Add a message to the logfile.
move_selected_pages_to_number (restString destnumber)	Move the selected pages to number or show a dialog if no number is supplied.
move_selected_pages_with_offset (restString destnumber)	Move the selected pages with an offset or show a dialog if no number is supplied.

open_effect_dialog	This command opens the effect dialog. Will not open if current page is not set.
playout_mode	Enter playout mode.
post_render	Opens the post render editor.
prepare_snapshot	Open the prepare snapshot editor.
print_selected_pages	Print the selected pages in the active view.
read_page_following_last_taken	Read the page succeeding the page that was last taken.
reimport_selected_pages	Reimport the selected pages in the active view.
select_last_taken_page	Select the page that was last taken.
select_nextpage	Select the next page in the active view.
select_prevpage	Select the previous page in the active view.
select_variant	Select the variant for the focused element in the page view.
set_autopreview (boolean autopreview)	Sets the auto-preview state (single-click read) for page views.
set_bounding_box (visible:boolean)	Toggles the bounding boxes for the elements in the preview (same as the BB button).
set_column_visible (string columnname, boolean active)	Sets the visiblity of the column. Applies to all pageviews.
set_focus_to_editor	Sets focus to the currently active tab field editor.
set_interactive_mode (boolean active)	Sets interactive mode which controls whether to show dialogs to the user or not.
set_run_script_button_enabled (boolean IsEnabled)	Sets the run script button to enabled/ disabled.
set_safearea (visible:boolean)	Toggle safe area.

set_silent_mode (boolean active)	Sets silent mode which controls whether to show dialogs to the user or not.
set_statusbar_color (int R, int G, int B)	Sets the color of the statusbar based on the RBG values given.
set_titlearea (visible:boolean)	Toggles the title area in the preview window.
show_custom_prop_column (boolean value)	Shows or hides custom property column in tab field list.
show_export_dialog	Show the export show dialog.
show_external_cursor (boolean value)	Show or hide the external cursor in the page view.
show_import_dialog	Show the import show dialog.
show_pageeditor	Shows the page editor.
show_pages_in_rundown (boolean doShow)	Shows or hides pages in the rundown for the current show.
show_pageview	Show the page view.
show_playlist (string refPath, boolean requestMos, restString description)	Shows the playlist with the specified path or name. Can choose to request a MOS playlist. Description is optional and defaults to the playlist name.
show_scripteditor	Shows the script editor.
show_scroll_template_creator	Shows the scroll template creator view.
show_settings	Open the show settings view.
show_shortcut_list	Show the view of local shortcuts and macros.
show_showscript_editor	Shows the show script editor.
show_status_icons (boolean value)	Shows or hides status cells in the callup grid.
show_templates_in_rundown (boolean doShow)	Shows or hides templates in the rundown for the current show.
show_timecode_monitor	Shows the TimeCode Monitor. See also hide_timecode_monitor.
show_triocommands	Toggles the Trio Commands window.

status_message (restString message)	Display a text message in the status bar. The message will also be logged.
take_callup	Take the current callup number directly, without a read.
take_snapshot (string path, string handlerName)	Takes snapshot from the specified handler in RGB format.
take_snapshot_rgba (string path, string handlerName)	Takes snapshot from the specified handler in RGBA format.
toggle_design_mode	Toggle between Trio design and playout mode.
toggle_error_message_window	Toggle the visibility of the error message window.
toggle_hide_empty_locked_groups (visible:boolean)	Toggle hide/show empty and locked groups.
toggle_hide_nameless_groups (visible:boolean)	Toggle hide/show groups with no name.

macro

Command name and Arguments	**Description**
export_macros_to_xml (string filename)	Exports the macro commands to a XML file.

main

Command name and Arguments	**Description**
apropos (search:string)	Search command names and descriptions for a string.
call_macro (restString name)	Call (invoke) a named macro.
define_local_macro (string name, restString commands)	Define a named, local macro.
define_local_script (string name, restString commands)	Define a named, local script.

define_macro (string name, restString commands)	Define a named, global macro.
define_script (string name, restString commands)	Define a named, global script.
delete_global_macro (name:string)	Delete a global macro.
delete_local_macro (name:string)	Delete a local macro.
get_global_macros	List the names of global macros (separated by new lines).
get_local_macros	List the names of local macros (separated by new lines).
get_shows	Get the names of all the shows in the client
get_version	Get a version string.
help (command:string)	Shows help for the specified command, or lists commands.
macro	

page

Command name and Arguments	**Description**
arm (pageName:string, channelName: string)	Arms the specified page on the specified channel. If channelName is empty, the default channel is used.
arm_current (channelName:string)	Arms the currently read page on its specified program channel. If channelName is empty, the default channel is used.
cancel_refresh_linked_data (page name (optional))	Cancel refreshing of linked data, started with the \qpage:refresh_linked_data_async \q command.
change_channel ("string FromChannel, string ToChannel, boolean All)	Switch from "FromChannel" to "ToChannel". "All" will change all elements using "FromChannel".

change_description (string pageNr, restString desc)	Sets the page description.
change_template (string templateName)	Changes the template of the selected pages. Empty parameter("") will take the number in the callup field and use that as the template ID.
change_template_for_pages (string templateName, restString pages)	Changes the template of the given pages.
change_variable (string variable, restString value)	Change the variant for the currently edited page.
continue (restString pageNr)	Continues the page specified as parameter or the selected if the parameter is empty.
cue (restString pageNr)	Cues the page specified as parameter or the selected if the parameter is empty.
cue_append (pageNr:string)	Only applicape to videos. Cues the video after the currently playing video. Specify a page as parameter or no parameter for the currently read video.
cut (pageNr:integer)	Cuts the current template or page or the page specified.
delete_page	Delete selected page(s) in active view.
delete_pagerange (int start, int end)	Deletes the page inside from the begin range to (including) the end range parameter.
direct_continue	Continue selected page in active view.
direct_cut	Cut selected page in active view.
direct_take	Take selected page in active view.
direct_takeout	Take out selected page in active view.
export_property (string key, string filename)	Export a property value to file (UTF-8 encoded).
fire (channelName:string, action:string, clearAfterFire:boolean)	Fire a channel with the given action (take, continue, out, and so on). If clearAfterFire is true, the armed element on the channel is un-armed after fire.

fire_all (action:string, clearAfterFire:boolean)	Fire all armed channels with the given action (take, continue, out, and so on). If clearAfterFire is true, the armed elements on the channels are un-armed after fire.
get_current_propertykey	Get the current property-key.
get_current_tabfield_name	Get the name of the current tab field.
get_layers (string page)	Will get the layer name(s) the combination or transition logic page is based on, hence, this command is not valid for pages based on standalone scenes (returns an empty string).
get_program_pagechannel (restString pageid)	Gets the program channel for the page.
get_property (string name)	
get_tabfield_count	Gets the number of tab field on the current page.
get_template_description (string page)	Gets the template description for the page specified.
get_viz_layer (restString page)	Gets the viz layer for a page. If no page name is supplied, current page is used. Only valid for scene-based pages.
getpagedescription	Get the description of the current page.
getpagename	Get the name of the current page.
getpagetemplate	Get the template of the current page.
import_property (string key, string filename)	Import a property value from file (UTF-8 encoded).
load_page_data (filename:string (optional))	Load page data from XML.
pause (pageNr:string)	Only applicable to videos. Pauses the video. Specify a page as parameter or no parameter for the currently read video.
prepare (pageNr:string)	Prepares the page specified as parameter or the currently read if the parameter is empty.
print	Print the current page. Use settings printer/left_margin, printer/right_margin,

	printer/top_margin, printer/bottom_margin to control the size, where the value is the percent of the page width/height.
read (pageNr:integer)	Reads the specified page number.
read_parentpage	
read_rootpage	
read_subpage (string string)	
read_template (string templateid)	Reads a template if concepts and variants are enabled. If not, read a normal template.
read_template_with_context (string template, string contextPairs)	Reads a template with context variables that can override the show settings. The context is given a whitespace-separated list of keys and values.
readnext	Read next element in active view.
readprevious	Read previous element in active view.
redo	Redo edit in current page history.
refresh_linked_data (page name (optional))	Refresh linked data if the page has any tabfields that are linked to data from an external source.
refresh_linked_data_async (page name (optional))	Start refreshing linked data if the page has any tabfields that are linked to data from an external source. The refresh can be cancelled with the \qpage:cancel_refresh_linked_data\q command.
run_command_with_variables_on_channel (string command, string channel, restString variables)	Run a command (for example a take) on a page with variables to a specific channel.
save	Saves current page.
save_page_data (filename:string (optional), version:string (optional, defaults to 2.6))	Save page data as XML in specified version (2.5 or 2.6).
save_scene	Save current page as a new Viz scene.

saveas ([pageNr:integer])	Triggers the save as action for a template or page, saving it with the page number as parameter. If no parameter is given, the callup code will be set to the next page number available; however, the page will not be saved.
set_default_effect (string effect)	Sets the default transition effect to be used between (scene-based) pages. Empty string specifies hard cuts (default).
set_effect (restString effect)	Sets the transition effect to be used between (scene-based) pages. Empty string specifies hard cuts (default).
set_effect_on_selected (string effect)	Sets the transition effect to be used between (scene-based) pages on the currently selected one. Empty string specifies hard cuts (default).
set_expert_mode_enabled (boolean enabled)	Enable or disable "expert mode" for the current page. This enables all tab field properties to be accessed instead of a filtered subset.
set_pagestatus (status: string)	Set the status of the selected pages. Valid arguments: FINISHED/UNFINISHED/NONE.
set_pagestatus_one (pagenr: integer, status: string)	Set the status of page. Valid status arguments: FINISHED/UNFINISHED/NONE.
set_pagetime (string pageid, string type, string value)	Sets the begin/end time for the page specified.
set_program_pagechannel (string pageid, restString channelname)	Sets the program channel for the page.
set_property (string name, restString value)	Set the value of a named tab field property.
setpagetemplate (string templateName)	Change the template of the current page.
store	Save the page with the name given in the read page edit field (the left one).
tab	Tab to the next tab field.
tab_backwards	Tab to the previous tab field.

tabto (tabfieldnr:integer)	Go to a specific tab-field number.
tabtotabfield (tabfieldname:string)	Go to a specific tab-field number.
take (pageNr:integer)	Does a take on the current template or page or on page specified.
take_exchange	Take current page and read the last page that was taken.
take_with_variables (restString variables)	Take a page with variables.
take_with_variables_on_channel	Take current page and read next page in active view.
takenext	Take current page and read next page in active view.
takeout (pageNr:integer)	Take out current template or page or template or page specified.
unarm (channelName:string)	Unarms the specified channel.
unarm_current	Unarms the currently read page on the channel it is armed.
unarm_all	Un-arms all armed pages.
undo	Undo edit in current page history.
update	Update the program renderer (do a take without animating it in).
update_preview	Update the external preview renderer with the contents of the local preview.

playlist

Command name and Arguments	**Description**
add_page (string pagename, restString duration)	Add a page to the end of the playlist. The duration argument is optional. If not given, the page duration will be used.
create_playlist (string name)	Adds a new empty global playlist and returns the path to the new playlist. The name of the playlist is optional. If not

	specified, a dialog will pop up to ask for it. The new playlist will show up in the "playlists" in the "Change Show" dialog.
direct_take_out_selected	
direct_take_selected	
go_to_next_story	Select the next story (group) in the active playlist.
go_to_previous_story	Select the previous story (group) in the active playlist.
goto_manual_graphics_mode (restString enable)	Enable/disable manual playout of graphic elements. Use "true" or "" for manual and "false" for automatic mode.
initialize_playlist	Initialize the playlist (load graphics) on the external output channels.
jump_to_ncs_cursor	Jump to the element that the NCS-cursor (newsroom control system) is pointing to.
pause_carousel	Pause the carousel.
read_next_item	Read the next playlist item.
read_prev_item	Read the previous playlist item.
read_selected	Read the currently selected playlist element.
run_selected_with_custom_action (string Action)	This macro command is generic and can append any Media Sequencer command as a parameter for playing out selected graphics and/or video clip elements in any playlist. Example: **`playlist:run_selected_with_custom_action "prepare"`** **`playlist:run_selected_with_custom_action "take"`** Note that if you have a version of the Media Sequencer that is newer than the version released with your version of Viz Trio, you can still use new commands supported by the Media Sequencer by using this macro command.
select_first	Select the first element in the playlist.

select_next	Select the next element in the active playlist.
select_next_by_description (restString phrase)	Selects the next element in the active playlist which has the given phrase in its description.
select_previous	Select the previous element in the active playlist.
set_attribute_on_selected (string attribute, restString value)	Sets an attribute on all the selected items in a playlist.
set_concept (string value)	Set the concept for a show.
set_looping (restString looping TRUE or FALSE)	Set to true if the carousel shall be looping.
start_carousel (playlist name or id (optional, defaults to active playlist))	Run the elements in the playlist as a carousel.
stop_carousel (playlist name or id (optional, defaults to active playlist))	Stop a playlist running as a carousel.

proxy

Command name and Arguments	Description
enable_viz_proxy (boolean enable)	Enables/disables Trio acting as a Viz Proxy on the port configured.
set_proxy_port (int port)	Set the port that Trio should listen on.
set_viz_host (string host)	Set the host where the proxy can locate Viz.
set_viz_port (int port)	Set the port the proxy should use to access Viz.

rundown

Command name and Arguments	Description

go_to_next_story	Sets focus on the next story/group in the active rundown.
go_to_previous_story	Sets focus on the previous story/group in the active rundown.
reload_template_images (restString templates)	Comma separated list of template IDs.

script

Command name and Arguments	Description
eval (restString scriptExpression)	Evaluate the VBScript expression given as a parameter, and return the value converted to a string.
execute_script	Execute the script of the current page.
get_showscript_name	Gets the name of the current show\qs script.
import_script (string scriptName, restString scriptFilename)	Imports the script into the current show.
run_macro_script (restString scriptCode)	Run the VBScript script code given as a parameter. The snippet can contain multiple lines of code. The macro will return either an empty string or an error message.
run_script (string scriptFunction, restString argumentList)	Run the specified script function. The argument list is a list of strings separated by commas or white space. Arguments that can contain commas or white space must be enclosed by double quotes.
run_showscript (string scriptFunction, restString argumentList)	Run the script associated with the current show. The argument list is a list of strings separated by commas or white space. Arguments that can contain commas or white space must be enclosed by double quotes.

scroll

Command name and Arguments	Description

scroll_add_range (index:integer, ranges:string)	Insert one or more ranges of elements into scroll at index. Use index -1 to insert at end.
scroll_clear	Clear all scroll data, including scroll elements.
scroll_element_parameter (index:integer,name:string,value(s):variant)	Set a parameter on the scroll element at index. Supported parameters are: [page (string): set the page name, will refresh element] [space_before (float): extra space before this element, accumulates with padding] [space_after (float): extra space after this element, accumulates with padding] [scaling (two floats): set scaling in X and Y direction] [position (two floats): position adjustment in X and Y direction].
scroll_insert_elements (index:integer, pages:string)	Insert elements into scroll at index. Use index -1 to insert at end.
scroll_move_element (from_index,to_index:integer)	Move scroll element from from_index to to_index.
scroll_refresh_all	Refresh all scroll elements. Also refreshes end page and background page.
scroll_refresh_element (index:integer)	Refresh scroll element at index. This will refresh both the viz object and the data.
scroll_remove_all	Remove all scroll elements. This will not clear other scroll parameters.
scroll_remove_element (index:integer)	Remove scroll element at index.
scroll_select_element (index:integer)	Select a scroll element. Use index -1 to clear the selection.
scroll_set_endpage (page:string,offset:float(optional))	Set the scroll end page, and (optionally) the end page offset.
scroll_set_endpage_offset (offset:float)	Set the end page offset, in seconds from end of scroll animation.
set_scroll_parameter (name:string,value(s):variant)	Set a scroll parameter. The supported parameters are: [direction (up/down/left/right): the scroll direction] [padding (float): padding between elements] [alignment (none/left/right/bottom/top): left/right or bottom/top alignment,

	depending on direction] [alignment_offset (float): alignment offset in percentage of screen size] [background_page (string): name of background page] [use_pixel_speed (boolean): if true, scroll will use pixel speed] [pixel_speed (float): number of pixels per frame (takes effect if use_pixel_speed is true)] [duration (float): duration of scroll animation (takes effect if use_pixel_speed is false)] [start_offset (float): start offset of scroll in percentage of screen size] [pause_at_start (boolean): pause scroll animation at start] [viz_layer (front/main/back): viz layer for scroll scene].

scroll2

Command name and Arguments	Description
add_easepoint (string pagename)	
clear_elements	Clear scroll elements (remove all).
copy_element (int sourceIndex, int targetIndex)	Add a copy of scroll element at sourceIndex to targetIndex.
create_scroll_template (string sceneName, string templateDescription, float width, float height, boolean showBounds)	Create a new scroll template with the given paramters.
edit_easepoint (string subpage, string easepoint)	Edit an easepoint in the current scroll.
insert_objects (int index, restString objects)	Insert SCENE or GEOM objects from viz into the current scroll.
insert_pages (int index, restString pages)	Insert pages from current show into current scroll at index.
insert_range (int index, string range)	Insert an inclusive numerical range of pages (e.g 1000-2000) from the current show, or a single page.
move_element (int sourceIndex, int targetIndex)	Move scroll element from sourceIndex to targetIndex.
next_easepoint	Go to next ease point editor.

next_element_data	Go to next element data (extra spacing) editor.
preview_continue	Continue the current scroll in preview.
preview_start	Start the current scroll in preview.
preview_stop	Stop the current scroll in preview.
previous_easepoint	Go to previous ease point editor.
previous_element_data	Go to previous element data (extra spacing) editor.
program_continue	Continue the current scroll on the program channel (must be taken on-air first).
program_start	Start the current scroll on the program channel (must be taken on-air first).
program_stop	Stop the current scroll on the program channel (must be taken on-air first).
reload_all_page_data	Reload all scroll page data by copying from original pages.
reload_page_data (int index)	Reload scroll page data at index by copying from original page.
reload_template_graphics	Reload all scroll elements (reload geometry objects created during import of templates).
reload_templates	Reload all scroll elements by merging with the current show templates.
remove_easepoint (string subpage, string easepoint)	Remove a named easepoint in the current scroll.
remove_element (int index)	Remove scroll element at index.
rename_easepoint (string subpage, string oldName, string newName)	Rename an easepoint in the current scroll.
set_focus (int index)	Focus on scroll element.

settings

Command name and Arguments	Description
get_setting (string path)	Gets a Viz setting.
set_global_setting	Sets a global Viz setting (e.g. **`settings:set_global_setting encoding ISO-8859-1`**).
set_setting (string path, restString value)	Sets a Viz setting.

show

Command name and Arguments	Description
append_pages_from_xml (boolean showDialogs, string filename)	Loads pages from XML and replaces any pages that will be overwritten.
copy_pages (page list)	Copies the given page(s) to the clipboard
copy_pages_to_number (int destination, restString CommaSeperatedList)	Copy the pages to a destination number.
copy_pages_with_offset (int offset, int CommaSeperatedList)	Copy the pages to a destination number.
create_combo_page (string pagelist)	Create a combo page.
create_dir (restString path)	Creates the specified show directory.
create_group (string groupname)	Create a page group in the current show, before the focused node.
create_playlist (restString name)	Adds a new playlist to the show and returns the path to the new playlist. If name is omitted, a dialog will pop up asking for a name.
create_show (string path, restString EnableContext)	Create a new show. If EnableContext is not "false" then a context-enabled show is created.
cut_pages (page list)	Cuts the given page(s) to the clipboard.

delete_all_pages	Deletes all the pages in the page view.
delete_templates (restString templateList)	Delete the given templates from the current show. Does nothing if the show does not have concepts and variants enabled.
enable_context	Enable concept/variant for the current show.
export_setting (string name, restString value)	Configure an export setting, use this before export_show.
export_show (filename:string)	Export a show (trio archive).
get_all_timing_handlers	Returns a comma separated list of all timing handlers.
get_associated_files	Get the list of associated files for the show
get_background_scenes	Get a space-separated list of background scenes in the show.
get_concept	Get the show-concept.
get_context_variable (string variable)	Get the show-context-variable.
get_custom_colors	Get the custom colors for the current show.
get_default_viz_path	Get the default viz scene path for the current show.
get_group_pages	Returns a list of pages in the specified group.
get_groups	Returns a list of groups in the current show.
get_library_path	Get the default viz scene path for the current show.
get_page_xml(restString page_path)	Get the xml for the specified page. The path is given as showpath/<page-id> (e.g. `get_page_xml myshow/1000`). For "untitled show" use empty showpath (`e.g. get_page_xml /1002`). Note that show names are case sensitive.
get_pages	Returns a list of pages in the current show.

get_preview_background_image	Get the Preview background image for the current show.
get_scenes_for_pages (restString pagelist)	Get the list of scenes for the given pages.
get_setting (string path)	Get a show setting.
get_settings	Get all settings.
get_show_description	Get the description of the current show.
get_show_name	Get the name of the current show.
get_timing_handler	Returns the timing handler for the current show.
get_variable (string propname)	Get the value of a show variable.
get_variant	Get the show-variant.
goto_viz_dir (path:string)	Change to a show with the same name as a viz directory, creating it if necessary.
import (scenes:string)	Shows the Import Scenes pane or imports specified scene(s).
import_and_initialize (scenes:string)	Import scenes to templates, then reload on external renderers.
import_no_gui (restString sceneNames)	Imports the scenes given as parameter without showing/closing the import GUI.
import_pages_from_xml (string filename, int offset, boolean interactive, boolean pageNames)	Import the named pages from an XML file. An offset different from zero will cause pages with numerical names to be offset by this number, unless they are templates. Pages are overwritten automatically if interactive is false.
import_recursively (string path)	Import all the scenes recursively from this folder.
import_setting (string name, restString value)	Configure an import setting, use this before import_show.
import_show (filename:string)	Import a show (Viz Trio archive).

load_locally	Loads all scenes referenced by pages in the current show on the local viz preview.
load_show	Load show (scenes, textures, fonts) on external output channels. Replaces the old initialize command.
load_show_on_renderers (string ProgramChannelName, restString PreviewChannelName)	Load current show on the specified channels. First argument is treated as a program channel, second as preview.
move_pages_to_group (string group, restString pages)	Move pages into the specified group. If the group name is empty, move to top level.
move_pages_to_number (int destination, restString CommaSeperatedList)	Copy the pages to a destination number.
move_pages_with_offset (int destination, int CommaSeperatedList)	Move the pages with an offset.
paste_pages	Pastes the given page(s) from the clipboard to the current show.
page_exists (restString page)	Checks if a page with the specified name exists in the current show. Returns "true" or "false".
reload_on_renderers (restString pages)	Reload (re-initialize) graphics for the specified pages on program and preview channels.
rename_page (string old_name, restString new_name)	Sets a new name for the page. If a new name is not defined, a dialog appears asking for the new name.
run_show (boolean b)	Runs/stops the show.
save_pages (string FileName, restString CommaSeperatedList)	Saves the pages given as parameter to XML.
save_pages_to_xml (string filename)	Saves pages to XML.
save_selected_pages (restString fileName)	Saves the selected pages to XML.

set_associated_files (restString filelist)	Set the associated files for the show. ("file1" "file2" "file3").
set_concept (restString concept)	Set the show-concept to a new value.
set_context_variable (string variable, restString value)	Set the show-variant to a new value.
set_custom_colors (restString colors)	Set the custom colors for the current show.
set_default_viz_path (path:string)	Set the default viz scene path for the current show.
set_dir (restString path)	Changes the show directory to the path specified.
set_external_cursor (restString pagename)	Set the external cursor to page with page name or to current page if page name is empty.
set_library_path (restString path)	Set the design-library path.
set_preview_background_image (path:string)	Set the preview background image for the current show.
set_setting (string path, restString value)	Set a show setting.
set_show_description (description:string)	Set the description of the current show.
set_show_name (name:string)	Set the name of the current show.
set_timing_handler (string handlerName)	Set the timing handler for the current show.
set_variable (string propname, restString value)	Set the value of a show variable. The value is stored on the Media Sequencer.
set_variant (restString variant)	Set the show-variant to a new value.
show_export_dialog_for_path (restString showpath)	Exports the show.

sock

Command name and Arguments	**Description**
connect_socket	Explicitly connect (open) the socket, if not already connected.
disconnect_socket	Disconnect (close) the socket, if connected.
send_socket_data (restString text)	Send UTF-8 encoded text over the socket. If it is a server socket, send to all clients.
set_com_baud (int comBaudRate)	Set baud rate to use for the serial port.
set_com_number (int comPortNumber)	Set COM port number to use for the serial port.
set_socket_autoconnect (boolean autoconnect)	If auto-connect is true, a client socket will be connected the first time data is sent, or a server socket will be opened automatically.
set_socket_data_separator (string separator)	Set the separator for the OnSocketDataReceived callback.
set_socket_encoding (string encoding)	Set text encoding for socket to either UTF-8 or ISO-8859-1.
set_socket_host (string hostname)	Set the socket hostname. Does nothing if the socket type is server.
set_socket_port (int port)	Set the socket port number.
set_socket_type (string type)	Set the socket type to client or server.
socket_is_connected	Returns true if the socket is connected, false otherwise.

tabfield

Command name and Arguments	**Description**
active (active:string)	Toggle active flag of current tab field or set its value (0 or 1).
browse_file	

clock	Change to clock editor of current tab field or set its value (string).
downcase_tabfield	Convert current tab field to lower case, if it contains text.
edit_property (string propertyName)	Changes editor to the specified property i.e 1.image.
geom (vizPath:string)	Change to geometry editor of current tab field or set its value (GEOM*path).
get_custom_property (string tabfieldName)	Gets the custom property of the tab field. "" will get it for the current tab field.
get_tabfield_property (tabfieldnr:integer,property:string)	Gets a property value for a given tab field.
image (vizPath:string)	Change to image editor of current tab field or set its value (IMAGE*path or filename).
image_position	Change to image position editor of current tab field or set its value (two floats).
image_scaling	Change to image scaling editor of current tab field or set its value (two floats).
import_value_from_file (restString filename)	Load a tab field value from a text file (UTF-8 encoded).
kerning (value:float)	Change to kerning editor of current tab field or set its value (float).
material (vizPath:string)	Change to material editor of current tab field or set its value (MATERIAL*path).
next_property	Select the next property of the current tab field, or the first if the last one is currently selected.
position (value:float)	Change to position editor of current tab field or set its value (floats).
previous_property	Select the previous property of the current tab field, or the last if the first one is currently selected.
rotation (value:float)	Change to rotation editor of current tab field or set its value (floats).

scaling (value:float)	Change to scaling editor of current tab field or set its value (float).
set_custom_property (string tabfieldName, string value)	Sets the custom property of the tab field. "" as tab-field name will use the current tab field.
set_tabfield_property (prop:string, value:string)	Set a property value.
set_value (value:string)	Sets the value of the current tab-field property.
text (value:string)	Change to text editor of current tab field or set its value (unicode string).
toggle_current_custom_property (string value1, string value2)	Toggle the custom property of the current tab field between the two given values.
upcase_tabfield	Convert current tab field to upper case, if it contains text.
value	Change to default editor.

table

Command name and Arguments	**Description**
clear_sorting (string table key)	Clear the sorted state of a table property.
delete_rows (string table key, string row index list)	Delete a number of rows from a table property.
get_cell_value (string table key, string column key, int row num)	Get a cell value of a table property.
insert_rows (string table key, int row index, int number of rows to insert)	Insert a number of rows into a table property.
move_current_row_down	Move the selected row in the current table editor one step downwards.
move_current_row_up	Move the selected row in the current table editor one step upwards.

move_row (string table key, int row index to move, int target row index)	Move a row downwards behind the target row or upwards before the target row.
set_cell_value (string table key, string column key, int row num, restString new value)	Set a cell value of a table property.
sort_column (<table key> <column key> [ascending or descending] (optional, default: ascending))	Sort a table ascending or descending after a column.

text

Command name and Arguments	**Description**
incr_alpha (string key, string selectionStart, string selectionEnd, float alpha)	Increment or decrement the transparency of selected text.
incr_kerning (string key, string selectionStart, string selectionEnd, float kerning)	Increment or decrement the kerning of selected text.
incr_position (string key, string selectionStart, string selectionEnd, float posX, float posY, float posZ)	Increment or decrement the position of selected text.
incr_rotation (string key, string selectionStart, string selectionEnd, float rotX, float rotY, float rotZ)	Increment or decrement the rotation of selected text.
incr_scale (string key, string selectionStart, string selectionEnd, float scaleX, float scaleY, float scaleZ)	Increment or decrement the scaling of selected text.
revert (string key)	Revert current text to saved value.
set_alpha_mode	Set text manipulation mode to Alpha.
set_color (string key, string selectionStart, string selectionEnd, string color)	Change the color of selected text.

set_color_mode	Set text manipulation mode to Color.
set_justification (string key, string justification)	Set the text justification (LEFT, CENTER, RIGHT).
set_kerning_mode	Set text manipulation mode to Kerning.
set_position_mode	Set text manipulation mode to Kerning.
set_rotate_xy_mode	Set text manipulation mode to Rotate x and y.
set_rotate_z_mode	Set text manipulation mode to Rotate z.
set_scale_mode	Set text manipulation mode to Scale.
show_replace_list	Shows the pre-configured character palette for the character to the left of the cursor.

trio

Command name and Arguments	**Description**
assign_script (string page, boolean fileScript, restString scriptunit)	Assign or change the script for the specified page.
cleanup_all_channels	Cleans up all channels in the current profile by clearing Viz layers and freeing memory. Does not clear the channel for transition logic pages.
cleanup_channel (restString channelname)	Cleans up the specified channel by clearing Viz layers and freeing memory. **Note**: The `trio:clear_channel` command duplicated the `trio:cleanup_channel` command and is therefore as of version 2.10 deprecated.
cleanup_renderers	Cleans up Viz program and preview channels by clearing Viz layers and freeing memory.
clear_preview	Cleans up Viz preview channel by clearing Viz layers and freeing memory.
clear_program	Cleans up Viz program channel by clearing Viz layers and freeing memory.
continue_last_taken_page	Continue the page that was last taken.

create_snapshot_page	Takes a snapshot and creates a page with that snapshot.
display_imported_archives	Display a list of the imported trio-archives.
exchange	Exchange the content of the program and external preview.
exit	Close the Trio.
freeze_program_clock (string string)	Freeze a clock on the program machine.
get_global_variable (string propname)	Get the value of a global variable.
get_next_savenumber	Get the number that will be proposed on the next save as or with a create_snapshot_page.
help	Opens the Viz Trio user's guide. The help file is also opened by clicking the Help button in the user interface (next to Config), or by pressing the F1 key unless it has been assigned to another action (e.g. macro). See also General settings.
initialize_show_or_playlist	Initialize current show or playlist on external renderers.
invoke_with_current_page (string commandName)	Invoke the given command with the name of the current page as a parameter (useful for macro shortcuts).
invoke_with_current_scene (string commandName)	Invoke the given command with the name of the current scene as a parameter (useful for macro shortcuts).
offair	Set client in off-air mode.
onair	Set client in on-air mode.
open_printsettings_dialog (restString pages)	Open the printer-settings dialog.
print_and_save_snapshots (restString pages)	Print the pages. Use settings printer/left_margin, printer/right_margin, printer/top_margin, printer/bottom_margin to control the size, where the value is the percent of the page width/height.
print_snapshots	Print the pages. Use settings printer/left_margin, printer/right_margin, printer/

(restString pages)	top_margin, printer/bottom_margin to control the size, where the value is the percent of the page width/height. With no argument, the content of the preview is printed.
process_ii_string (restString value)	Sends a string to the intelligent interface handler on the Media Sequencer and lets it process it.
restart_local_viz	Restarts the local Viz preview channel.
restart_local_viz_program	Restarts the local Viz program channel. Only available when local program channel has been started.
save_snapshots (restString pages)	Print the pages. Use settings printer/left_margin, printer/right_margin, printer/top_margin, printer/bottom_margin to control the size, where the value is the percent of the page width/height.
send_local_vizcmd (command:string)	Send a Viz command to the local viz preview.
send_preview_vizcmd (command:string)	Send a Viz command to the preview renderer.
send_preview_vizcmd_noerror (restString command)	Send a Viz command to the preview renderer if possible, otherwise do nothing (no error message).
send_vizcmd (command:string)	Send a Viz command to the program renderer.
send_vizcmd_to_channel (string channelName, restString command)	Send a Viz command to a specified channel.
set_global_variable (string propname, restString value)	Set the value of a global property. The value is stored on the Media Sequencer.
set_mcu_folder (string string)	Sets the folder of the MCU/AVS plug-in.
set_vizconnection_timeout (int timeout)	Set the Viz connection timeout.
show_trio_settings_dialog	Show dialog containing a tree view of Trio settings.

sleep
(int millisec)
	Sleeps a page a certain amount of milliseconds.
	For example:
	`TrioCmd("page:take 1000")`
	`TrioCmd("trio:sleep 10000")`
	`TrioCmd("page:take 1001")`
	`TrioCmd("trio:sleep 10000")`
	`TrioCmd("page:takeout")`

swap_channels	Swap the program and preview channels.
synchronize_clocks	Synchronize the clocks to the clocks on the program renderer.
takeout_last_taken_page	Continue the page that was last taken.
unfreeze_program_clock (string string)	Freeze a clock on the program machine.

util

Command name and Arguments	**Description**
get_node_text (string string)	Gets the node text of a Media Sequencer node.
list_archive_files (filename:string)	Returns a list of files in a trio archive (will also work for other tar files).
list_archive_pages (filename:string)	Returns a list of pages in a trio archive (creates a list of all_pages.xml within the Viz Trio archive).
list_archive_parameters (restString filename)	Returns a list of parameters of a trio archive.
list_xml_pages (restString filename)	Returns a list of pages in an XML file.
run_mse_entry (string path)	Runs the node at the specified path. No context is given.
set_node_text (string path, restString value)	Sets the node text of a Media Sequencer node.

viz

Command name and Arguments	Description
continue	Continue the animation in viz preview (if stopped).
import_image_from_file (string filename, restString pool folder)	Import the given image file into the given viz image pool folder.
play	Start (play) the animation in viz preview.
reload_data_locally (boolean paths)	Reload viz resources locally. The space-separated list of paths must include the pool prefix and full path, e.g. SCENE*folder/name.
set_bounding_box (boolean visible)	Toggle bounding box visibility.
set_key_alpha	Viz Artist setting.
set_key_preview	Viz Artist setting.
set_rgb	Viz Artist setting.
set_safearea (boolean visible)	Toggle safe area visibility.
set_stage_pos (restString pos)	Set the current stage position.
set_titlearea (boolean visible)	Toggle title area visibility.
stop	Stop the animation in viz preview.

vtwtemplate

Command name and Arguments	Description
get_template	Gets the VTW template for the current show.
import_template (string ScriptName, restString FileName)	Imports a template from file to the current show. Overwrites any template with the same name.
reimport_active_template	Reimports the active VTW template for the current show.

run_vtw_function (string functionName, restString argumentList)	Runs a script function in the active VTW template. The argument list is a list of strings separated by commas or white space. Arguments that can contain commas or white space must be enclosed by double quotes.
run_vtw_script (string FunctionName, restString Data)	Runs a script function in the active VTW template. Only a single parameter is supported by the Data parameter, so use vtwtemplate:run_vtw_function instead if possible.
set_template (restString templateName)	Sets the VTW template for the current show.

See Also

- Scripting

11.2 Events

- **OnBeforeSave():** This procedure is called before Trio saves the current page. The script can cancel the saving by returning false (`OnBeforeSave = false`).
- **OnBeforeTake**: This function is called before Trio runs take on the current page. The script can cancel the take action by returning false (`OnBeforeTake = false`).
- **OnCleanupRenderers:** Called when the `trio:cleanup_renderers` or `trio:cleanup_all_channels` commands are executed.
- **OnContinue** - Called when the Continue button is pressed or a continue macro command is executed.
- **OnCopy(OldName, NewName)**: Called when a page is copied. The event is only available to show scripts.
- **OnDelete(PageName)**: Called when a page is deleted. The script can abort the deletion by returning false (`OnDelete = false`). Note that this event is a function, hence, it can return a value. If you set it to `false` it will not delete the page in question. If you set it to anything else or do not return a value, the page in question will be deleted. The event is only available to show scripts (see Using the OnDelete script event).
- **OnGlobalVariableChanged(Name, Value):** This procedure is called when a show variable is changed or added. All Trio clients that are connected to the same Media Sequencer with the same show open will receive the event when the command `trio:set_global_variable` is used.
- **OnShowVariableChanged(Name, Value):** This procedure is called when a global variable is changed or added. All Trio clients (including the client where this command was issued) that have the same show open will receive the event when the command `show:set_variable` is used .

- **OnInitialize**: Called when the Initialize button is pressed or an initialize macro command is executed.
- **OnMove(OldName, NewName)**: Called when a page is moved or renamed. The event is only available to show scripts.
- **OnPropertyFocused(PropertyName)**: Called when a tab-field editor gets focus in the Viz Trio user interface. It sends the property name into the function that uses the event.
- **OnRead()**: Called when the Read button is pressed or a read macro command is executed.
- **OnSave:** Called when the Save button is pressed or a save macro command is executed.
- **OnSocketDataReceived**: Called when socket data is received on the defined port. A socket object must be configured on the configuration page.
- **OnTake()**: Called when the Take button is pressed or a take macro command is executed.
- **OnTakeOut**: Called when the Take Out button is pressed or a take out macro command is executed.
- **OnUpdate()**: Called when an update action is executed in Viz Trio (See keyboard shortcut list on control page).
- **OnUserClick()**: Called when the user clicks the Run macro button or when the Viz Trio macro command execute_script is executed.
- **OnValueChanged(PropertyName,NewPropertyValue)**: Used with template scripts. The event is called when a property in the page is changed. It sends in the name of the property and the new value.
- **OnValueChanged(PageName, PropertyName,NewPropertyValue):** Used with show scripts to specify the page (PageName) that is called. The event is called when a property in a show's page is changed. It sends in the name of the page, the name of the property and the new value.

Using the OnDelete script event

For example, the following script will cancel the delete operation of any page named `2000`.

```
function OnDelete(PageName)
if PageName = "2000" then
   OnDelete = false
else
   OnDelete = true
end if
end function
```

The following are examples of commands that will trigger this event:

- gui:copy_selected_pages_to_number
- gui:copy_selected_pages_with_offset
- gui:move_selected_pages_to_number
- gui:move_selected_pages_with_offset

- show:copy_pages_to_number
- show:copy_pages_with_offset
- show:delete_all_pages
- show:delete_templates
- show:move_pages_to_number
- show:move_pages_with_offset
- show:rename_page
- page:delete_page
- page:delete_pagerange

See Also

- Scripting
- Commands

12 Designer

There are two ways of doing scene design for Viz Trio. One is using Viz Artist, which in most cases is the preferred way, and another is using the built-in designer. The Designer enables you to use pre-made scene elements or building blocks for creating a standalone scene.

Note: Transition logic is not supported.

This section contains information on the following topics:

- About Viz Trio Designer
- Creating Scene Elements in Viz Artist
- To start the Designer

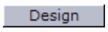
To start the Designer

- Click the Design button in the upper right corner of Viz Trio's playout interface.

See Also

- Viz Artist User's Guide

12.1 About Viz Trio Designer



Viz Trio Designer will display the designer's library of pre-defined scene elements. The scene elements are created in Viz Artist and includes the required control plug-ins for exposing the scene properties the operator can adjust. The user can easily group the different scene elements together in order to create more advanced scene. In the Designer it is also possible to modify the scene element's properties, provided that they have been exposed for editing (ref. Control Plug-ins).

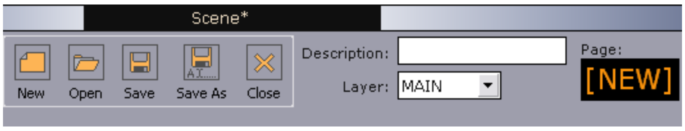
This section contains information on the following topics:

- Scene
- Resources
- Scene Tree
- Tab Fields
- Page Editor
- Properties

See Also

- Viz Artist 3.3 User's Guide or later on Control Plug-ins

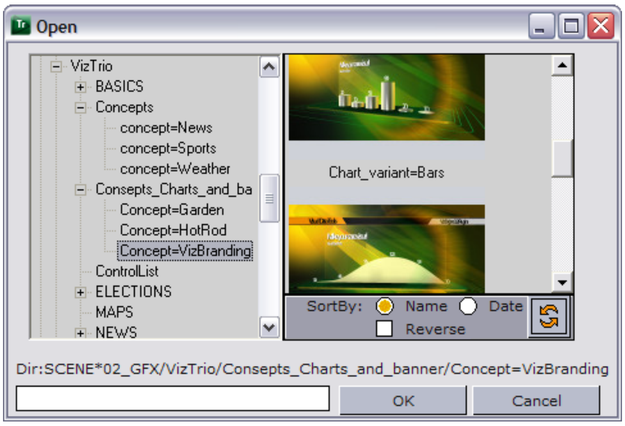
12.1.1 Scene



The scene pane is located in the upper left corner of the Designer. It contains functions for scene management and control, such as New, Open, Save, Save As, and Close buttons.

- New Scene - Click the New button to create a new scene.
- **Open Scenes -** Displays the Viz browser, which provides access to the Viz scene database. Each scene is represented as an icon reflecting the appearance of the scene as it was when last saved. The scene icons are displayed to the right in the scene database pane. The scenes are organized in folders which can be accessed through the folder tree to the left. The tree structure is the same as available in the SCENE folder in the Viz Artist data directory. The scenes can be sorted by Name or Date. The Refresh button refreshes the content for the selected folder.

  Viz browser:

  Dir:SCENE*02_GFX/VizTrio/Consepts_Charts_and_banner/Concept=VizBranding

- **Save -** Saves changes applied to the currently selected scene.
- **Save As -** Saves changes applied to the currently selected scene to a new name.
- **Close -** Closes the currently selected scene. If the scene contains unsaved changes, the user will be prompted for a confirmation.
- **Description -** Can be used to enter a description for the scene which will be displayed in the Template Description column in Viz Trio.
- **Layer -** Allows the renderer layer for the new scene to be specified. The graphics can be played in the FRONT, MIDDLE and BACK layer. The MIDDLE layer, also called MAIN, is the default layer. By using different layers it is possible to have up to three elements on screen simultaneously. However, if they are positioned at the same X and Y positions, graphical elements in the front layer will cover graphical elements in the middle and back layers.

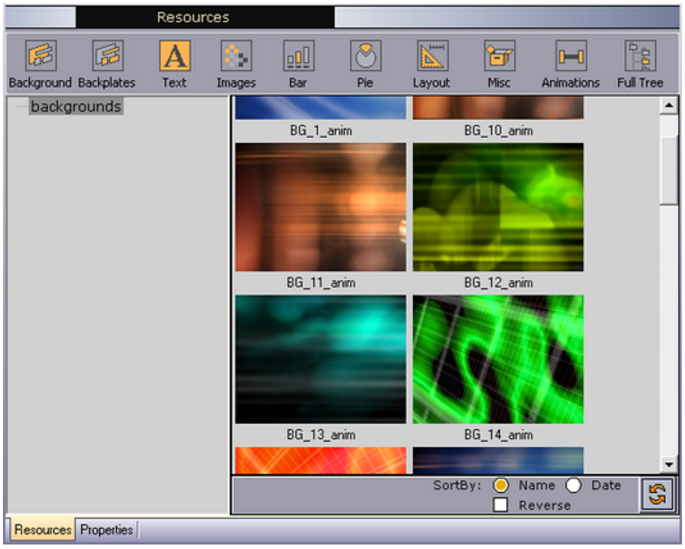
Likewise, graphical elements in the middle layer will obscure graphics in the back layer.

- **Callup Code -** Displays the callup code of the currently selected page. New pages, that have not been saved, will have the page name **[NEW]**. Click the **Save As** button to save it with a specific callup code.

See Also

- Viz Artist 3.3 User’s Guide on transition logic

12.1.2 Resources



Note: The Library path is set in Show Settings , and should be named **LIBRARY**.

The Resources pane contains all the scene elements available to Viz Trio, and is automatically displayed when opening the Designer. The scene elements are created in Viz Artist, and include the required control plug-ins.

Scene elements are basically scenes created in Viz Artist, however, they are not standalone scenes. They are made more like building blocks such that they can be pieced together with other scene elements in order for a Viz Trio operator to create a standalone scene on the fly.

Scene elements are organized under a **LIBRARY** folder in Viz with the following sub folders; **BACKGROUNDS**, **BACKPLATES**, **TEXT**, **IMAGES**, **BARS**, **PIES**, **LAYOUT**, **MISC** and **ANIMATIONS**. The various folders become available when selecting the corresponding categories using the buttons in the Resources pane.

In addition to the pre-defined scene elements, it is possible to use ordinary Viz Artist scenes, if a group with a placeholder has been added to it, when creating new scenes in Viz Trio’s Designer. The Viz Artist folder tree is displayed when clicking the **Full Tree** button.

Each scene element is represented by an icon in the right part of the Resources pane. The scene elements in each category are organized in folders, accessible through the folder tree to the left. The tree structure is the same as the **SCENE** folder tree in the Viz Artist data directory. Browse the folder tree to locate the scene elements to use. Scene elements can be sorted by Name or Date and in reverse order. Click the Refresh button to update the content of the selected folder.

Also, the storage location distinguishes scene elements from ordinary standalone scenes as the scenes must be stored in the designated **LIBRARY** sub-folders. This will ensure that they become available as scene elements in the Designer interface, see To create a new scene element for further details. Furthermore, the scene elements contain control plug-ins that enable the user to edit exposed properties and organize them in parent-child hierarchies.

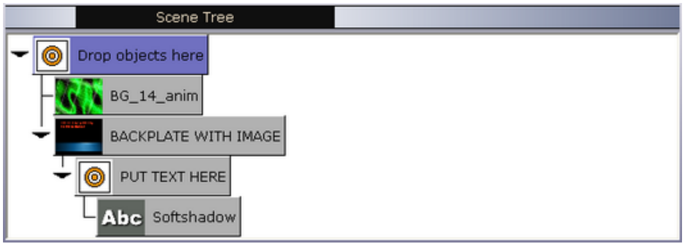
IMPORTANT! Standalone scenes cannot be edited in the Designer. They can only be used as is, and must be added to separate placeholders in the Scene tree. Furthermore, standalone scenes cannot parent other scene elements.

- **Background -** Shows the background scene elements available in **BACKGROUNDS** library folder. Select a background, and add it to the scene by drag and drop onto the root placeholder.
- **Backplate -** Shows the backplate scene elements available in the **BACKPLATES** library folder. Select a backplate, and add it to the scene by drag and drop onto the root placeholder.
- **Text -** Shows the fonts scene elements in the **TEXT** library folder. Adding text to a scene adds a text tab-field that is used by the operator for editing in the Page Editor. Font scene elements may have special effects such as alpha, mask, and shadow. Select a font scene element, and add it by drag and drop onto the appropriate placeholder. This will automatically enable the tab-field for text editing.
- **Images -** Shows the images available in the **IMAGES** library folder. As with the Text button, the Image button adds a tab-field for editing by an operator. Clicking the Image button opens the Images library where an image can be selected and added by drag and drop onto the appropriate placeholder.
- **Bar -** Shows the bar scene objects available in the **BARS** library folder. Select a bar scene element, and add it to the scene by drag and drop onto the appropriate placeholder. To create a scene with several bars a layout scene element should be created that can hold the individual bar scene elements.
- **Pie -** Shows the pie scene objects available in the **PIES** library folder. Select a pie, and add it to the scene by drag and drop onto the appropriate placeholder.
- **Layout -** Shows the layout scene elements available in the **LAYOUT** library folder. The folder contains design elements which allow for easy alignment of other scene elements, by organizing them in for instance lines or rows.

The layout element themselves usually do not contain any graphics. They should ideally function as placeholders in which other types of scene elements can be added. Select a layout, and add it to the scene by drag and drop onto the root placeholder.

- **Miscellaneous -** Shows the miscellaneous scene elements available in the **MISC** library folder. These can be anything you decide to put there that does not fit in the other categories, such as 3D objects, bullets, and placeholders. Select a scene element, and add it to the scene tree by drag and drop onto the appropriate placeholder.
- **Animation -** Shows the animation scene elements in the **ANIMATIONS** library folder. Add an animation to the scene by drag and drop onto the placeholder holding the scene element to animate.
- **Full Tree -** Shows a full Viz directory structure that provides an overview of all available scenes.

12.1.3 Scene Tree



The scene tree provides a logical visualization of all the graphical elements in a scene. The tree consists of placeholders containing the different types of scene elements.

A standalone scene is built by selecting various scene elements from the Resources libraries and dragging them onto the scene tree. In the scene tree it is possible to create a hierarchy between elements and groups of elements in logical divisions. This allows for new properties to be assigned to more than one scene element in a single operation.

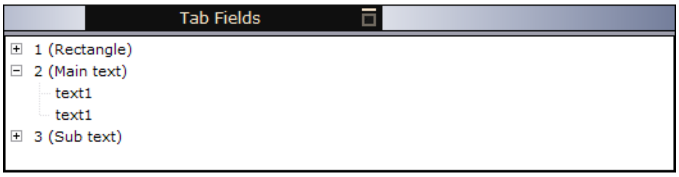
The black arrow to the left indicates that the placeholder has sub-containers. If the arrow points to the right the sub-containers are not displayed. Click on the arrow to expand the sub-containers. The arrow will then point downwards.

To delete an item in the scene tree

- Select the appropriate scene element and then press the **Delete** key. Note that this will also delete sub nodes.

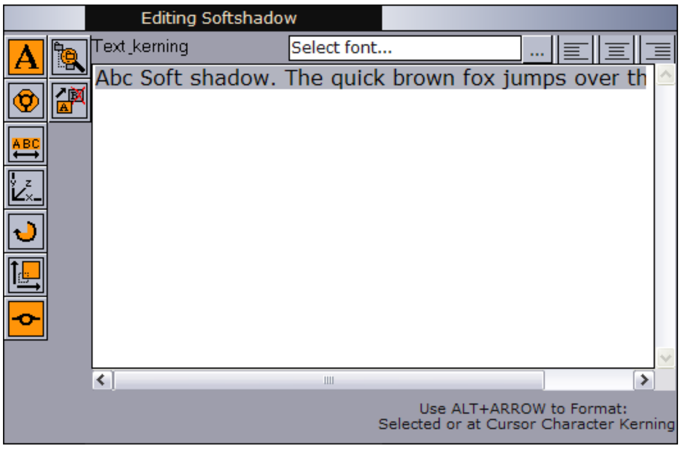
Caution: You cannot undo a delete operation.

12.1.4 Tab Fields



Scene elements can have one or more tab fields. When selecting a scene element in the Scene Tree, the associated tab fields are displayed in the tab fields pane in the lower left corner of the designer tool. In the tab fields pane it is possible to see which Properties that can be exposed for editing in Viz Trio. Click the ‘+’ sign to expand a tab field’s list of exposable properties.

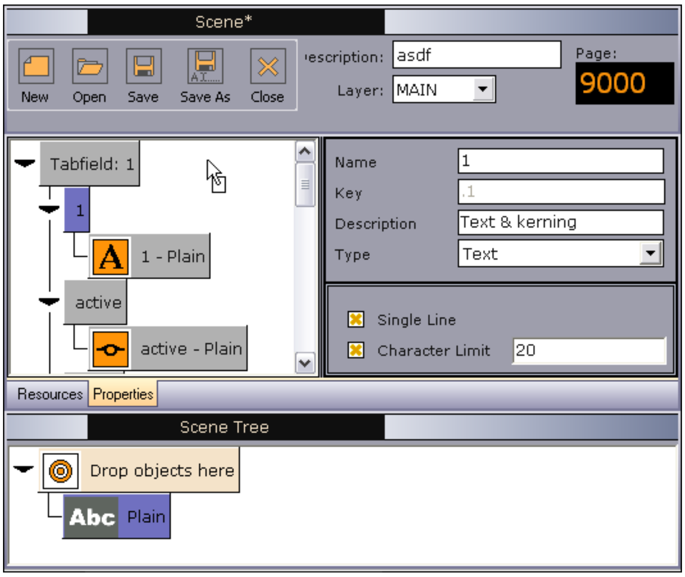
12.1.5 Page Editor


Editing Softshadow
Text_kerning
Select font...
...
Abc Soft shadow. The quick brown fox jumps over th
Use ALT+ARROW to Format:
Selected or at Cursor Character Kerning

When selecting a tab-field from the Tab Fields pane, the corresponding page editor is displayed in the upper right corner of the Designer. Use the page editor to edit the selected tab field’s properties, like for instance changing material, position, rotation, text, and so on, provided they have been exposed for editing.

The type of page editor displayed varies according to the type of element selected, e.g. text, images, etc. The buttons in the left part of the page editor area represent the various exposable properties of the currently selected tab field. To display the corresponding editor, click on the appropriate button or select the property in the Tab Fields pane.

12.1.6 Properties



escription: asdf

Layer: MAIN

Page: 9000

Name 1

Key .1

Description Text & kerning

Type Text

☒ Single Line

☒ Character Limit 20

The Properties pane becomes available when selecting the Properties tab in the lower left corner of the Resources pane.

Use the Properties pane to define which Tab Fields should be exposed for editing in Viz Trio. The properties pane consists of three parts: a Property Tree, a Property Description Editor, and a Property Type Editor.

This section contains information on the following topics:

- Property Tree
- Property Description Editor
- Property Type Editor
- To expose properties
- To map multiple property receivers to one exposed property
- To remove properties

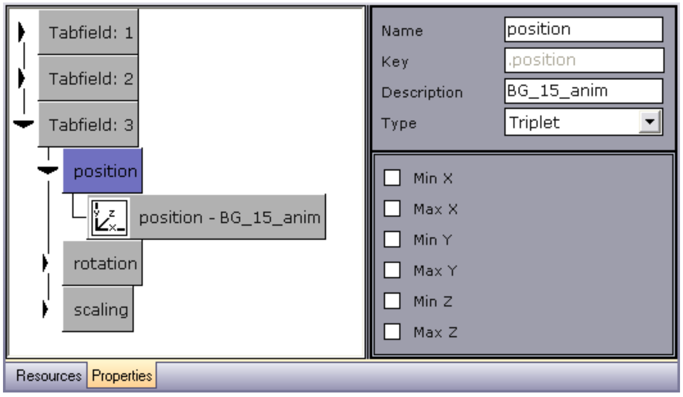
Property Tree

Initially, when creating a new scene, the properties pane is empty. Tab field properties are exposed for editing by adding them to the properties pane (top left).

The Viz Trio Designer provides two different approaches To expose properties: exposing properties in a tab-field one by one, or exposing all properties in one operation.

Use the properties pane to define tab field properties that should be exposed for editing in Viz Trio. The Tab Fields pane provides a list of properties that can be exposed for editing for each of the tab fields in a scene. Expose as many of them as needed for editing.

A Viz Artist designer, that creates the resources, can define the properties to be exposed for editing when creating the scene element in Viz Artist. Exposed properties may vary from scene to scene. Note that additional properties must be exposed through Viz Artist.



Name: position
Key: .position
Description: BG_15_anim
Type: Triplet

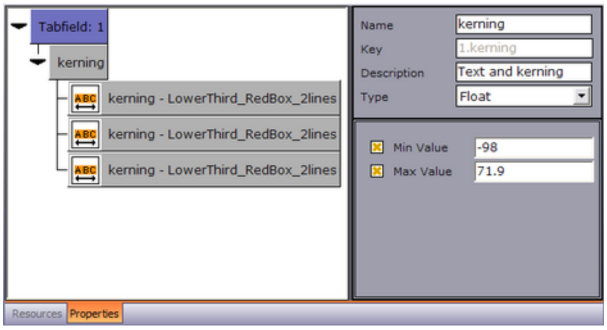
□ Min X
□ Max X
□ Min Y
□ Max Y
□ Min Z
□ Max Z

The nodes in the properties tree are named *Tabfield: 1, Tabfield: 2, Tabfield: 3*, and so on as they are added. The order of the tab fields can be rearranged by drag and drop.

Appended to each tab field are sub-nodes representing the exposed properties (e.g. position and rotation). The sub-nodes have child nodes that represents the receiver of the exposed property’s data value, for example the selected scene element. The child node typically displays a property name and a symbol, in addition to the receiving scene element’s name (e.g. background).

It is possible to expose several properties for one tab field by dragging the property icons onto the same tab field container from the Page Editor.

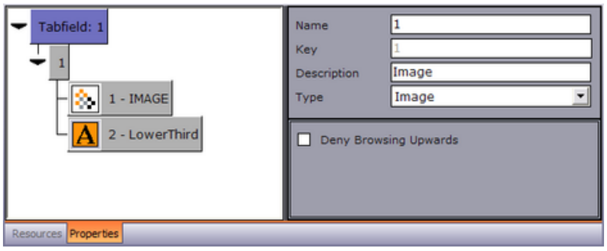
It is also possible to map two or more property receivers to one exposed property. This will control the value of several property receivers through one exposed property. This is for instance useful if wanting to change a property, such as kerning or material, for several scene elements in a single operation. This is illustrated in the example below, where the exposed property *kerning* controls the kerning value of the three attached property receivers called *LowerThird_RedBox_2lines*.


Tabfield: 1
kerning
kerning - LowerThird_RedBox_2lines
kerning - LowerThird_RedBox_2lines
kerning - LowerThird_RedBox_2lines
Resources
Properties

Name: kerning
Key: 1.kerning
Description: Text and kerning
Type: Float

☒ Min Value: -98
☒ Max Value: 71.9

Furthermore, property receivers of various types, like for instance an image and a text object, can be mapped to the same exposed property, even when located in different tab fields. This will allow edits to all the associated property receivers in one single operation. In the example below, the exposed property *Image*, controls the content of the associated image and text property receivers. This implies that when selecting a new image (see Search Media), the text related to the image will be added accordingly.

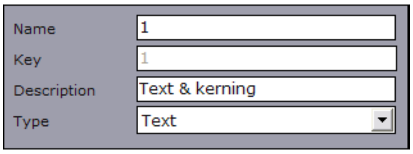


Name: 1
Key: 1
Description: Image
Type: Image

☐ Deny Browsing Upwards

Another example is when connected to a newsroom system and changes are made to a text and an image in the same tab field by entering a text string instead of the whole path. This implies that there is a folder of images (e.g. flags) and the Viz Trio system receives ‘US’ from the external system, it will then load the image with the path: ‘image location prefix + US’, provided that the image location prefix has been specified.

Property Description Editor



Name: 1
Key: 1
Description: Text & kerning
Type: Text

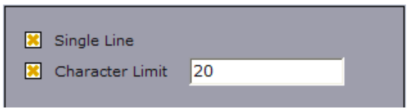
The Property Description editor is displayed in the upper right corner of the Properties pane. It is used to edit the description parameters of a tab field. The fields become available for editing when selecting a property in the Property Tree. All fields, apart from the Key field, are editable.

- **Name** - Shows the name of the selected tab field property.
- **Key** - Displays the key identifier of the property.
- **Description** - Shows the description for the selected tab field. The description is displayed in the Page List.
- **Type** - Shows the data input type defined for the selected property. The value selected in the Type field determines which Page Editor will be displayed.

Property Type Editor

The Property Type editor is closely linked to the value selected in the Type field in the Property Description Editor. When selecting a value in the Type field, the fields in the Property Type editor will be updated accordingly, such that values for the associated parameters can be specified.

Text



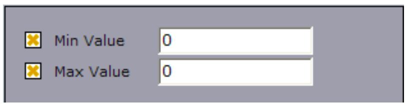
☒ Single Line

☒ Character Limit 20

Allows the designer to set text parameters.

- **Single Line** - Disables text wrapping displaying the text as a single line.
- **Character Limit** - Allows for setting a maximum number of characters for the selected text tab field.

Float



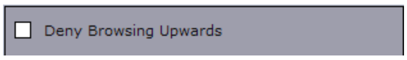
☒ Min Value 0

☒ Max Value 0

Allows the designer to specify a minimum and a maximum value for the selected property. Select one or more of the check boxes to display the associated input fields.

- **Min Value** - Sets the minimum input value for the selected property.
- **Max Value -** Sets the maximum input value for the selected property.

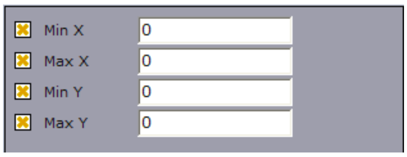
Deny browsing



☐ Deny Browsing Upwards

Allows the designer to deny the Viz Trio user from browsing for images, geometries, and materials in folders other than the selected folder and its sub-folders.

Duplet



☒ Min X 0

☒ Max X 0

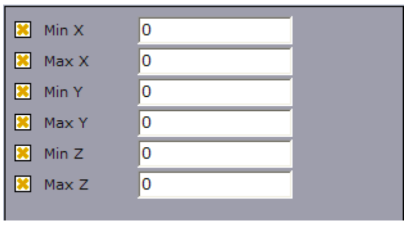
☒ Min Y 0

☒ Max Y 0

Allows the designer to specify a minimum and a maximum value for the X and Y axes of the selected property. Select one or more of the check boxes to display the associated input fields.

- **Min X** - Sets the minimum value for the X axis of the selected property.
- **Max X -** Sets the maximum value for the X axis of the selected property.
- **Min Y** - Sets the minimum value for the Y axis of the selected property.
- **Max Y** - Sets the maximum value for the Y axis of the selected property.

Triplet



☒ Min X 0

☒ Max X 0

☒ Min Y 0

☒ Max Y 0

☒ Min Z 0

☒ Max Z 0

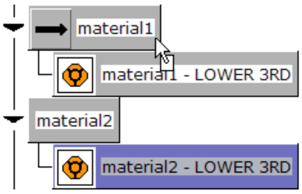
Allows the designer to specify a minimum and a maximum value for the X and Y axes of the selected property, as well as the Z axis. Select one or more of the check boxes to display the associated input fields.

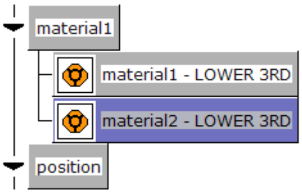
- **Min X** - Sets the minimum value for the X axis of the selected property.
- **Max X** - Sets the maximum value for the X axis of the selected property.
- **Min Y** - Sets the minimum value for the Y axis of the selected property.
- **Max Y** - Sets the maximum value for the Y axis of the selected property.
- **Min Z** - Sets the minimum value for the Z axis of the selected property.
- **Max Z** - Sets the maximum value for the Z axis of the selected property.

To expose properties

1. In the Page Editor, select the icon or design element representing the property to expose for editing, and drag and drop it onto the Property Tree, or
2. Drag and drop a container from the Scene Tree onto the Property Tree to generate a complete list of exposed properties.

To map multiple property receivers to one exposed property





- Drag and drop the property receiver onto the exposed property that should control both properties.

To remove properties

- Select a property and press the Delete key on the keyboard. Note that this will also delete sub-nodes.

12.2 Creating Scene Elements in Viz Artist

This section provides a basic introduction on how to create scene elements in Viz Artist. Creating scene elements basically consist of two main activities; creating the graphics and adding different Control plug-ins. Control plug-ins are the binding links between Viz Artist and Viz Trio that allow properties to be exposed to the Viz Trio operator.

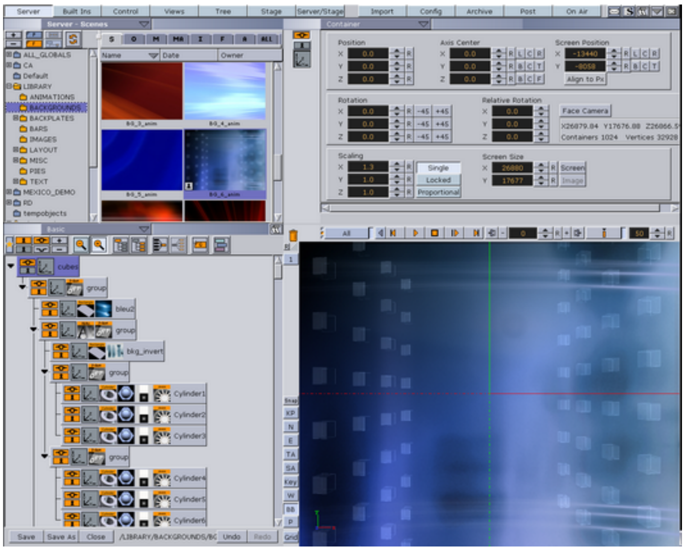
Scene elements can be of various complexities with one or more tab fields, different types of animations, and so on. The scene elements may also include placeholders which are basically non-graphical objects. These can in turn hold other scene elements, like for instance text objects.

A brief introduction to the Viz Artist GUI is provided initially. Only functions and features required to create scene elements will be addressed in this chapter.

See Also

- Viz Artist User Interface
- Creating Graphics
- Adding Control Plug-ins
- Creating Backgrounds
- Creating Backplates
- Creating Text Objects
- Creating Image Objects
- Creating Animations
- Viz Artist User's Guide

12.2.1 Viz Artist User Interface



Open Viz Artist by clicking the Viz Artist button in the upper right corner of Viz Trio. The Viz Artist user interface at startup displays the following:

- **Resources** - Contains all the different objects stored on Viz Graphic Hub (Viz 3.x) or on the data root (Viz 2.x). The resources are available in the upper left corner of Viz Artist under the Server tab.
- **Editors** - Allows the user to modify the properties of an object. The various editors are displayed in the upper right corner.
- **Scene tree** - Provides an overview of all the elements in a scene and their hierarchy. The scene tree is displayed in the lower left corner.
- **Preview** - Displays a WYSIWYG representation of the graphics and what it will look like when on-air. The renderer is located in the lower right corner.

Interaction with the scene builder tools is generally based on drag and drop actions.

12.2.2 Creating Graphics

Create scene elements by using the various building blocks available in the Viz Artist database. The building blocks are basically placeholders which can hold different types of graphical elements and/or plug-ins. They are thus also known as containers.

Build the graphics by organizing the containers hierarchically in the scene tree pane and adjust the associated properties in the corresponding property editors. The tree structure constitutes a parent-child hierarchy in which all child containers will inherit properties of the parent container.

Selection of the building blocks to use depends on the type and complexity of the design. The following sub sections will provide a basic description on how to create scene elements in each of the various categories. Some steps are common for all categories, like for instance how to create a new scene and add a group container. These procedures are addressed in the initial sections, while steps specific to each of the categories are described in separate sections.

This section contains information on the following topics:

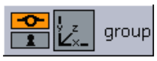
- To create a new scene element
- To add group containers
- To add geometries
- To edit scale and position
- To copy containers
- To delete containers
- To add materials
- To add fonts
- To add images
- To add key
- To define tab fields
- To save scenes

To c reate a new scene element

1. Start Viz Artist
2. Select the Scene view.
   - *For Viz Artist 3.x:* Click the **Server** button and select Scene from the drop-list in the upper left corner of the Database window, og click the **S** tab.
   - *For Viz Artist 2.x:* Click the **Scene** button in the upper left corner of the Database window.
3. Locate and expand the **`LIBRARY`** folder in the folder tree.
   - The sub-folders that appear correspond to the various library categories available in the Designer and contains the different scene elements created by the designer.
   - Note that scenes must be stored in the designated **`LIBRARY`** sub-folders in order to be available as scene elements in the Designer’s Resources pane.
4. Select the appropriate sub-folder (e.g. **`BACKGROUNDS)`**.
5. Create a new scene.
   - *For Viz Artist 3.x:* Select **Create...** from the Scene database drop-menu, or press the CTRL+A keys.
   - *For Viz Artist 2.x:* Click the **Add...** button in the lower left corner of the Scene database pane.
6. Enter a name for the scene in the appearing dialog box, and click OK.
   - The new scene becomes available in the right part of the Server view.

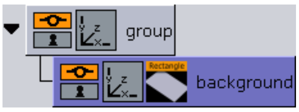
To add group containers

The Group function is a container which allows for elements to be grouped in the scene tree, and thereby create a parent-child hierarchy in which the child containers inherit the properties of its parent(s).



1. Open the scene (see To create a new scene element).
2. Add a group container to the scene tree.

To add geometries

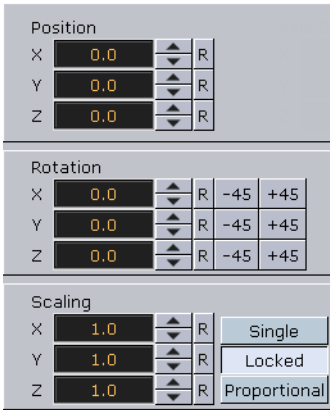


1. Add a geometry object (e.g. Rectangle), and add it as a sub-container to the group container in the Scene Tree.

2. Rename the rectangle's sub-container to for example *background* in order to describe its function.

To edit scale and position

1. Display the Transformation editor by selecting the Transformation icon on the container.



Position

X	0.0	R	
Y	0.0	R	
Z	0.0	R	

Rotation

X	0.0	R	-45	+45
Y	0.0	R	-45	+45
Z	0.0	R	-45	+45

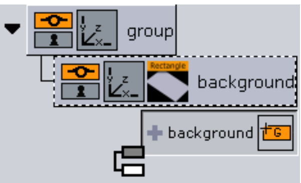
Scaling

X	1.0	R	Single
Y	1.0	R	Locked
Z	1.0	R	Proportional

2. Modify the objects's size and position.
   - The size and position of an object depends on the type of scene element you want to create. For example a lower third should cover the lower third of the screen, while an over the shoulder should cover parts of the screen over the should of the anchor/presenter.
3. Specify the order of layered objects by using the Z field in the Position section.
   - Some objects must be displayed behind the other elements in a scene, like for instance a background or a backplate, in order not to cover for elements which should be displayed in the front.
   - Keep in mind when creating scene elements that the object with the highest z-position will be displayed in the front, while the object with the lowest z-position will be displayed in the back (unless you are rotating objects on the y-axis which in case you might need to manually sort objects on the Z-axis using the Z-sort plug-in).

To copy containers

1. Press the CTRL key and the left mouse button simultaneously and drag the container to its new location.



- *For Viz Artist 3.x:* A node symbol will appear to the left of the copied container, indicating the position which the new container will be added when releasing the mouse button.
- *For Viz Artist 2.x:* An arrow will appear to the very left of the scene tree, indicating the position in which the new container will be added when releasing the mouse button. Release the mouse button when at the appropriate position.

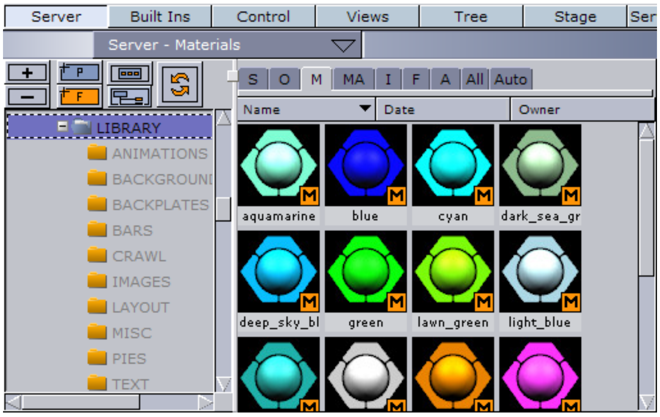
2. To copy multiple containers, press the CTRL key and select the containers with the left mouse button. Drag the containers to the new location and release the mouse button.

To delete containers

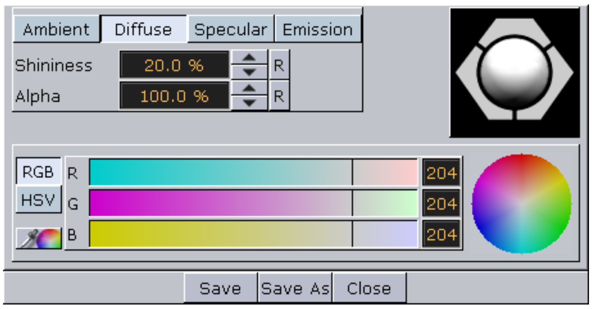
🗑

1. Select the container(s) to delete with the left mouse button and drag it/them onto the trash bin above the Renderer window, or
2. Right-click the container, and select **Delete Container <name>** from the appearing context menu (*Viz Artist 3.x only*).

To add materials



1. Select the material (M) tab under the server view (Material button in Viz Artist 2.x), and drag and drop a material object onto the container.



Shininess 20.0 %

Alpha 100.0 %

R 204

G 204

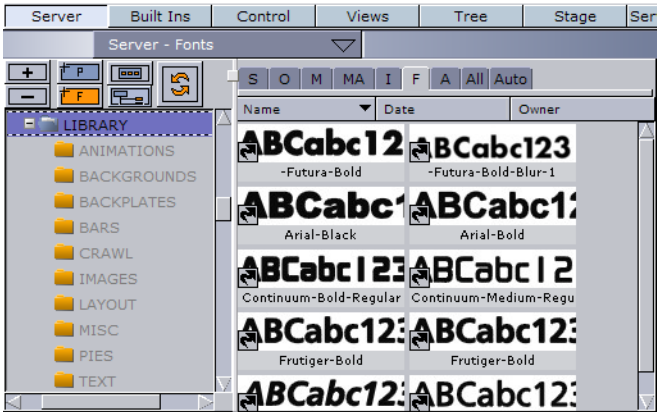
B 204

2. Double-click the material to open the Material Editor to change the effects, or types of lights, of the material (e.g. Ambient, Diffuse, Specular and Emission).

See Also

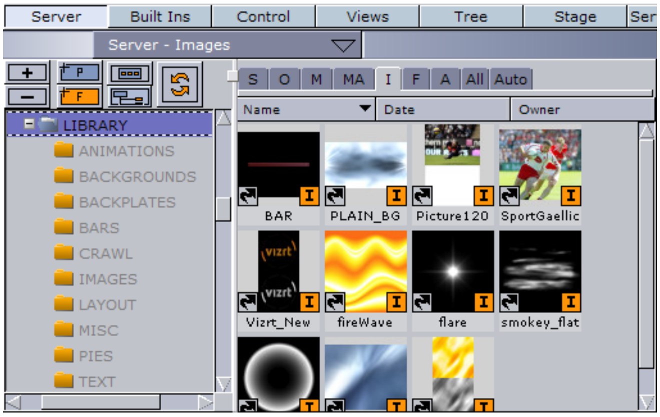
- Viz Artist User’s Guide

To add fonts



1. Select the font (F) tab under the server view (Font button in Viz Artist 2.x), and drag and drop a font onto the container.
2. Open the transformation editor to change the size and position of the text.

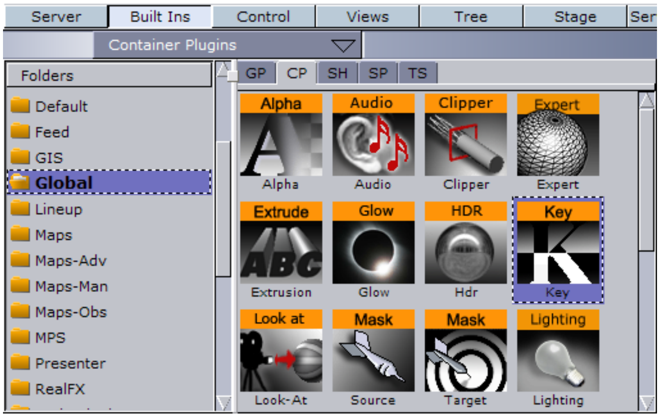
To add images



1. Select the image (I) tab under the server view (Image button in Viz Artist 2.x), and drag and drop an image onto the container.
2. Open the transformation editor to change the size and position of the text.

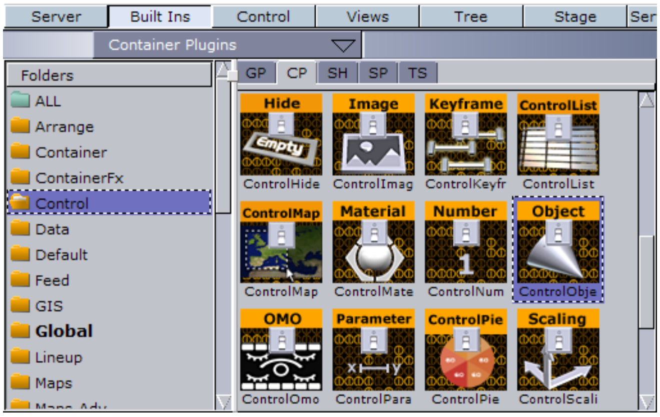
To add key

In order to enable Viz Engine to produce a key signal, key must be added to individual containers that hold objects that should draw key or the scene in general.



1. Click the Built Ins button, and from the Container Plugins (CTRL+2) select the Global folder.
   - For Viz Artist 2.x: Click Function.
2. Drag and drop the Key plugin onto the containers that should have key.

12.2.3 Adding Control Plug-ins



In order to enable Viz Trio operators to edit the graphical elements, the containers must hold the necessary control plug-ins. These are container plug-ins that must be added for each of the graphical elements that should be editable. Which control plug-in to choose, depends on the type of property that needs to be exposed for editing.

In addition to the container specific plug-ins, the scene tree must have a plug-in called the Control Object plug-in. It is actually by means of the Control Object plug-in that Viz Trio is able to identify a scene as a Viz Trio template. Note that only containers placed under the Control Object plug-in in a scene tree can be imported to Viz Trio.

The control plug-ins are added manually to the containers using drag and drop. The interaction principles are the same for all control plug-ins except the

Control Object plug-in that is added automatically if another control plug-in is added to the scene tree. Control Object can also be added manually.

To add a control plug-in

1. Click the Built Ins button, and select the Container Plugins (CTRL+2) option from the drop-menu or simply click the CP tab.
    - For Viz Artist 2.x: Click Function, Container and select the Control folder.
2. Select a control plug-in and add it to the appropriate container.
3. Click on the control plug-in icon to display the associated editor.

To define tab fields

Viz Trio uses the control plug-in’s Field Identifier ID to identify the container as an editable element. Furthermore, the field’s ID defines a tab-field, and is used to specify the tab-order between the editable elements of a scene.

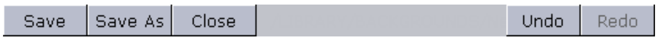
All control plug-ins located in the same container must have the same field ID. This will ensure that when choosing a tab-field, all associated property editors are enabled for selection.

To group properties located in different containers to the same tab-field, the property name must be added as an extension to the field ID, using the following format: *ID.propertyname*, like for instance *2.scaling*.

1. Add a control plug-in (e.g. Control Text) to the scene tree.
2. Open the control plug-in’s editor and set the **Field Identifier**.
    - The field identifier should be a numeric value (range 1-n).

To save scenes

Options for saving and closing scenes are provided in the lower left corner of the Viz Artist GUI.



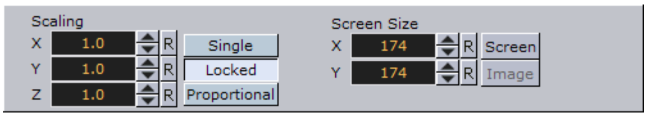
1. Click the **Save** button to save a new scene or to overwrite an open scene, or
2. Select the **Save As** button to save it as a new scene.

12.2.4 Creating Backgrounds

This section is a quick tutorial on how to create a basic background with an image.

Note: Screenshots used are from Viz Artist 3. The user interface in Viz Artist 3 is similar to Viz Artist 2. Where needed additional explanation is given.

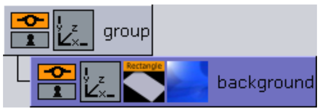
1. Start by creating a new scene in the **BACKGROUNDS** directory in the Viz Artist scene tree (see how To create a new scene element).
2. Double-click on the new scene to open it, and add a group container to the scene tree (see how To add group containers).
3. Add a new group as a sub-container to the first group, and name it *background*.
4. Add an object, in this case a rectangle, to the *background* container. The container should now have four icons; a show/hide, lock/unlock, transformation editor, and a rectangle icon (see how To add geometries).
5. Adjust the rectangle's size and position (see how To edit scale and position).
   - Select the Transformation button to open the Transformation editor.
   - Change the position in the Position section, available in the upper left corner of the Transformation editor.
   - In order to ensure that the background is displayed behind all other elements in a scene, adjust the Z position in the Position section. Remember that the Z position value of backgrounds must always be lower than the Z position value of the other scene element categories.
   - Furthermore, if the background contains animations, verify that it will not at any time overlay the other objects. A low z-position value, like for instance -500, will normally be sufficient, but increase if needed.



Scaling
X 1.0
Y 1.0
Z 1.0

Screen Size
X 174
Y 174

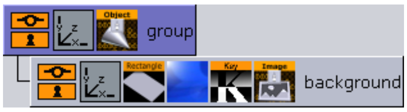
6. Change the size of the rectangle to cover the whole area of the Renderer window in order to create a full-screen background. This is easiest done by pressing the Screen button available in the Screen Size section in the lower right corner of the Transformation editor. The rectangle will then be re-sized to cover the screen.
7. Add an image to the scene tree (see To add images).
   - Select an image and add it onto the *background* container using drag and drop.



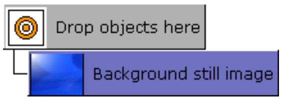
8. Add the key function to the *background* container (see how To add key).
   - In order for Viz Engine to produce a key signal, a key function must be added.
9. Add a *Control Image* plug-in to the *background* group and the Control Object plug-in will be added automatically (see Adding Control Plug-ins).
   - Adding the Control Image plug-in will allow the background object to be modified in Viz Trio in playout or design mode.

10. Define the tab-field. Select the Image icon on the container to display the Control Image editor. Enter an ID in the *Field Identifier* field, for example 1.
    - This creates a tab-field, which enables the user to edit any exposed properties. If needed, the image position and scaling can be exposed for editing.
11. Add a description for the background object. Select the Control Object plug-in icon on the *group* container. Enter a description for the background object in the Description field in the upper part of the editor (e.g. Background Still Image).
    - The description entered in the Description field is the same as displayed when adding a scene element to the scene tree in Viz Trio’s Designer. Although optional, it is recommended to use the scene name as a description in order to provide a better overview.
12. Click the Save button to save the background object. Select the appropriate BACKGROUND directory in the Scene database to see the new scene icon.

Viz Artist scene tree:



Viz Trio Designer scene tree:



For reference: After finishing this quick tutorial, the Viz Artist and Designer scene tree should look like the images above.

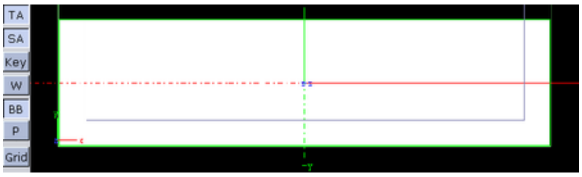
12.2.5 Creating Backplates

This section is a quick tutorial on how to create a basic backplate with two text tab fields. For details on how to add animation to a backplate, see also Creating Animations.

Note: Screenshots used are from Viz Artist 3. The user interface in Viz Artist 3 is similar to Viz Artist 2. Where needed additional explanation is given.

1. Start by creating a new scene in the `BACKPLATES` directory in the Viz Artist scene tree (see how To create a new scene element).
2. Double-click on the new scene to open it. Add a group container to the scene tree (see how To add group containers).
    - Rename the container, by double-clicking the label, to *object*.

3. Add a new group as a sub-container to the first group, and name it *backplate*.
4. Add an object, in this case a rectangle, to the *backplate* container. The container should now have four icons; a show/hide, lock/unlock, transformation editor, and a rectangle icon. For more information, see To add geometries.
5. Adjust the rectangle’s size and position. For more information, see To edit scale and position.
    - Scale and position the rectangle to create a backplate. Use the Title and Safe Areas as reference when positioning the rectangle. The Title Area (the blue box) is displayed by clicking on the TA button in the lower left corner of the Renderer window, while the Safe Area (the green box) is shown when selecting the SA button.

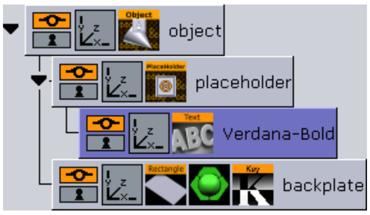


6. Display the Transformation editor by selecting the Transformation button, located on the *backplate* container.
    - Scale the rectangle along the X and Y axes, and place it in the lower third area of the screen as illustrated by the images.
    - The backplate should be able to be repositioned and scaled in the Designer and/or in playout mode. Hence, a 100% accuracy with regard to scale and position is not required in this case.

Note: If you have rounded/beveled corners they will be stretched if scaled.

7. Set a Z-value slightly below zero (e.g. 10) for the backplate.
    - For objects to be displayed in the front, always select zero or a higher value for the z-position. This will ensure that the scene elements are displayed in the correct layers and do not cover each other.
    - Depending on the animations added later, this value could be less.
8. Add a material to the scene tree (see To add materials).
    - Select a material and add it onto the *backplate* container using drag and drop.
    - To modify the color, display the Material editor by clicking the icon.
9. Add the key function to the *background* container. For more information, see To add key .
    - In order for Viz Engine to produce a key signal, a key function must be added.
10. Add a new group as a sub-container to the *object* container, and name it *placeholder*. This will create a new empty group over the *backplate* container.

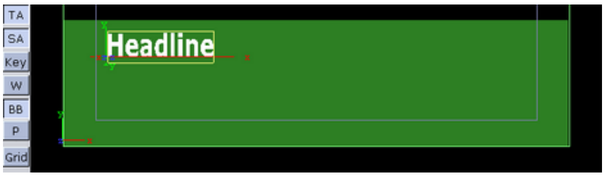
11. Add the *Placeholder* plug-in to the *Placeholder* container (see Adding Control Plug-ins).
    - The *Placeholder* for the object allows users to add scene elements such as text and images to the backplate.



12. *Optional*: Add a font object as a sub-container to the *placeholder* container to provide a visual que while adjusting the position of the *placeholder* container.

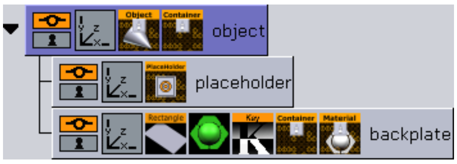
    Note: The font is a temporary visual que that must be removed once you have finished adjusting the *placeholder* container.

13. Open the *placeholder* container's transformation editor, and scale and reposition the placeholder object to form a headline as illustrated in the example below.



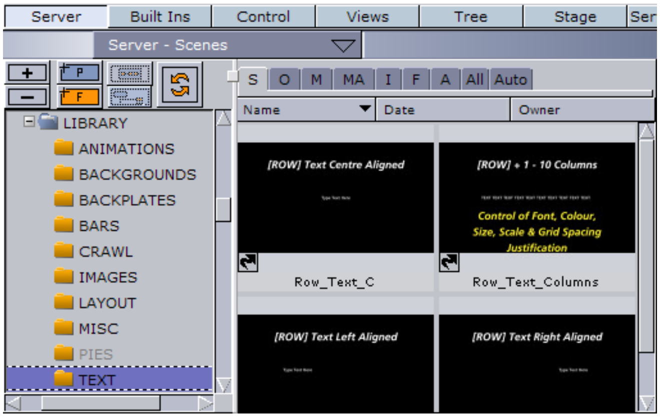
14. Adjust the Z-position in order to ensure that it will be displayed in front of the backplate. Generally a value slightly above zero will be sufficient.
15. When finished adjusting the placeholder object delete the font object as it is no longer needed (see how To delete containers).
16. Add the *Control Container* plug-in to the node labeled *object* (see Adding Control Plug-ins).
    - This enables basic positioning control for the entire backplate, including the placeholder object.
    - The *Control Container* plug-in allows all child objects in the group to move simultaneously.
    - Select the *Control Container* icon to open the associated editor. Expose the X, Y, and Z position. The Field Identifier (1) is added automatically.
17. Add the *Control Material* plug-in to the node labeled *backplate* (see Adding Control Plug-ins).
    - Open the plug-in's editor, and change the *Field Identifier* field to *1.material.*

- This will group the material property to tab-field 1 and allow the user to modify it together with the other exposed properties of the tab-field.



18. Add the *Control Container* plug-in to the node labeled *backplate* (see [Adding Control Plug-ins](#)).
    - Open the plug-in's editor, and change the *Field Identifier* field to *1.scaling.*
    - This will group the material property to tab-field 1 and allow the user to scale the backplate.
    - Expose the *X* and *Y* scaling.
    - Open the Transformation editor, and enable the Single option in the Scaling section to allow *X* and *Y* axes to be scaled separately.
19. Select the *Control Object* icon in the *object* container to open the Control Object editor. Enter a description in the Description field, for example *Basic backplate*.
20. Click the Save button to save the backplate object.
21. Select the appropriate **BACKPLATES** directory to see the newly created scene and the scene icon the Viz Trio operator will see in Viz Trio's Designer.

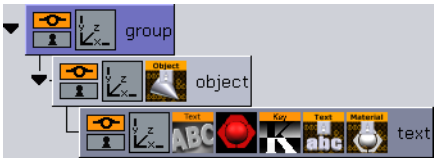
12.2.6 Creating Text Objects



This section is a quick tutorial on how to create text objects.

Note: Screen shots used are from Viz Artist 3. The user interface in Viz Artist 3 is similar to Viz Artist 2. Where needed additional explanation is given.

1. Create a new scene in the **TEXT** directory in the Viz Artist scene tree (see how To create a new scene element).



2. Rename the group container to *object* (see how To add group containers).
3. Add a font object to the scene tree as a sub-container of the *object* container, and rename the new container to *text*.
4. Open the Text editor, and enter a common phrase (e.g. *Abc*).
5. Add the key plugin to the *object* element (see how To add key).
   - In order for Viz Engine to produce a key signal, the key plugin must be added.
6. Add a material to the *text* container (see how To add materials).
7. Add the *Control Text* and the *Control Material* plug-in to the *text* container.
   - This will will allow the Viz Trio operator to edit the text (see Adding Control Plug-ins).

Note: *Control Object* is automatically added to the scene tree’s root container.

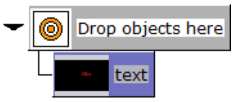
8. Select the icon to display the *Control Text* editor.
   - The *Field Identifier* (1) has been added automatically, thereby creating a tab-field.
   - Expose the *kerning*, *font*, and *justification* by clicking the corresponding buttons. Set other options if needed.
9. Select the icon to display the *Control Material* editor.
   - The *Field Identifier* (1) has been added automatically, thereby creating a tab-field.
10. Provide a description for the *text* object. This must be done in the *Control Object* editor.
    - Select the *Control Object* icon in the *object* container to open the editor.
    - Enter a description for the text object in the *Description* field, for example *Plain Text*.

All scene elements available in Viz Trio Designer’s resource library are represented with icons reflecting the appearance of the saved scene. All graphical elements are reduced proportionally in size, and will therefore appear very small on the icon.

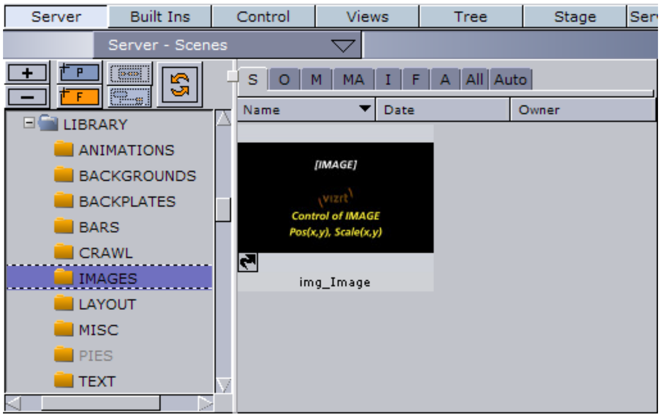
In order to create an icon with a good enough visualization of the scene, a dummy scaling group can be created at the root level of the scene tree. This will allow the graphical representation of the scene to be enlarged without changing the actual size of the actual scene objects.

11. Add a group to the root level of the scene tree.
    - This will create an empty group container at the same level as the *object* container.
12. Select the *object* container and append it as a sub-container to the newly added *group* container.
    - As the object group with its Control Object is moved, it will not be used in the Viz Trio Designer. This will allow you to create a good visual representation of the library element.
13. Open the transformation editor for the *group* container.
14. Position the text object to the lower left corner of the Renderer window.
15. Increase the scale of the text object until it fills the whole Renderer window.
16. Click the Save button to save the text object. Select the appropriate **`TEXT`** directory in the Scene database to see the new scene icon.

    For reference: After finishing this quick tutorial, the Viz Trio Designer scene tree should look like the image below.



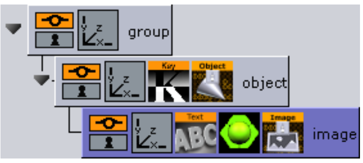
12.2.7 Creating Image Objects



This section is a quick tutorial on how to create image objects.

Note: Screen shots used are from Viz Artist 3. The user interface in Viz Artist 3 is similar to Viz Artist 2. Where needed additional explanation is given.

1. Create a new scene in the **IMAGE** directory (see how To create a new scene element).



2. Add a group container to the Scene Tree (see how To add group containers).
3. Rename the group container to *object*.
4. Add an image to the scene tree as a sub-container of the *object* container. The container is automatically named the same name as the image. Rename the container to *image*.
5. Add the key function to the *object* element (see how To add key).
   - In order for Viz Engine to produce a key signal, a key function must be added.
6. Add the *Control Image* plug-in to the *image* container, which will allow for image changes (see Adding Control Plug-ins).

   Note: *Control Object* is automatically added to the scene tree’s root container.

7. Add text or an image that will act as an icon for the container with the *Control Imag*e editor.
   - The *Field Identifier* (1) has been added automatically, thereby creating a tab-field.

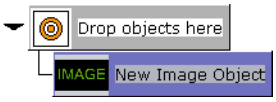
   In order to create a scene icon with a large and good enough visualization of the image object, a dummy scaling group can be added. This allows the graphical representation of the icon in the scene tree to be large enough without changing the actual size of the image object to be used in the template.

8. Add a Group to the root level of the scene tree. This will create an empty group container at the same level as the *object* container.
   - Select the *object* container and append it as a sub-container to the newly added *group* container (now top node).
   - Select the Transformation icon in the *group* container to display the Transformation editor.
   - Increase the scale of the image object until it fills the whole Renderer window.
9. Open the Control Image editor, and expose image *position* and *scaling* by clicking the corresponding buttons. Set other options if needed.

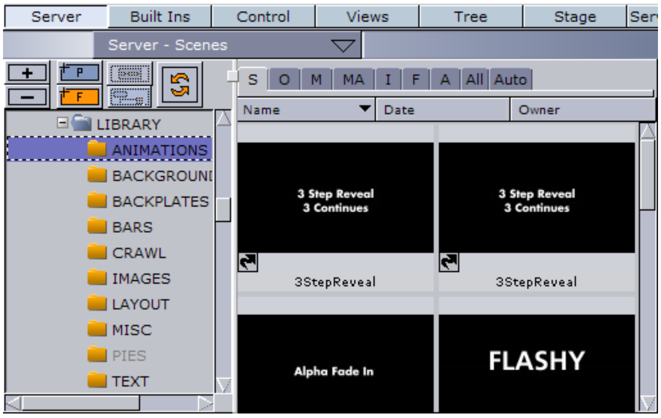
   When having specified the parameters, various additional control plug-ins can be added to the image object. Selection of the control plug-ins depends on the effect to be created. Refer the Viz Artist User’s Guide for further details on the different control plug-ins.

10. Select the *Control Object* icon in the *object* container to open the editor. Enter a description for the image object in the *Description* field. For example *New Image Object*.
11. Click the Save button to save the image object. Select the appropriate **`IMAGE`** directory in the Scene database to see the new scene icon.

    For reference: After finishing this quick tutorial, the Viz Trio Designer scene tree should look like the image below.



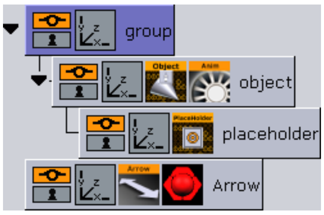
12.2.8 Creating Animations



This section is a quick tutorial on how to create a basic animation sliding in from the left. The process of creating an animation object follows the same principles as when adding an animation to graphic elements in ordinary Viz Artist scenes. Basically the only difference is that the animation is added to an empty container without any graphic elements.

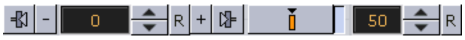
Note: Screen shots used are from Viz Artist 3. The user interface in Viz Artist 3 is similar to Viz Artist 2. Where needed additional explanation is given.

1. Create a new scene in the **`ANIMATIONS`** directory (see how To create a new scene element).



2. Add a group container to the scene tree (see how To add group containers).
3. Add a group container to the scene tree as a sub-container of the *group* container, and rename the new container to *object*.

4. Create a slide-in animation on the **object** container.
    - To create a slide-in animation the *object* container's position must be changed. Initially the graphics can be off screen by moving it to the far left.
5. Open the **object** container's transformation editor, and specify the container's initial *X-position* in the Position X field (e.g. *-600*).



6. Verify that the **timeline** field in the timeline editor, seen above the Scene Editor, is set to *0* (fields).
7. Click the **Set Key** button (aka Update in Viz Artist 2).
    - This will create a keyframe reflecting the scene as is. The number of fields specified in the timeline field is automatically updated to *50*, which is the default interval.
8. In the Transformation editor, reset the Position X to *0*.

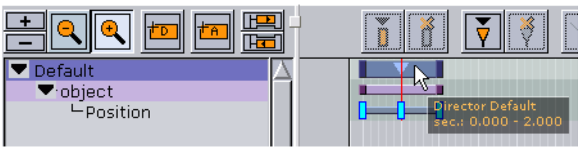
Tip: Click the R (*reset*) button to the right of the Position X field.

9. Click the **Set Key** button again to create a new keyframe.
    - This creates a simple in-animation.
    - The values at these keyframes are called keys. Viz Artist calculates the interpolated values between each key to produce the completed animation.
10. Create an out-animation that slides the object out the same way it came in (e.g. Position X set to -600).
11. Click the **Set Key** button again to create a new keyframe.
    - Viz Artist calculates the interpolated values between the second and third keyframes to produce the completed out-animation.

    Creating the animation adds an animation icon to the object container. Clicking the icon displays the Stage editor, which allows for further tuning of the animation.

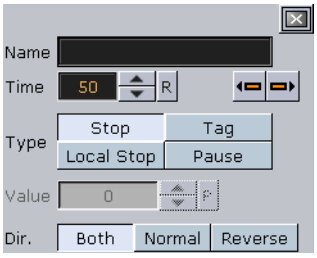
    In order to ensure that the animation stays on screen for as long as required, a stop point at the end of the in-animation can be added, which in this case would be at field 50 in the timeline. The stop point will prevent the out-animation from playing before a Continue command is issued.
12. Open the **Stage** editor by selecting the animation icon (wheel) on the **object** container.
    - The animation channel is represented by a gray (Viz Artist 3) or green (Viz Artist 2) line in the right part of the Stage editor.
    - The keyframes are indicated by small rectangles.

13. Move the red **Timeline Marker**, represented as a vertical red line, to the second keyframe (the in point).



Director Default
sec.: 0.000 - 2.000

14. Select the **Default** director as illustrated in the example above.
15. Click the **Add a Stop/Tag** button (aka Add Stop button in Viz Artist 2.x).
    - It is now possible to see the stop point just added to the Default director.



Time 50

16. Select the Stop point to open the editor to see, and if needed, adjust the parameters for the stop point.
    - Verify that the stop point has the same time settings as the second keyframe.
17. Add *Control Object* plug-in to the *object* container (see Adding Control Plug-ins).

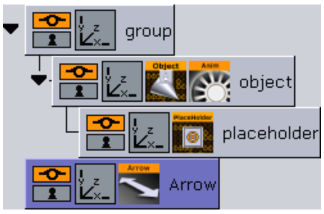
Note: Given that the animation object is created without the need for graphic elements, there is no need to expose properties for editing; however, *Control Object* is needed as it provides a description for the animation object.

18. Open the Control Object editor, and enter an appropriate description to the *Description* field.
19. Add a Group container to the scene tree as a sub-container of the *object* container, and rename the new container to *placeholder*.
20. Add the *Placeholder* plug-in to the *Placeholder* container (see Adding Control Plug-ins).
    - The *Placeholder* for the object allows users to add scene elements such as backplates, text, and images to the animation.

Note: The animation object contains no graphical elements, hence, saving the scene will create a blank scene icon when viewed in Viz Trio.

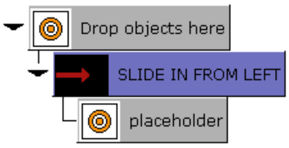
21. Create a dummy container with graphics illustrating the animation and apply this as a scene icon.
    - This will easily distinguish one animation scene from another in Viz Trio.

Tip: In order to provide a graphical illusion of the animation sliding in from the left, a built-in arrow object can be used.



22. Add a geometry, in this case an arrow, to the scene tree (see To add geometries).
23. Level the *Arrow* container with the *group* container to ensure that the arrow graphics are not displayed on screen during Playout.
24. Open the Arrow editor to set the style and size of the geometry.
25. Open the Arrow container’s **transformation editor** to scale and reposition the arrow to illustrate it coming in from the left.
    - Add material, images and text if needed.
26. Click the Save button to save the animation object. Select the appropriate **ANIMATIONS** directory in the Scene database to see the new scene icon.

    For reference: After finishing this quick tutorial, the Viz Trio Designer scene tree should look alike the image below.



Note: SLIDE IN FROM LEFT refers to the control object plugin’s description field, and placeholder to the placeholder plugin’s description field.

13Creating Standalone Scenes

This section will show you how to create your basic lower third as a standalone scene. This scene can be imported to Viz Trio in order to create a template for creating pages that are used for playout.

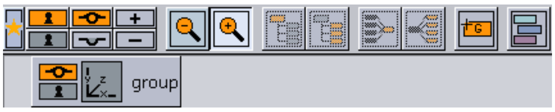
For ease of use, the scene example has been split up in several procedures. In order for the example to work, it is recommended to follow each procedure in the order of appearance.

This section contains information on the following topics:

- To create a scene
- To add a background
- To add text
- To create an in animation
- To create an out animation
- To add stop tags
- To add key functions to the container
- To add expose properties
- To edit multiple elements with a single value

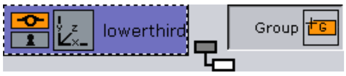
To create a scene

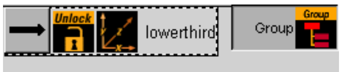
1. Start Viz Artist 2.x or 3.x, and create a blank scene.
   - For Viz Artist 3.x: Start Viz Artist and start creating the new scene.
   - For Viz Artist 2.x: Open the directory in the Viz Artist scene tree where the lower third scene will be saved. Create a new blank scene by pressing the Add button, and open the scene.



2. Add a group container to the tree.
   - For Viz Artist 3.x: Click or drag the Group icon labeled *G* (see image above).
   - For Viz Artist 2.x: Click the Function button, and click or drag the *Group* icon.
3. Rename the group to for example *lowerthird*.

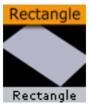
- To change the container’s name, double click on the name section of the container.



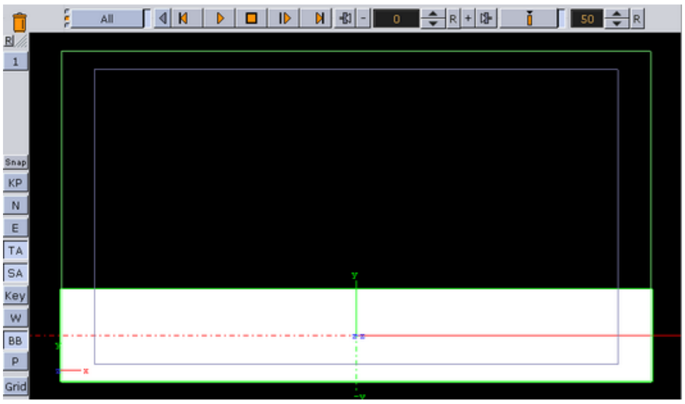


4. Add another group container as a sub-container to the *lowerthird* container.
   - To add a sub-container drag the group object to the right of the existing container.
5. Name the second group *object*.

To add a background

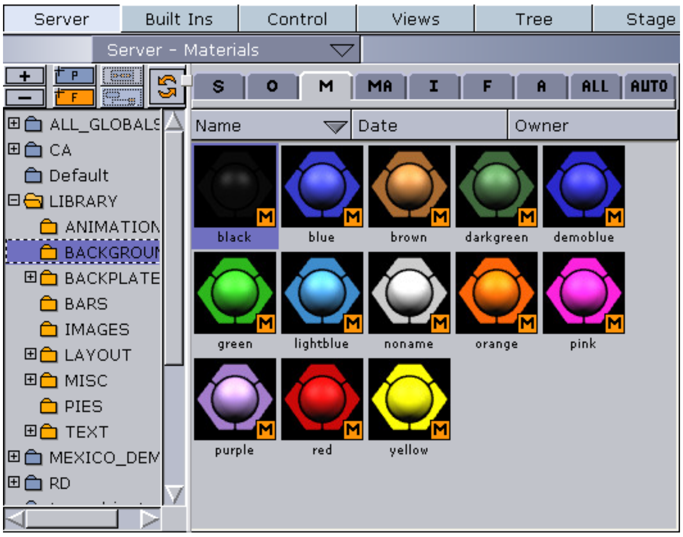


1. Add a rectangle from the *Built Ins* object pool and drop it as a sub-container of the *object* container, and rename it to *Background*.
   - For Viz Artist 3.x: Click the Built Ins button, and select *Primitives* from the drop-list. The object can be found in the *Default* folder.
   - For Viz Artist 2.x: Open the *Object* pool and click on the button labeled Built in.



2. Open the rectangle’s editor and the background container’s transformation editor to scale and then position the object so that it covers the "lower third" of the screen.
   - Rectangle editor: Width *800* and Height *125*.
   - Transformation editor: Position Y *-160*.
3. Since this element is a background element it should be a little bit behind the other objects on the Z-axis.

- Transformation editor: Position *Z -100*.



4. Add a material (see To add materials) object to give the rectangle color.
   - For Viz Artist 3.x: Click the Server button and select Materials on its drop-down menu (CTRL+3 or the M tab).
   - For Viz Artist 2.x: Click the Material button to open the material database, and select a color.
5. Drag the desired material from the material pool and drop it onto the *Background* container.

To add text

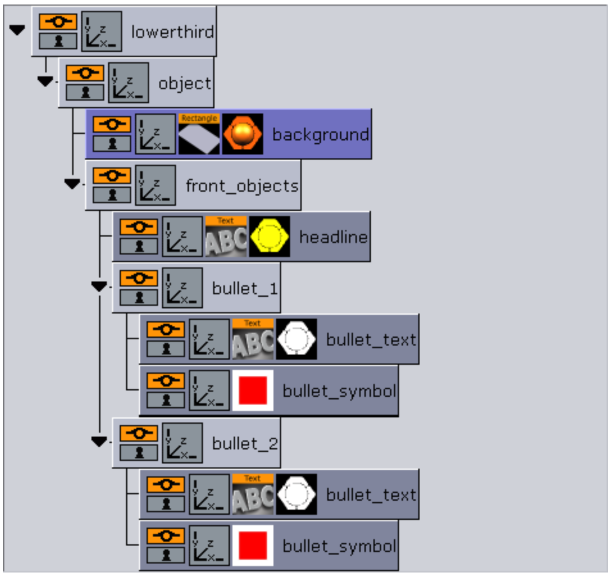
To further improve the basic lower third a headline element and two text lines, lead by a bullet symbol, can be added.

1. Add a group as a sub-container to the object container, and name the group *front_objects*.
2. Add a font as a sub-container of the *front_objects* group container, and name it *headline*.
   - Open the text editor by clicking the text symbol of that container.
   - In the text editor enter the word *Headline* in the text input field and set the Horizontal orientation to *Left*. This positions the text on the right side of the Y axis to allow the text to be written from left to right.
3. Add a material to the font container.
4. Open the transformation editor to scale and position the font so that the headline is placed in the upper left corner of the lower third background.
5. Add a group container as a sub-container of the *front_objects* group, and name it *bullet_1*.
6. As sub-containers of *bullet_1*, add a font and any image or object that can function as a bullet symbol.

- Name the text container *bullet_text* and the image *bullet_symbol*.

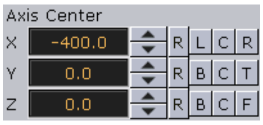
7. In *bullet_text*’s text editor enter the text "Bullet 1 text here".
   - Set the horizontal orientation to left as for the headline container.
   - Add a material to the *bullet_text* container.
   - Scale and position the two containers reciprocally, and then position the *bullet_1* container under the headline.
8. Make a copy of the *bullet_1* container by dragging the container while holding down the CTRL key. Position it as a sub-container of the *front_objects* container.
   - Rename the copy to *bullet_2*.
   - Adjust the Y-position of *bullet_2*.

To create an in animation



To make the whole lower third rotate in from the left side of the screen, the *object* container must be animated. To make the rotation look right, the X-centre of the container must be set to the left.

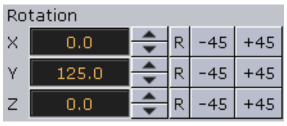
1. Open the transformation editor for the *object* container and click the L button to the right of the Axis Center X property.



Axis Center

X	-400.0	R	L	C	R
Y	0.0	R	B	C	T
Z	0.0	R	B	C	F

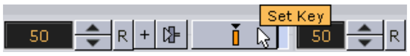
2. Change the Rotation value for the Y-axis so the container moves out to the left side and is hidden.



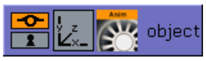
Rotation

X	0.0	R	-45	+45
Y	125.0	R	-45	+45
Z	0.0	R	-45	+45

3. Press the Set Key (Viz Artist 3.x) or Update (Viz Artist 2.x) button.



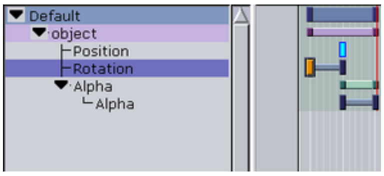
4. Set the Rotation value for the Y-axis back to zero by pressing the R (reset) button. Perform the previous step to set a new key. An animation object should now be visible on the *object* container. Play the animation in the render window.

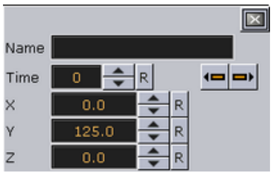


To create an out animation

To create an out animation, a simple fade out animation of the whole object can be created.

1. Add an *Alpha* function to the *object* container.
   - For Viz Artist 3.x: Click the Built Ins button, and select *Function Container* from the drop-list. The *Alpha* function can be found in the *Global* folder.
   - For Viz Artist 2.x: Click the Function button.
2. Open the alpha editor.
   - Set the alpha value to 100% and update the animation by setting a new key.
   - Set the alpha value to 0.0% and update the set key again.
   - This has created an alpha animation in addition to the rotation animation.0
3. Click the Stage button and look at the animation channels:





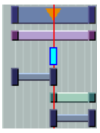
Name
Time 0 R
X 0.0 R
Y 125.0 R
Z 0.0 R

4. It is possible to move the keyframes to achieve a different timing. Move keyframes either by dragging them with the mouse or by clicking on them and alter the time settings in the keyframe editor

To add stop tags

When playing out the scene, the objects should move in from the left and then fade out again. In order to stop the animation after the rotation, a stop point must be added before the animation can continue and fade out the scene.

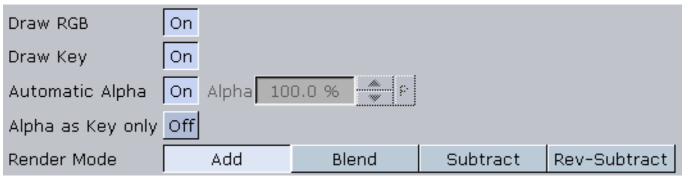
1. Move the timeline (the thin red vertical line) to the second keyframe of the rotation channel (an exact spot is not needed as it is easy to adjust afterwards).
2. Add a Stop keyframe to the Default director.
   - For Viz Artist 3.x: Click the Add a Stop/Tag button above the stage editor.
   - For Viz Artist 2.x: Click the *Default* director label to open the Default director editor. Click the Add Stop button.



3. Move the stop-point with the mouse or move it by using its editor that opens when it is selected. Check that it has the same time settings as the second keyframe on the rotation channel.
4. Play out the animation to verify that it stops when the rotation has finished. Click the Continue button to proceed with the alpha fade.

To add key functions to the container

1. Add a key function to the *background* container, and click the key icon to open the key editor.
   - For Viz Artist 3.x: Click the Built Ins button, and select *Function Container* from the drop-list. The *Alpha* function can be found in the *Global* folder.
   - For Viz Artist 2.x: Click the Function button.



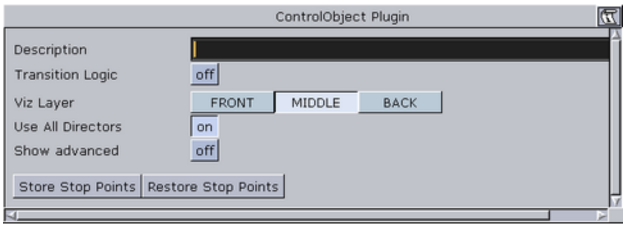
Draw RGB On
Draw Key On
Automatic Alpha On Alpha 100.0 %
Alpha as Key only Off
Render Mode Add Blend Subtract Rev-Subtract

2. The key for the *background* must have the *Alpha as key only* setting enabled (On). This is to avoid a "dirty key" if the background has some level of transparency. Set the *Render mode* to *Blend*.
3. Add a key function to the *front_objects* container. On this key signal the *Alpha as key only* setting must be disabled (Off), and the *Render mode* must be set to *Add*. This is to avoid the foreground objects to cut a hole in the key signal of the background object.

To add expose properties

To make the scene ready for import into Viz Trio, Control plug-ins must be added. The plug-ins enables the designer to expose scene properties to the Viz Trio operator.

1. Add the Control Object plug-in to the *object* container.
    - For Viz Artist 3.x: Click the Built Ins button, and select *Function Container* from the drop-list. The Control Object plug-in can be found in the *Control* folder.
    - For Viz Artist 2.x: Click the Function button, and in the *Control* folder select the Control Object plug-in.

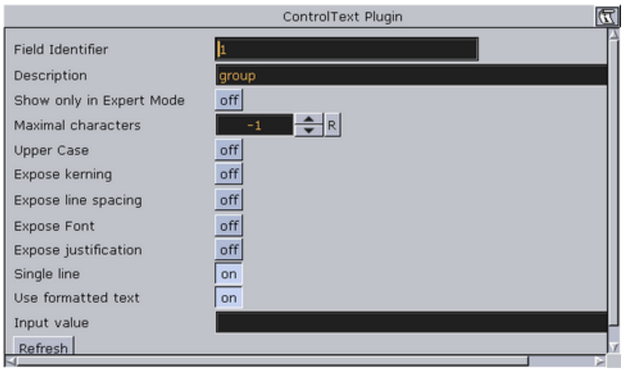


ControlObject Plugin

Description
Transition Logic off
Viz Layer FRONT MIDDLE BACK
Use All Directors on
Show advanced off

2. Click on the Control Object icon on the *object* container to open its editor.
    - Enter a description for the Viz Trio template (e.g. *Lower Third*).

3. Add the Control Text plug-in to the *Headline* and both *bullet_text* containers.

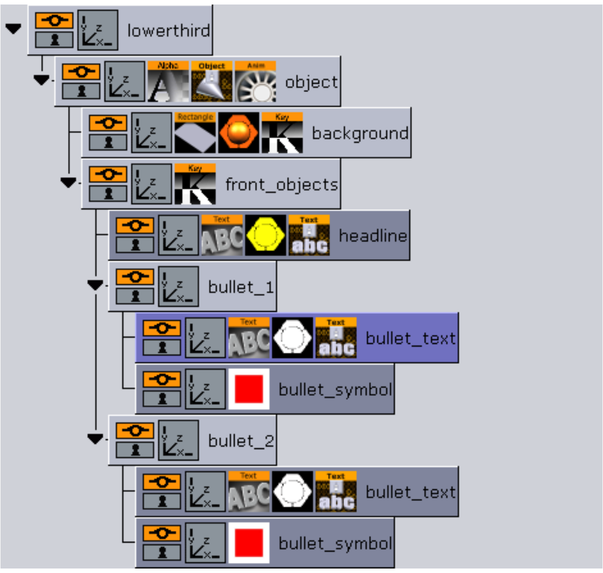


ControlText Plugin

Field Identifier 1
Description group
Show only in Expert Mode off
Maximal characters -1
Upper Case off
Expose kerning off
Expose line spacing off
Expose Font off
Expose justification off
Single line on
Use formatted text on
Input value

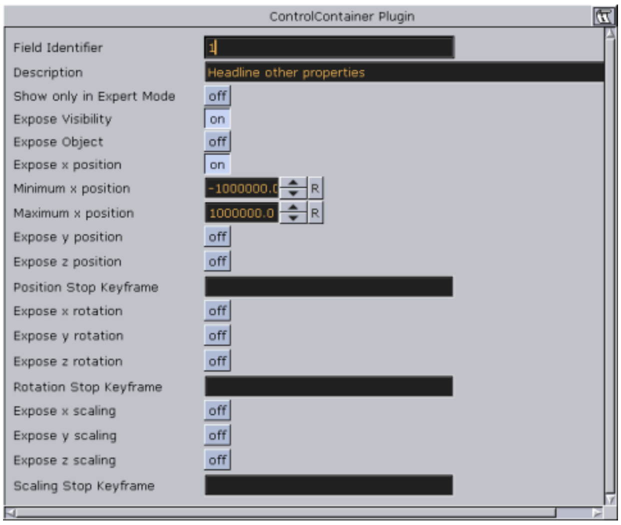
4. Click on the Control Text icon on the containers to open its editor.
    - Set the *Field identifier* and *Description*. The Field identifier must be a numeric value and the value will be used to give the Viz Trio page a tab order.

- In this scene the Headline container will typically get identifier 1, and the two bullet_text containers will get identifier 2 and 3. There are other parameters that can be set.



It is possible to expose more properties to the Viz Trio operator. By exposing the position, rotation, and scaling properties the operator can hide or show an object and add material.

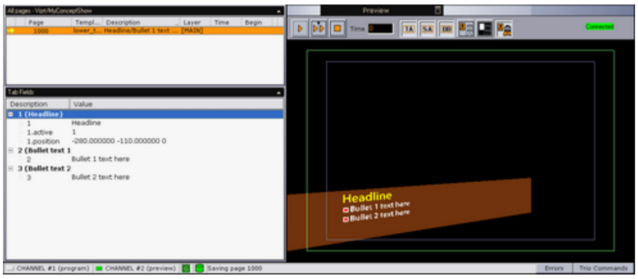
5. Add the Control Container plug-in to the container to be exposed (e.g.*headline*).
6. Click the Container plug-in icon to open is editor.


ControlContainer Plugin

Field Identifier	1
Description	Headline other properties
Show only in Expert Mode	off
Expose Visibility	on
Expose Object	off
Expose x position	on
Minimum x position	-1000000.0
Maximum x position	1000000.0
Expose y position	off
Expose z position	off
Position Stop Keyframe	
Expose x rotation	off
Expose y rotation	off
Expose z rotation	off
Rotation Stop Keyframe	
Expose x scaling	off
Expose y scaling	off
Expose z scaling	off
Scaling Stop Keyframe	

7. Enter a field identifier. If there is another control plug-in on that container, like a Control Text or Image, use the same Field identifier.

- X/Y/Z properties for a keyframe in an animation must be specified by a stop keyframe name.



All pages - Vizrt/MyConceptShow

Page	Templ...	Description	Layer	Time	Begin
1000	lower_t...	Headline/Bullet 1 text ...	[MAIN]		

Tab Fields

Description	Value
1 (Headline)	
1	Headline
1.active	1
1.position	-280.000000 -110.000000 0
2 (Bullet text 1	
2	Bullet 1 text here
3 (Bullet text 2	
3	Bullet 2 text here

To edit multiple elements with a single value

- Use the same field identifier for multiple control plug-ins to treat two or more fields as a single editing element that will receive the same value.

This can for example be used with a bar that scales and a text label that shows its value. The scale value and the text can then be set in a single operation, ensuring that there is no mismatch between the bar size and the written text value.

14Creating Transition Effects

The following section describe show to design custom transition effects for Viz Trio. The scene transition mechanism uses a hardware feature called Dynamic Scene.

In Viz you have To create dynamic textures using the **Dyncamic Scene** plugin found under the **Texture Sources** tab. You may also find these textures as part of an already existing transition effect scenes in the **dynamic** folder (at root level).

The textures must be named layer1 and layer2. These two are not ordinary images as they have the possibility to load into them an actual scene.

- **layer1 -** Represents the first scene.
- **layer2 -** Represents the scene to transit to.

It is possible to make any kind of animation, but there are a few design conventions to follow.

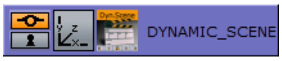
The scene should start with a full screen view of the dynamic texture **layer1**, and end with a full screen display of the dynamic texture **layer2**. Use the screen size section in the transformation editor to set the size of the texture container to fit the screen exactly.

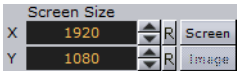
A transition scene is a scene that is created to move from one scene to the next in a dynamic way (not by cut).

Note: All scenes must be placed in a **transitions** folder in the scene database to make it visible in the control application.

To create dynamic textures

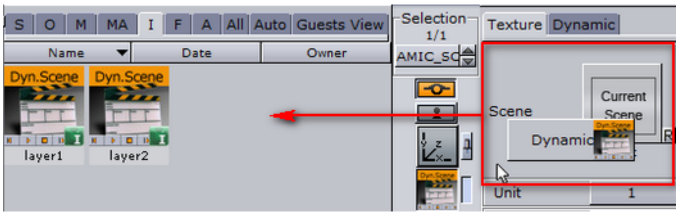
1. Start **Viz Artist**
2. Add the **Dynamic Scene** plugin to your Scene Tree.
3. Open the Dynamic Scene plugin’s **Dynamic** tab and configure the properties (e.g. setting width and height).





Screen Size
X 1920 R Screen
Y 1080 R Image

4. Open the DYNAMIC_SCENE container's tranformation editor and set **Screen Size** to **Screen**.

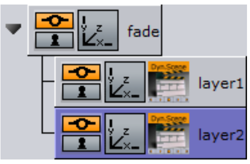


5. Open the **Server Area**
6. Create a folder at the root level and name it **dynamic**
7. Select the **Image (I) tab**
8. Drag the **Current Scene** placeholder icon into the Server Area and save two textures as `layer1` and `layer2`.

Note: Depending on the Viz version you use, the icons may be different.

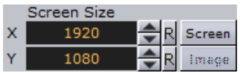
To create a transition scene

1. Add or create a new scene in the transition scene folder.
2. Add a group to the scene tree, and rename the container to **Fade**.



3. Add the dynamic texture **Layer 1** and **Layer 2** as sub-containers to the **Fade** group container.

   Note: There might not be images in the preview window, but only the bounding box.

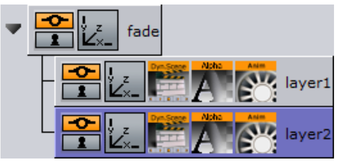


4. Open the **Fade** group container's transformation editor, and resize the container to fit the entire screen by clicking the Screen button.

   The scaling of the main group (**Fade**) to the screen size will ensure that the dynamic textures (layer 1 and layer2) brought under it will be the correct full frame size.

5. Click the **Built Ins** button, select Container Plugins (CP) from the drop-list and then the Global folder.

6. Add the Alpha plug-in to the **Layer 1** and **Layer 2** containers.



7. Create a fade out animation for the **Layer 1** container.
   - Click the Alpha plug-in on the container, and set the Alpha to 100%.
   - Click the Set key frame button above the Scene Editor.
   - Set the Alpha value to 0% and click the Set key frame button again.
8. Create a fade in animation for the **Layer 2** container.
   - Repeat the steps for *Layer 1* in reverse order.
9. Open the **Server Area**
10. Create a folder at the root level and name it **transitions**
11. Save the scene to the transitions folder.

Tip: Place the timeline somewhere in the middle before the scene is saved as it usually gives the best representation of the transition effect.

Tip: Transition scenes are commonly stored in a **transitions** scene folder at the root of the database directory structure.

See Also

- Viz Artist User’s Guide

15Command Line Parameters

Use the command line parameters below to customize the Viz Trio startup.

To add a command line parameter

- Right-click the program shortcut, and edit the program target path.

Example: "C:\Program Files\vizrt\Trio Client\trio.exe" -mse localhost -control -force_gpu_count 2

Command line parameters

Parameter	Value Syntax	Description
-control		Allows you to configure Viz Trio.
-folder	showpath	Causes the client to start in the specified show.
-force_gpu_count	integer	Allows the user to force/override the available (detected by Viz) number of GPUs used for preview and program channel.
-hideversion		Hide the version number in the window caption.
-local_program_channel_port	integer	Overrides the configured port number set for the local program channel. This is useful if another port, than the default 6800, needs to be set.
-logfile-path	directory	Folder in which log files are stored.
-loglevel	integer	Controls how much is logged to the log file.
-mse	hostname	Media Sequencer hostname.
-nle-mode		Start Viz Trio in "NLE mode".
-no-nle-mode		Start an NLE-compiled Viz Trio in normal (non-NLE) mode.
-scriptloglevel	integer	Controls how much is logged when executing scripts.

Parameter	Value Syntax	Description
-socket		Use socket (TreeTalk) for Media Sequencer communication.
-t	quoted string	Put a string in the header of the Viz Trio window. %h will be replaced with the Media Sequencer-host
-usersetting	settingsname	Use something other than the hostname as an identifier for user settings.
-viz2		Start Viz Engine 2instead of Viz Engine 3for local preview.
-viz-console-delay	<time in seconds>	Starts Viz Trio independetly of the Viz Engine process, enabling use of Viz Trio before Viz Engine is running. Note that the Viz Engine console is displayed in this mode (during startup) which can be used to debug Viz Engine start-up problems.
-vizdb	host:db:user:pw	Configure the Viz Engine 3 database login for the local preview engine.
-vizparams	quoted string	Extra parameters to pass on when starting the local viz engine.
-vizpreview	hostname: port<:protocol>	Connect to an external Viz Engine for preview. Viz Engine 2 must have a Viz Multiplexer.
-viz-startup-timeout	integer	Specifies the time-out to use during start-up of Viz Trio when communicating with Viz Engine. The default time-out value is set to 30 seconds. Time-outs during start-up will often leave Viz Trio unusable. After Viz Trio has successfully started up, the time-out setting in the Local Preview configuration is used.

16Logging

Log files are crucial in order for Vizrt personnel to troubleshoot any issues related to our products. When investigating Viz Trio related issues, the Viz Trio log files, in addition to log files on the Media Sequencer and Viz Engine, are highly relevant.

This section contains information on the following topics:

- Viz Trio Log Levels
- Viz Trio Log Files
- Viz Trio Error Messages
- Viz Engine Log Files
- Media Sequencer Files
- Media Sequencer Logging
- Command Line Parameters

16.1 Viz Trio Log Levels

From the General section of the Configuration it is possible to specify various Viz Trio log levels. The log levels can be set to 0, 1, 2, 5, or 9.

- **Loglevel 0**: Only error messages will be logged.
- **Loglevel 1**: Warning messages will be added.
- **Loglevel 2**: Timer messages will be added. These show the amount of time different operations take in the program.
- **Loglevel 5**: Status messages will be added. These show ordinary program events such as "page loaded", "page taken", and so on.
- **Loglevel 9**: All commands sent to the Viz Engine rendering process will be added.

For more information, see To change the Viz Trio log level.

Tip: Messages on log level 0 and 1 (error and warning messages) can also be viewed in the Error Messages Window.

16.2 Viz Trio Log Files

Viz Trio log files are located in the application data folder per user.

Example: On a Windows XP machine the log files are located at C:\Documents and Settings\<user>\Application Data\Vizrt\Viz Trio. Viz Trio log files are typically named according to the following conventions: trio-2011-09-08-140923.log.

Various Viz Trio Log Levels can be specified in order to define the level of logging details. Log level 0 will for example provide information only about crucial errors, while log level 9 will provide logging information about a wide range of events.

Caution: In many cases it may be beneficial to set a low Media Sequencer Logging level, preferably to 0, because a high level of logging might affect the performance when running in a production environment.

To change the Viz Trio log level

1. Click the **Config** button in Viz Trio's main window to open the Trio Configuration.
2. Select General from the User Interface section.
3. In the **Log level** box, type a log level according to the available Viz Trio Log Levels.

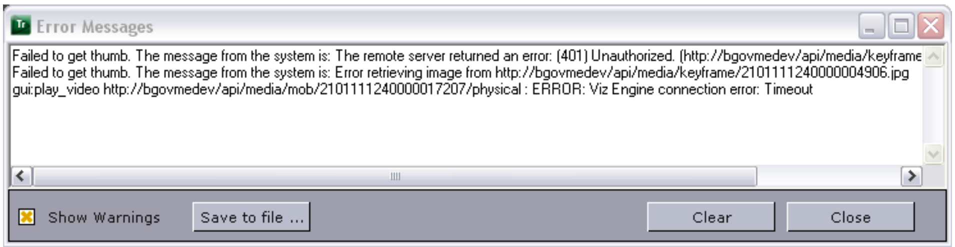
To change the Viz Trio log file path

1. Click the **Config** button in Viz Trio's main window to open the Trio Configuration.
2. Select Paths from the User Interface section.
3. In the **Logfile path** box, enter the path to where the log files should be located from now on.

16.3 Viz Trio Error Messages

In addition to being available in the log files, messages on log level 0 and 1 (error and warning messages) can be viewed in the Error Messages Window .

Error Messages Window



```
Failed to get thumb. The message from the system is: The remote server returned an error: (401) Unauthorized. (http://bgovmedev/api/media/keyframe
Failed to get thumb. The message from the system is: Error retrieving image from http://bgovmedev/api/media/keyframe/21011124000004906.jpg
gui:play_video http://bgovmedev/api/media/mob/21011124000017207/physical : ERROR: Viz Engine connection error: Timeout
```

This section contains information on the following topics:

- To view Viz Trio error messages
- To view Viz Trio error messages and warnings
- To save the content displayed in the Error Messages Window

To view Viz Trio error messages

- Click the **Errors** button in the lower right corner of the Viz Trio main window.

The Error Messages Window then opens.

To view Viz Trio error messages and warnings

1. Click the **Errors** button in the lower right corner of the Viz Trio main window.
2. In the Error Messages Window that opens, select the **Show Warnings** check box.

To save the content displayed in the Error Messages Window

1. Click the **Errors** button in the lower right corner of the Viz Trio main window.
2. In the Error Messages Window that opens, click **Save to file**.
3. In the **Save As** dialog that opens, define the path and enter a descriptive name for the .txt file.

16.4 Viz Engine Log Files

In addition to Viz Trio's log files created on the client side, it is recommended to read, and if needed send, log files to Vizrt support that were created on the Media Sequencer and Viz Engine.

Viz Engine log files are located in the program folder:

- Viz Engine 2: C:\Program Files\vizrt\viz
- Viz Engine 3:
  - Windows 7: **`C:\Program Files (x86)\Vizrt\Viz3`**
  - Windows XP: **`C:\Program Files\Vizrt\Viz3`**

Example: VizRender_1159345015.log

16.5 Media Sequencer Files

In addition to Viz Trio's log files created on the client side, it is recommended to read, and if needed send, log files to Vizrt support that were created on the Media Sequencer and Viz Engine.

Media Sequencer config files

The **`default.xml`** files are stored here:

- Windows Vista and 7: **`C:\ProgramData\Vizrt\Media Sequencer Engine`**

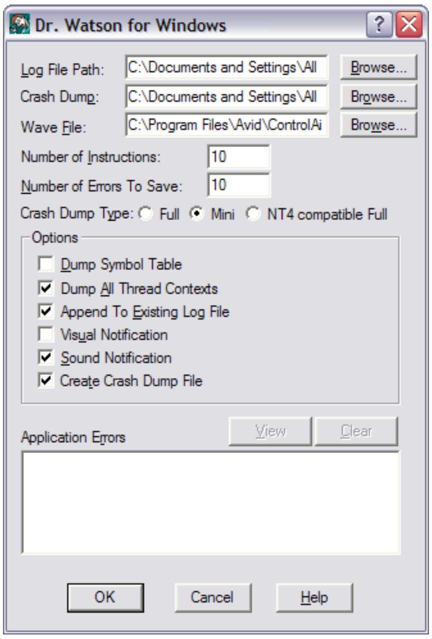
- Windows XP: **`C:\Documents and Settings\All Users\Application Data \Vizrt\Media Sequencer Engine`**

Media Sequencer Crash Dump Files

Log files created by a program called Dr. Watson (drwtsn32) can be used to trace problems with the Media Sequencer and Viz Trio. The program is normally a part of the Microsoft Windows default installation. It can be used to create crash dumps whenever a crash occurs as it is able to detect and log most crashes.

The first step after experiencing an Media Sequencer crash is to see whether Dr. Watson has created a crash dump.

Media Sequencer crash dump files, Dr Watson:



Log File Path: C:\Documents and Settings\All

Crash Dump: C:\Documents and Settings\All

Wave File: C:\Program Files\Avid\ControlAi

Number of Instructions: 10

Number of Errors To Save: 10

Crash Dump Type: ○ Full ● Mini ○ NT4 compatible Full

Options

□ Dump Symbol Table
☑ Dump All Thread Contexts
☑ Append To Existing Log File
□ Visual Notification
☑ Sound Notification
☑ Create Crash Dump File

Application Errors

There are several reasons why Dr. Watson might not create a crash dump. The most obvious ones are:

- Dr. Watson was not registered as the default debugger.
  - This can be fixed by starting Dr. Watson with the following command line option: *drwtsn32 -i*.
- The user account the software is running under has not been given debugging privileges.

To check for crash dumps

1. Start Windows' **Run...** dialog box, and enter **drwtsn32**, and click **OK**.
2. In the appearing window look at the **Applications Errors** list. The name of the program that crashed should be in the list. If it is not, then Dr. Watson has not captured a crash dump.
3. Verify that the **Create Crash Dump File** option is selected.

4. Look at the path specified for **Crash Dump** files.

   Example: C:\Documents and Settings\All Users\Application Data \Microsoft\Dr Watson\user.dmp.

5. Send relevant crash dump file to Vizrt for support.

16.6 Media Sequencer Logging

Viz Trio supports using Intelligent Interface (IIF), and through that interface the log level for Intelligent Interface specific messages on the Media Sequencer can be set. For more information on how to set log levels for the Media Sequencer, see the Media Sequencer documentation.

All logging of output can be assigned a log level. Messages are only written to the log if the current log level is greater than the log level of the message. The log levels are defined as integers in the range 0-100. At a given log level, all the information specified for lower log levels are also logged.

The log level can be changed while the Media Sequencer is running, and the logging output will immediately reflect the new log level.

Caution: Remember to set a low log level, preferably to zero, because a high level of logging might affect the performance when running in a production environment.

See the table for a complete list of predefined log levels.

Log levels

Name	Level	What will be logged
Never	0	Nothing
Bug	5	Bugs detected in the software.
Failure	10	A permanent error, for example part of the software was disabled and no further automatic retries will be attempted.
Lost link	15	A network connection or other link or precious resource was unexpectedly lost. The software might attempt to reestablish the link automatically.
Error	20	Something is incorrect. An internal or external operation could not be completed successfully.
Warning	30	A cause for concern has been detected.
Notice	35	An infrequent but expected event occurred.

Name	Level	What will be logged
Connection	40	A network connection or connection to another precious resource was intentionally opened or closed.
Operation	50	High level operations that are executed as requested or planned.
Input	60	Data that is received into the system from external connections.
Output	70	Data sent to from the system through external connections.
State	80	A change in the significant state of the system.
Analysis	90	Derived information and meta information generated during execution, such as the running times of the executed actions.
Trace	95	The various stages the internal operations of the system goes through during execution.
All	100	All possible logging information, including operation scheduling and loop iteration, and running state statistics.

17Preview Server

This section describes the installation and configuration of the Preview Server.

Preview Server is used in situations where Viz Engine must provide frames for snapshot/thumbnail generation.

Frames are cached in memory, allowing quicker repsonses when requesting frames previously requested. By default, frames will be cached no more than a day. This behavior can be changed by modifying the **`CacheMaxAge`** setting in the *Preview Server.exe.config* file, which specifies the maximum number of seconds to retained cached results.

Frame requests will be balanced across available Viz engines in a way that will minimize the memory load of each engine. If you are running out of memory on Viz Engines used for preview, you can alleviate this problem by adding more Viz Engines to the pool.

The Preview Server is a console application setting up an HTTP REST service on port *54000* on the host it is running. This service accepts requests for graphical snapshots of playout elements from a Viz Engine. Per default, the Viz Engine must run on the same host as the Preview Server, but it is possible to specify another host for the Viz Engine.

IMPORTANT! The Preview Server must be installed on a separate Viz Engine machine with its own license.

This section contains information on the following topics:

- Command Line Arguments
- To install/upgrade the Preview Server
- To configure the Preview Server using command line arguments
- To start the Preview Server

Command Line Arguments

The executable file can be started with the following command line arguments:

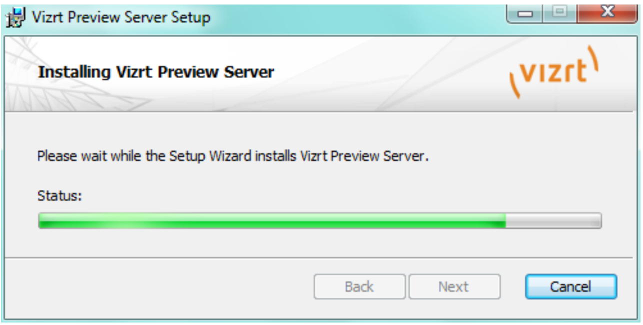
Preview Server Command Line Options

Argument	Description
-h= *or* -host=	Specifies the host name of the host running the Viz Engine. Default is localhost.
-p= *or* -port=	Specify the port of the host running the Viz Engine. Default is 50007, which is the built-in multiplexer port.

Argument	Description
-l= *or* -listen=	Specifies the listener port for the Preview Server. Default is 54000.
-t= *or* -timeout=	Specifies the default time out for a preview request in seconds. Default is 30s.
-v *or* -verbose	Specifies verbose output to the Preview Server log. Enable this if you want to report issues to Vizrt.
-? *or* -help	Displays help on command line arguments when using command prompt.

To install/upgrade the Preview Server

1. Run the installer.
2. Click **Next**.
    - *Optional*: Select the location of the installed files.
3. Click **Next**.
4. Click **Install** to start the installation process.



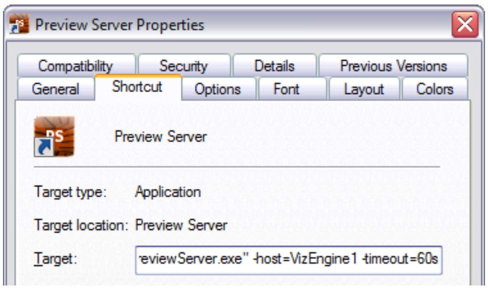
Installing Vizrt Preview Server

Please wait while the Setup Wizard installs Vizrt Preview Server.

Status:

5. Click **Finish**.

To configure the Preview Server using command line arguments



Target type: Application

Target location: Preview Server

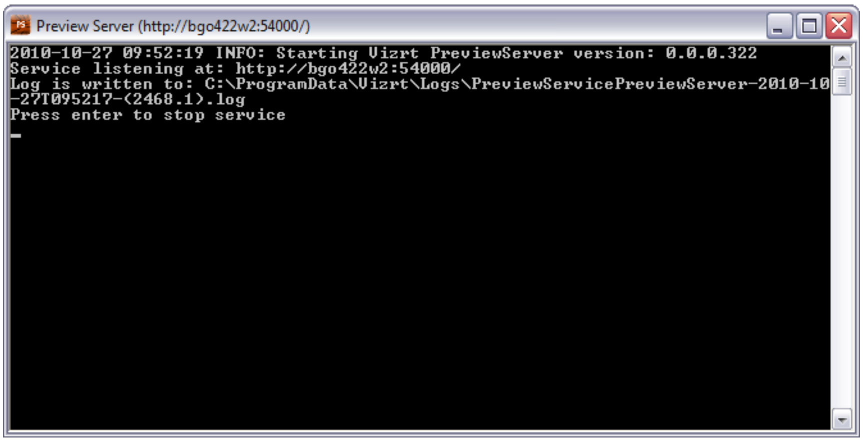
Target: eviewServer.exe" -host=VizEngine1 -timeout=60s

Note: Configuring the Preview Server is not needed unless you have to specify other than the default by using command line arguments.

1. From the Start menu select and right-click the Preview Server, and from the appearing context menu select Properties.

2. Click the Shortcut tab, and add your Command Line Arguments.

To start the Preview Server



```
2010-10-27 09:52:19 INFO: Starting Vizrt PreviewServer version: 0.0.0.322
Service listening at: http://bgo422w2:54000/
Log is written to: C:\ProgramData\Vizrt\Logs\PreviewServicePreviewServer-2010-10
-27T095217-(2468.1).log
Press enter to stop service
_
```

- From the Start menu select Preview Server.
    - The Preview Server is started in a console, and is up and running immediately. Upon start it will try to connect to the specified Viz Engine, or the Viz Engine running on localhost, if not specified.
    - To view the main web page of the server, start a browser and go to **`http://<hostname>:54000/`** (e.g. http://localhost:54000).

See Also

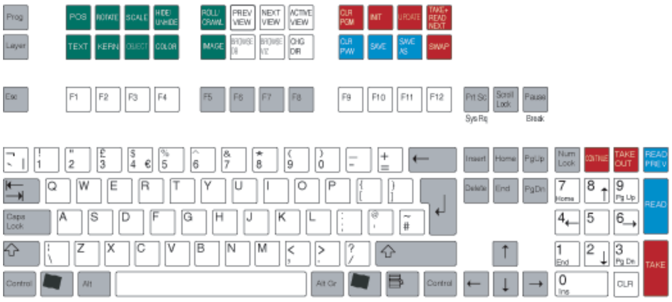
- Preview Server requirements
- Viz Engine Administrator’s Guide for information on installing the Viz Engine graphics and video render engine.

18Appendix

This section contains supplementary information related to Viz Trio:

- Cherry Keyboard

18.1 Cherry Keyboard



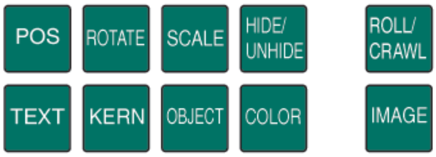
Early versions of Viz Trio was shipped with an now old version of the Cherry Keyboard. If you are still using this keyboard you should be able to use it with current versions of Viz Trio.

The keyboard contains two rows with extra function keys which have been assigned to different Viz Trio actions. The keyboard has its own configuration software. A Viz Trio configuration file must be loaded to create the correct keyboard map. In the Viz Trio client a keyboard mapping file must be imported to assign the correct actions to the keys. This is pre-installed on all Viz Trio clients, so normally there is no need to change these settings.

This section contains information on the following topics:

- Editing Keys (green)
- Navigation Keys (white)
- Program Channel Keys (red)
- Preview Channel Keys (blue)
- Program and Preview Channel Keys (red and blue)
- Viz Trio Keyboard
- Keyboard Shortcuts and Macros

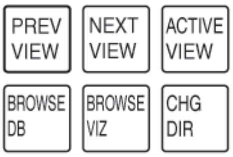
18.1.1 Editing Keys (green)



The green keys all perform editing operations. The current tab-field must have the property of the key exposed for editing. If not, the key will have no effect and an error message will be written to the log file when the key is pressed.

- **POS** - Displays the position editor.
- **ROTATE** - Displays the rotation editor.
- **TEXT** - Displays the text editor.
- **KERN** - Displays the character kerning editor.
- **SCALE** - Displays the scaling editor
- **OBJECT** - Displays the object pool where 2D and 3D objects can be browsed for.
- **HIDE/UNHIDE** - Hides/shows the tab-field.
- **COLOR** - Shows the pool of colors.
- **ROLL/CRAVL** - Opens the scroller editor
- **IMAGE** - Opens the image pool.

18.1.2 Navigation Keys (white)



The white keys shift between different views and editors in the program.

- **PRE VIEW** - If extra page views have been defined, this key shifts the view to the one above the currently active view, see Add Page List View .
- **NEXT VIEW** - If extra page views have been defined, this key shifts the view to the one below the currently active view.
- **ACTIVE VIEW** - When the program has the active focus on some part outside the current page view, hitting this key will bring back the page view in an active state and it is possible to navigate between the pages with the arrow keys.
- **BROWSE DB** - When on an image tab-field, hitting this key will open the Search Media frame to allow for media searches
- **BROWSE VIZ** - When on an image tab-field, hitting this key will open Viz Engine‘s image database.
- **CHG DIR** - Displays the change directory or show window.

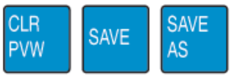
18.1.3 Program Channel Keys (red)

CLR PGM
INIT
UPDATE
TAKE+ READ NEXT
SWAP

The red function keys all affect actions on the program channel.

- **CLR PGM** - Clears all loaded content on the program channel.
- **INIT** - Initializes the current show on both the program and preview channel.
- **UPDATE** - When a change has be done to a page that is already On-air, hitting update will merge in the changes without running any animations. This is typically used for fixing typing errors. If a page is changed and Take is used instead of Update, all animation directors in the scene will be executed and this normally creates an unwanted effect.
- **TAKE+ READ NEXT** - Takes the page currently read, and reads the next one in the list.
- **SWAP** - The swap key takes to air what is currently read and visible in preview, and it takes of what is currently On-Air and reads that page again.

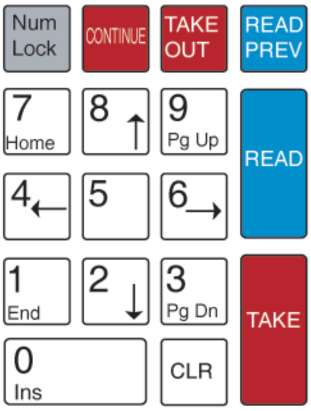
18.1.4 Preview Channel Keys (blue)



The blue keys all affect actions on the preview channel.

- **CLR PVW** - Clears the preview channel
- **SAVE** - Saves the page currently shown on the preview channel.
- **SAVE AS** - Saves the page currently shown in preview to the page number typed in.

18.1.5 Program and Preview Channel Keys (red and blue)



The blue keys affect actions on the preview channel, and the red on the program channel.

- **CONTINUE** - When a scene based page halts at a stop point, hitting the Continue key will make the animation continue.
- **TAKE OUT** - If transition logic is used, the Take Out key will take out any page loaded in the layer that is currently read. If transition logic is not used,

the Take Out key will perform a "clear" which will be a "hard cut". To obtain a smooth out animation, the scene must be designed with a stop point and an "out animation", and the Continue key must be used to take out the page.

- **READ PREV** - Reads the previous page in the page list.
- **READ** - Reads the page currently highlighted by the cursor.
- **TAKE** - Takes the page that is currently read.