Viz Multichannel User Guide

Version 4.2

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Created on

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Welcome to the Viz Multichannel User Guide.

- Related Documents
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1.1 Related Documents

- Viz Engine Administrator Guide : Installing Viz Engine software; supported hardware and how to configure Viz Artist and Viz Engine.
- Viz Artist User Guide: How to use Viz Artist to create 3D graphics.

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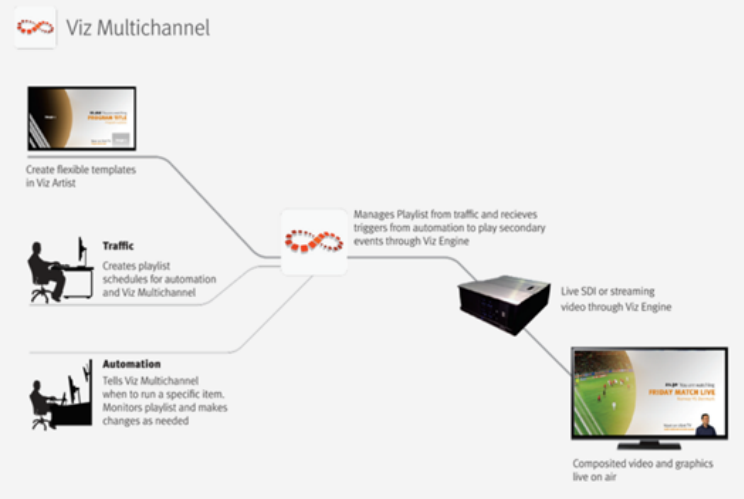
2 Overview

Viz Multichannel (VMC) provides high-quality Vizrt graphics for channel branding. The application simplifies the playout of playlists, potentially as a fully automated workflow that integrates with existing channel traffic and scheduling solutions.

Viz Multichannel combines pre-scheduled playlist operations with the ability to add real-time 2D and 3D graphic effects. In complex environments, Viz Multichannel helps with centralizing entire workflows to one or more desktops.

2.1 VMC-Introduction



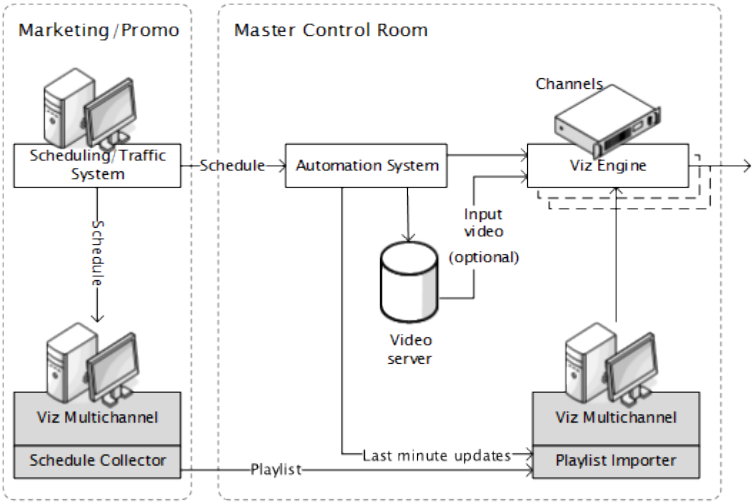
For seamless integration with existing hardware, the solution employs standard rack mountable PCs. Updates and upgrades are easily applied without requiring modifications to the solution as a whole.

Some key benefits:

- Translation of network promotions and branding strategies to rules that automatically create graphics playlists
- Operators can use pre-defined graphic templates
- Simplified sponsoring, including automatic logging and reporting, time frame-accurate reports about aired content, and “As-Run” logs
- Integrates with popular automation systems, using standard protocols
- Full support for SD and HD formats, real-time 2D/3D graphics and DVE effects
- For Viz Engines with compatible graphic / video cards, 4K and IP streaming is supported
- Access to Viz One video content

- Automate an almost unlimited number of channels and monitor them all from a single Viz Multichannel terminal
- Automatically adapt changes in the playlist, up to the very last minute

2.2 All-In-One Workflow



Viz Multichannel integrates with existing systems used in the traffic department and master control room. The application utilizes schedules from the scheduling and automation systems and is able to import any fixed format text file like XML, CSV, or Microsoft Excel with Playlist Importer. With Integrations Hub network update and schedule fetching from automation systems with the standard HTTP REST protocol can be implemented.

After importing the schedule and its data, a new Multichannel playlist, including a graphic layer, is automatically created. If the playlist is *continuous*, the playlist will be updated to reflect the new data received.

Pages are graphic elements ready for playout that can be manually or automatically added to the Multichannel playlist. Pages are created from *Templates* that a graphic artist creates in Viz Artist. The templates (and therefore, pages created from templates) can have fields or elements that Multichannel fill in based on the current playlist data. This will typically be information such as “What is the name of the next film?” or “When does the next film start?”.

Adding a predefined *page* to an event in the playlist can either be achieved by dragging the page from the Templates, Pages and Pilot Data Elements list and dropping it onto a primary event in the playlist or by allowing the graphic elements to be created automatically, based on predefined Rules. The latter is especially convenient for non-technical personnel in traffic departments who can prepare pages for playout without actually having to work with them. The possibility to predefine rules can describe a variety of playlist rules, such as adding graphics with a relative offset to a primary event with a predefined length.

To streamline workflow as much as possible, Viz Multichannel contains two layers of automation:

1. The first layer is Viz Multichannel’s capability to read schedules. By analyzing the schedule, the application can automatically launch graphics at a defined offset. This can be the beginning, the credits or the end time of a specific event, according to pre-defined rules.

2. The second layer of automation is the linkage between the different properties of objects from graphics (texts, images, geometry, etc.) and the information as it exists in the imported schedule. This linkage can be customized to create a fully automatic system that "decides" which graphics to use and add to which primary event, and what data to take from the schedule and insert to the matching object of that graphics. In other words: Viz Multichannel is capable of automatically choosing the right graphics and filling it with adequate content.
   After receiving the updated schedule from the scheduling system, the automation system takes control during playout. Using standard protocols like *VDCP* and intelligent interface, the automation system then triggers when certain events should be run. With the Broadcast eXchange Format (BXF) Viz Multichannel also provides an interface mechanism that allows broadcast systems to exchange mission-critical data.

Last minute changes to existing playlists are common in everyday broadcasting: sports events go overtime, live shows do not keep their planned time schedule, and breaking news events demand their own space in the playlist.

Viz Multichannel has been designed to maintain full control over its playlist up to the very last minute before playout. Graphics that are connected to a specific event will collect information like program name and start time automatically. In case any changes to the playlist occur, the graphics will update all the relevant information.

In addition, an automatic error check makes sure, that changes in the original schedule do not corrupt the imported playlist. Viz Multichannel offers advanced error protection features that alert about animations overlapping, mismatches or any other deviations from the schedule.

Multichannel works with relative time codes. Offsets for graphics are given, based on the timecode of a specific event rather than an absolute time of day. Updates in the playlist do not affect the secondary events (e.g. graphics, video clips or a combination of the two) in the playlist, simply because the relative start point of such an event in relation to the primary event always stays the same.

Viz Multichannel integrates with Viz One that enables the operator to search and browse for Clips stored in the Viz One from within the Viz Multichannel user interface. Video clips that are used in the playlist are automatically transferred to the relevant Viz Engines by Viz One. Video clips can either be added as full screens, or embedded into the graphics.

Finally, the playlist can be populated with graphics effects from all sources that follow the ODBC standard.

Viz Multichannel allows the promotion of programs and shows across multiple channels. This is made possible by accessing the playlist of other channels and cross referencing the content with the primary channel.

Viz Multichannel can also make use of Viz Engine for local preview of graphics and graphics with embedded video clips. The preview functionality is an essential tool for operators in the master control room to monitor graphics before taking it to air.

2.3 Graphics Workflow

Viz Engine supports several workflows with regards to how and when graphics and video are mixed. To simplify it we can say that Viz Engine supports graphics and video mixing in an *Upstream* or *Downstream* workflow.

An **upstream** workflow means that graphics are rendered separately and independently of the video signal before it is keyed on top of the video signal, traditionally by a vision mixer.

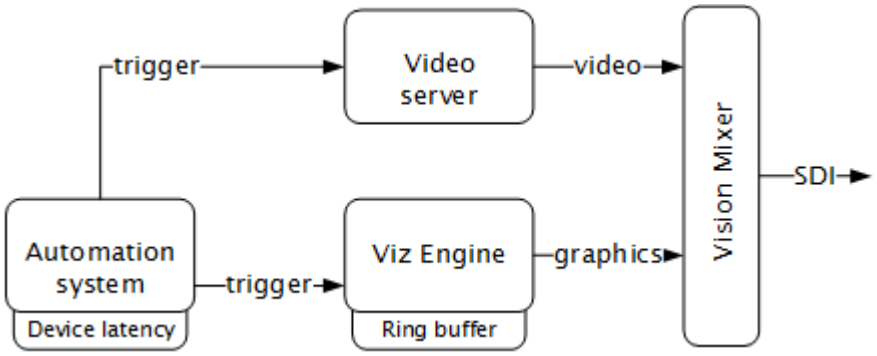
Opposite to upstream mixing you have **downstream** mixing. Downstream mixing means that graphics and video are composited and mixed by Viz Engine. This can be live video or clips treated as DVE for graphics insertion and/or squeeze backs.

> **Note:** The diagrams below are simplified. Details such as audio, keying (key out) etc. are not shown. For details about the full feature set of the Viz Engine see the Viz Engine manual at the Documentation site.

2.3.1 Upstream

An **upstream** workflow basically means that graphics are rendered separately and independently of the video signal before it is keyed on top of the video signal, traditionally by a vision mixer.

Note that mixing graphics and video in an upstream workflow introduces **latency** because graphics must be rendered before it can be mixed with the video signal for a final SDI output.

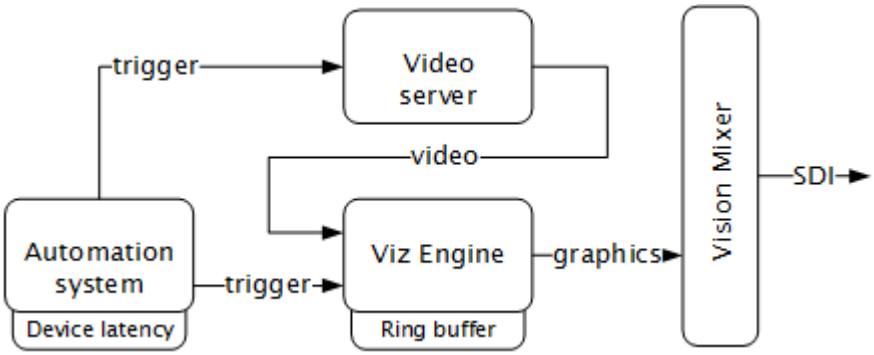


Therefore most automation systems, including Media Sequencer, are able to adjust and cater for latency introduced by devices such as Viz Engine due to the buffer it needs to render graphics in real-time.

In the case of Viz Engine and graphics output the latency has to match Viz Engine's **ring buffer**. Ring buffer is simply put the time (in frames) Viz has before its graphics should be ready for on air, and sent to your vision mixer.

Setting the ring buffer size is often simply a matter of setting a parameter called **Ring buffer size** using Viz Engine's configuration tool; however, the ring buffer size is only a maximum value which means that graphics rendered faster than the set size will be on air before it was intended. The latter is often the case when an automation system simultaneously takes video and graphics on air.

2.3.2 Downstream



Opposite to Upstream mixing you have **downstream** mixing. Downstream mixing basically means that graphics and video are composited and mixed by Viz Engine. This can be live video or clips treated as DVE for graphics insertion and/or squeeze backs.

In the case of the automation system, the downstream workflow allows such systems to simultaneously take video and graphics on air without worrying about latency as Viz Engine manages compositing and mixing of graphics and video.

In case graphics rendering should fail the video will simply pass through before the graphics engine is on air again and graphics compositing can commence.

2.4 Viz Multichannel Terminology

A number of glossary items in the table below refer to one another. If a definition contains an unfamiliar term, check for its explanation in the same table.

Term	Definition
Action	An action can be a GPO command, Viz Engine command or a Viz Ticker command. See Actions.
Automation system	The system that manages the assemblage of broadcast systems, meaning the camera, graphics, prompters, etc. for broadcast. During playout, the system sends control commands to Viz Multichannel.
Broadcast day playlist	Viz Multichannel supports two types of playlists; **broadcast day** and **continuous playlists**. A broadcast day playlist must be switched based on day switch settings.

Term	Definition
Channel	A channel is a defined broadcast channel. In Viz Multichannel a channel holds all the information needed for playout of that channel's program content. This involves how to import and map playout schedule(s) to a single continuous playlist or multiple broadcast day playlists. It also includes how Viz Multichannel is configured in order to cater for the channel's setup requirements (see device channel).
Control Room	Room serving as an operations center where a facility or service can be monitored and controlled. A control room generally serves a single channel.
Condition	Applied on rules, a condition relates to a primary event. When defining a condition, one or more attributes must be selected: the user enters a value which the primary event attribute must meet. If the condition is met, then the associated template will be shown.
Continuous playlist	Viz Multichannel supports two types of playlists: **continuous** and **broadcast day playlists**. A continuous playlist does not have to be switched based on day switch settings.
Device channel	A device channel is basically a list of playout devices assigned to a Channel. This can be one or multiple Viz Engines for graphics playout and video devices for full screen video playout (see playout device).
DVE	Digital Video Effects. Video that is played through the Viz Engine and that can have 2D animation.
Event	A playlist element. Can be a primary or secondary event.
Event ID	For primary events, this field serves as the index on which the playlist updates are done. This identifies the primary event, and is the key to knowing which event is to be updated.
Item	An item (or element) in a playlist. Can be a primary or secondary event.
Master Control Room	The Master Control Room (MCR) is the technical hub of a broadcast operation, commonly found among most over-the-air television stations and networks. It is distinct from production control rooms in television studios where activities such as switching from camera to camera are coordinated. The MCR will typically contain a Multichannel client for making last-minute changes and monitoring.

Term	Definition
Media Sequencer	Media Sequencer is a central software component used by Vizrt client applications. The Media Sequencer is a framework for defining and executing media elements.
Offset	The delay between a secondary event and its respective primary event.
Page	A page is an instance of a template containing data (such as imagery, text, video), and is based on a graphics template. Once added to a Viz Multichannel playlist, pages are considered secondary events.
Playout device	A playout device is either a Viz Engine dedicated to graphics and video clip playout, or a video device dedicated to full screen video playout, among other things (see device channel).
Playlist	A list of programs, typically for a single day. An external playlist can be imported from an automation or scheduling system. A Viz Multichannel playlist is composed of primary and secondary events and can be viewed in the pane on the right.
Playlist Element	A primary or secondary event in a playlist.
Primary Event	A program in a playlist; appears as the parent element. Templates and Viz Commands can be added as secondary events.
Rule	For imported (and subsequently updated) playlists, you can create sets of rules that govern how templates can be automatically associated with certain events within a playlist. Rules are useful when external playlists do not already contain secondary events. Rules are individually defined for each template. Both master and editable templates support rules. Rules can also be applied to Viz Commands (see Working with Actions). Rules are applied when importing a schedule or updating a playlist of external origin.
Scene	A graphic scene that has been built in Viz Artist, but has not yet been imported into Viz Multichannel.
Scheduling department	See traffic department.

Term	Definition
Scheduling system	The system used by the traffic department (scheduling department) for scheduling primary events - advertisements in particular - of program material for the broadcast day. The result of this scheduling is a daily schedule which is the input for Viz Multichannel. Some scheduling systems also include information for secondary events. Note that a scheduling system is also known as a traffic system.
Secondary Event	A child element of a primary event in a playlist. Can be a template or a Viz Command.
Template	A graphic scene that has been built in Viz Artist, after it has been imported into Viz Multichannel. A template is used to create pages (an instance of the template) that are added to the playlist. Once added to a Viz Multichannel playlist, pages are considered secondary events.
Traffic department	The department where the initial insertion of primary and secondary events into the schedule takes place. Once complete, the schedule is transferred to the automation system and Viz Multichannel in the Master Control Room for the actual playout. Note that the traffic department is also called the scheduling department.
Trigger	A control command initiated from the automation system that tells Viz Multichannel to execute a certain command on a playlist event, such as LOAD, PLAY or STOP. The automation system uses a known protocol, such as VDCP, CII, GPI etc. to send the command.
Viz Engine	A combination of hardware and software used to render graphics and to play out media such as video.

3 Requirements

There are compatibility requirements, access policies and rights for the software components in a Viz Multichannel work flow.

IMPORTANT! Always check component software Release Notes, bundled with the software installers at download.vizrt.com and in the Documentation sub-directory of the program directory once the program is installed.

3.1 General

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 and workgroup.
- Users of the Vizrt machines should ideally be separated into 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 a USB or a parallel port dongle on the renderer machine is required.

3.2 Hardware

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

For older hardware, such as Viz Engine, that is used with newer versions of Vizrt software, it is always recommended to check the current hardware specifications for the new software version to make sure that the set-up will work.

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 into the Media Sequencer servers.

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

3.3 Software

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

IMPORTANT! Always read the Release Notes (RN) for late minute changes or requirements, if any. If there are differences in the hardware or software requirements listed here and in the RN then the Release Notes supersedes the manual.

3.4 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 Media Sequencer. The client gives the user access to creation, editing and playout of pages with graphics and video clips.

Component	Requirement
Software	Media Sequencer 4.1 or higher Microsoft .NET Framework 4.6.1 or higher. Microsoft Visual C++ 2010 Redistributable Package (free download from http://www.microsoft.com/en\-us/download/details.aspx?id=5555) Viz Engine 3.6 or higher. Viz Engine 3.8.3 recommended. If you are using a local Viz Engine to preview video clips from Viz One, Viz Engine must be installed with video codecs: (Windows XP = MatroskaSplitter, ffdshow, Win7DSFilterTweaker // Windows 7 = K-lite Codec Pack full) Viz One 5.11 or higher if using Viz One integration.

Component	Requirement
Executable(s)	VizRundown.exe PlaylistImporter.exe Version 1 viz.exe (Viz Engine executable) PromoServer.exe UpgradeTool.exe HarrisIntegration.exe MarinaIntegration.exe NeptuneIntegration.exe
Service(s)	Viz Multichannel Schedule Collector Viz Multichannel Promo Server Viz Multichannel Integrations Hub
Operating system	Windows 10 32-bit or 64-bit Windows 7 32-bit or 64-bit Windows Server 2008 R2

3.5 Integration With Viz One

Multichannel integrates with the Viz One MAM system. Viz One version 5.8 (and later versions) require Multichannel version 2.11 or later.

3.6 Network Ports And Connections Ports And Connections

Application (From)	Application (To)	Port
Viz Multichannel (VizRundown.exe)	Media Sequencer	8580, 8594
Viz Multichannel	Viz Engine	6100, 6800
Viz Multichannel	Viz One	80
Viz Multichannel	Promo Server	9005
Viz Multichannel	Preview Server	5400, 21098

Application (From)	Application (To)	Port
PlayList Importer	Media Sequencer	8594
Integration Modules, Quick Scheduler Server	Integrations Hub	9990
Quick Scheduler	Quick Scheduler Server	9991
Harris Integration	Harris Automation	10050
Marina Integration	Marina Automation	18083

Ports in table above are TCP. Read the *From* and *To* in the table as initiator and receiver. Example: Multichannel uses TCP-port 8580 and 8594 when exchanging data with the Media Sequencer. Not all ports are used at all times, but they can be used and must be available. Traffic can be assumed bi-directional, i.e. from and to the services using the ports indicated in the table.

Note: Viz Multichannel Marina Integration sends traffic on port 18083 to the Marina Automation and uses port 12212 bi-directional.

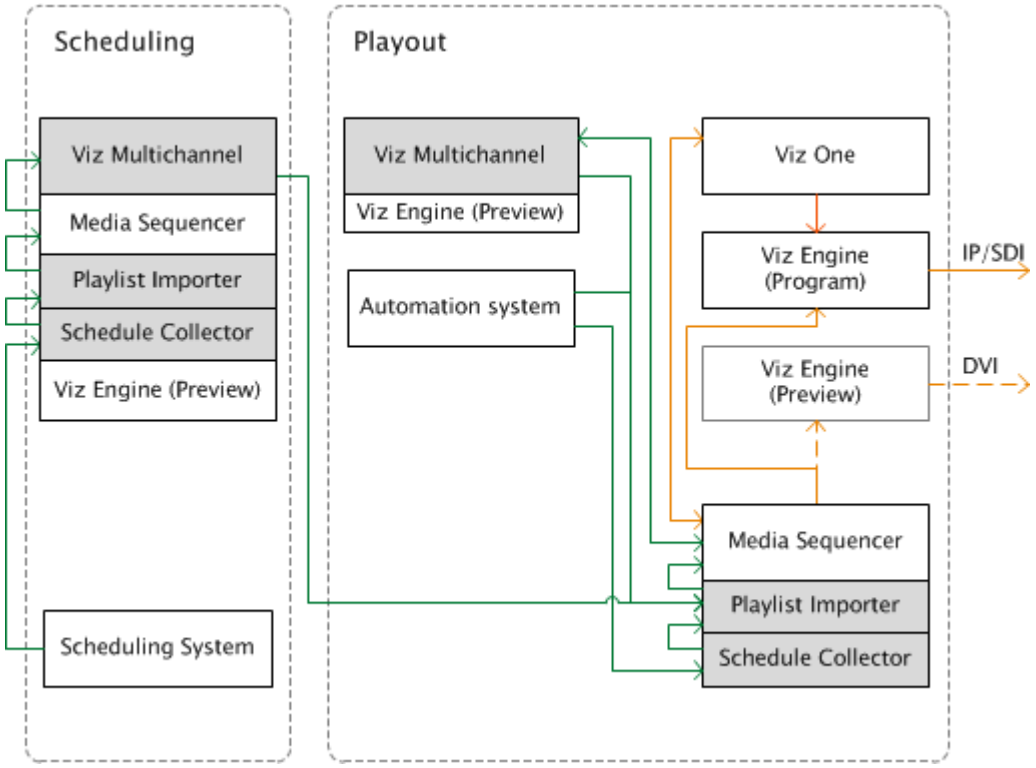
IMPORTANT! Some ports are configurable. For instance the Viz Engine uses port 6100 (and additional port 6800 for dual-channel engines) but can be configured to use other ports.

4 Setup And Configuration

When setting up Viz Multichannel, you must also install software components in addition to those bundled with Viz Multichannel. References is made below to the relevant manuals for help with installation of non-bundled software components.

When planning setup and configuration, two aspects in particular must be carefully considered before installation and configuration:

- How will the schedule be provided and how will it be ingested?
  Many Viz Multichannel systems are connected to an automation system that automatically provides the schedule from a scheduling department. Other installations read the schedule from a text file, a database, XML, Excel or by other means. Multichannel refers to the received schedule (what to do and when to do it) as a playlist. At any given time, Multichannel must have a valid, active and running playlist for the planned automated actions to be performed.
- How will graphics be triggered?
  There are many protocols (VDCP, REST, GPI and Intelligent Interface) that can trigger graphics. In some cases, external systems (automation or traffic systems) will trigger graphics by sending a command utilizing one of the protocols mentioned. These are called externally triggered events. In some cases, the automation system will only trigger main events (for example: a film) and graphics will then be applied by a time offset from the main event.



Viz Multichannel is typically installed in the following locations:

- Viz Multichannel's Schedule Collector and Playlist Importer on the Media Sequencer machine in the **server room**. Media Sequencer is in most cases installed on the Viz Engine (program) machine.
- Viz Multichannel, it's Schedule Collector and Playlist Importer on a client machine in the **scheduling center**
- Viz Multichannel on a client machine in the **master control room**

This section covers the following topics:

4.1 Bundle Installer

The bundle installer can be used to install one or all of the separate components (programs) that are part of Viz Multichannel. It is typically distributed as:

```
MultiChannelBundleInstaller-<VERSION-NUMBERS>.exe
```

Start the installer and select the components you require for installation, repair or deletion. The installer will also perform the required basic configuration and starting service processes. The bundle installer is the most convenient installation method and is therefore recommended. See below if you require the separate MSI components.

If you need to install from separate + installers, see Unbundling the Wrapped Installer below.

Start by double-clicking the bundle installer and click install after selecting the relevant components:

4.1.1 Unbundling the Bundle Installer

You can unpack the separate .MSI installers in the bundle installer by executing from the command-line with the argument "*/msi*".
For example:

```
MultiChannelBundleInstaller-<VERSION-NUMBER>.exe /msi
```

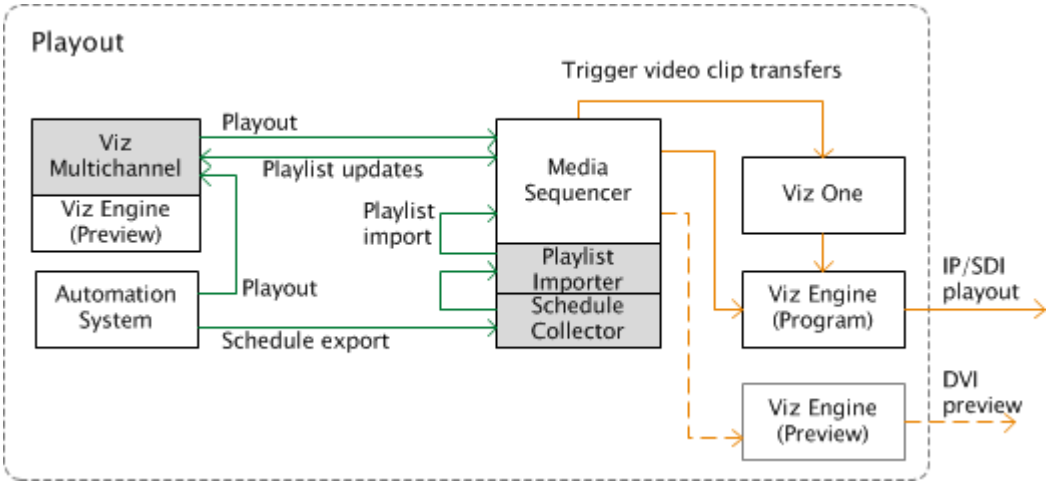
This will create a new directory with the installer name that contains the separate MSI installers.

The bundled installer will also accept the standard */passive* and /_silent _options:

- /silent - no GUI shown.
- /passive - GUI shown, but no need to press any buttons.

4.2 Playout

4.2.1 Playlist Importer



4.2.2 Component Placement

A second Viz Multichannel application is typically installed in the master control room (MCR) for monitoring purposes and manual update of data. It can also be used for manual playout. This installation also includes a local Viz Engine for preview purposes.

Integrated with an automation system, Viz Multichannel can import its schedule(s) and allow the automation system to control the playout of video and graphics without any manual intervention.

The following software components must be installed on the machine in the MCR:

- Viz Multichannel client
- Viz Engine (local preview)
  Viz Multichannel's Schedule Collector and importer must be installed alongside the Media Sequencer. Note that you may install the Media Sequencer, Schedule Collector and Playlist Importer on the Viz Engine program machine.

The Schedule Collector collects and outputs scheduled events, typically from the automation system, which the Playlist Importer imports into the Media Sequencer for the Viz Multichannel operator in the MCR to see. Final mapping of events into the Vizrt playlist is done using the Viz Multichannel client.

Video clip transfers from Viz One to the Viz Engine program machine are initiated by the Media Sequencer once the playlist is activated.

The following software components are in use:

- Viz Multichannel's Schedule Collector (SCC)
- Viz Multichannel's Playlist Importer (PLI)
- Viz Engine (program and preview)
- Media Sequencer

> **Note:** Collection of events from scheduling systems is not currently supported by the Schedule Collector. This is done using the Viz Multichannel client in *scheduling mode*.

This section covers:

- Installation of Viz Multichannel
- Installation of Viz Engine Machines for Playout
- Configuration of Channels with channels.ini
- Enabling Logging

4.2.3 Installation of Viz Multichannel

Viz Multichannel in the master control room must be connected to Viz Engines for program and preview output; however, a Viz Engine is often required for local preview in addition. Ensure that Viz Engines are ready before starting the installation steps below.

Since a Viz Engine is also used for local preview by the Page Editor, a **VGA** version must be installed.

> **IMPORTANT!** Ensure that clocks on all machines in the installation are synchronized. It is also recommended to set all date formats on all machines to the same format.

Install the Viz Multichannel Client

1. Start the Viz Multichannel installer.
2. Click **Next.**
3. Select **Complete** and click **Next.** Select **Custom** if a different *install path* is required.
4. Click **Install.**
5. Click **Finish.**

Install Viz Engine

1. Start the Viz Artist/Viz Engine installer.
2. Click **Next.** Check the *I accept the terms in the License Agreement* check box and click **Next**
3. Click **VGA.**
4. Click **Next.** Select *features* and/or a different *install path* if required.
5. Click **Install.**
6. Click **Finish.**

4.2.4 Installation of Viz Engine Machines for Playout

It is recommended to install Viz Multichannel's Schedule Collector, Playlist Importer, and Media Sequencer on the same machine as the Viz Engine defined as your program output channel.

> **IMPORTANT!** Ensure that clocks on all machines in the installation are synchronized. It is also recommended to set all date formats on all machines to the same format.

Install the Schedule Collector

1. Start the Viz Multichannel Schedule Collector installer.
2. Click **Next.**
3. Click **Next.** Select a different *install path* if required.
4. Click **Install.**
5. Click **Finish.**

Install the Playlist Importer

1. Start the Viz Playlist Importer installer.
2. Click **Next.**
3. Click **Next.** Select a different *install path* if required.
4. Click **Install.**
5. Click **Finish.**

Install Media Sequencer

1. Start the Media Sequencer installer.
2. Click **Next.**
3. Click **Next.** Select *features* and/or a different *install path* if required.
4. Click **Install.** Put *shortcuts* on the desktop if required.
5. Click **Finish.**

Install Viz Engine (program and preview)

Viz Engines used as your program and preview output channels can easily switch roles, hence, you should always have two **Video** versions installed.

1. Start the Viz Artist/Viz Engine installer.
2. Click **Next.** Check the *I accept the terms in the License Agreement* check box and click **Next**
3. Click **Video.**
4. Click **Next.** Select *features* and/or a different *install path* if required.
5. Click **Install.**
6. Click **Finish.**

4.2.5 Configuration of Channels with channels.ini

In order for the Master Control Room machine(s) that use the MCR-mode of Multichannel to have access to all channels, you **must** populate its `channels.ini` file with all channels defined on the Media Sequencer machine(s). If the *channel.ini* configuration file is not present or incorrectly formatted, the Multichannel GUI in MCR-mode will abort startup with an error message.

Configure channels.ini

1. In Windows Explorer, locate the Viz Multichannel's directory where the *channels.ini* is:
    - For Windows XP this would normally be:

- `C:\Documents and Settings\All Users\Application Data\Vizrt\Multichannel\channels.ini`
- For Windows 7 or Windows Server 2008 R2 and higher (64-bit Windows) this will normally be:
- `%ProgramData%\vizrt\Multichannel\channels.ini`

2. Open the `channels.ini` file in the text editor of your choice.
   - The file could be empty if not previously configured.
3. Enter each channel as a separate line in the text file.
   - The format is: `ChannelName=<IP address>` **or** `<hostname>`
   - Example: If you have two channels named *channel1* and *channel2* then the content of *channels.ini* would be (using a random example IP-address):

```
channel1=10.10.10.10
channel2=20.20.20.20
```

4. Save and close the file. Note: The `channels.ini` is a normal text file so make sure you save the file as type text.
5. Add `-msehost none` to your Viz Multichannel shortcut as explained in Startup Parameters.

4.2.6 Enabling Logging

Logging will help you troubleshoot issues that may occur. Note that the log produced by Viz Multichannel only shows what the Media Sequencer attempted to play out (and not what was actually played out).

For more information on how to format output, see the Media Sequencer manual. See also Logging.

Enable Logging

- On the Media Sequencer machine, create the following folder path: `%ProgramData%\Vizrt\Media Sequencer` to generate a Daily Log.

See Also

- Logging
- Master Control Workflow
- Schedule Collector
- Channel Settings
- Playlist Importer
- Scheduling
- Import Guide
- Viz Engine Administrator Guide for more information on setup and configuration of Viz Engine

4.3 Playout Configuration

Viz Multichannel is able to handle multiple TV channels. In order to accomplish this you need to define separate configuration settings per channel. You therefore need to define playout devices as part of the configuration. Playout is defined as graphics and/or video output.

For must assign Viz Engines for *graphics output*. For *video output*, you can either assign Viz Engines or other video playout servers that are able to handle your video output. For more information, see Upstream and Downstream workflows in the Graphics Workflow section.

4.3.1 Forked Execution

Forked execution allows you to set up a single channel with multiple concepts, triggering one Viz Engine per concept. Forked execution supports standalone and Transition Logic scenes. Concepts are defined per channel when Configuring Device Channels.

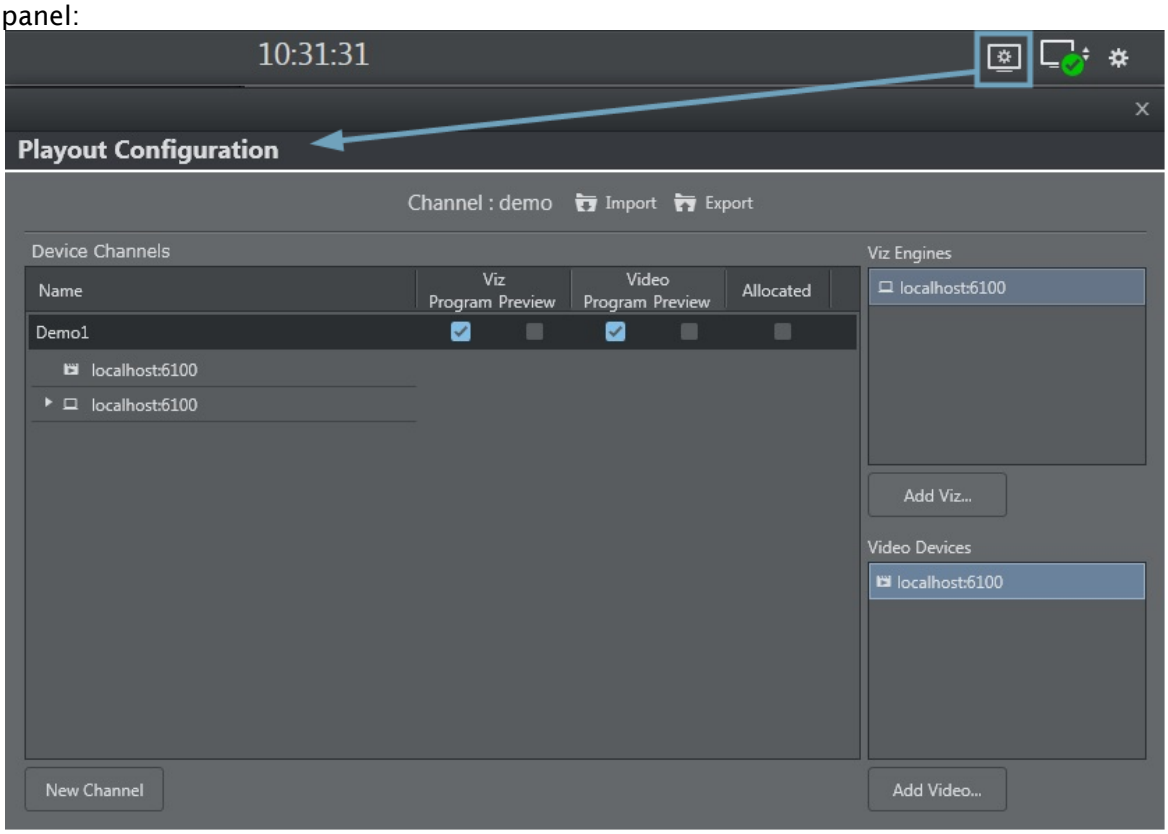
> **Note:** As an option you can also use this setup to have the same graphics concept being rendered on multiple Viz Engines.

4.3.2 Configuring Device Channels

Device channels are essentially placeholders for playout devices. You use device channels to group the graphics and video devices into logical areas of responsibility (program and preview channels for graphics or video devices).

Graphics device channels may also be configured to apply a given graphics design concept (for example *weather*, *sports*, *election*, *news*).

Click the **Playout configuration** icon on the main menu-bar to display the **Profile Configuration** panel:

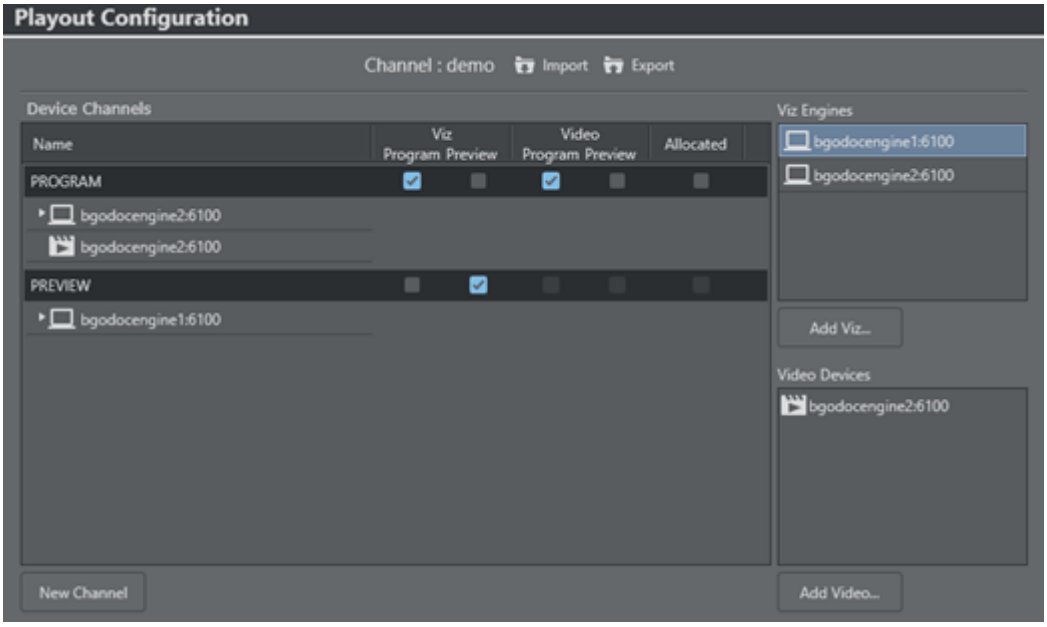


You can use the **Import** and **Export** buttons to import (or save) a configuration to an XML-file for safekeeping. Importing a configuration from an XML-file makes it easy to quickly change configuration parameters.

This section contains the procedures:

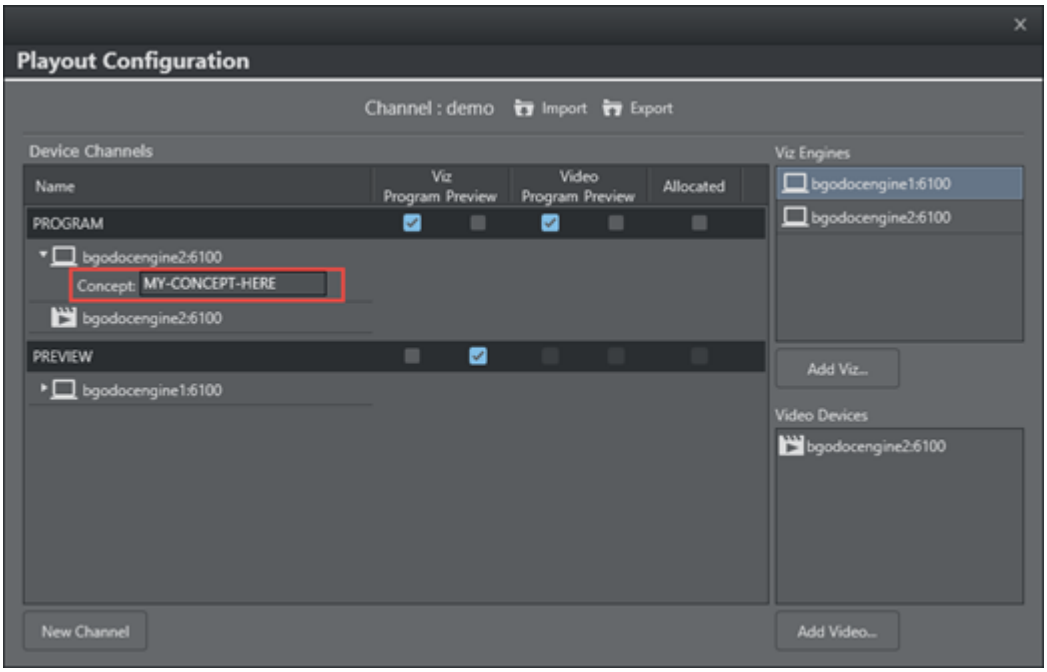
- Add a Playout Device to the Device Channels List
- Add a Concept Override for a Channel's Playout Device
- Rename a Playout Device in the Device Channels List
- Remove a Playout Device in the Device Channels List

Add a Playout Device to the Device Channels List



- Click the **New Channel** button, or drag and drop a playout device to the **Channels** list.

Add a Concept Override for a Channel's Playout Device



1. **Expand** the device channel's playout device and append the concept name. This will override any concepts set elsewhere.
2. Click **OK**

Caution: Note that concept names are case sensitive.

Rename a Playout Device in the Device Channels List

- Right-click the channel and select **Edit Channel Name** from the context menu, or double-click the name.

Remove a Playout Device in the Device Channels List

Select the channel and press the **Delete** button or right-click the device and select **Remove Output** .

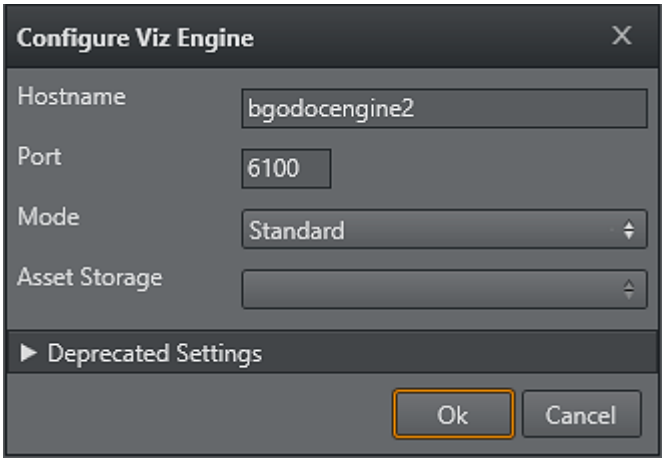
4.3.3 Configuring Playout Devices

Playout devices are physical output devices that play out program or preview content of graphics or video. These devices are added to *device channels* for the purpose of logically grouping playout devices into functional areas of responsibility; they act as program or preview channels for either graphics or video.

This section contains the procedures:

- Configure a Graphics Device
- Configure a Video Device
- Configure a Dummy Video Device
- Edit a Video Device
- Delete a Video Device
- Add a Video Device to the Channels List
- Enable Scene Transitions

Configure a Graphics Device



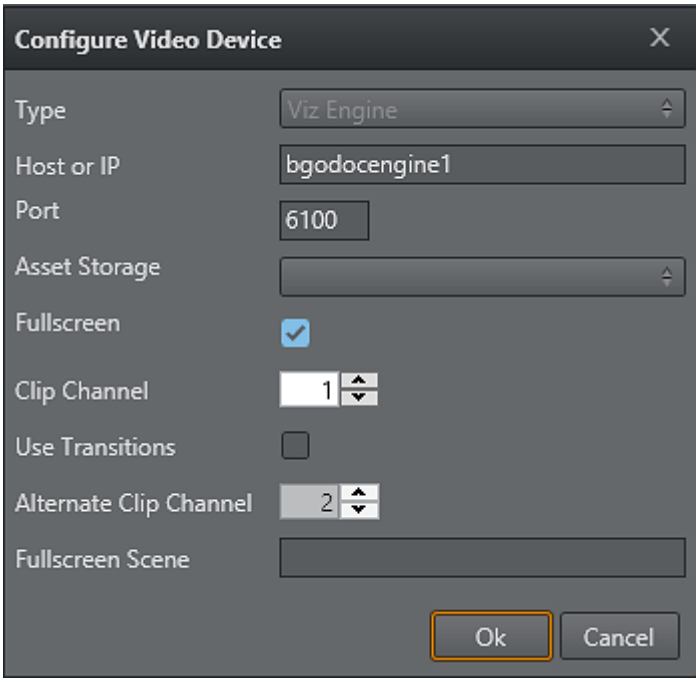
1. Click the **Add Viz** button to open the Configure Viz Engine dialog box.
   a. Enter the hostname and port
   b. Default port for Viz Engine is 6100.

2. *Optional*: Select **Mode.**
    a. **Scene Transitions**: See To Enable Scene Transitions.
    b. **Still Preview**: See To Enable Scene Transitions.
3. *Optional*: Select an **Asset Storage** location.
    a. Asset Storage lists available Viz Engine storage for clip transfer and playout.
4. Click **OK**.

A status indicator will show if the renderer is On Air.

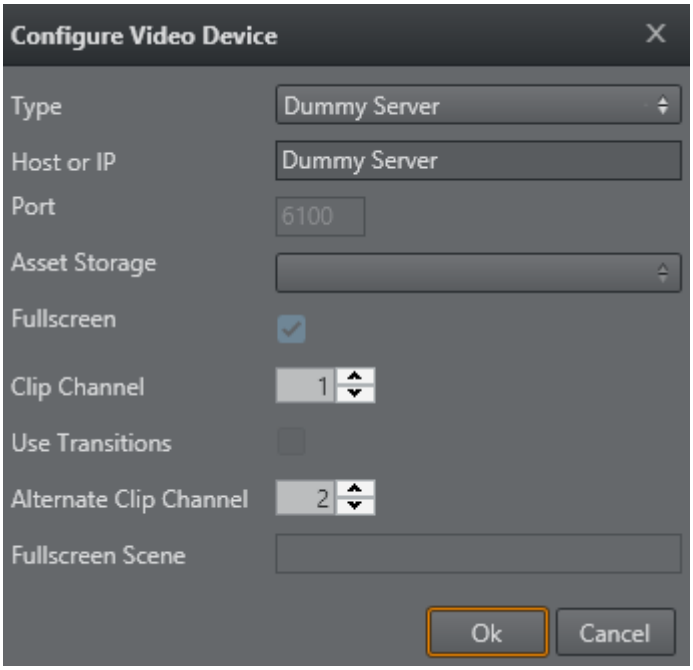
> **Note:** *Deprecated Settings* are not used with Viz Multichannel.

Configure a Video Device



1. Click the **Add Video** button to open the **Configure Video Device** dialog.
2. Select the video server **Type.**
3. Enter the **Host** or **IP address** and the **port.**
   - Default port for MVCP is 5250.
   - Default port for Viz Engine is 6100.
4. Select an **Asset Storage** location.
   - Asset Storage lists available Viz Engine storage for clip transfer and playout.
5. Enable/Disable **Fullscreen** mode.
   - When Fullscreen is *enabled*, which is the default behavior, stand-alone video clip elements are played out full screen in the back layer. Graphics in the middle or front layer will still play.
   - When Fullscreen is *disabled.* stand-alone video clip elements will only replace the current video clip without triggering animations or transition effects.
6. Select **Clip Channel** (only relevant for Viz Engine).
7. Click **OK**. A status indicator shows if the device is On Air/online.

Configure a Dummy Video Device



1. Click the **Add Video** button to open the **Configure Video Device** dialog.
2. Select the video server **Dummy Server.**
3. Enter a name for your dummy server (e.g. Dummy Server).
4. Click OK.

> ⚠ **Note:** This will enable use of the Timeline Editor when Viz One is simply a gateway and video is served from an alternative asset management system.

Edit a Video Device

- Right-click the video device and select **Edit** from the context menu, or simply **double-click** it.

Delete a Video Device

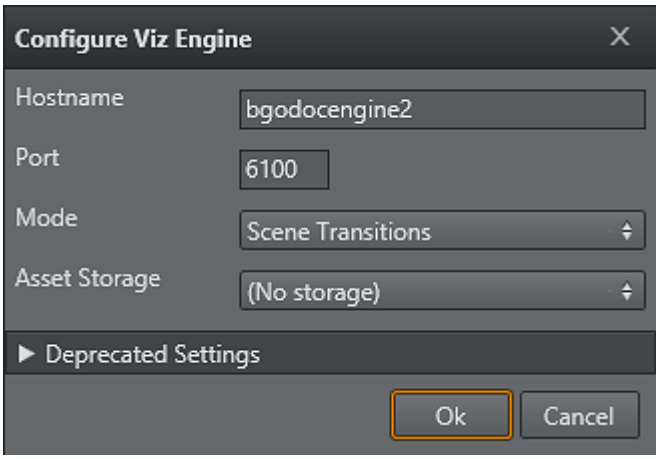
- Right-click the video device and select **Delete** from the context menu, or simply select it and press the **DELETE** button.

Add a Video 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 context menu and choose:
  - Add to profile (creating a new channel) or
  - Add to selected channel.

Enable Scene Transitions

Transition Effect scenes are made in Viz Artist and can be applied to data elements to create custom transition effects from one scene to the other. If an effect is specified, the effect will be shown when the scene is taken On Air.
Effects include wipes, dissolves and alpha fades.



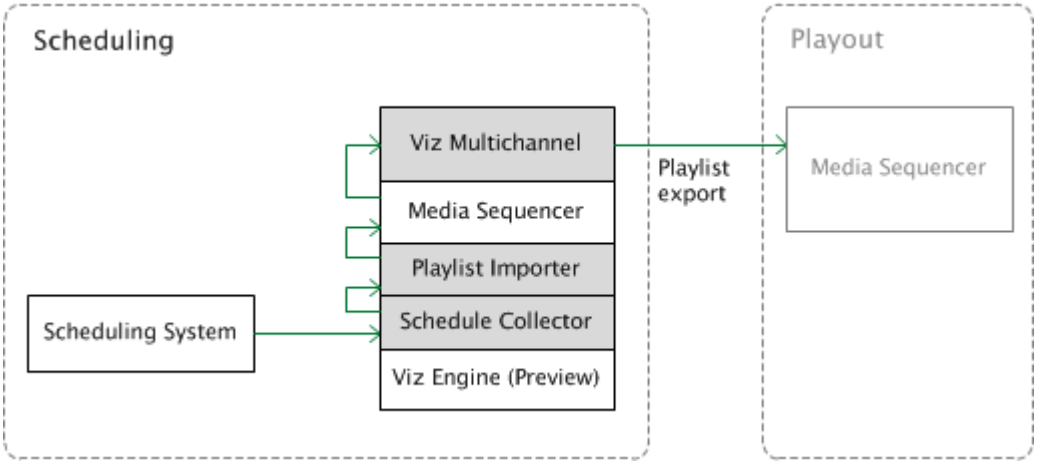
1. Configure the Viz Engine settings as described in how Configure a Graphics Device
2. Set the **Mode** to **Scene Transitions** to allow the renderer to copy (or snapshot) the scenes for creating a transition effect between them.
3. Click **OK.**
4. Add the program renderer to the program channel.

> **Note:** The program channel must be configured and on-air in order for the effects to be visible.

See Also

- Configuring Device Channels
- Viz Artist User Guide section on *Transition Logic*

4.4 Scheduling



A typical installation includes one Viz Multichannel and a local Viz Engine. In addition you typically install Viz Multichannel's Schedule Collector (SCC) and Playlist Importer (PLI) in order to collect and import playlists through mapping settings into Viz Multichannel.

Viz Engine is used for preview and is typically a VGA version without SDI out capabilities. This setup allows the Scheduling Center to prepare and preview playlists before sending them to playout by the program Viz Engine(s).

The following software components are in use:

- Viz Multichannel client
- Viz Multichannel's Schedule Collector (SCC)
- Viz Multichannel's Playlist Importer (PLI)
- Viz Engine (local preview)
- Media Sequencer

4.4.1 Installation for Scheduling

The machine in the Scheduling must have the following software components installed:

- Viz Multichannel client
- Viz Multichannel's Schedule Collector
- Viz Multichannel's Playlist Importer
- Media Sequencer
- Viz Engine (preview)

> **IMPORTANT!** Ensure that clocks on all machines in the installation are synchronized! It is also recommended to set all date formats on all machines to the same format.

To Install Viz Multichannel Client

1. Start the Viz Multichannel installer.
2. Click **Next.**

3. Select **Complete** and click **Next.** Select **Custom** if a different *install path* is needed.
4. Click **Install.**
5. Click **Finish.**

To Install Media Sequencer

1. Start the Media Sequencer installer.
2. Click **Next.**
3. Click **Next.** Select *features* and/or a different *install path* if needed.
4. Click **Install.** Put *shortcuts* on the desktop if needed.
5. Click **Finish.**

To Install Viz Engine

Viz Engine is used for local preview, hence, you only need to install a **VGA** version.

1. Start the Viz Artist/Viz Engine installer.
2. Click **Next.** Check the *I accept the terms in the License Agreement* check box and click **Next**
3. Click **VGA.**
4. Click **Next.** Select *features* and/or a different *install path* if needed.
5. Click **Install.**
6. Click **Finish.**

See Also

- Playout
- Vizrt's Documentation Center

4.5 Running Viz Multichannel

This section covers the following topics:

- Media Sequencer
- Startup Parameters
- Time Format and Timezones

4.5.1 Media Sequencer

There must **always** be a connection to the Media Sequencer(s) when running Viz Multichannel. By default, the Media Sequencer runs as a Windows service, and is automatically launched on machine startup. You can check Media Sequencer by starting the Media Sequencer Launcher application. From the Launcher you can start, stop and set run-mode. Alternatively, start the Windows Services component and make sure Sequencer is running and set to autostart. You can see the complete Media Sequencer Documentation (assuming it's running on standard port) at:

```
http://YourMediaSequencerhost:8580/doc
```

> ⚠ **Note:** You must configure your `channels.ini` file in order for Viz Multichannel to run in Master Control Room (MCR) mode.

The Playlist Importer runs on the Media Sequencer by default. For a schedule to be imported correctly, your Viz Multichannel client must therefore set the correct Startup Parameters for your Media Sequencer.

4.5.2 Startup Parameters

Parameter	Description	Example
`-channelini`	A path of `channel.ini` file that we want to use for MCR mode. If no `-channelini` is specified, MCP will read `channel.ini` file from the default path, `[ProgramData]\Vizrt\Multichannel\channels.ini`	`-channelini "C:\channel_1.ini"`
`-msehost`	Hostname or IP address for Media Sequencer. If `none` is used MCP will work in MCR mode, reading each channel's Media Sequencer from `channels.ini`. See Playout and Configuration of Channels with channels.ini. If no parameter is provided, MCP will attempt to connect to `localhost`.	`-msehost none` `-msehost 10.210.0.10` `-msehost hostname`
`-vizdb`	host:db:user:pw Configure the Viz Engine 3.x database login for the local preview Engine.	`-vizdb localhost:VizDb:Guest`

4.5.3 Time Format and Timezones

All internal time handling calculations and operations - the time *reference* in the Media Sequencer - is always UTC (Universal Time Code), regardless of the timezone and local settings on your Windows servers and PCs. This is a reference time only - Window PC clients that are running the User Interface will often have different time-settings. This can easily get confusing, so please keep the following rules in mind:

- The Media Sequencer reference time is UTC.
- The Multichannel UI will show the *client* machine time. If you click on the time-display in the Multichannel UI it will show the Media Sequencer's time and local offset, if any.

When importing and handling time-dependent items in Multichannel please make sure that:

- Logic in rules should use the channel's timezone setting, see **Timezone Settings**.
- Logic for Page Content Filling (PCF) should use the playout channels timezone settings.

A timecode in the **Rules** section must always follow full time-code format - the value you manually enter must be **HH:mm:ss:00**. The value **HH:mm:ss**. is contained in *begin_time* and is pushed On Air when it is used as an attribute from which to grab data.

See Also

- Promo Server
- Working with Rules
- Page Content Filling Aliases

4.6 Video Configuration

To enable video to pass through Viz Engine when no scenes are loaded, you must activate the Matrox Watchdog functionality and enable video to loop through the Matrox X.mio or X.mio 2 board.

> ⚠ **Note:** The procedure below is not relevant for Viz Engine 3.6 and X.mio 2 plus users.

4.6.1 Configure Viz Engine to Pass through Video as DVE

1. Start Viz Engine's configuration tool (Viz Config).
2. In the **Matrox** section under the General tab enable **Use Watchdog**
   - **Use Watchdog:** When activated, this setting enables the Matrox X.mio watchdog feature. It defines what kind of key is produced when the watchdog takes over control. Default mode is Inactive. When the watchdog is enabled, turning off the video out will activate the software bypass after a given timeout (see next setting).
3. Set the **Timeout** setting (e.g. 100ms)
   - **Timeout:** Defines the time in milliseconds until the watchdog takes over control. This value should not be smaller than the time of two fields/frames. Default value is 999 milliseconds.
4. In the **Video Output** section, tweak the **h-phase** and **v-phase** settings to have a glitch free switching to and from the Watchdog.
   - *H-Phase and V-Phase: *Shifts the output signal with respect to the sync signal.
5. Open the Viz configuration file
6. Navigate to the `TARGA3200` section and set the following parameters
   - Set `video_loopthrough_mode = 2`
   - Set `video_loopthrough_reactivation = 1`

With these configurations you should have a DVE pass through as long as no scene or DVE is activated on the Viz Engine.

See Also

- Viz One Integration
- Global Settings
- Local Settings

- Working with Channel Settings
- Channel Settings

4.7 Preview Server

Preview Server is used in situations where Viz Engine provides frames for snapshot or thumbnail generation. Preview Server is used by several Vizrt products such as Viz Trio, Viz Multichannel and Viz Content Pilot Newsroom Component to fetch previews of overlay graphics for the Timeline Editor.

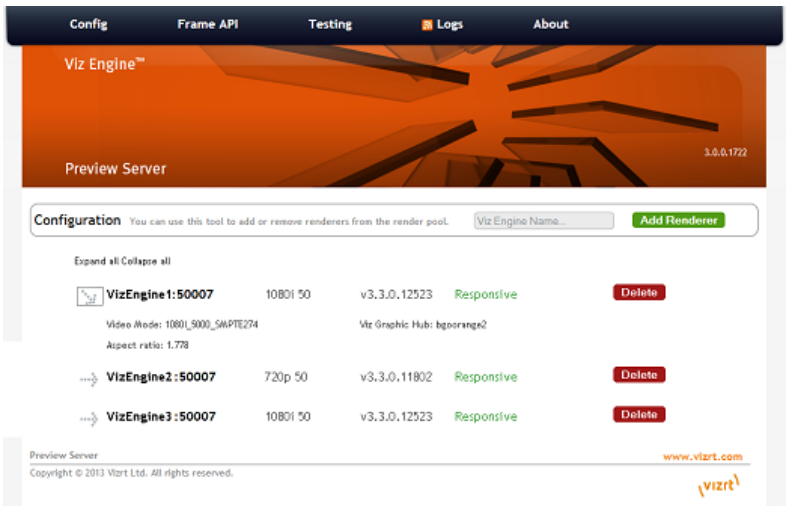
Preview Server can manage a pool of Viz Engines. Clients can query it for a Viz Engine that matches a specific video mode. The Preview Server provides load balancing, video mode matching and can be used to create a redundant renderer pool.

This section contains information on the following topics:

- Preview Server Web Interface
  - Config
  - Frame API
  - Testing
  - Logs
  - About
- VMC-Installation and Configuration
  - Requirements
  - Installation
  - Configuration

4.7.1 Preview Server Web Interface

The Preview Server has a web interface for accessing the Preview Server's features.



Access the Preview Server Web Interface

- Open the Preview Server Web Interface by navigating File Explorer to **All Programs > Vizrt > Preview Server > Preview Server Config**.
- Alternatively, access the Preview Server Web Interface in a web browser, using the host name of the machine running the Preview Server, and port 54000.
  for example, `http://<hostname>:54000/`

The Preview Server menu bar has links to the following pages:

- Config
- Frame API
- Testing
- Logs
- About

Config

The Preview Server can interact with one or more Viz Engines. These can be configured on the home page of the Preview Server web interface.

`http://<hostname>:54000/`

Add a Viz Engine

- Enter the Viz Engine hostname or IP address in the Configuration field, and click **Add Renderer**.

> ⚠ **Tip:** Click the arrow next to the Viz Engine entity or the **Expand All** link to see information on video mode, aspect ratio and Viz Graphic Hub connection.

> ⚠ **Note:** If not specified, the Viz Engine is added with default port 50007. When using Viz Engines in a *dual channel* setup, it is possible to run multiple instances of Viz Engine on a single host. Each instance uses a unique port, which means that two Viz Engines are only considered duplicates when both the hostnames and port numbers are identical. When referring to Viz Engines in a dual channel setup, type the port number after the host name (for example *VizEngine1:51007*).

Remove a Viz Engine

- Click the **Delete** button next to the Viz Engine entity that is to be removed.

Frame API

The Preview Server REST API page displays the REST API provided by the Preview Server and includes information on the Resource Types and Data Types that are used in the interface.

`http://<hostname>:54000/doc/rest_manual`

Testing

This page provides:

- Snapshot Testing - Test snapshot service.
- Snapshot Set Testing - Test snapshot service with set of positions.

To use these features, enter the snapshot XML data, payload XML data and the path to a scene. When the **Test this data** button is pressed, a feed is returned containing links to the requested snapshots.

`http://<hostname>:54000/testing`

Logs

This page provides a feed with links to Preview Server logs.

`http://<hostname>:54000/logs`

About

Opens the About window with details of installed Preview Server version. A link to the list of Third Party Component Credits is also provided.

4.7.2 VMC-Installation and Configuration

This section describes

- Requirements
- Installation
- Configuration

of the Preview Server.

Requirements

The Preview Server requires Microsoft .NET version 4 or newer. The free .NET 4.0 bootstrap installer may be downloaded directly from Microsoft.

Installation

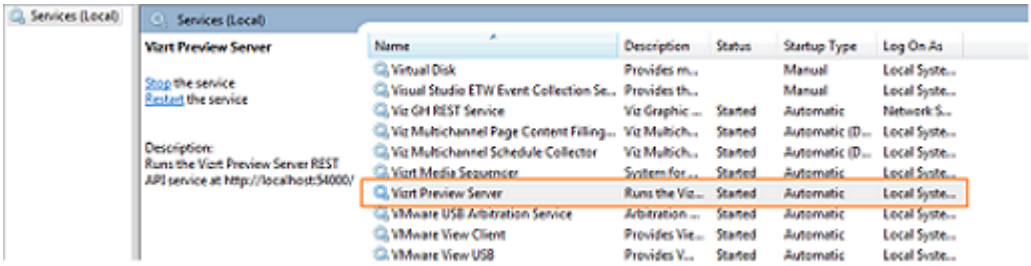
The Preview Server is a separate installer and can be downloaded from ftp.vizrt.com under the folder products/VizContentPilot/Latest Version folder.
Please carefully review the Release Notes before installing the product.

Install or Upgrade the Preview Server

As a user with Administrative rights:

1. Run the installer `Preview Server-<version>.msi`
2. Click **Next**.
   - *Optional*: Select the location of the installed files.
3. Click **Next**.
4. Click **Install** to start the installation process.
5. Click **Finish**.
   The installer will install the Preview Server as an automatically started Windows service and start the service. This could require the user to open the Preview Server port if using a Firewall.

To check that the service is correctly installed and running, go to **Windows: Control Panel > System and Security > Administrative Tools > Services** and check that the **Preview Service** is running and set to automatically start:



Configuration

Preview Server Service

The Preview Server is a Windows Service. It sets up an HTTP REST service on **port 54000** on the host it is running on. This service accepts requests for graphical snapshots of playout elements from a Viz Engine.

Viz Engines

Although the Preview Server can run on the same machine as a Viz Engine (also used for the Newsroom Component data element preview), it is also possible to specify additional Viz Engines in order to spread the load. Frame requests will be balanced across available Viz engines in a way that will minimize the memory load of each engine.

The pool of Viz Engines is configured on the Preview Server Web Interface **Config** page.

Scaling of the system should be monitored to avoid excessive client waiting time and potential overload of the Viz Engines.

Frame Cache

Frames are cached in memory, allowing quicker responses when requesting frames that have been requested previously. By default, frames will be cached for a maximum of one 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 retain cached results.

See Also

- Viz Engine Administrator Guide for information on installing Viz Engine.

4.8 Quick Scheduler Server

Quick Scheduler Server is a back-end component that hosts all schedules that is worked on via any Quick Scheduler client. This section presents:

4.8.1 Installation

1. Locate the current Quick Scheduler Server installer from your Vizrt representative or from the ftp server download.vizrt.com.
   The Quick Scheduler Server is a separate installer named *VizMultichannel_QuickSchedulerServer-VERSION.exe* where *VERSION* will be numbers indicating the release/version of the software. Double-click on the installer to start the installation.
2. Press **Next** and on the next page **Next** to install Quick Scheduler Server to the default installation directory.
3. Press the **Install** button and wait until the software is installed.
   You can now exit the installer by pressing **Finish**.

> **Important!** The Quick Scheduler Server run as a Windows Service process. It is recommended that the Quick Scheduler Server service process is enabled to start automatically and that the Quick Scheduler Server is run as an Administrator service level process

4.8.2 Configuration

Quick Scheduler Server Configuration

To configure Quick Scheduler Server follow these steps:

1. Use Windows Explorer to locate the directory `%ProgramData%\Vizrt\Multichannel\QuickSchedulerServer` and locate the config file.
   Normally: `c:`

`\ProgramData\Vizrt\Multichannel\QuickSchedulerServer\QuickSchedulerServer.config`

2. Open QuickSchedulerServer.config in a text editor.
3. For key ScheduleChannels change the attribute name value to be the target channel names. If you have several channels, each channel is separated by a "," (comma) character.
   Example format: `<add key="ScheduleChannels" value="MUSIC,MOVIE" />`
4. Save the `QuickSchedulerServer.config` file as a normal textfile.
   After you have configured (or changed) the QuickSchedulerServer.config file you need to restart the Quick Schedule Server service process.
5. To restart the Quick Schedule Server and to configure the service-level follow these steps:
   a. Start Windows Services administrator utility.
   b. On Windows 7 like systems: Press Windows Start menu button, type services.msc in the search bar and
   c. Press **ENTER** to start the program.

Channel Settings

After finishing the steps in Quick Scheduler Server Configuration and restarting the service process, there will be folders created for each channels in the directory `%ProgramData%\Vizrt\Multichannel\QuickSchedulerServer`.

To configure the channel settings please follow these steps:

1. Use Windows Explorer to locate the directory `%ProgramData%\Vizrt\Multichannel\QuickSchedulerServer\[channel_name]` and locate the settings file.
   Example: `c:\ProgramData\Vizrt\Multichannel\QuickSchedulerServer\MUSIC\settings.xml`
2. Open settings.xml in a text editor.
3. Modify the settings.
   IntegrationsHubHost: host name or ip of Integrations Hub.
   PublishTimeType: Can be *absolute* or *relative.*
   a. *absolute*: The server will publish schedule to Integrations Hub at the time specific in PublishTime.
      Example: if PublishTime is "05:00:00", the schedule will be publish on "05:00:00".
   b. *relative*: The server will publish schedule to Integrations Hub [xx:xx:xx time] before the Broadcast Day Start Time.
      Example: if PublishTime is "01:00:00" and Broadcast Day Start Time is "06:00:00", the schedule will be publish 1 hour before Broadcast Day Start Time which is "05:00:00".
   PublishTime: Time that server will publish schedule to Integrations Hub in hh:mm:ss format. Can be only positive value. Max value is "99:59:59".

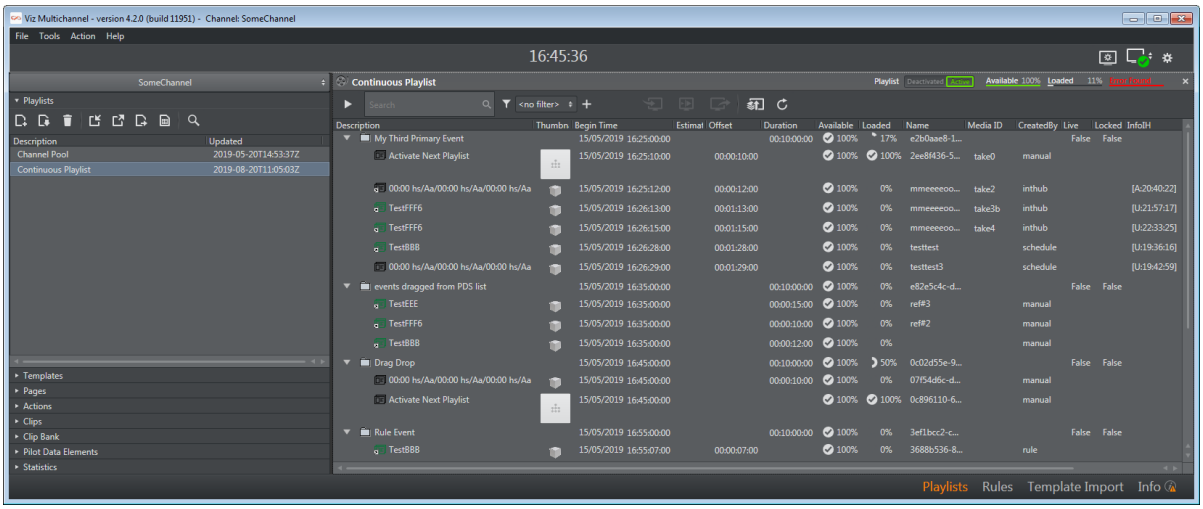
```
<ChannelSettings xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http:/
/www.w3.org/2001/XMLSchema-instance">
  <SettingsVersion>1</SettingsVersion>
  <IntegrationsHubHost>playout.internal</IntegrationsHubHost>
  <PublishTimeType>absolute</PublishTimeType>
```

```
  <PublishTime>05:00:00</PublishTime>
</ChannelSettings>
```

4. Save the `settings.xml` file as a standard text file.
5. After you have configured (or changed) the `settings.xml` file you must restart the Quick Schedule Server service process.
   To restart the Quick Schedule Server and to configure the service-level follow these steps:
   a. Start Windows Services administrator utility.
   b. On Windows 7 like systems: Press Windows Start menu button, type `services.msc` in the search bar
   c. Press **ENTER** to start the program.

5 User Interface

This chapter is a reference chapter for the user interface. It contains information relevant for the Viz Multichannel client when used in scheduling and master control room (MCR) mode.

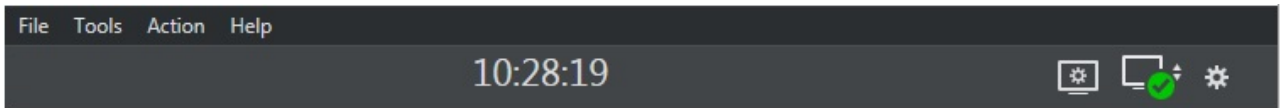


The main window is divided into the following sections:

1. Main menu with options **File, Tools, Actions** and **Help**. The toolbar icons can, if required, all be hidden or visible (except the **Time, Local Engine Status** and **Configuration** icons that always will be visible) using the **Action** menu page options.
2. Select panel to work on: **Playlists, Templates, Pages, Actions, Clips, Pilot Data Elements or Statistics**.
3. Work area for the selected **Playlist** or **Channel Pool**.
4. Menu-selector for easy access to **Playlists, Rules, Template Import** or the **Information** panel.

This section also contains:

5.1 Main Menu And Toolbar



There is a main menu at the top of Viz Multichannel and a dynamic toolbar below it.

A dynamic toolbar means that you can configure which icons (representing actions) are available in the toolbar. You configure which icons to display under **Actions** from the main menu.

The actions themselves will be available as keyboard shortcuts, for example **F9** and **CTRL + F9** to take or take out the Logo page, even if the icons representing the actions are not displayed.

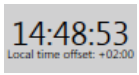
5.1.1 Main Menu

- File
  - **Exit:** Closes the application
- Tools
  - **Analyze logs:** allows you to open and analyze the As Run Logs, which offer a quick overview of all elements run by the system. The logs are created by the Media Sequencer.
  - **Reports Manager:** allows you to create reports on multiple channels.
  - **Generate Channels File:** generates a file containing information about the channels file. This is required when running Viz Multichannel in MCR mode (see Master Control Workflow).
- Action
  - **Edit Mode:** enables edit mode.
  - **Cleanup Engines:** clears all loaded graphics from the program and preview renderer memory for the output profile currently in use. This is done before initializing a new playlist or in order to re-initialize the same playlist into the renderer memory. Note that cleanup commands will affect all clients that are connected to the same Media Sequencer and that use the same output profile (see **Clear Layers**).
  - **Clear Layers:** clears all or specific layers (front, middle or back) for your channel's configured Viz Engines. Note: the graphics will still remain in the memory (see **Toolbar** and **Cleanup Engines**).
  - **Initialize:** manually initializes either the currently selected Channel or the Channel Pool. Initializing will fetch and load resources to the memory of the Viz Engine, ensuring that resources such as graphics are ready for playout. If it is not initialized, the Viz Engine will still load resources when needed, but pre-fetching can provide flicker and artifact-free playout in some situations.
  - **Logo Page:** allows you to take or take out the defined logo page.
  - **Error Page:** allows you to take or take out the defined error page.

- **Video-only Page:** allows you to take or take out the defined video-only page.
- **Ticker:** allows you to import or export Viz Ticker3D playlists (see Working with Ticker Actions).
- **Actions:** allows you to import or export actions from an XML-file.
- **Template and Pages:** allows you to import or export template and pages to XML-files.
- **Video bypass:** When enabled, only video is shown. When disabled, video and graphics are shown.

- Help
  - **Help (F1):** Launches the documentation in your preferred browser.
  - **About:** Shows the version of Viz Multichannel.

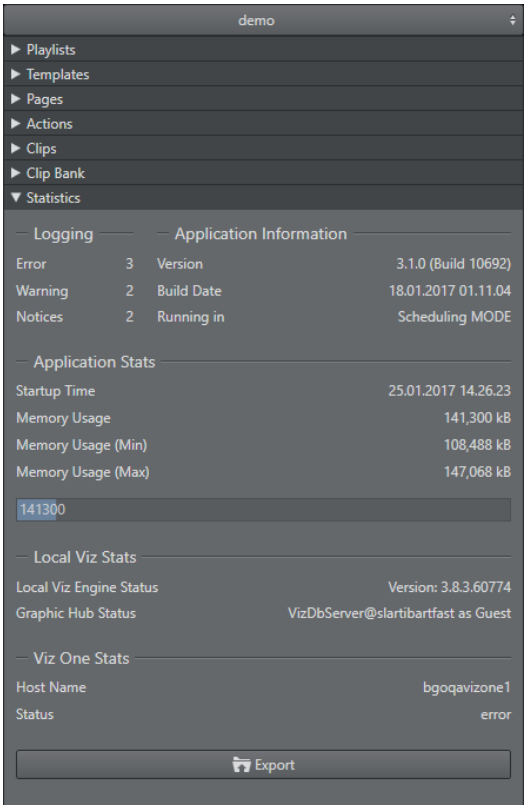
5.1.2 Toolbar

Icon	Shortcut	Description
		Configuration menu
		Local Viz Engine status. Sub-Commands that can be selected: Show Commands, Show Status and Restart Viz. Note that these commands will be sent to the local Viz Engine, normally used for preview. For more information about any given status, see the log messages in your Information Panel.
		Profile settings - click this icon for the Playout Configuration dialog where you can add playout devices and device channels.
		Shows the time of the currently selected channel's Media Sequencer server, with the local client (Multichannel UI) machine offset applied. Example: If the Media Sequencer machine is UTC and it is 12.00 and UI is CET (UTC+1), then the clock will show 13.00. Click the clock icon to show the Media Sequencer machine time with only the local offset and timezone-offset applied. Given the data in the example above, the time shown is now 12.00, and the time-zone info shown is UTC+0.
	**F9**	Take **in** the defined Logo Page.
	**CTRL + F9**	Take **out** the defined Logo Page.
	**F10**	Take **in** the defined Error Page.
	**CTRL + F10**	Take **out** the defined Error Page.

Icon	Shortcut	Description
	F11	Take **in** the Video Only Page.
	CTRL + F11	Take **out** the Video Only Page.
		Import a Viz Ticker definition file (XML).
		Export a Viz Ticker definition file (XML).
		Import Actions definitions (from XML file).
		Export Actions definitions (to XML file).
		Import Templates (and Pages) to the connected Graphics Hub.
		Export Templates (and Pages) from the connected Graphics Hub.
		**Enables** the mechanical bypass on the Matrox video card. This effectively bypasses any rendering and stops the Viz Engine from impacting the video signal. Important: for this to work, the Viz Engine must be properly configured. See the Matrox and Watchdog sections in the Viz Engine Administrator Guide .
		**Disables** the mechanical bypass on the Matrox video card. This effectively bypasses any rendering and stops the Viz Engine from impacting the video signal. Important: for this to work, the Viz Engine must be properly configured. See the Matrox and Watchdog sections in the Viz Engine Administrator Guide .

5.2 Information Panel

The Information panel is an overview dashboard, also useful for debugging.



Use the **Export** button to export statistic information to a text file.

5.3 Channels

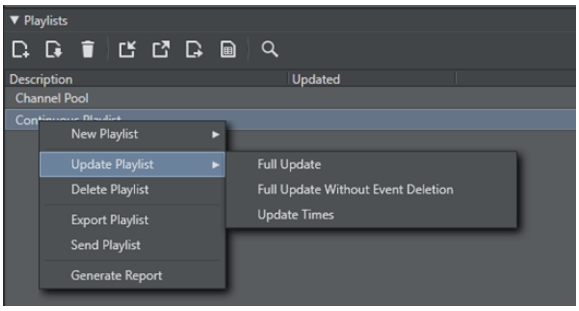
At the top of the left pane area is the channel selection combo-box. The channel selection combo-box lists all your different channels and allows you to switch between them. You can also click on the channel icon above the combo-box in order to switch to the corresponding channel.

5.3.1 Channel Selection Combo Box

See Also

- Working with Channel Settings

5.4 Playlists



The Playlists pane displays the playlist(s) created for the selected channel. Viz Multichannel supports two types of playlists: continuous and broadcast day playlist. In addition, the pane contains a location to store prepared non-scheduled events named Channel Pool.

When a playlist is opened, the primary and secondary events will be displayed in the right pane. In the Playlist pane you can view all the playlists you have for a specific channel.

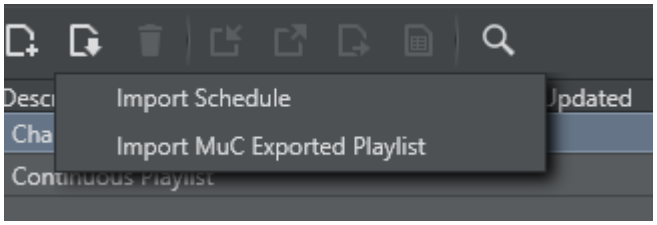
Right-clicking on a playlist in the left pane displays a context menu of playlist commands:

- **Update Playlist:** allows you to select one of the following update options:
  - **Full Update:** updates the entire playlist, primary and secondary events.
  - **Full Update Without Event Deletion:** updates the entire playlist, primary and secondary events; however, it will not delete events that have already been added.
  - **Update Times:** Allows you to only update the event times according to the imported schedule.
- **Delete Playlist:** Deletes the playlist.
- **Export Playlist:** Exports the playlist to a native Viz Multichannel XML format. You can also export the Graphics and Data as part of the export.
- **Send Playlist:** Sends the playlist to the master control room.
- **Generate Report:** Generates an HTML report of the selected playlist.

5.4.1 Import a MuC Exported Playlist

A playlist that has previously been exported from MuC as an XML file can be imported back using the **Import MuC Exported Playlist** menu item.
This will import the XML playlist to MuC without performing any mapping settings. Playlist data is set as it appears in the imported file.
If the contained broadcast date already exists, the imported data will not replace the existing playlist. You must first delete the existing playlist.

- Click the Import icon and select **Import MuC Exported Playlist**



This section covers:

- Channel Pool
- Playlist Toolbar
- Playlist Keyboard and Mouse Shortcuts
- Playlist Columns
- Playlist Context Menu
- Playlist Filters

5.4.2 Channel Pool

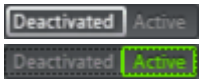
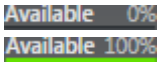
The **Channel Pool** playlist is used for those elements that may require special handling, such as a series of animated logos, an advanced trouble slide, or a special pre-prepared legally mandated breaking news event. For example, these can be accessible to and used by external control applications in order to trigger elements that are not scheduled in a normal playlist.

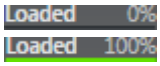
Pages added to the Channel Pool will have the page name set as the Media ID by default. The Media ID can be changed manually by editing the **Media ID** column (individually for each element). Enable editing by checking the **Edit Events** option for Media IDs in **Mapping Settings**.

A separate channel pool is added for each channel.

5.4.3 Playlist Toolbar

The following table describes the different buttons, modes and status icons available to the playlist.

Icon	Description
	When green, the playlist is running. When gray, the playlist has stopped.
	When a playlist is **active** it is added to the Media Sequencer, which starts checking that all resources (such as videos and imagery) are available (see **Available status**) to Viz Engine for playout. This means that videos are transferred from Viz One to Viz Engine, for example.
	**100% available** means that full screen video clips are available to Viz Engine for playout.

Icon	Description
	**100% loaded** means that all pages (the actual graphics including embedded video clips and imagery) are loaded and ready for playout.
	Enables you to **run** and **stop** the playlist. Note that in order to run the playlist successfully your elements must have a begin and end time.
	Searches the description field of your playlist elements. To see the next result, press Enter.
	Predefined filters allow you to filter the playlist. Click the funnel icon to create, edit or delete filters. See **To add a playlist filter**.
	Takes the selected playlist element (or group of elements) on air
	Continues the animation of the playlist element
	Takes the current playlist element off air
	Initializes the playlist's pages on the preview and program renderer. When complete, the loaded status is set to 100%. See the **Playlist Context Menu** on how to initialize the playlist and individual elements from the context menu.
	Refreshes the data in use by the pages.

5.4.4 Playlist Keyboard and Mouse Shortcuts

Function	Key	Mouse
Move one or more secondary events to another primary event (up or down).	Combine mouse-drag with **CTRL** to prevent the playlist from auto-scrolling while dragging.	Drag and drop.
Move selected entries to previous group in the playlist	**ALT + UP ARROW**	

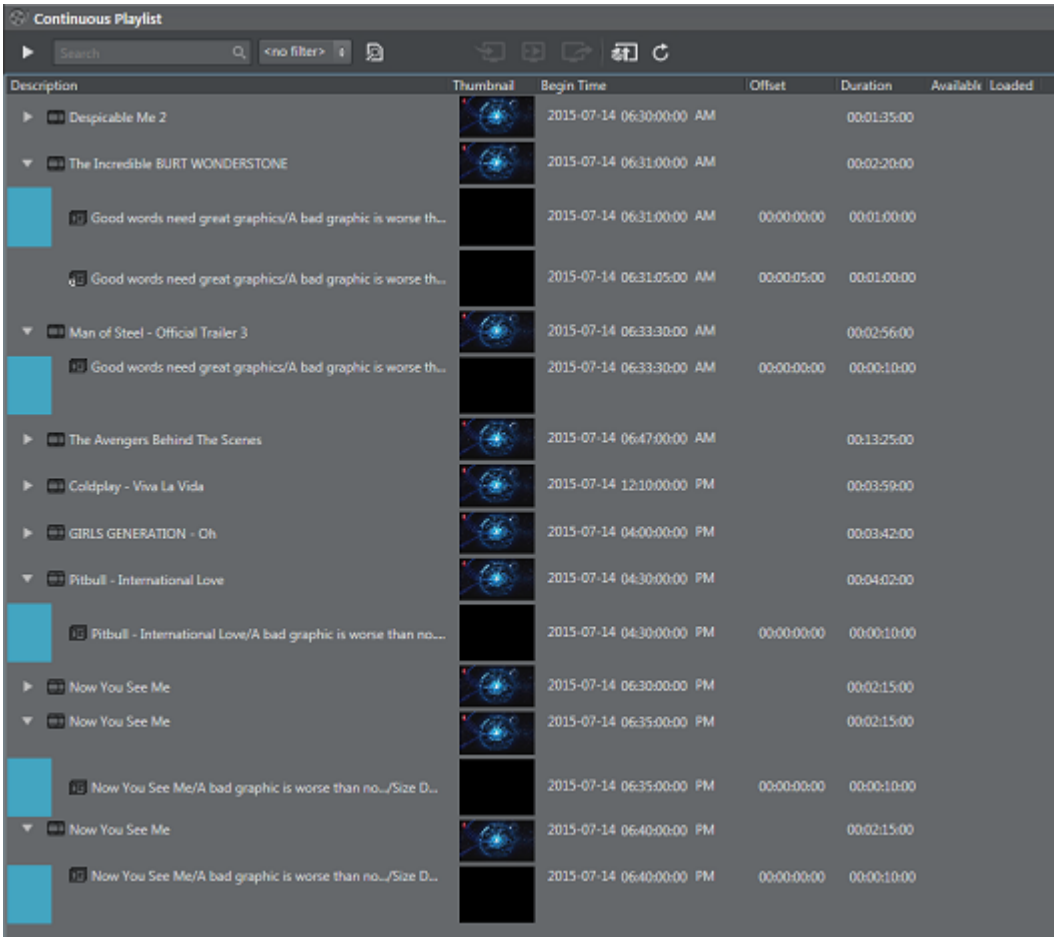
Function	Key	Mouse
Move selected entries to next group in the playlist	**ALT + DOWN ARROW**	
Collapse the group	**LEFT ARROW**	Double-click left mouse button
Expand the group	**RIGHT ARROW**	Double-click left mouse button
Expand all groups	**CTRL + Numpad +**	
Collapse all groups	**CTRL + Numpad -**	
Select all events	**CTRL + A**	
Open search	**CTRL + F**	
Select individual events	**CTRL**	Left mouse button
Remove the selected event(s)	**DELETE**	
Make an event's Description field editable	**F2**	Double-click left mouse button on the Description field
Move the focus to the top of the playlist	**HOME**	
Move the focus to the end of the playlist	**END**	
Move the focus one section down	**PAGE DOWN**	
Move the focus one section up	**PAGE UP**	
Select events (up or down)	**SHIFT**	Left mouse button
Display the context menu		Right mouse button

5.4.5 Playlist Columns

When the right pane displays the playlist, all events along with pages and actions scheduled together are displayed.

To **edit the playlist columns** you must check the **Edit Events** check-box in your mapping table (see **Table Columns**) for each column.

Right pane showing playlist



The layout and visibility of the playlist columns can be customized by drag-and-drop and by right-clicking one of the columns to select or de-select them. Secondary events that have been edited will have a color indicator in the left side of the edited row.

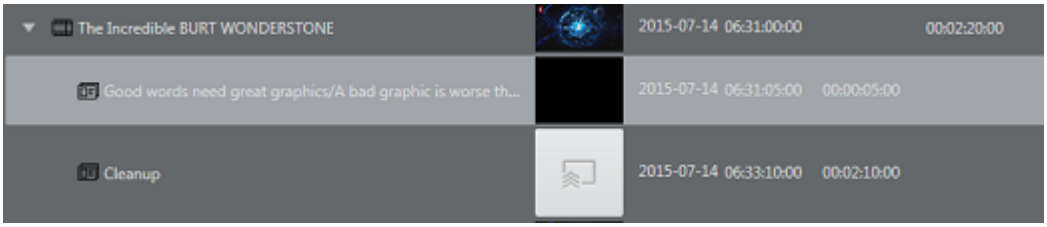
> ⚠ **Note:** If there are any errors found in the playlist, the primary element(s) causing the error will be shown in red. Hover the mouse over the red no-entry icon of the error element(s) for more information.

The default columns available are:

- **Available:** Shows if a video clip is available to your playout device.

- **Begin Time:** Shows the element's begin time (see also **Duration and Offset**, and **External Data**).
- **Channel:** Shows the name of the currently selected device channel for any given element in the playlist (see **Configuring Device Channels**).
- **Description:** Shows a description of the element. An **arrow-head** next to a description indicates other elements are group together with the event. This may be a primary event with pages and/or actions scheduled for it as secondary events. Click the **arrow-head** to expand and show the secondary events.
- **Duration:** Shows the duration of the element (see also **Begin Time** and **Offset**).
- **End Time:** Shows the end time (Begin Time + Duration) for each element.
- **Event ID:** For playlist updates. The ID must be unique since it is the event's identifier. If it is not unique, you must construct a unique identifier with other properties toward the internal property `name`.
- **Layer:** Shows on which logical layer the element will be playout out (front, middle, or back). The middle layer is the default layer for Pages. The back layer is the default layer for full screen video clips.
- **Loaded:** Shows the loaded status of pages on the Viz Engine program device channel.
- **Mark In:** Shows the mark in point for a video clip set by the schedule.
- **Mark Out:** Shows the mark out point for a video clip set by the schedule.
- **Media ID:** Shows the ID of the element.
- **Offset:** Shows the offset of the secondary event relative to its primary event (see also **Begin Time and Duration**).
- **Page Name:** Shows the name of the page (secondary event).
- **Template Description:** Shows the template name as saved in Viz Artist.
- **Template ID:** Shows the template name as saved in Viz Artist.
- **Thumbnail:** Shows a snapshot/thumbnail of the template used in a Secondary Event.

Elements in the playlist that are **inactivated** will be show with a gray background as illustrated in the screenshot below.

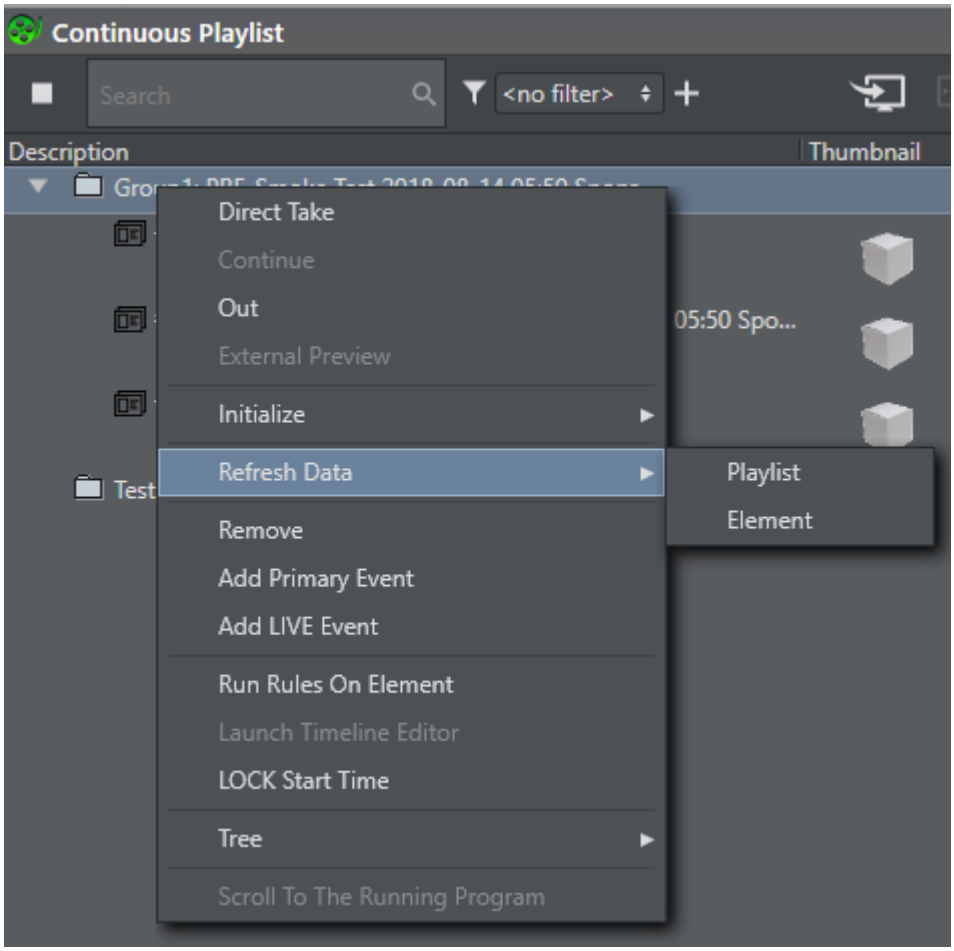


> **Note:** Elements in the Multichannel playlist can be de-activated by external events or applications. For example, by Media Sequencer if the required resources are not available for the element.

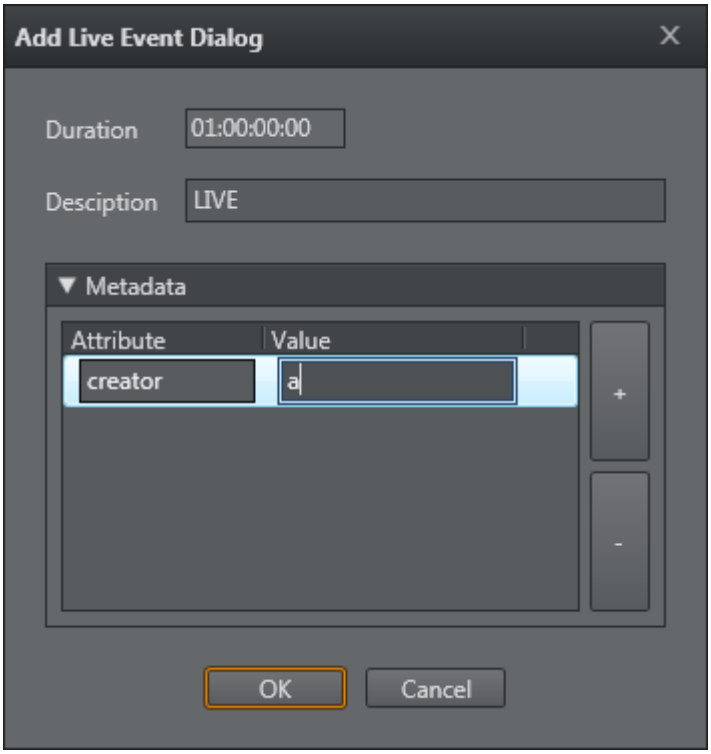
5.4.6 Playlist Context Menu

Right-clicking the playlist opens the following context menu:

- **Direct Take:** Takes the playlist element directly to air. If the element is available and/or loaded it will play immediately. If not, the element will be taken on air as soon as it is.
- **Continue:** Continues the animation of the graphics if the graphics has a continue point.
- **Out:** Takes the element off air (i.e. hard cut).
- **External Preview:** Previews the element on your configured preview channel (see section *Configuring Device Channels* and *Configuring Playout Devices*).
- **Enable** or **Disable Element:** *Only* for secondary events. Allows you to either enable or disable a secondary element.
- **Re-try creating page from this element:** This menu item will only shown for elements with errors. An example error condition that could trigger this is: A request to create a page is pushed via the Integrations Hub, but the page is not found in the Page Pool at creation time. A stub-version containing meta-information will be created. If the requested page is later created in the Page Pool you can use this menu item on the element and store the page-relevant data under the element.
- **Initialize** (see section *Playlist Toolbar*).
  - **Playlist:** Initializes the entire playlist.
  - **Element:** Initializes the selected playlist element.
- **Refresh Data:** Request a refresh of automatic page content or primary event Viz One metadata, as shown in the screenshot below:



    - **Playlist:** Clicking here iterates through the entire playlist and update all elements.
    - **Element:** Clicking here updates page data or Viz One metadata for the selected element of the playlist only.
- **Remove:** Removes an element from the playlist. This action cannot be undone.
- **Add Primary Event:** Adds a primary event to the playlist.
- **Add Live Event:** Adds a live event.

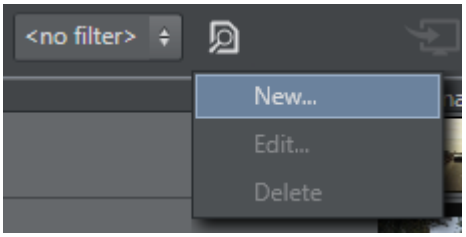


- **Run Rules On Element:** enabled for group and video primary events only. When selected, defined Rules will be run for the selected primary element only.
- **Launch Timeline Editor:** Launches the Timeline Editor, see Working with Video Clips.
- **LOCK Start Time:** Lock the event. Note that you can modify live or locked events in the playlist column.
- **Tree:**
    - **Select All:** Selects all events.
    - **Select Inverse:** Inverts your current selection, selecting all other elements.
    - **Select None:** Cancels all selections.
    - **Expand All:** Expands all primary events to show secondary events.
    - **Collapse All:** Collapses all primary events to hide secondary events.
    - **Hide Empty Groups:** Hides all empty groups.
    - **Wrap Text:** Wraps the text according to column width.
    - **Font...:** Allows you to set your own system font for the playlist.
- **Scroll To The Running Program:** Scrolls the playlist view to show the current running primary element at the top.

5.4.7 Playlist Filters

The Playlist allows you to add filters to quickly sort the list of events.

Add a Playlist Filter

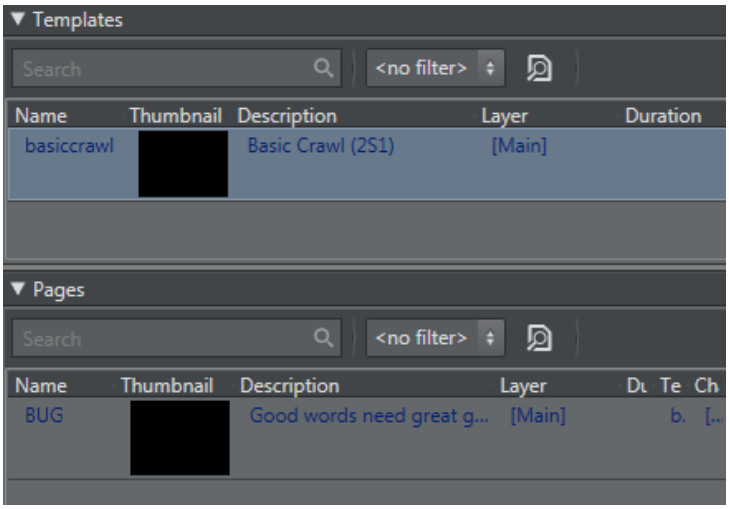


1. Click the **funnel** icon, and click **New...**. This opens the Edit filter window.
2. Enter a **Filter name**.
3. Select whether the filter should apply if:
   - All conditions match, or
   - One of the conditions matches, or
   - None of the conditions match.
4. Select whether or not to Filter on Group.
5. Continue to define your filter by adding one or multiple conditions. The list of events is filtered as you define your conditions, allowing you to verify that the filter is configured correctly.

Manage a Playlist Filter

1. Select your filter
2. Click the **funnel** icon, and from the menu click **Edit...** or **Delete**.

5.5 Templates, Pages And Pilot Data Elements



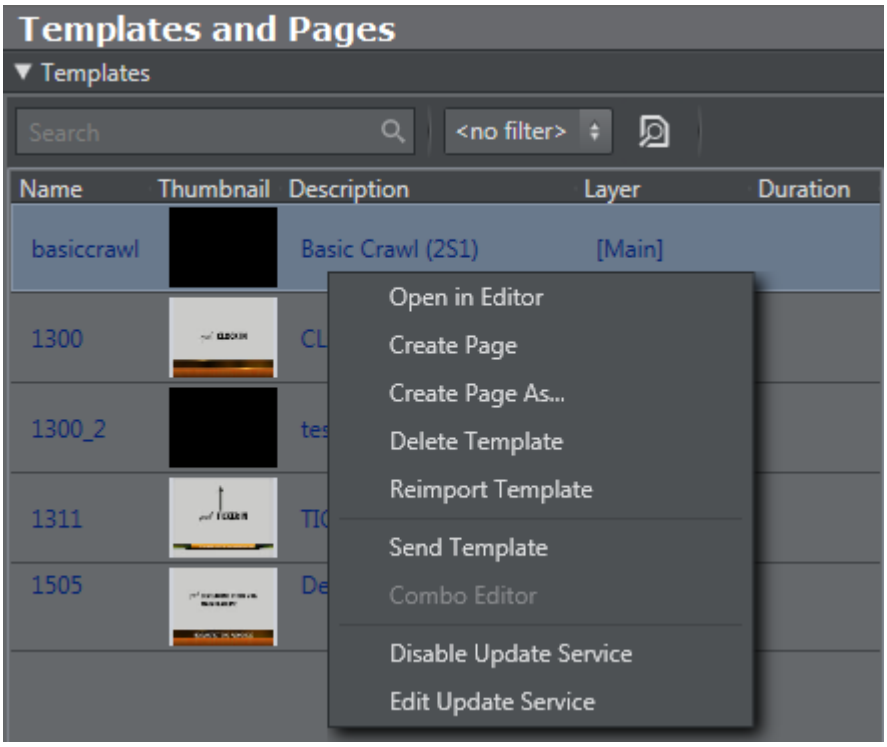
In the Templates and Pages panel, you can view all imported templates and pages based on those templates. You can also filter your templates and pages view and add content to pages using the Page Content Filling Window.

In the Pilot Data Elements panel all locally known Pilot elements are shown, to be used for manual drag into a playlist or to be used by Rules. Even if an element isn't yet known by the local Media Sequencer but exists in the Pilot Database it can be referenced and used by a channel and will be added to the local list once the playlist has been imported.

- Template Context Menu
- Page Context Menu
- Page Content Filling Window
- Database Connection Window
- Template and Page Filters

5.5.1 Template Context Menu

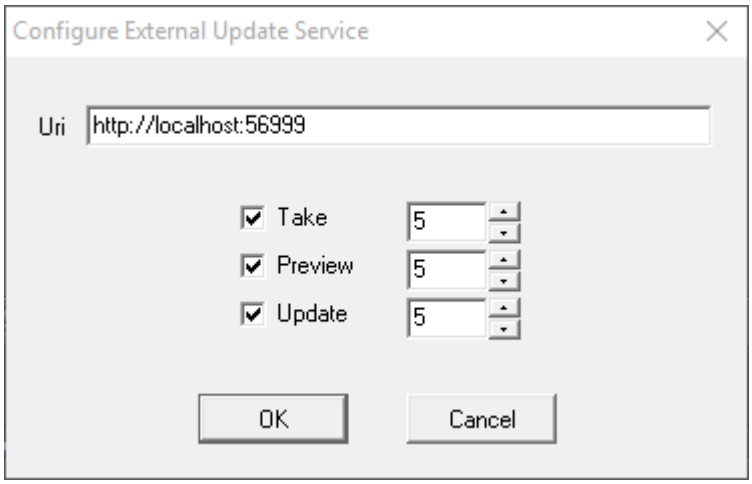
Right-clicking a **template** opens the context menu:



- **Open in Editor:** Opens the template editor which allows you to create a new page based on the template.
- **Create Page:** Creates a page based on the selected template. The page can be opened in the template editor for editing.
- **Delete Template:** Deletes the selected template/data.
- **Reimport Template:** Scans the scene and re-imports the selected template. The resulting object will be recreated. When re-importing, you will first be asked to confirm and the

following reminder will then appear: existing pages description might not reflect the true data content until refreshed by update.

- **Add To Favorites:** Adds the template to your pre-defined Favorites filter.
- **Send Template:** Sends the selected template(s) to the master control room. This option is only enabled if the **Remote Host** is defined in the General Settings.
- **Combo Editor:** Opens the Combo (short for Combination) template editor where you can change templates based on multiple Transition Logic (TL) scenes. For more detailed information, see the Combo Page Editor section.
- **Enable Update Service:** Enables you to assign an update service for the selected template.



- **Disable Update Service:** Disables the update service for the selected template.
- **Edit Update Service:** Edit the update service for the selected template by setting the service URL. A timeout on the available commands (take, preview and update) may be set as well. This will delay the given command sent by the Media Sequencer to the Viz Engine.

5.5.2 Page Context Menu

Right-clicking a **page** opens the following context menu:

- **Open in Editor:** Opens the template editor which allows you to update the page or save it as a new page based on the same template.
- **Save Page as:** Creates a page based on an existing page. The page can be opened in the template editor for editing.
- **Rename:** Changes the name of the selected page. Duplicate page names are not allowed.
- **Delete Page:** Deletes the selected page(s).
- **Add to/Remove from Favorites:** Adds or Removes the page from the pre-defined Favorites filter, see Templates, Pages and Pilot Data Elements.
- **Send Page:** Sends the page to the defined remote hosts, see General Settings.
- **Reload Page:** Reloads the scene referenced by the page on the device defined as the program Viz Engine, see **Configuring Device Channels**.
- **Set as Logo Scene:** Sets a selected page as the default Logo Scene that can be controlled from the Toolbar.

- **Set as Error Scene:** Sets a selected page as the default Error Scene that can be controlled from the Toolbar.
- **Set as Video-only Scene:** Sets the selected video scene as the default Video-only scene that can be controlled from the Toolbar.
- **External Preview:** Shows the scene on your defined preview Viz Engine.
- **Take:** Immediately takes the page on-air on your program Viz Engine.
- **Continue:** Continues the page on-air on your program Viz Engine.
- **Out:** Immediately takes the page off-air (hard cut) on your program Viz Engine.

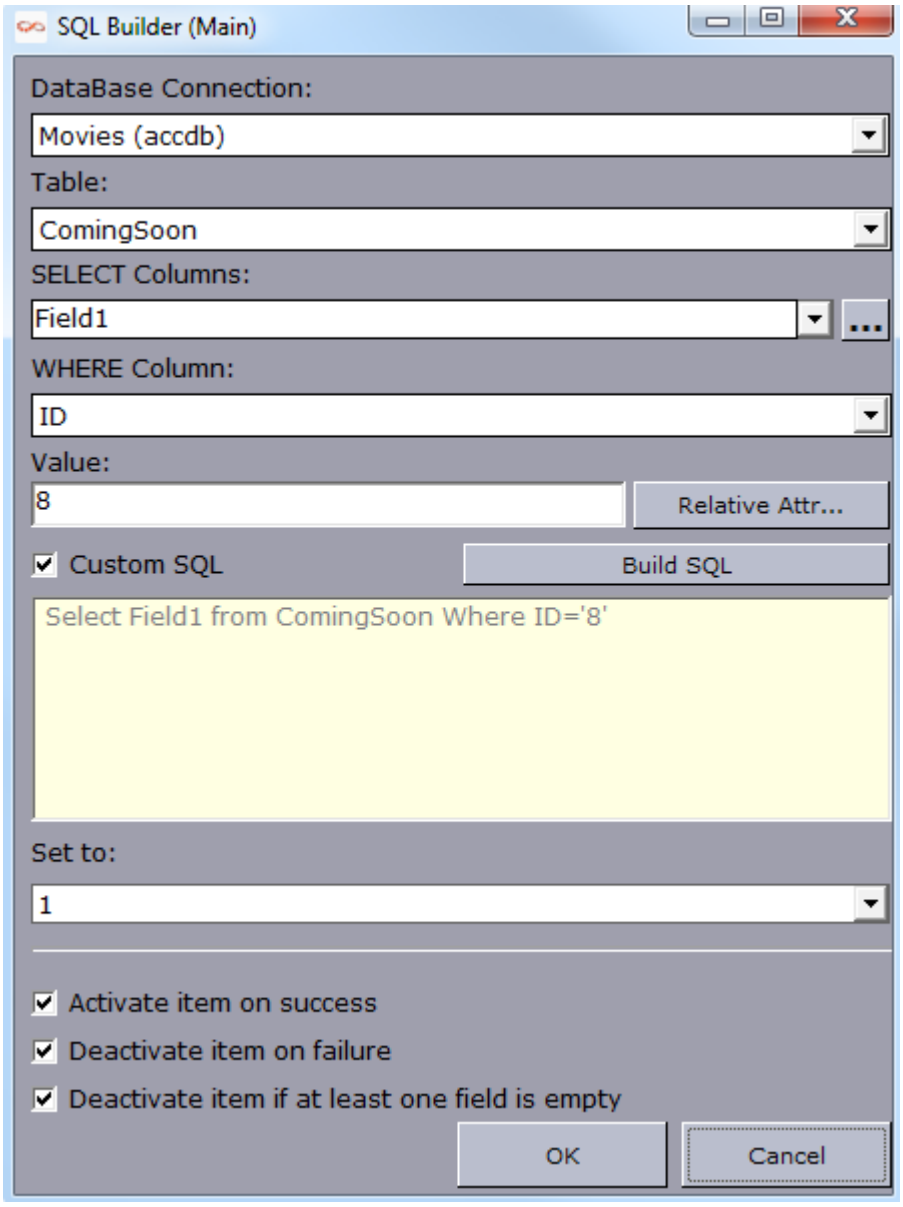
Right-clicking the **column headers** allows you to customize your templates and pages view.

- **Channel:** Allows you to set a default playout channel (see **Configuring Device Channels**) for a given page.
- **Description:** Shows the template or page description.
- **Duration:** Shows the duration of the template or page. Click the area and type to set a default duration for the page.
- **TTL:** Time To Live. This header is available for Pages pool *only*. It allows you to set an expiry (TTL) date for a page. Pages that have a TTL-date on or after the current date will be removed when PLHM is run.
- **Layer:** Defines the layer the scene should play in. Available options are Front, Middle, and Back. Default is Middle.
- **Name:** Shows the name of the template or page.
- **Template Name:** For Pages, an additional column shows the template associated with a given page.
- **Thumbnail:** Shows a thumbnail image of the template or page.
- **Store as Default:** Allows you to arrange and store your columns as a default column arrangement.
- **Use Default:** Reverts to your current default column arrangement.
- **Auto Fit Columns:** Automatically fits the columns to the available space.

5.5.3 Page Content Filling Window

This is described in the section Page Content Filling.

5.5.4 Database Connection Window



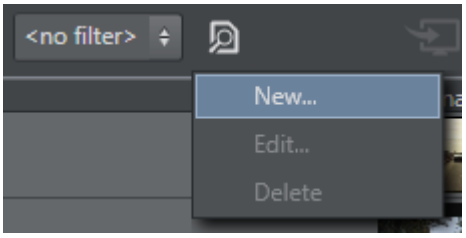
- **Database Connection:** Allows you to select from your list of pre-configured Database Connections.
- **Table:** Allows you to select a table from your selected database.
- **SELECT Columns:** Allows you to select a column from your selected table.
- **WHERE Column:** Allows you to select a location from which the value should be selected.
- **Value:** Allows you to set which value is selected from the WHERE column.
- **Relative Attr...**(button): Allows you to select a relative attribute from the Page Content Filling Window.

- **Custom SQL:** Allows you to write a custom SQL query with multiple dynamic mappings (for example, `Select Field1 from ComingSoon Where Field4='PG-13' AND Field2='23.12.2013'`).
- **Build SQL** (button): Builds the query based on your previous selections.
- **Set to:** Allows you to select which page field that is updated by the query. Ensure that the SELECT columns match the page fields.
- **Activate item on success:** Ensures that playlist items will be marked as active if the query is successful and data fields have been populated. Leave this unchecked if you do not want the success of the query to affect the status of a playlist item.
- **Inactivate item on failure:** Ensures that playlist items will be marked as inactive if the query fails and data fields have not been populated. Leave this unchecked if you do not want the success of the query to affect the status of a playlist item.
- **Deactivate item if at least one field is empty:** Ensures that playlist items will be marked as inactive when one of the fields the query returns is empty. Leave this unchecked if you do not want the success of the query to affect the status of a playlist item.

5.5.5 Template and Page Filters

Add a Template or Page Filter

The Templates and Pages panel allows you to add filters to quickly sort the list of templates or pages.



1. Click the **funnel** icon, and click **New...**. This will open the Edit filter window.
2. Enter a **Filter name**.
3. Select if the filter should apply when:
   - All conditions match, or
   - One of the conditions matches, or
   - None of the conditions match.
4. Continue to define your filter by adding one or multiple conditions.
   The list of templates or pages is filtered as you define your conditions, allowing you to verify that the filter is configured correctly.

> ⚠ **Note:** There is also a built-in **Favorites** filter.

Manage a Template or Page Filter

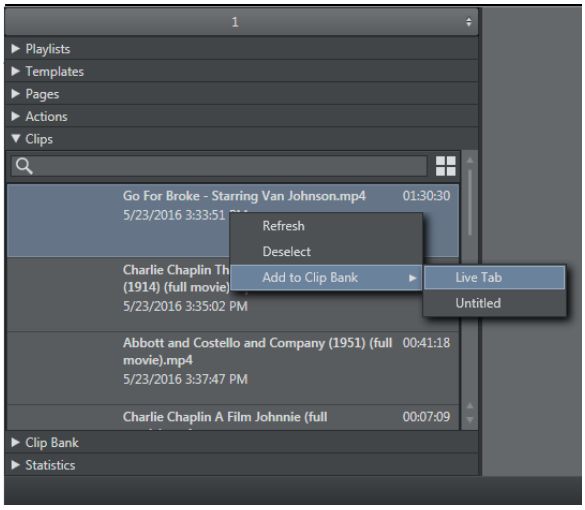
1. Select your filter

2. Click the **funnel** icon, and from the menu click **Edit...** or **DELETE**.

See Also

- Import Scene
- Working with Templates, Pages and Pilot Data Elements

5.6 Clips



The **Clips** button opens up a search frame allowing you to search for video clips on Viz One.

The search field allows you to use common search operations such as:

- Search for a word: soccer
- Search for an exact word or phrase: “world football championship”
- Search for either word: soccer OR football
- Search for both words: soccer AND football
- Search using an asterisk (*) to “fill in the blanks”: foot*, *ball*, *ball

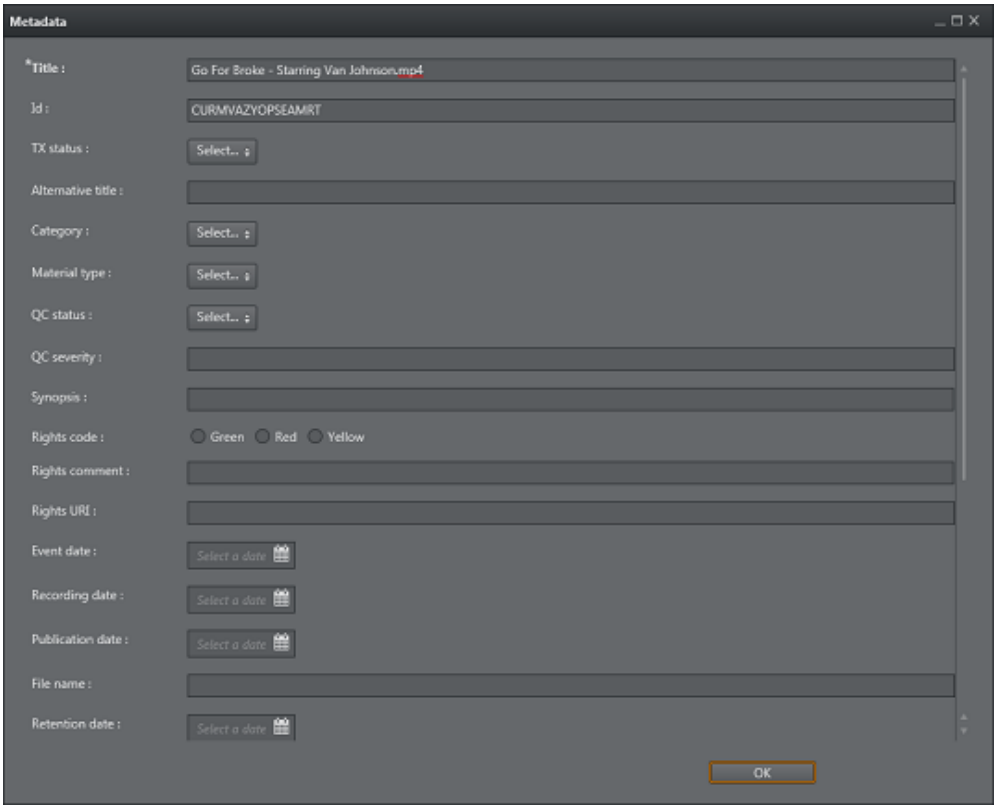
5.6.1 Clips Context Menu

Right-Click on Clips to show the context menu providing these options:

- **Refresh**: Reload all clips from Viz One.
- **Deselect**: Deselect a clip
- **Add to Clip Bank**: add the selected Viz One clip into the Multichannel Clip Bank. You can select which clip bank tab the clip should be added to.

5.6.2 Clip Metadata

Click on a clip to view or edit metadata:

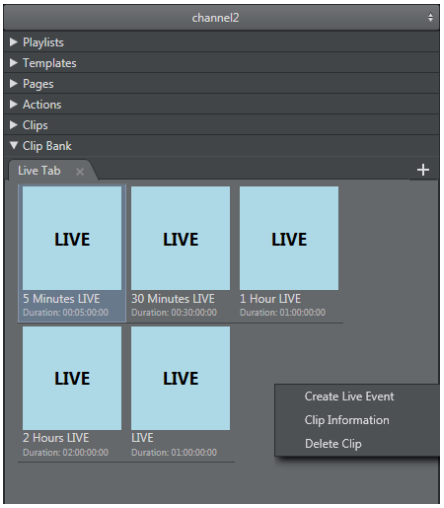


See Also

- Viz One Integration

5.7 Clip Bank

Clip Bank contains LIVE events and Viz One clips. You can have LIVE events pre-created in this clip bank to allow for rapid insertion of LIVE events into the running playlist. When you first create a channel, the default clip tab name "LIVE" with four default LIVE events is created.

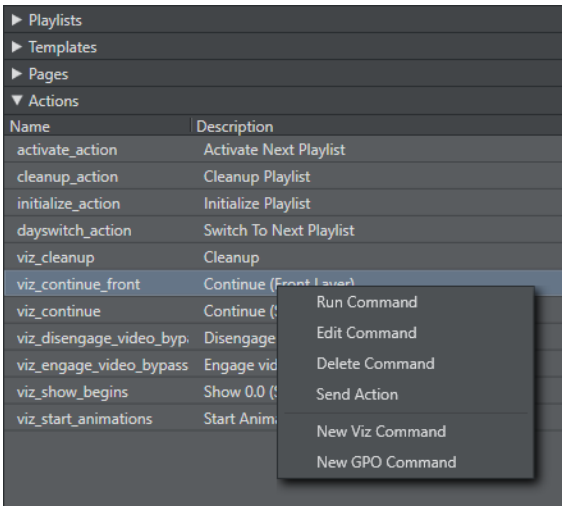


You can add a new tab by clicking the + sign at the top right of Clip Bank tab.

Right-Click for the options menu where you can:

- Create Live Event
- Clip Information
- Delete Clip

5.8 Actions



Viz Multichannel's Actions pane allows you to define General Purpose Output (GPO) commands, Viz Ticker commands and Viz Engine commands. GPO commands are handled by Media Sequencer. Both Viz Ticker and Viz Engine commands can be used in Viz Multichannel to automate certain tasks. The commands behave as secondary events, in that you can also apply rules and schedule them in the playlist. Ticker actions are accessible from the Actions panel seen in the left pane. Ticker actions integrate tickers from Viz Ticker. Once the ticker has been created, it can be imported into Viz Multichannel.

Actions can for example include:

- Playing specific data elements on air

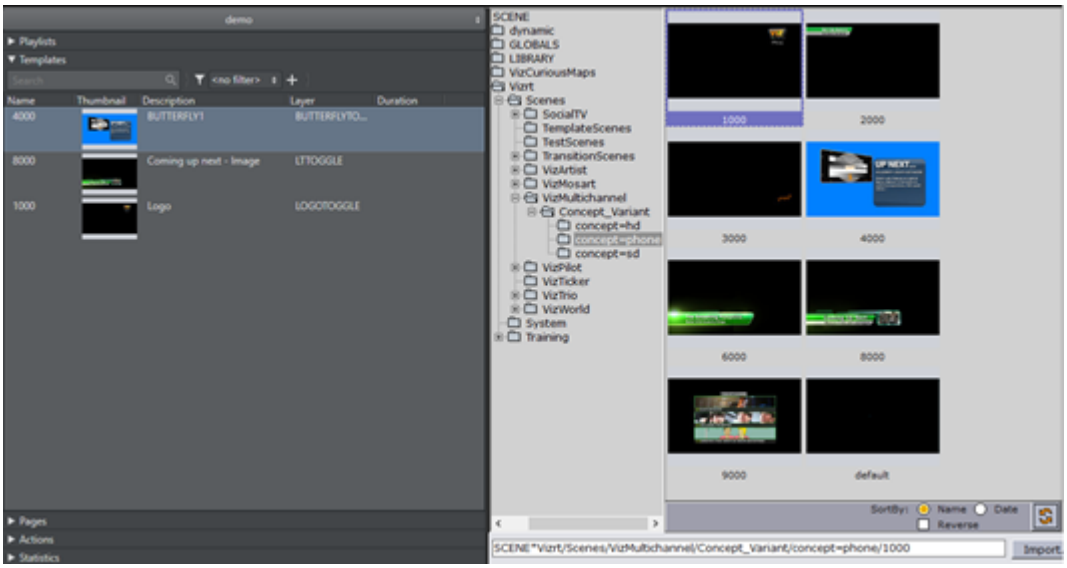
- Clearing specific render layer
- Sending Stop, Continue, Take and other such commands to a specific render layer
- Associated with playlists as secondary events

> **Note:** The Media Sequencer can only handle one ticker at a time. When working working with more than one channel in the Traffic Department Workflow the Ticker actions are therefore virtual, meaning that you can schedule them in playlists, but not actually preview them.

See Also

- Working with Actions
- Working with Ticker Actions
- Rules
- Working with Rules

5.9 Import Scene



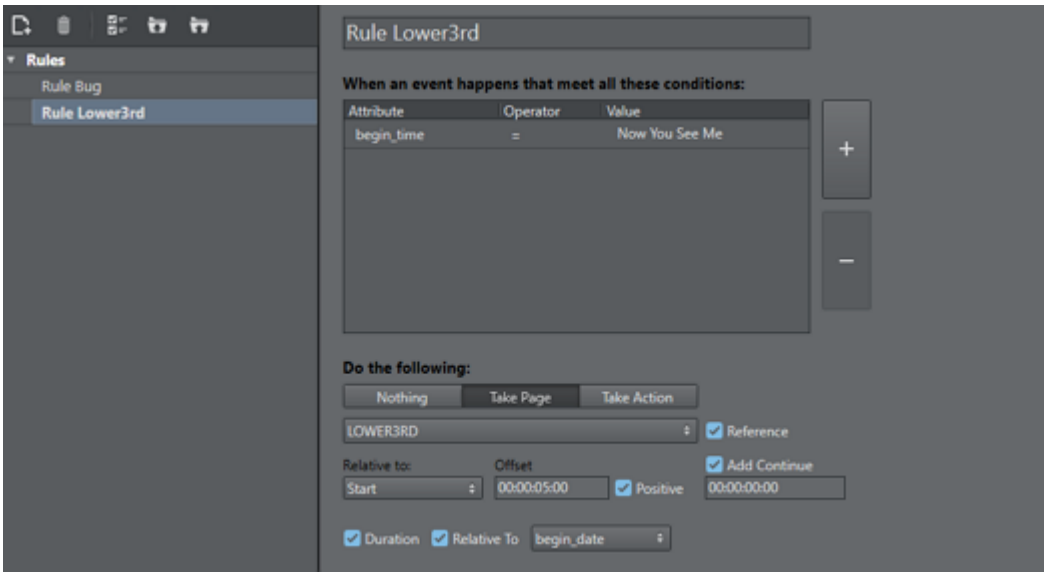
- Click the **Scenes** button on the lower right to view the contents of your Viz Graphics Hub and select scenes to import.
- Double-click scenes to import or select several and select import.

> **Note:** You must have a working Viz Graphics Hub connection in order to view the content. For information on how to configure your local Viz Engine Database connection settings, see the Viz Engine Administrator Guide.

See Also

- Templates, Pages and Pilot Data Elements
- Working with Templates, Pages and Pilot Data Elements

5.10 Rules



This is the area where you set up playlist rules. Clicking the **Rules** button shows all current rules in the right panel.

- **Description:** Allows you to define a name for the rule. This can help differentiate among several rules applied to a single page or action.
- **Conditions:** Lists the conditions that must be met for an event to happen.
- **Take Page or Take Action:** Sets the page or action on which the rule will be applied.
- **Reference:** If required, associates the page, Viz or GPI command as referenced (see Referenced Pages and Referenced Actions).
- **Relative To:** Allows you to set the time that a page or action will be scheduled relative to the offset. Your options are:
  - **Start:** Schedules the page or action relative to the event's start time.
  - **End:** Schedules the page or action relative to the event's end time.
  - **Program Duration:** Schedules the page or action relative to the event's duration, as a percentage. Selecting this option enables a slider that allows you to configure the position in the program when you want the secondary event to be added.
  - **Relative To:** Sets the duration of a page from the rule.
- **Offset:** Allows you to set the offset time. Offsets may be a positive or negative number (see **Positive** option). The format is `hh:nn:ss:ff`.
  - Configuring a negative value will push the page into another primary event, and not the one it originally resided under. This will correctly place the page with the proper offset to the original primary event.
    For example, if a one minute count-down timer page is added that counts down until a specific program starts (with an unknown number of programs before it), you can configure the offset to be one minute and uncheck the **Positive** option in order for it to

be a negative value. The page will then be inserted correctly at the correct offset, no matter how many previous primary events there might be.

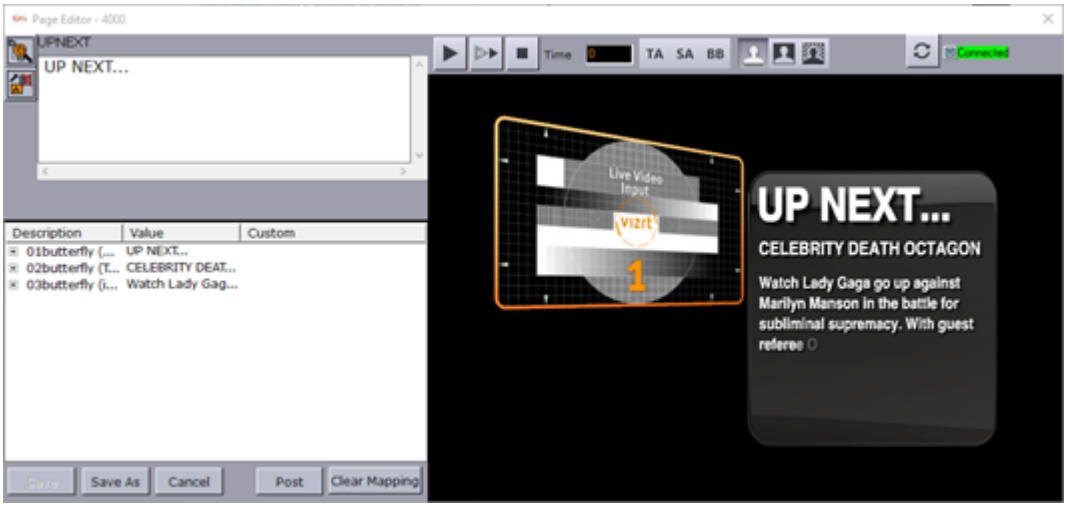
- **Positive:** Determines if the number is positive (checked) or negative (not checked). A page may be added at 00:02:00:00 (negative) which allows it to be added before a primary event is started (as a count-down timer).
- **Add Continue:** Allows you to select the check box if the page (the graphics) has been designed with a stop point, and a Continue action is needed for full execution. By enabling **Add Continue,** you can set the offset time for the Continue action, if required by the previous step.
- **Duration:** If the **Duration**-option check box is selected (activated), then the related *Relative To* option check box can optionally be selected as well.

> ⚠ **Note:** If both **Duration** and **Relative To** check-boxes are selected you will not be able to input a fixed duration. Instead, you must select the appropriate attribute from the drop-down list. Each primary event will then have different duration based on the value of the selected attribute.

See Also

- Working with Rules
- Actions
- Working with Actions
- Working with Ticker Actions

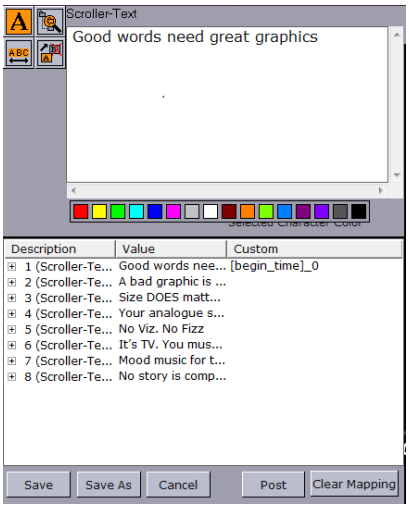
5.11 Page Editor



Viz Multichannel basically two types of content editors: a page editor and a Timeline Editor. The page editor, which this section will describe, allows you to edit secondary events such as graphics and graphics with embedded video clips. The available options for editing the content will change depending on the design of the graphics and the functionality it exposes.

This section covers the following topics:

5.11.1 Page Editor Tab Fields



The panel at the left of **Page Editor** shows the available tab fields (editable elements of the graphics) for the page or template currently loaded.
Click on a tab field to display the available options.

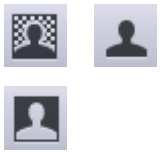
When a tab field for video elements is selected you will be able to search for, filter, and add Clips to your graphics. A page containing video elements will automatically search for the video and preview it.

- **Save:** Overwrites the page using the existing save name.
- **Save As:** Saves the template or page as a new element.
- **Cancel:** Cancels all changes.
- **Post:** Switches to Post Rendering mode (only visible in page editing mode).
- **Clear Mapping:** Removes any Page Content Filling mapping done for each tab-field as well as any DB mapping for the page. You must press **Save** afterwards to save the page.

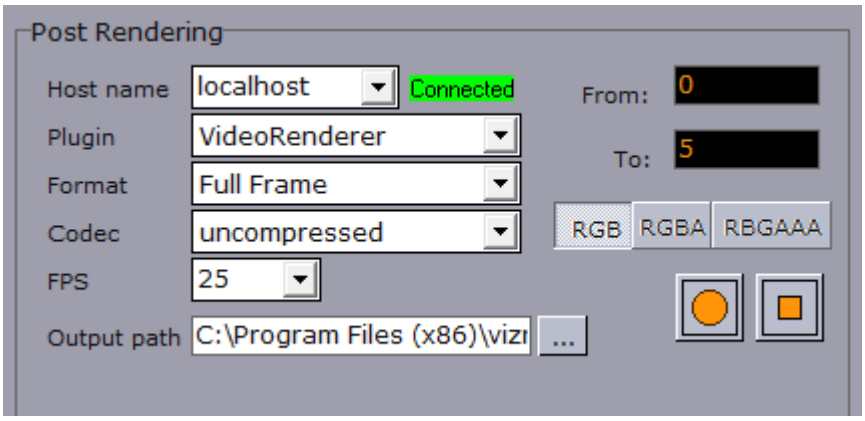
5.11.2 Graphics Control Buttons

The preview window shows a WYSIWYG (what you see is what you get) representation of the graphics and video clip. In addition, it shows the defined title and safe area and the bounding boxes. Bounding boxes are related to the graphics scene's editable elements (see the **Page Editor Tab Fields** section). For a full screen video preview there is also a Timeline Editor.

Preview window buttons

Icon	Description
	Starts the scene animation currently loaded in the local preview
	Continues the scene animation currently loaded if it contains any stop points
	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
	Shows or hides the Title Area in the Preview window
	Shows or hides the Safe Area in the Preview window
	Shows or hides the Bounding Box for the tab field currently selected in the Preview window
	These three buttons can be used to preview graphics in three different modes. Clockwise from bottom left: The first shows an RGB version of the graphics with a default background color (black). The second shows the Key version of the graphics. The third shows the graphics keyed on top of a still image. Currently not supported by Viz Multichannel 2.7
	Press the icon to refresh your view
	This icon indicates the Viz Engine connection; a green check mark indicates that the Engine is connected properly. Click the drop-down for further actions: Show Commands - displays the Viz Engine console window where you can observe all commands sent to the Engine and replies sent from the Engine. Show Status - displays Viz Engine status. Restart Viz - attempts to restart the Viz Engine (a disruptive action). Reconnect Viz - reconnect the Viz Engine.

5.11.3 Post Rendering



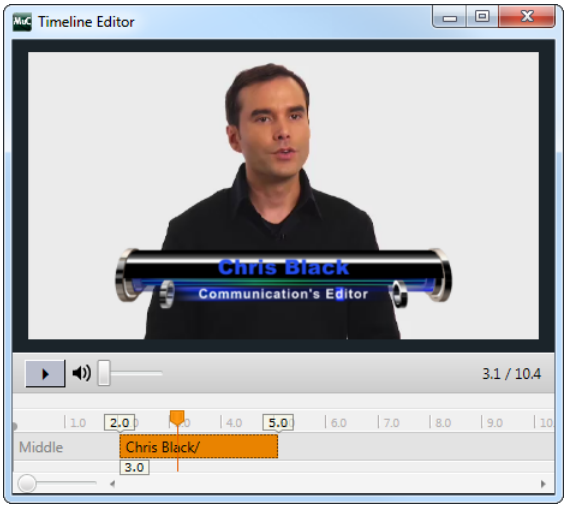
The Post option in the Page Editor allows you to generate videos and images of pages based on standalone scenes (not transition logic based scenes).

- **Host name:** Host name of the rendering engine. If connected the different post rendering options are made available.
- **Plugin:** Sets the rendering engine to generate either video or images.
  - Available options are: Video-renderer, JpegRenderer, PNGRenderer, QuicktimeRenderer, TgaRenderer, and TiffRenderer.
  - The Video-renderer option creates a single video file, whereas any of the image rendering options create multiple images (based on the configured frame rate).
- **Format:** Sets the output format. Formats vary depending on the option selected.
  - Available formats are: *Full Frame, Fields Top, Fields Bottom, Full Frame Skip, Full Frame/ Interlaced Top*, and *Full Frame/ Interlaced Bottom*.
  - The Video-renderer option supports all formats, whereas the image rendering options do not support the interlace (top/bottom) formats.
- **Codec:** Sets the codec device to be used. The codec option is available only for creating videos. This option is unavailable if the plugin is set to image renderer.
- **FPS:** Sets the numbered of frames to be rendered per second. This option is only available for the Video-renderer option.
  - Available frame rates are: *25, 30, 50, 60, 29.97, 59.94*.
  - Setting a frame rate for image rendering is not available. Default is 25 FPS. Hence, rendering a scene for five seconds will result in 250 images.
- **Output Path:** Requires a full path where the created file will be saved. Default path is, `%Program Files%\vizrt\Viz3\trioclip`.
- **From:** Sets the start time in seconds.
- **To:** Sets the end time in seconds.
- **RGB/RGBA/RGBAA:** Sets the pixel format to RGB, RGBA and RCBAA, respectively.
- **Record button (circle):** Starts the rendering process.
- **Stop button (square):** Stops the rendering process before the configured stop time set by the *To* field.

See Also

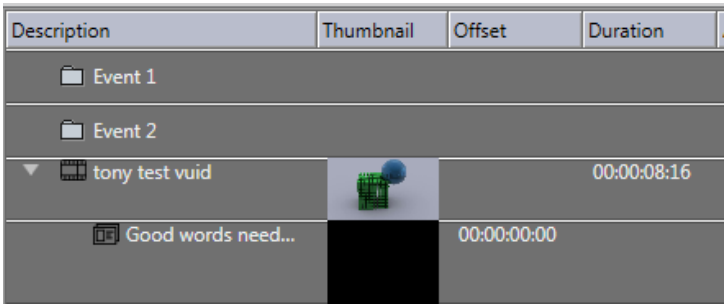
- Timeline Editor

5.12 Timeline Editor



Viz Multichannel offers two types of content editor: a Page Editor and a Timeline Editor. The Timeline Editor, which this section describes, allows you to edit secondary events such as video clips and video clips with embedded graphics.

5.12.1 Add Graphics to the Video Timeline



1. Open the playlist.
2. Add a video clip to a primary event.
3. Drag and drop single or multiple pages onto the video clip.
   When adding graphics on top of video clips you should always make sure you have set **Duration** beforehand.
   If not, graphics will not appear in the timeline as the default duration is 00:00:00:00.
4. Double-click the video clip.
5. Edit the duration of the graphic(s).
   The Duration in the playlist changes simultaneously.
6. Close the window.

5.12.2 Remove Graphics from the Video Timeline

1. Open the playlist.
2. Expand the video element in the playlist, exposing the time graphics elements.
3. Select the graphics element and press **DELETE**, or
4. Right-click the element and select **Remove**.

See Also

- Page Editor
- Clips
- Working with Video Clips
- Video Preview Configuration

5.13 Combo Page Editor

A combo (combination) template is a template based on multiple **Transition Logic** (TL) foreground scenes from different **logical layers**. Having a combo template allows you to create combo pages that can perform several Transition Logic actions in one page-take. A TL *action* changes the **state** for a TL page. A single combo page could for instance take out a lower-third and an animation while simultaneously inserting a logo. A combo page forms a template or page that performs several Transition Logic steps or actions, similar to creating a script to perform several actions in a procedure. TL states are typically be IN, OUT, LEFT, RIGHT, UP, DOWN and so forth.

Combo pages are based on and require Transition Logic templates, as described below.

5.13.1 Transition Logic

Most broadcast video systems have three independent physical layers: *Front, Middle* and *Back*. In certain situations this can be limiting. With TL you can have any number of **logical layers**. TL layers are always created and shown in the “physical” Middle layer and will not interfere with the Front or Back layer. Transition Logic allows for more than one scene to be On Air at a time. For example, a graphics covering the lower third of the screen, and another covering the left for over the shoulder graphics, can be On Air at the same time.

Playout with transition logic means that the graphics taken to air are loaded into a background scene that can always be on-air. By using this method several independent graphical elements can be On Air at the same time and can be taken in and out independently. Intelligent transitions can be built into the background scene ensuring smooth and seamless transitions between changing elements.

Summary

- A Transition Logic scene is not a single scene, but a set of Viz graphic scenes that consist of a background scene that may have multiple layers of graphics that can be On Air at the same time and independently controlled.
- Each layer in the background scene may have multiple referring foreground scenes; however, each layer can only show one foreground scene at a time.

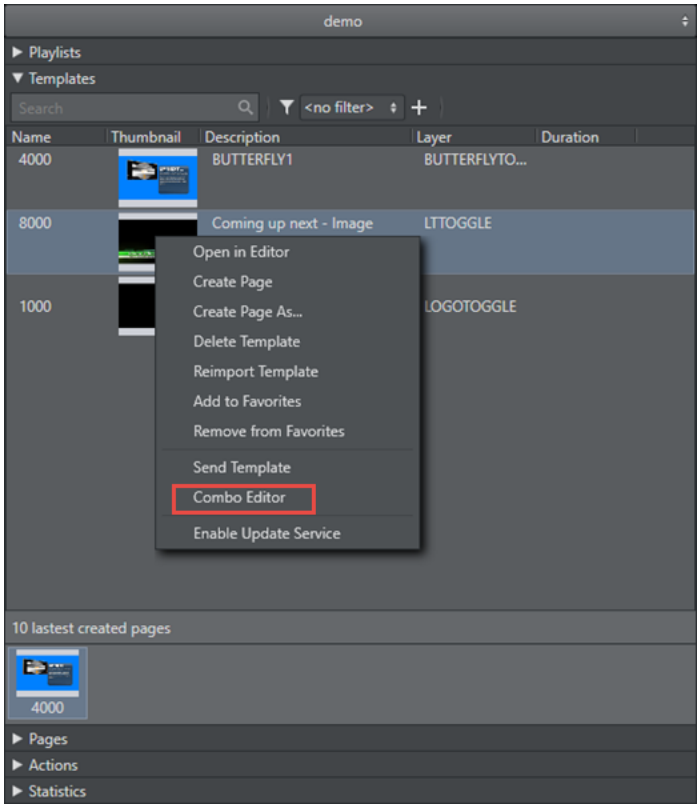
- A TL layer can have zero or 1 (one) states. If the TL layer doesn't have a state, then this layer will not be part of the combo template. Only *one* state can be active or chosen for each layer, however the scene designer can create as many layers as needed.

5.13.2 Working with the Combo Page Editor

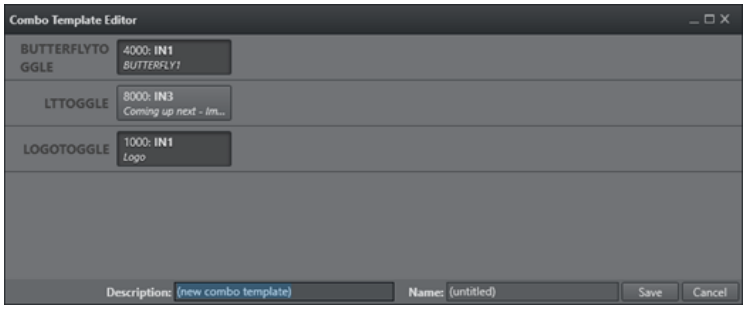
As described above, a combo template can only be created from transition logic templates. In order to create a combo page, the templates must be in different layers. This must be ensured by the graphical designer when the scenes are created in Viz Artist.

Create a combo template:

1. **Right-click** a template in the **Templates and Pages** drop-down menu and select **Combo Editor**:



The Combo Template Editor is shown. For each TL layer (in the example screenshot below: logo_zehd, music_name, etc) the various states that can be selected will be shown as selectable boxes.

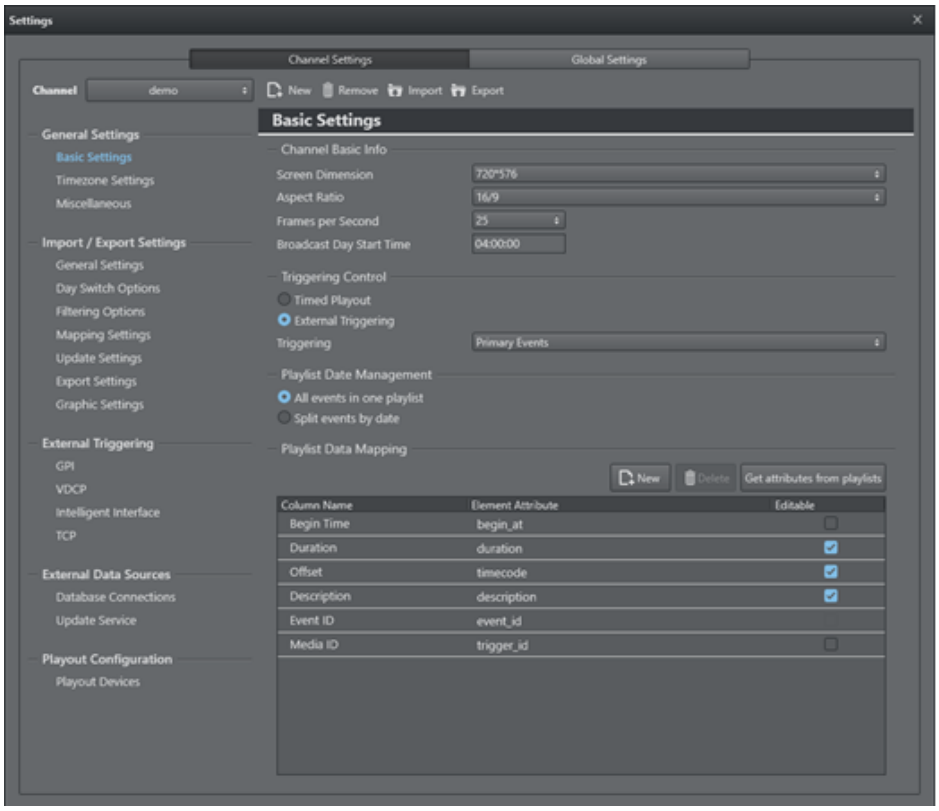


1. In the **Combo Template Editor**, select the TL state that should be activated when pages based on the TL template are shown On Air. Selected states are highlighted in orange.
2. Give the new combo template a text description and a unique name.
3. Press **Save**.

6 Configuration Interface

Viz Multichannel settings are split into two distinct categories: **Global** and **Channels.** Channels are the various channels that have been defined by the user in Viz Multichannel.

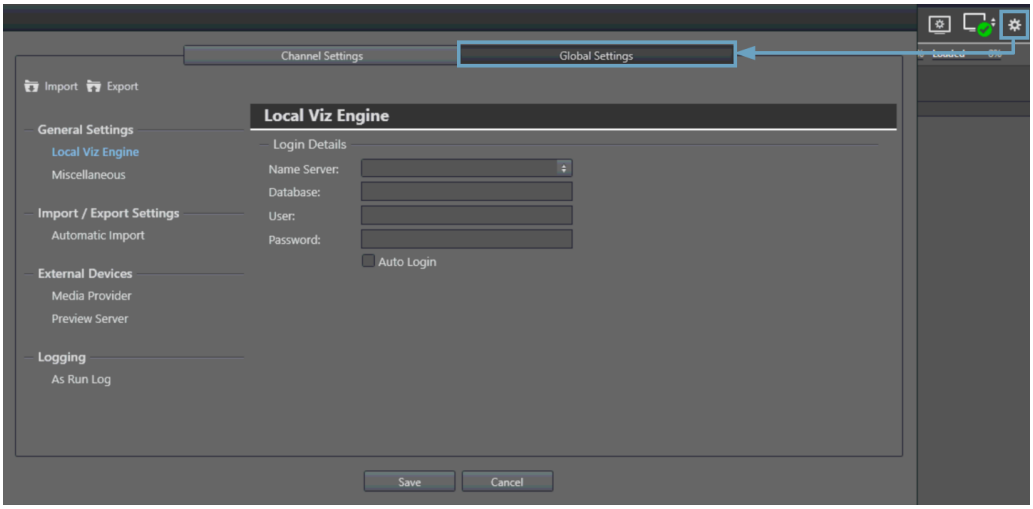
- **Global settings** apply to all channels.
- **Channel settings** define the output channels connected to your scheduling system.
  Most of the configuration work is done on a *per channel* basis. When configuring channel settings, ensure that you have selected the required channel beforehand. Most settings are set using the **Settings** window.



This section presents the following topics:

6.1 Global Settings

In addition to Channel Settings, Viz Multichannel has global settings that affect all channels stored in the same Media Sequencer (MSE).



Each of the settings groups are presented below:

- General Settings
- Import / Export Settings
- External Devices
- Logging

6.1.1 General Settings

Local Viz Engine

The local Viz Engine will usually run on the same machine as the client application. These settings are used to provide Viz Multichannel with information on the connection and authorization parameters (see screenshot above).

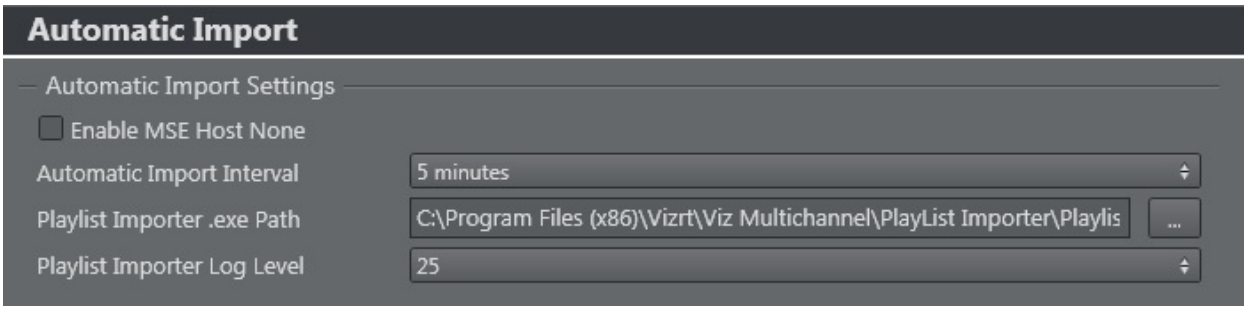
- **Name server:** <viz engine server name> Can be localhost or a different PC where viz engine installed.
- **Database:** Graphics Hub (GH) database name.
- **User** + **Password:** GH database user and password.
- **Auto Login** checkbox: the system will not request a username/password the next time it is opened, but use stored credentials to log-in.

Miscellaneous

Archiving Program Folder: Location of the Playlist History Manger (PLHM).
The default location is `C:\Program Files (x86)\Vizrt\VizMultichannel\Tools`

6.1.2 Import / Export Settings

Automatic Import



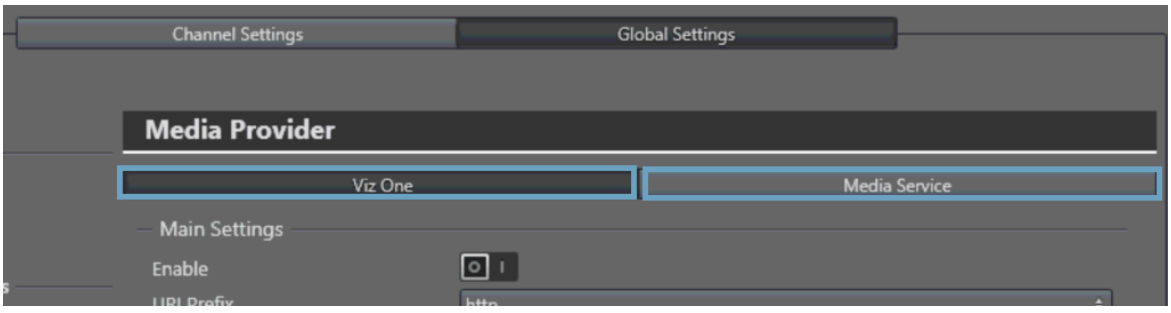
This setting is a global setting for all channels. You must enable automatic import for *each* affected channel to automatically import a schedule for a specific channel (see **General Settings**) .

- **Enable MSE Host None** checkbox:
  Selected, enable automatic imports for all channel in `channel.ini` file.
  Unselected, disable automatic imports for all channel in `channel.ini` file
- **Automatic Import Interval:**
  Select the interval at which automatic imports of schedules will occur.
- **Playlist Importer .exe Path:** The file path on the remote machine where the Playlist Importer is installed.
  Select `PlaylistImporter.exe` or similar batch file.
  Playlist Importer is installed on the Media Sequencer machine by default.
- **Playlist Importer Log level:** Sets the log level of the Playlist Importer.
  See the Playlist Importer's **Startup Parameters**.

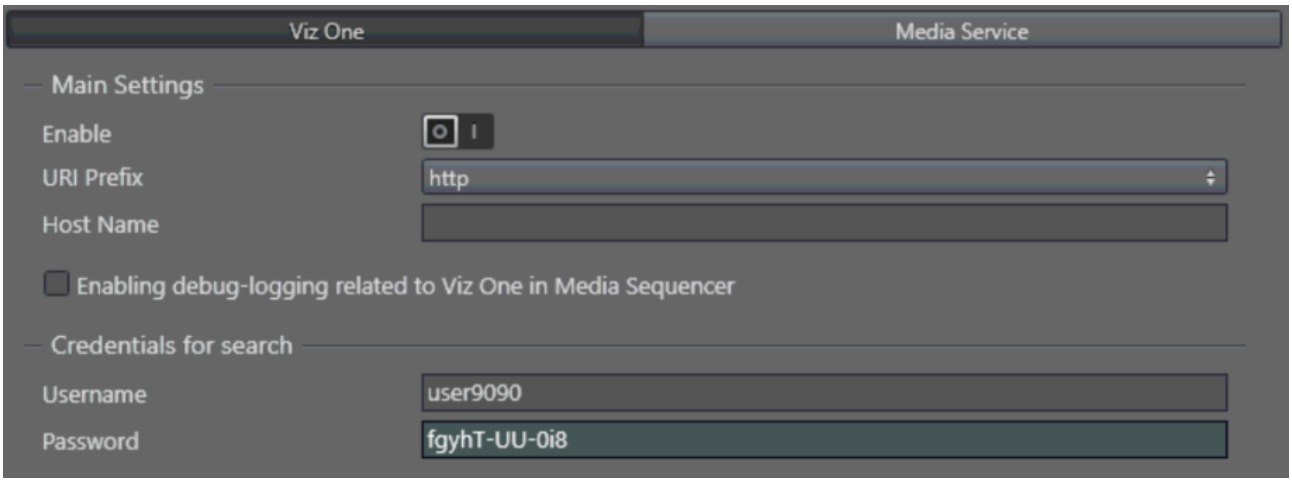
6.1.3 External Devices

Media Provider

You can select from either *Viz One* or *Media Service* as a provider of media assets.



Viz One



These global Viz One settings are used by *all* channels sharing the same Media Sequencer, and define the Viz One connection to the Media Sequencer.
Once connected to Viz One, Media Sequencer can request that media stored in Viz One be transferred to the Viz Engine for playout.

- **URI Prefix:** Select protocol prefix to either *http* or *https*.
- **Host name:** The host name of Viz One. The Viz One server instance based on either an IP address or host name. It is recommended to use a fully qualified host name.

  > ⚠ **Note:** Whichever addressing method you choose, (for example IP or a fully qualified host name) always use the *same method* throughout the entire setup process.

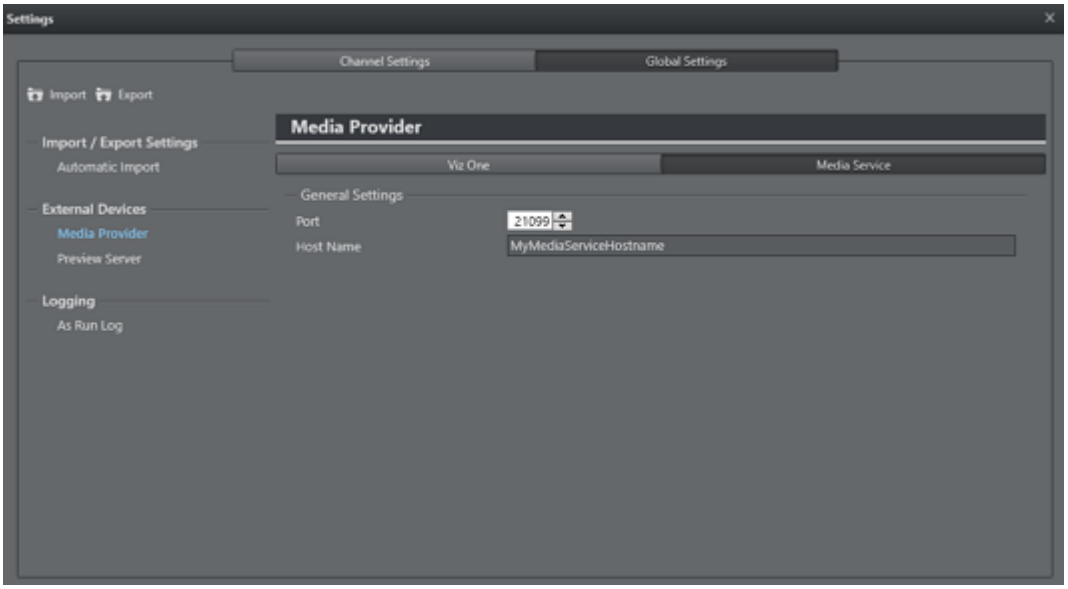
- **Username/Password:** The depth of Viz One searches is based on the permissions associated with the Viz One user. For example, a user with elevated permissions can see a wider set of assets, and can save modifications; A user with restricted Viz One permissions might be prevented from viewing certain types of video assets or files.

Configure a Viz One Connection

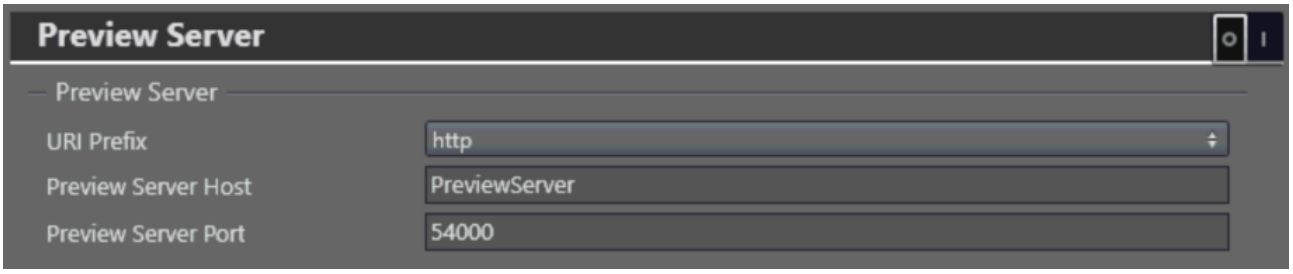
1. Make sure that **Viz One** is enabled
2. Enter the Viz One **host name**
3. Enter **Username** and **Password**
4. Click **Save**.
   You can now select the **Video Clips** options and search for a clip in Viz One (to verify the connection).

Media Service

Media Provider is a simple REST-based service enabling Multichannel to search and use video resources from a Viz Engine clip folder. The Media Provider standard TCP/IP port is **21099**. The port-number is configurable and must match the IP port used by the Media Service server.



Preview Server



With the Preview Server, Viz Multichannel can request frames of playlist elements to create a visual references in the playlist or to add graphics to secondary event video clips.

This configuration requires a running Preview Server. Note that the Preview Server setup must be installed on a *separate* machine.

The Preview Server itself is configured to connect to a pool of Viz Engines, and uses port number 54000 as its default listener port. The port must be changed if the Preview Server uses a non-standard port number.

The settings window has an On/Off switch. You can configure settings with the device in on or off mode. When *off*, the settings will take effect the next time the device is turned on.

- **URI Prefix:** Select protocol prefix to either *http* or *https*.
- **Host name:** The host name of Preview Server. Either an IP address or host name. It is recommended to use fully qualified host name.

  > ⚠ **Note:** Whichever addressing method you choose, (for example IP or fully qualified host name) always use the *same method* throughout the entire setup process.

- **Preview Server Port:** Port number for your Preview Server.

Note: It is recommended to run the Preview Server on a dedicated Viz Engine machine.

Configure Preview Server

1. Select protocol type (*http/https*).
2. Enter your Preview Server **host name** and **port number.**
3. Click **Save**.

6.1.4 Logging

The **As Run Log** records all *Take* commands sent to the Media Sequencer.

When enabled, the log can be stored as a standard text output (one line per take) or in a more structured JSON format for further processing.

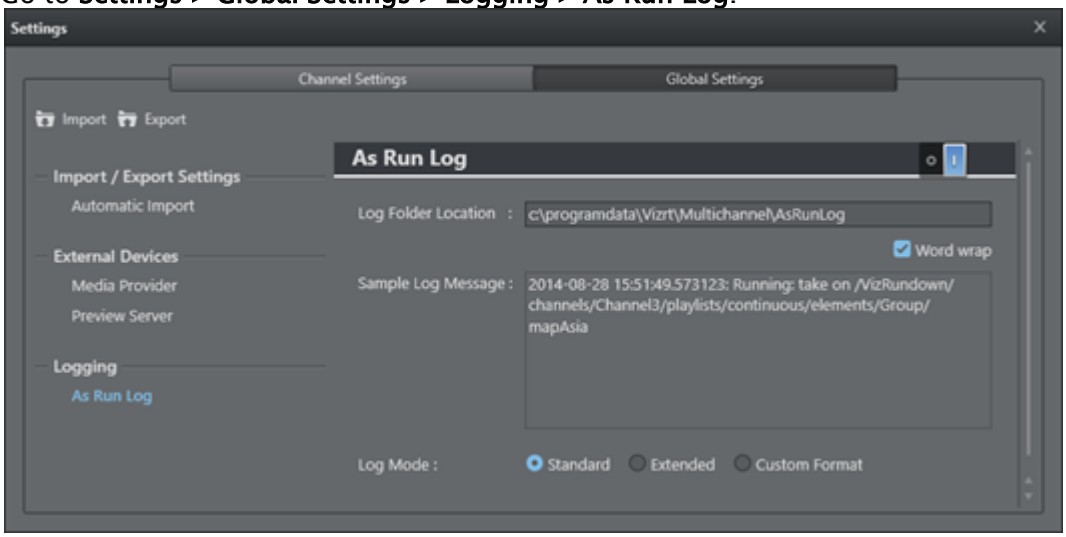
For more information (such as how to customize log entries), please see the *Media Sequencer* manual's **As Run Log** section.

Note: A log entry is not a guarantee that media went On Air.

Enable As Run Log

When running Viz Multichannel in MCR mode, you have in most cases the Media Sequencer running on a separate machine. Most often on the same machine as your Viz Engine.

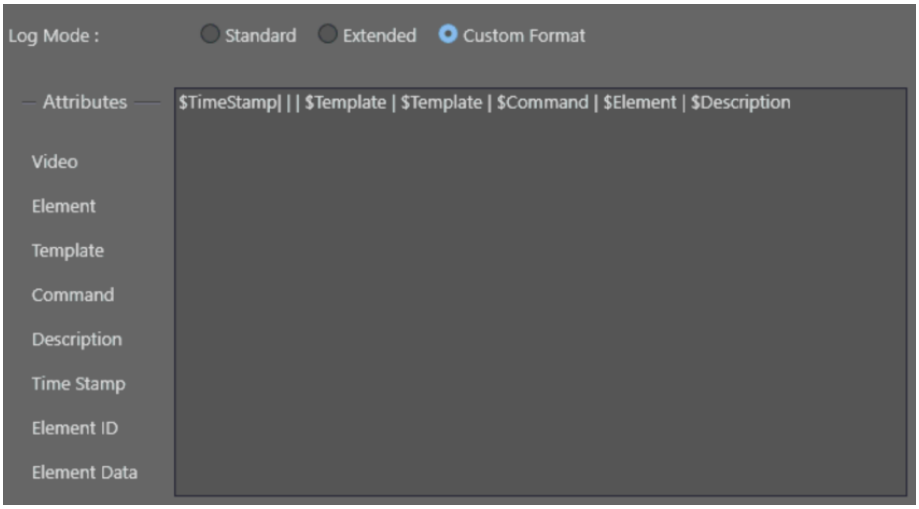
1. Go to **Settings > Global Settings > Logging > As Run Log**.



2. Select **ON** to enable logging.
3. Enter the **Log Folder Location** if required, or use the default location.
4. Select **Standard** or **Extended (JSON** or **Custom Format**).
   - (Optional) **Log Mode** is *Extended* or *Custom Format*
     Perform customization. See below.
5. Click **Save**.

Custom Format
Use *Extended* or *Custom Format* when there are **As Run** logging requirements not covered in Standard mode.

For example, you can use **Custom Format** for creating a specific As Run log format. When **Custom Format** is chosen, you can drag the available formatting keys (**Attributes**) from the left side of the panel to the **Sample Log** area to create a log style.



See Also

- Local Settings
- Working with Channel Settings
- Channel Settings
- Video Configuration
- Viz One Integration

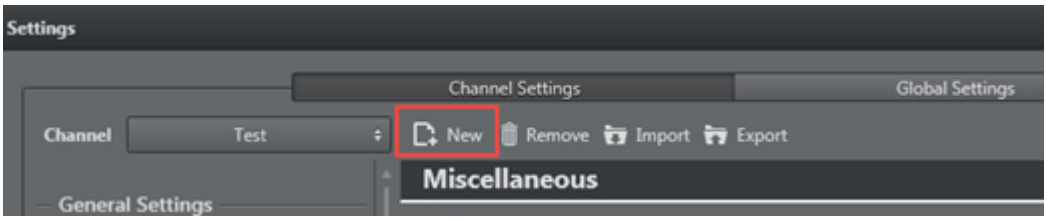
6.2 Working With Channel Settings

This section shows how to **configure a channel**. An ordered overview of topics helps you configure the system quickly.

The following sections cover how to **add**, **remove**, **export** or **import** channel settings:

- Creating a Channel
  - Add a New Channel
- Removing a Channel
  - Remove a Channel
- Exporting a Channel
  - Export a Channel as an XML File
- Importing a Channel
  - Import a Channel from an XML File

6.2.1 Creating a Channel



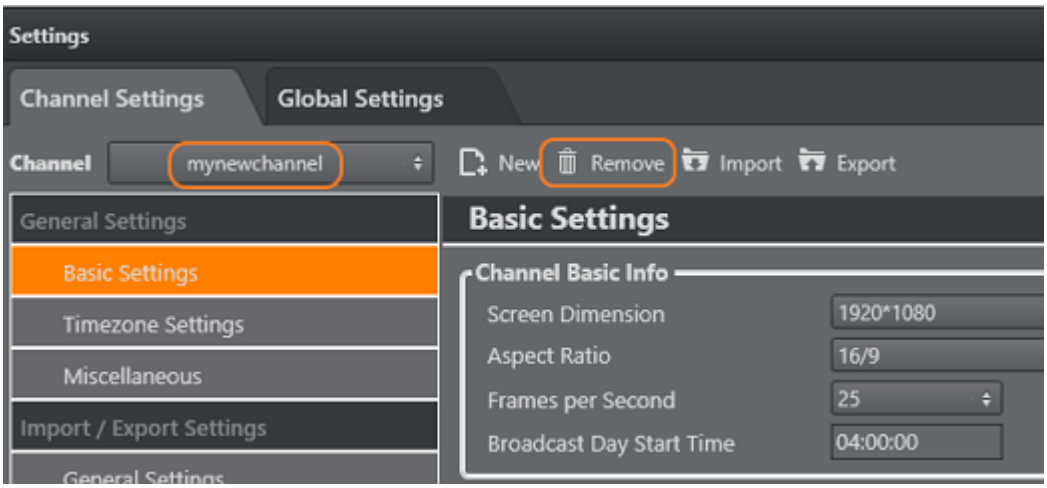
Create a new channel by pressing the **New** icon and give the channel a name in the dialog.

Add a New Channel

1. Open the **Settings** > **Channel Settings** window.
2. Select **New.** You are prompted to enter the new channel's name.
3. Enter the channel name *without spaces* (a-z, A-Z, 0-9), and click **OK**.
4. Proceed to configure the Channel Settings.

6.2.2 Removing a Channel

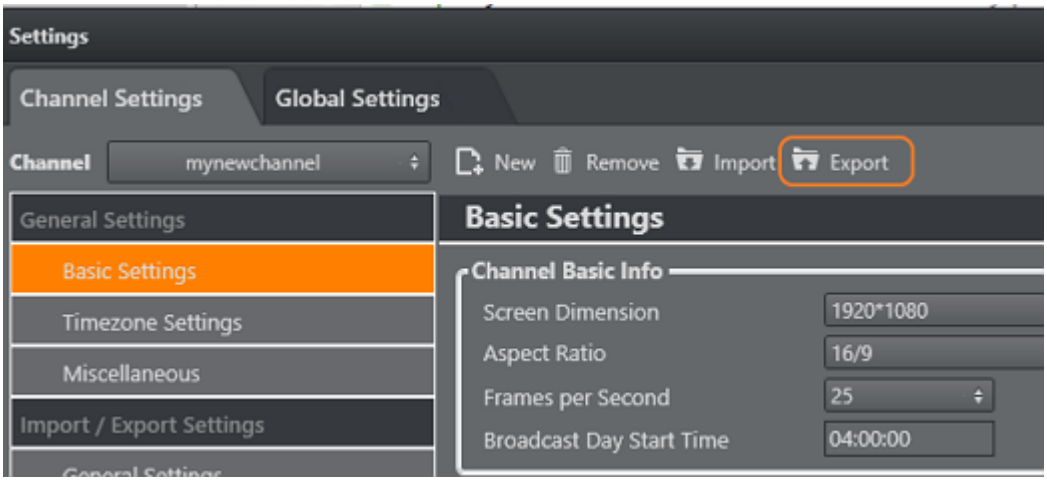
Remove a Channel



1. Open the **Settings** window.
2. From the **Channels** combo box, select the channel you wish to remove.
3. Select **Remove.** You are asked if you are sure you want to remove the selected channel.
4. Click **Yes**. The last removed channel is automatically saved to a `<ChannelName>.bkp` file, which can later be re-imported back into Viz Multichannel. The file is located in the **backup channel** folder found in the Viz Multichannel program folder.

6.2.3 Exporting a Channel

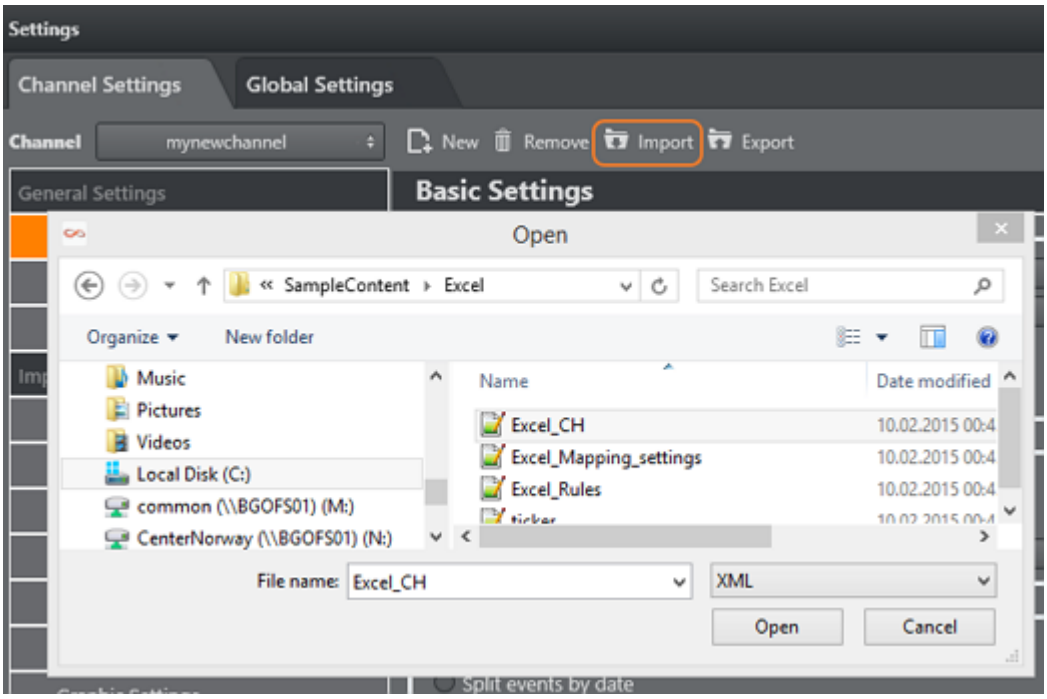
Export a Channel as an XML File



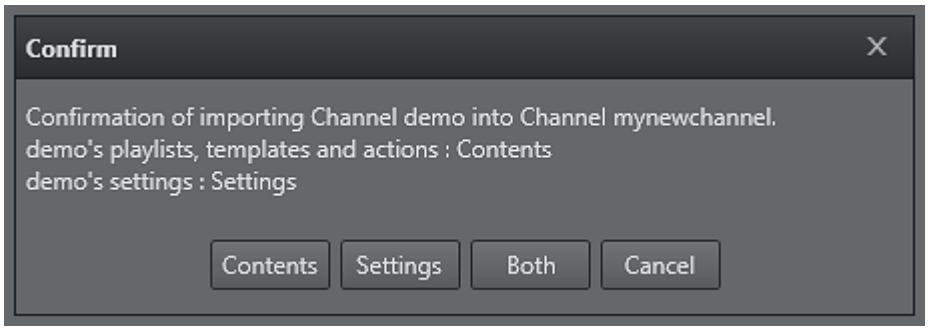
1. Open the **Settings** window.
2. From the **Channels** combo box, select the channel you wish to export.
3. Select **Export**. You are asked if you want to include the playlists and templates along with the selected channel's settings.
4. Click **Yes** or **No**, as required.
5. Enter a file name and click **Save**.

6.2.4 Importing a Channel

Import a Channel from an XML File



1. Open the **Settings** window.
2. Select **Import**.
3. Select the XML file and click **Open**. You are prompted to confirm what parameters to override.



4. Select *one* of the following:
   - **Contents**
   - **Settings**
   - **Both**

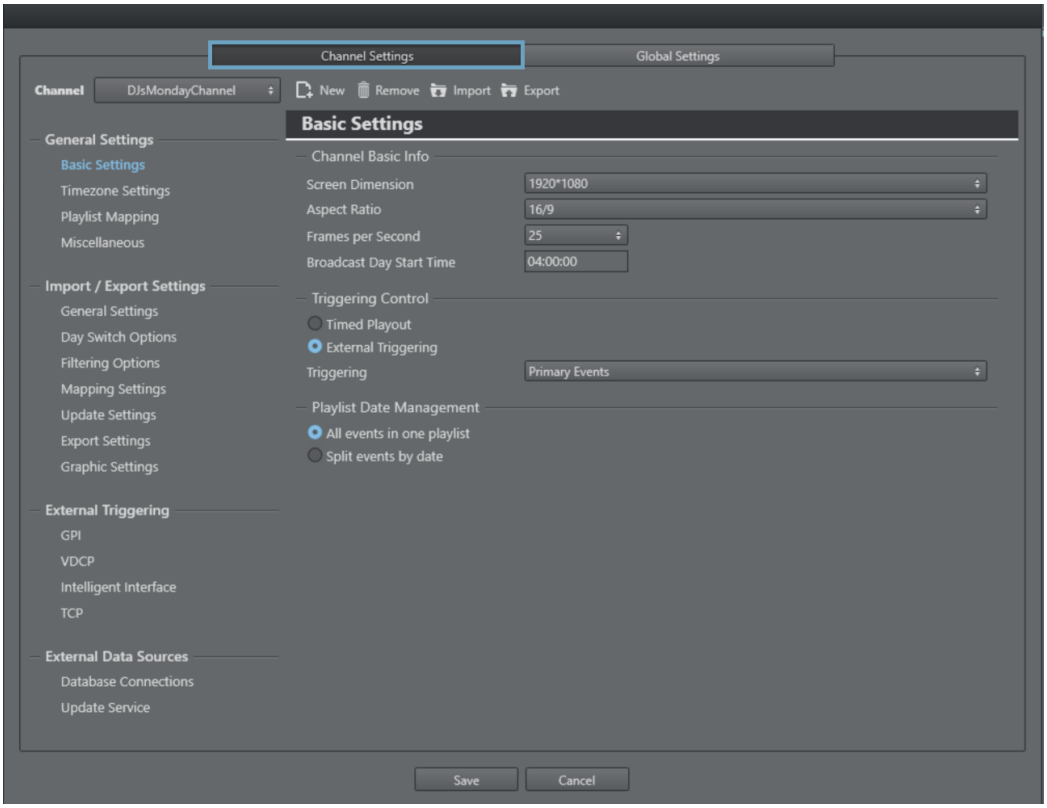
⚠ **Note:** If the imported channel uses the same path to the Viz Graphic Hub as the original, you will be prompted to confirm the overwrite of templates.

See Also

- Global Settings
- Local Settings
- Channel Settings
- Video Configuration

6.3 Channel Settings

In addition to Global Settings, Viz Multichannel has channel-specific settings, affecting a single channel.

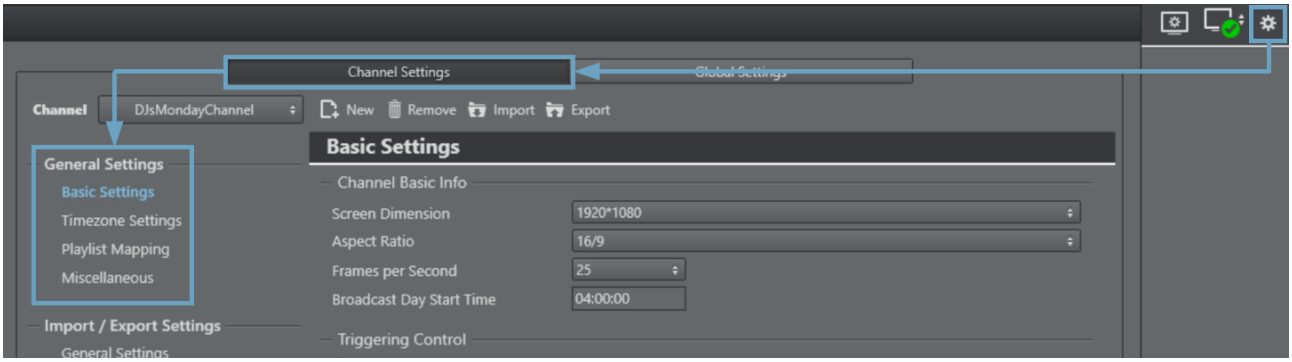


Each of the settings groups are presented below:

- General Settings
- Import / Export Settings
- External Triggering
- External Data Sources

6.3.1 General Settings

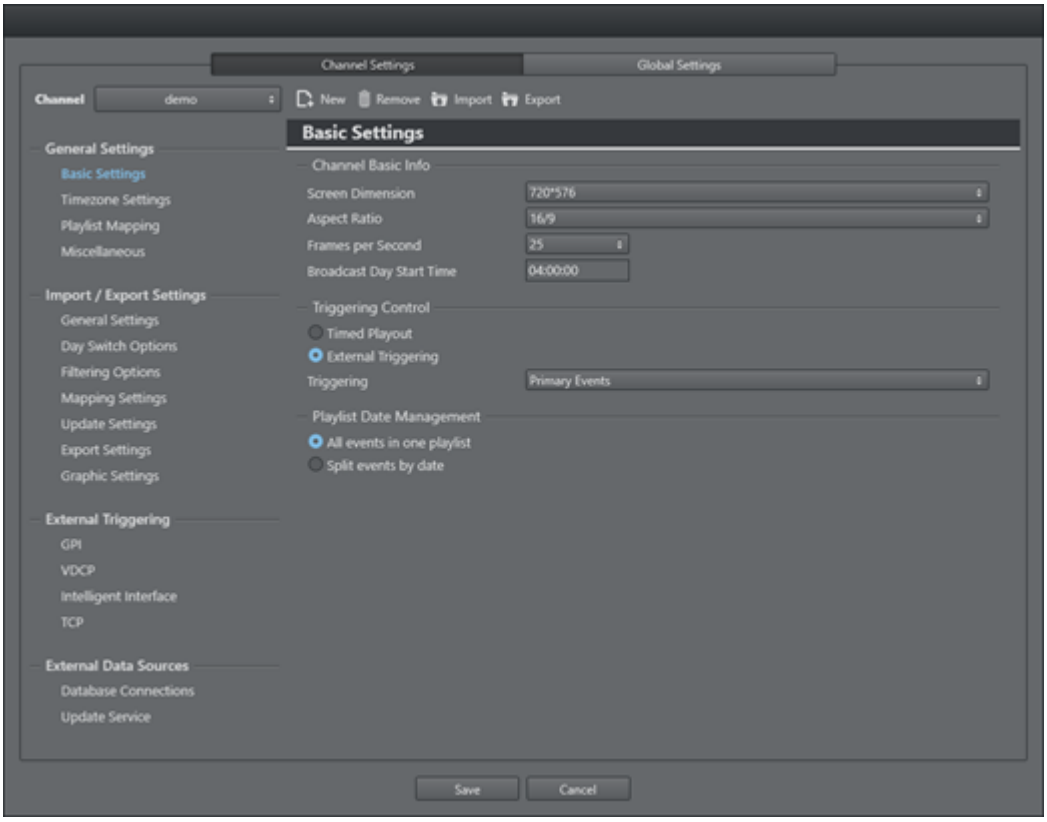
Click the cog wheel icon for channel-specific general settings. Then select the **Channel settings** tab.



The **General Settings** group comprises:

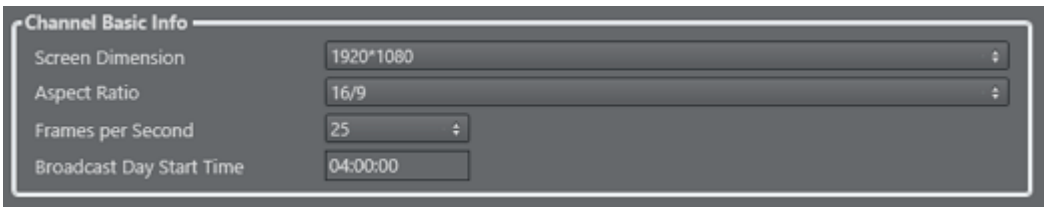
- Basic Settings
- Timezone Settings
- Playlist Mapping
- Miscellaneous

Basic Settings



- Channel Basic Info
- Triggering Control
- Playlist Date Management

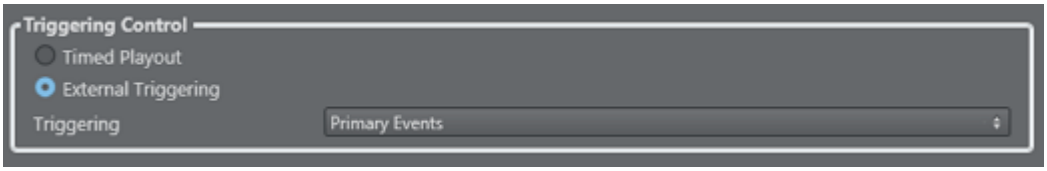
Channel Basic Info



Format settings are most relevant when Viz Multichannel is in master control room (MCR) mode.

- **Screen Dimension:** Defines the screen dimension. Options are:
  - SD NTSC: 720 x 486
  - SD PAL/SECAM: 720 x 576
  - HD 720: 1280 x 720
  - HD 1080: 1920 x 1080 (current default value, can be changed)
- **Aspect Ratio:** Defines the aspect ratio. Options are 4:3 and 16:9. This setting also affects the aspect ratio of the template editor.
- **Frames per Second:** Defines the frame rate at which the output will be displayed. The Media Sequencer may be responsible for the entire playlist or only secondary events (when an external system controls the primary events). If this setting is incorrect, the Media Sequencer will not calculate the events correctly, creating a *frame inaccurate* system. See Triggering Control.
- **Broadcast Day Start Time:** The broadcast day start time in use for the channel.

Triggering Control



Triggering control is only relevant when Viz Multichannel is in master control room (MCR) mode.

- **Timed Playout:** Allows the **Media Sequencer** to control the triggering of the playlist's timed events.
- **External Triggering:** Allows the **automation system** to trigger the playlist's timed events.
- **Triggering:** Allows you to define the level at which the automation system will have control over the timed events.
  - If the **primary events** option is selected, the Media Sequencer will trigger the secondary events based on offsets to the timed primary events.
  - If the **secondary and video events** option is selected, the automation system is in full control of the playlist and the Media Sequencer will act as a slave. Note that this using this option and assets from Vizrt's Viz One system as Primary Events, the effect is that the video of the primary Primary and all other Secondary types can be played out in combination and controlled from Automation.

Playlist Date Management

- **All events in one playlist:** When selected, Viz Multichannel will only allow one continuous playlist exist per channel. Regardless of time and on-air date, all events are included in the imported playlist. This setting is recommended.
- **Split events by date:** Schedules received from automation systems *are split by date*. This means that Viz Multichannel usually receives one long sequence of events that may belong to multiple playlists, typically for the current day and the next day. If this option is selected, Viz Multichannel separates the events by date and begin time, according to the **Broadcast Day Start Time** settings.

> ⚠ **Note:** The **Split events by date** option is only valid when reading the schedule's date from within the source file contents (and not the file name). If the `filedate` field is mapped to read values from `filename (=` **$Filename** `)`, this feature will not work.

Timezone Settings

Timezone

- **Channel Timezone:** Defines the timezone of the location where the channel is being broadcast. Options are: -12:00 to +14:00.
- **Schedule Timezone:** Defines the timezone of the schedule being imported.

DST Setting

- **Channel is in DST timezone:** Check this option when you want to enable the Day-light saving time function and select one of the Day-light saving time modes:
  - Dynamic DST Setting
  - Explicitly Defined DST Setting

Dynamic DST Setting

This configuration panel opens when **DST Setting > Channel is in DST timezone** (above) is set to *Dynamic DST setting*.

- **Period Start Date:** Specifies the *date* that starts the Day-light saving time period.
- **Period Start Time:** Specifies the *time* that starts the Day-light saving time period.
- **Period End Date:** Specifies the *date* that ends the Day-light saving time period.
- **Period End Time:** Specifies the *time* in local non- DST time that ends the Day-light saving time period.

Explicitly Defined DST Setting

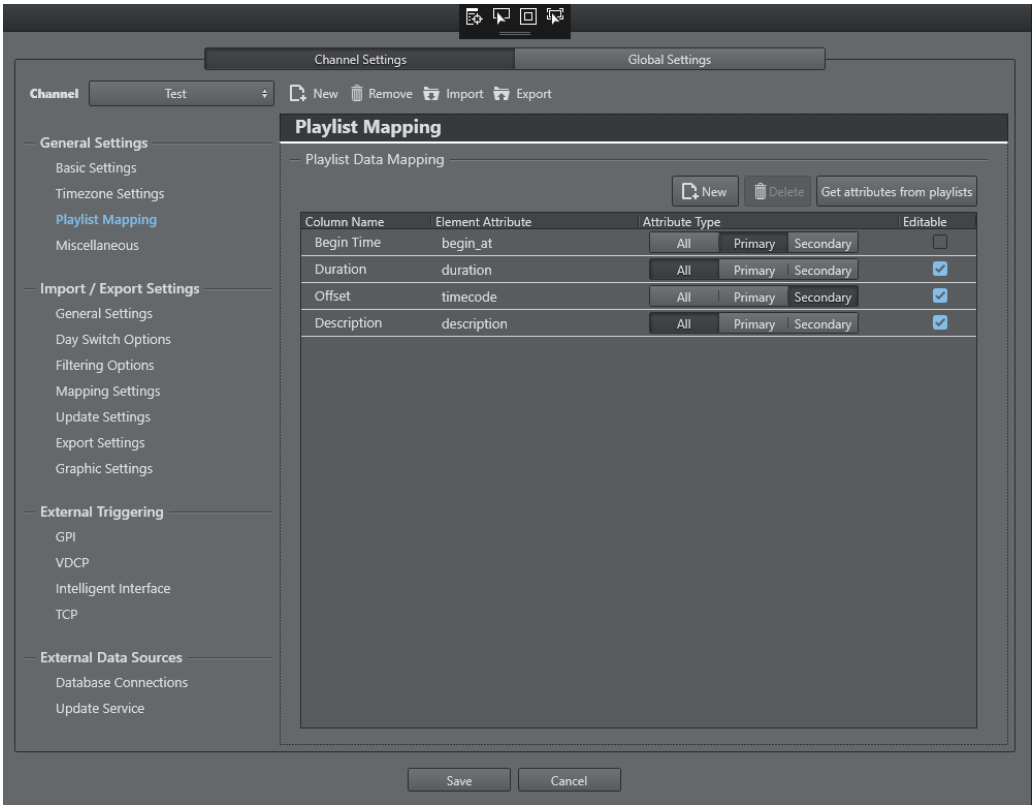
This configuration panel opens when **DST Setting > Channel is in DST timezone** (above) is set to *Explicitly defined DST setting*

Note: For nations with special DST handling. Press the calendar icon to selected dates from a popup.

- **Period Start Date:** Specifies the *date* that starts the Day-light saving time period
- **Period Start Time:** Specifies the *time* that starts the Day-light saving time period
- **Period End Date:** Specifies the *date* that ends the Day-light saving time period
- **Period End Time:** Specifies the *time* in local non-DST time that ends the Day-light saving time period

Playlist Mapping

Playlist mapping defines how the current playlist (rundown) columns are mapped to attributes.



- **Column Name:** Specify what attribute name to show on the playlist.
- **Element Attribute:** All attributes in the **Element Attribute** column are used in Page Content Filling Dialog, Rules condition and Filtering Options in **Import/Export Settings**.
- **Attribute Type:** Indicates whether an attribute belongs to a primary event, secondary event or both.
- **Get attributes from playlist:** Examine attributes from all playlists in the channel and find all attributes in primary and secondary events. Automatically adds all attributes in the **Playlist Data Mapping** table with a blank **Column Name**. To show this attribute in the playlist column (option **Use External Data** menu when right-clicking on playlist column), you must fill in a **Column Name** first.

Miscellaneous

- Playlist Options
- General Playout Options
- Edit Options
- Scene Import
- Playlist Archiving
- Viz One Integration
- Default Scenes
- Reporting

Playlist Options

- **Expand running primary element:** If set to true the playing primary element will be expanded when it is started (triggered).
- **Lock view to running primary element:** if enabled, this option will scroll the view of the playlist to the current running group (primary element) to the top whenever the primary element is changed.

General Playout Options

- **Allow item replay:** When checked, the automation system requests the replay of an item in a playlist (same Media ID). Viz Multichannel will go back and play the requested item (even if marked as played). When unchecked, this setting prevents an event from being played twice, and instead searches for the next event with the requested ID that is marked as not played.

> ⚠ **Note:** If you are using duplicate Media IDs, uncheck this option.

Edit Options

- **Clear ID after editing secondary event:** When checked, the secondary event ID is removed from the edited element in the playlist. This allows you to receive an updated schedule without overwriting secondary events in your playlist that have already been edited .

Scene Import

- **Report DVE errors during import:** When checked, any Viz Artist scenes being imported as Viz Multichannel templates that were built without DVE support will be reported, if *Play Video Through the Viz Engine* in the Basic Settings has been selected. If play video through the Viz Engine has been selected, it is therefore recommended that you select this option, as DVE support is important.
  Leave this setting unchecked if you do not play video through the Viz Engine or if you do not wish to see this error highlighted.

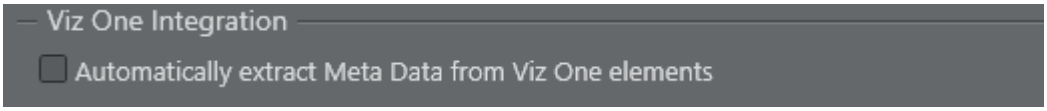
Playlist Archiving

Playlist archiving is used to archive and delete old playlists and pages, keeping only relevant data in the system.

These settings are only applicable for playlists that are split on days, and *not* for a continuous playlist.

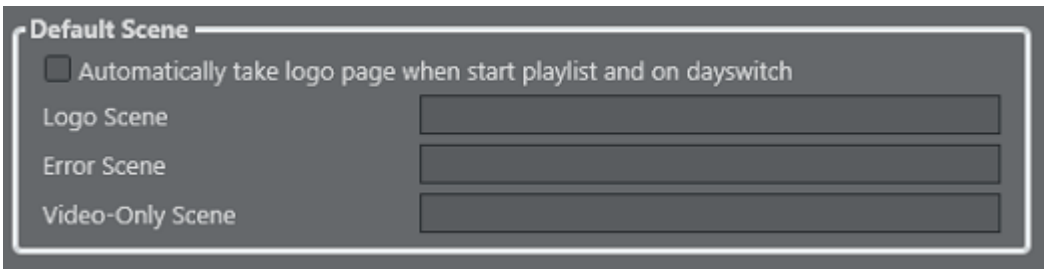
- **Enable Archiving:** When checked, archiving is enabled. When unchecked, no archiving will occur. Archiving will remove old playlists from the system and archive them in files.
- **Archive playlists older than (days):** Enter the number of days after which a playlist will be archived.
  Example: If today is 20/07/2014 and playlists are older than 2 days, playlists dated 17/07/2014 and older are archived.
- **Archive Folder:** Enter the folder path in which older playlists are archived.
- **Archiving Time (MSE clock):** Enter the time at which archiving will take place each day. The action will occur according to the clock on the machine on which Media Sequencer is installed.
  Example: If set to 00:00:00, Playlist History Manager will run every midnight.
- **Delete pages (days):** Enter the number of days after which pages will be deleted from the channel's storage.
  Example: If today is 20/07/2014 and pages are older than 2 days, pages modified on date 17/07/2014 and older are deleted. Note, *date modified* is used, not *date created*.

Viz One Integration



- **Automatically extract Meta Data from Viz One elements:** If this option is checked, Multichannel will add metadata from the Viz One item as primary event attributes while building video elements when importing a schedule.

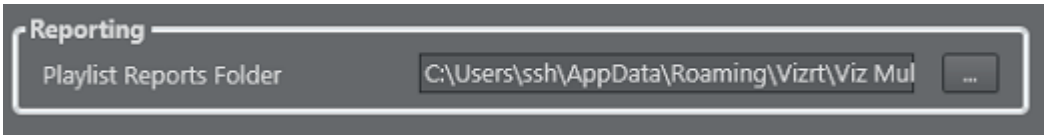
Default Scenes



- **Automatically take logo page when start playlist and on dayswitch:** Once the day switch occurs, the logo scene goes on air.
- **Logo Scene:** Enter the scene name of the required logo scene to be played.
- **Error Scene:** Enter the scene name of the error scene that should be easily accessible in the event of an error.
- **Video-only Scene:** If *Play Video Through the Viz Engine* has been selected in the Basic Settings, enter the scene name of the video-only scene that will be played when Viz Multichannel has no templates or playlists in memory. If you have a Matrox X.mio 2 plus card this is not required.

> **Tip:** The above scenes can also be set using the context menu available to pages listed in the Templates, Pages and Pilot Data Elements pane.

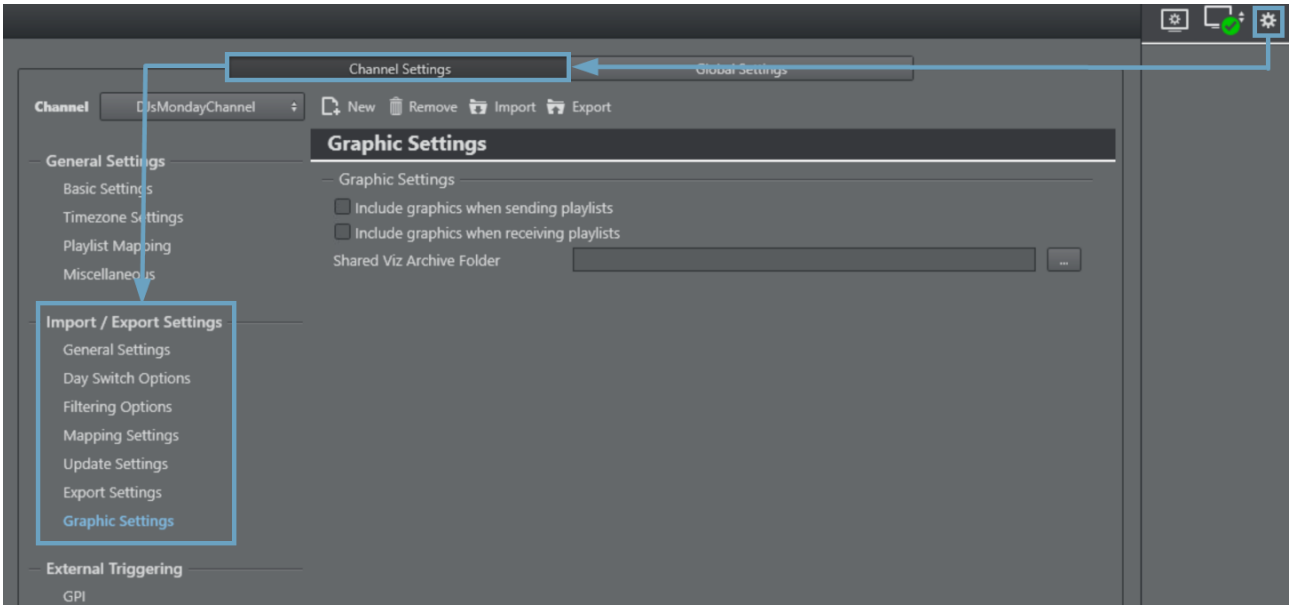
Reporting



- **Playlist Reports Folders:** Enter the folder path where playlist reports are saved. For more information on how to generate reports, see the Channel and Playlist Reports section.

6.3.2 Import / Export Settings

Locate channel-specific import and export settings from the cog wheel icon. Select the **Channel settings** tab.



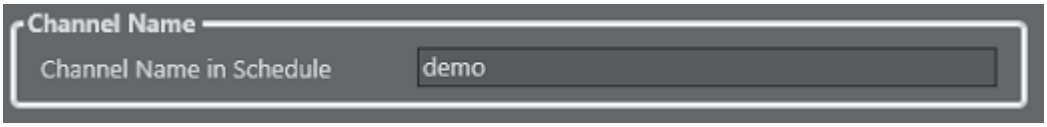
The **Import and Export** settings group comprises:

- General Settings
- Day Switch Options
- Filtering Options
- Mapping Settings
- Secondary Mapping Settings
- Update Settings
- Export Settings
- Graphic Settings

General Settings

- Channel Name
- Remote Hosts
- Automatic Import Settings
- Import Options
- Page Content Filling
- Translation Tables

Channel Name



- **Channel Name in Schedule:** Sets the channel name that corresponds to the channel name given by the imported schedule.
  Setting the name is useful if there are schedules for multiple channels in import or update folders.

Remote Hosts

- **Remote Hosts:** Defines remote machines that are to receive a copy of the playlist. Multiple hosts are separated by a comma.

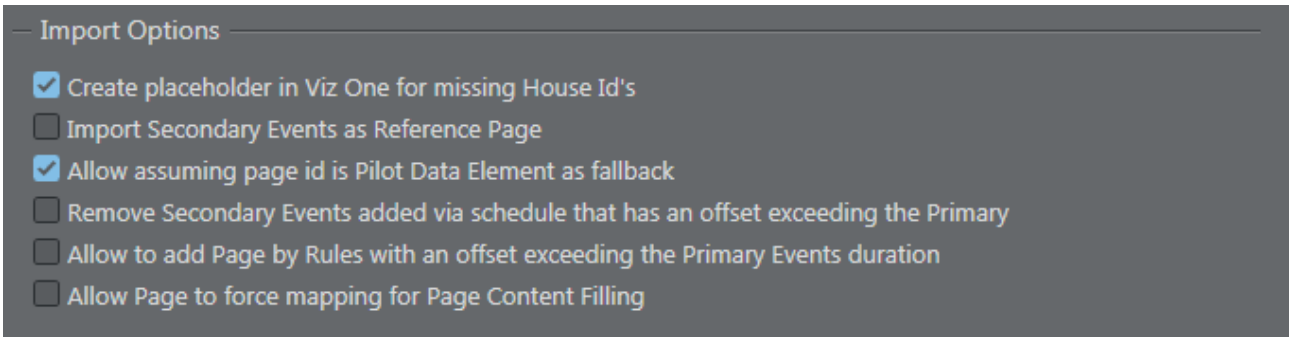
Automatic Import Settings

For information on how to set global import settings (import interval and import path), see the global Automatic Import settings. See also the Playlist Importer section for installation, configuration and use of the Playlist Importer.

- **Enable Automatic Import:** When checked, automatic imports and updates are enabled. When unchecked, only manual import operations occur.
- **Schedule Import Folder:** Enter the folder path where schedules imported from external systems will be found.
- **Schedule Update Folder:** The path where a schedule file is located for the purpose of Update of the playlists in the system.

> ⚠ **Note:** It is highly recommended that the **import** and **update** folders are defined as **separate folders**.

Import Options



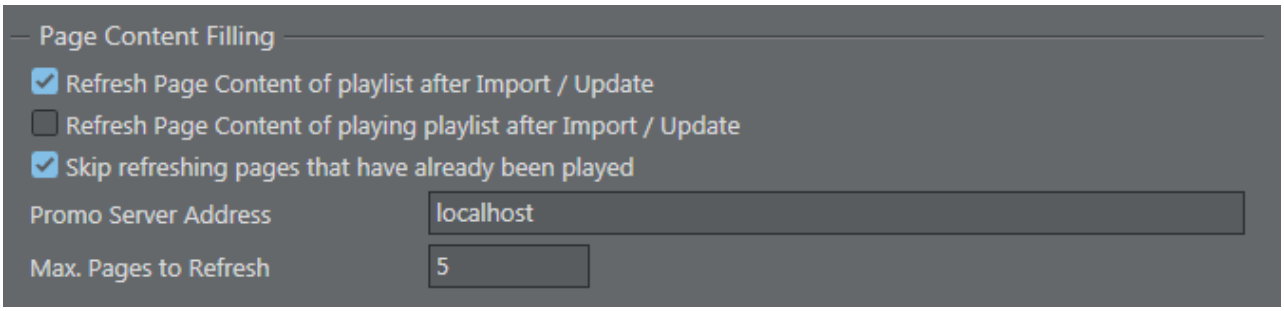
- **Create placeholder in Viz One for missing House Ids:** If enabled, any request towards a given House Id that is not found in the Viz One system will issue a second query against Viz One to create a placeholder element and retrieve the resulting payload for playlist composite

group purposes. Disable this setting if placeholders are not required. This setting is enabled by default.

- **Import Secondary Events as Reference:** When checked, all secondary events associated to pages in Viz Multichannel will be imported as Referenced Pages. When unchecked, pages will be instances of the original page.
- **Allow assuming page id is Pilot Data Element as fallback:** When checked, any secondary element with an page id that is numerical and that does not have a corresponding entry in the Page Pool or Action Pool, will be assumed to be a Pilot Data Element, stored in a Pilot Database, and the import process will create a Pilot Data Element reference page in the playlist.
- Self-explanatory options:
  - **Remove secondary events that has an offset exceeding the primary events duration**.
  - **Allow to add Page by Rules with an offset exceeding the Primary Event's duration**.
  - **Allow page to force mapping for data content filling**.

Page Content Filling

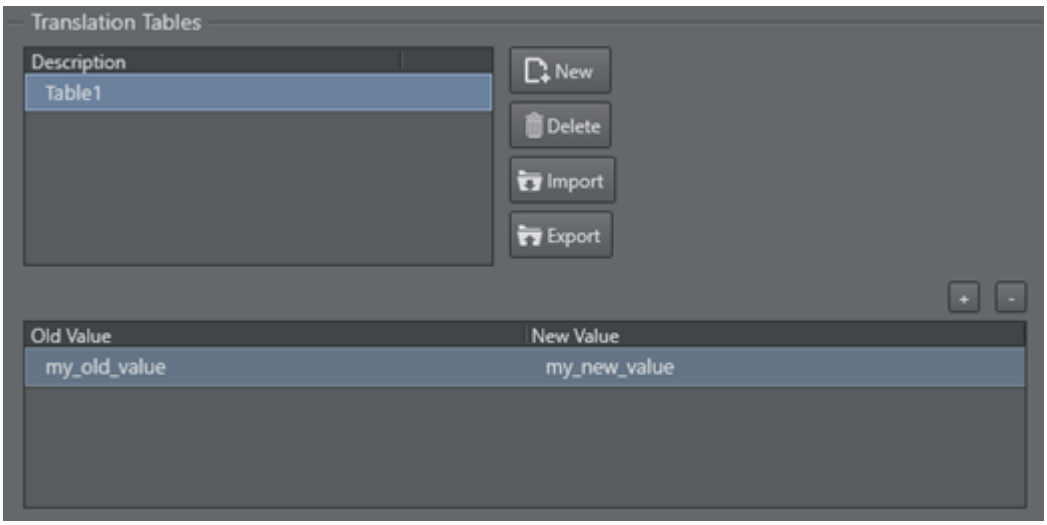
In order to use Page Content Filling, the Promo Server component must be installed and configured. See **Promo Server Installation and Configuration** in the Promo Server chapter.



Options:

- **Refresh Page Content of playlist after Import / Update**. Enabled by default.
- **Refresh Page Content of playing playlist after Import / Update**. Only useful if segmenting playlists by broadcast days and if you want any update of an upcoming day's playlist to also affect the currents day's data content.
- **Skip refreshing pages that have already been played:** The system skips page content filling for pages that have already been played. If this option is unchecked, the system performs page content filling for all pages for which lookup rules or database connections have been set. This option is selected by default.
- **Promo Server Address:.** Defines the network address for the server.
- **Max. Pages to Refresh:** Maximum pages that will be Refreshed during a full Page Content Filling Refresh session by Integrations Hub or manually requested from the UI.

Translation Tables



Translation Tables are global for translating values when performing Content Filling. Although you can have several tables, only one can be active at any given time. Use **New** to create a table and add *Old* and *New* translations as required. Use **Import** and **Export** buttons to load or save translation tables from/to XML-files.

Day Switch Options

- **Activate Day Switch:** Activates day switch for split playlists. The default Day Switch is 04:00. This can be changed in Channel Settings as required.
- **Insert Cleanup:** Cleans up the program in Viz Engine a set *amount of time before the day switch* takes place.
- **Insert Initialize:** Initializes the program in Viz Engine a set *amount of time before the day switch* takes place.

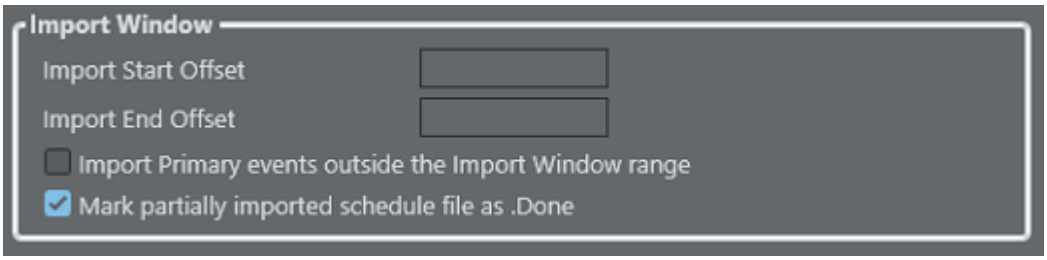
> ⚠ **Note:** Time is relative to the day switch action that is inserted as the *last* element of the day. For example, if the primary event ends 30 minutes after the preferred day switch time then the switch and all other actions are offset by 30 minutes to adjust for this.

Filtering Options

- Import Window

- Primary Event Filtering

Import Window

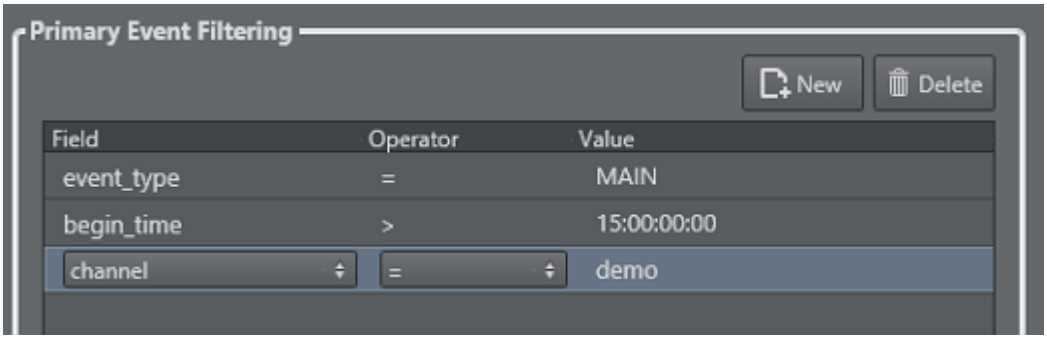


The import window defines what duration of the playlist is to be imported at any given time. This is useful in order to control the amount of secondary and, if relevant, primary events that are imported.

- **Import Start Offset:** Sets the relative offset for when to start importing elements according to their start time. Format is HH:MM:SS (hours, minutes and seconds). If the current time is 12:30:00 and the start offset is set to 01:00:00 then only events with a start time set to 11:30:00 and after will be imported.
- **Import End Offset:** Sets the relative offset time for when to end the import. Format is HH:MM:SS (hours, minutes and seconds).
- **Import Primary events outside the Import Window range:** Imports the primary elements (groups), but does not apply rules or create any secondary elements. This setting should be used in conjunction with the offset settings.
- **Mark partially imported schedule files as .Done:** Tags the schedule file already processed as *.done* so that it is filtered out at the next import or update. Files that failed to import are tagged as *.fail*.
  Setting an import interval allows for improved control over what is imported and reduces the overall load on the system.

Some channels may also benefit from setting a small import window in order to set a more frequent Automatic Import Interval - see Automatic Import Settings.

Primary Event Filtering



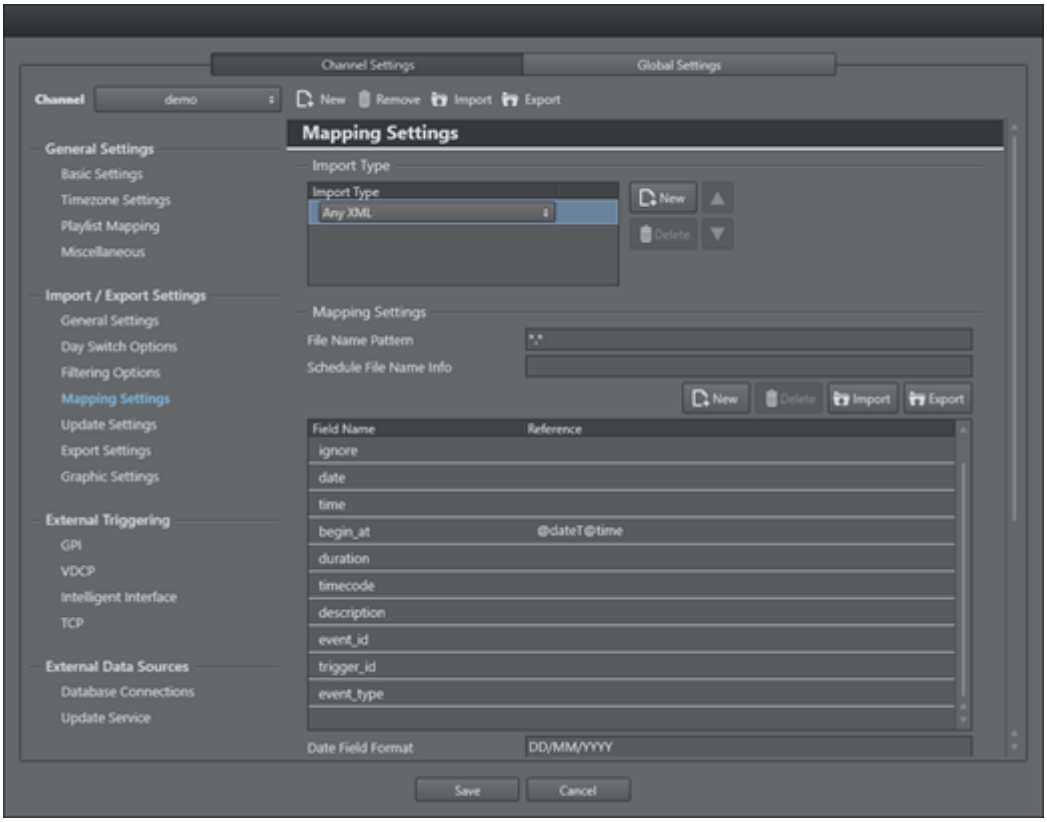
These settings allow you to filter the import process, so that source primary events must meet certain criteria in order to be included in the playlist.

Create a Primary Event Filter

1. Select your **channel**.
2. Click the **Settings** button to open the Settings window.
3. Select Filtering Options.
4. Under the **Primary Event Filtering** section click the **Add Condition** icon.
5. Click the **Attribute** field to select an attribute from the Field Name column.
   These relate to both the Mapping Settings and the Secondary Mapping Settings .
6. Click the **Operator** field and make a selection (see table below).
7. Click the **Value** field and enter a time, number or text. Time format is `hh:mm:ss:ff`.
   For a list of operator options, see:

Operator	Description
=	equal to
>	greater than
<	less than
>=	greater than or equal to
<=	less than or equal to
<>	different from
~=	Contain string (fuzzy search)
!~=	Does NOT contain string (fuzzy search)
Reg Exp	A Regular Expression

Mapping Settings



The primary mapping settings can map from scheduling and/or automation systems. Depending on the local setup, some of the following configuration panels will be presented:

- Mapping Settings
- Table Columns
- Primary Events Ignore Settings for Page Content Filling
- LST Import Settings
- Excel Import Settings
- Any Text Import Settings
- XML Import Settings
- Omnibus Import Settings

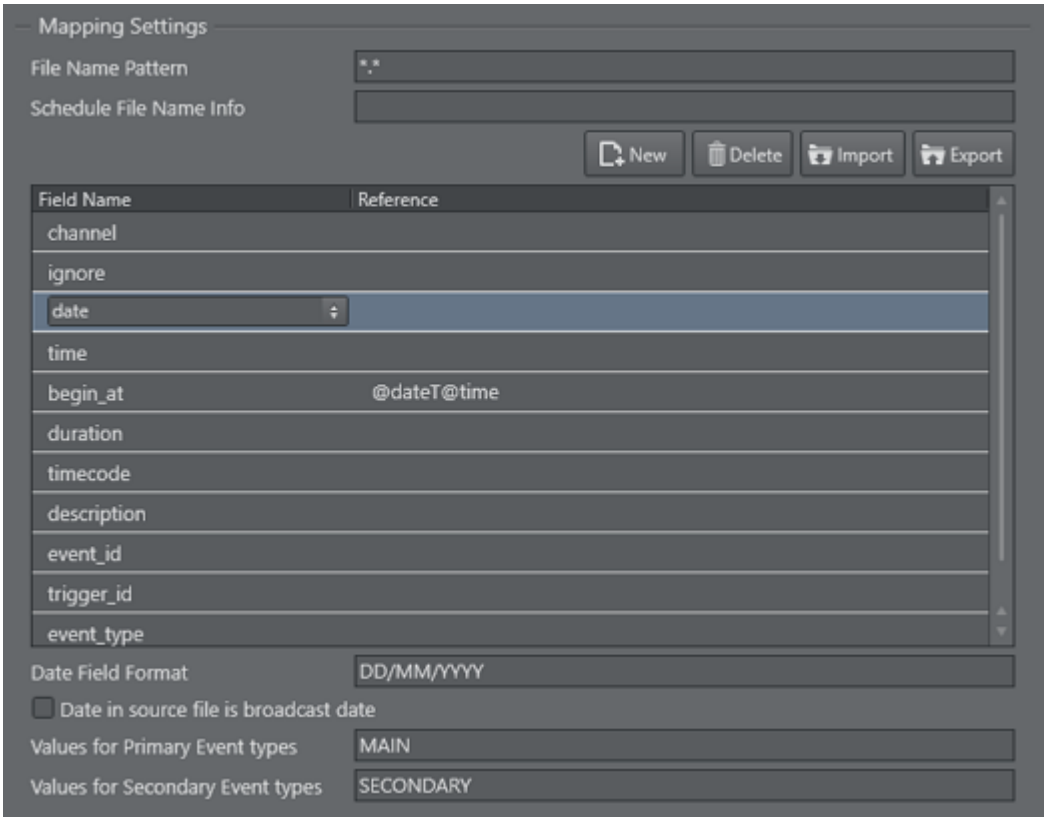
Mapping Settings

- **Import Type:** Select the type of external playlist.
- **File name pattern:** Enter the specific file format to search for in the import/update folders, for example `*.xml`, `*.lst`, `*10.txt`, etc.
- **Schedule File Name Info:** When Reading Channel and Date Values from Filenames, indicate the format that Viz Multichannel should expect. The filename must contain the D/M/Y to represent the day, month and year character location in the filename. C must represent the

channel name. Note that the number of occurrences of the letter C is the same as the number of characters in the channel name. X can be used in order to skip characters.

- `Channel10_20100824.txt` = `CCCCCCCC_YYYYMMDD`.
- `20130314_TV2Test.xml` = `YYYYMMDD_XXXCCCC`.

Table Columns



The mapping table is used to add all the rows required to map the source playlist to the Viz Multichannel playlist to be created.

- **Field Name:** Viz Multichannel's internal field name. You can either edit the value directly or select values from a drop-down list: click the Field Name entry to show a selectable drop-down list of available Field Name types. See the Basic Mapping Table Field Names section for more information on required and optional field names, and how to use additional field names.
- **Reference:** Reference to the data in the schedule file. The reference is then mapped to the *Field Name*. The actual reference code depends on the input data format (textfile, XML etc).

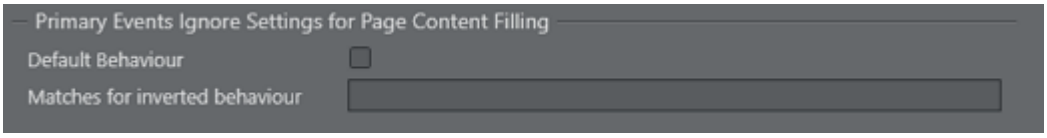
  > **IMPORTANT!** Field names and reference values vary depending on the automation system and data formats in use. For more information, see the Import Guide.

- **Date Field Format:** This field is optional. If defined, Viz Multichannel will expect to find dates in the source file based on the format provided here.

- **Date in source file is broadcast date:** Check this box if the date in the source file is the same as the broadcast date. Otherwise, leave it unchecked.
- **Values for Primary Event Types:** When primary and secondary events are at the same hierarchical level in the source file, enter the text within the fields that denotes primary events. If there is more than one type of denoting text, separate with commas. For example `Program,Promo,Commercial`. This value will be called from within the `event_type` field.
- **Values for Secondary Event Types:** Enter the text within the fields that denotes secondary events. If there is more than one type of denoting text, separate with commas. For example `Logo,Bug`. When primary and secondary events are at the same hierarchical level in the source file, the value will be called from within the `event_type` field. Otherwise, the value will be called from within the `secondary_event_type` field.

> ⚠ **Note:** If a field name is empty, duplicate or invalid, the field name(s) in error will be shown with a red border. Fields containing errors must be corrected.

Primary Events Ignore Settings for Page Content Filling



- **Default behavior:** Defines the default behavior during import of primary events for Page Content Filling purposes.
  - When set to FALSE the default behavior is to *use* all primary events for page content filling except those values listed in the Values field.
  - When set to TRUE the default behavior is to *not use* all primary events for page content filling except those values listed in the Values field.
- **Matches for inverted behavior:** Primary events that match the comma-separated values will invert the selected default behavior. Note that you need to fill in a reference for the Ignore field name in the mapping table.
  Supported wildcards:

- `LIVE` - any string that is an **exact** match “LIVE” is a hit, for example: “LIVE”.
- `*LIVE` - any string that **ends** with “LIVE” is a hit, for example: “MUSICLIVE”, “NOTLIVE” and “LIVE”.
- `LIVE*` - any string that **starts** with “LIVE” is a hit, for example: “LIVESHOW”, “LIVEEVENT” and “LIVE”.
- `*LIVE*` - any string that **contains** “LIVE” is a hit, for example: “VERYLIVEMUSIC”, “MUSICLIVE”, “NOTLIVE”, “LIVESHOW”, “LIVEEVENT” and “LIVE”.

LST Import Settings

- **Use Reconcile key as Viz One House Id:** After a playlist has been imported, the reconcile keys are used to set the IDs for the Viz One assets.
- **Get date from schedule file:** If the Schedule File Name (see Mapping Settings) is empty, the schedule date will be retrieved from the ADC-100 system's RCV file.
- **Code Page:** During import, bytes in an LST file, stored in the TITLE field, will be converted according to the defined Windows code page. For example, code page with identifier 1256 will convert bytes to ANSI Arabic.
- **Use Universal Sercom Driver:** Enable this when USD is used.
- **Universal Sercom Driver name:** If left empty, exports Secondary Events as standard secondary events for Harris. If defined, exports secondary events as macro commands for that Universal Sercom Driver (USD) device for Harris (ID=USD_NAME, Title=VIZRT:Media ID, Reconcile Key=Template_name).
- **Macro Name:** Sets the macro name used in the Harris system.

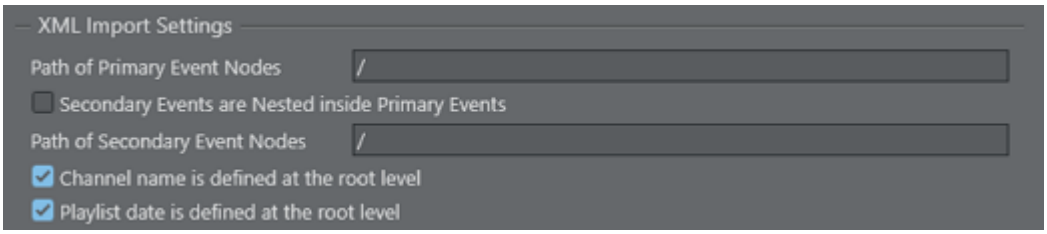
Excel Import Settings

- **Header Lines Included:** If checked, the header lines will *not* be read, and reading will start from the first row of data only. If left unchecked, the first line will be read. Only relevant if the import type is Excel (`*.xls` or `*.xlsx`).
- **Skip Rows:** Set the count here if the Excel file contains any blank lines after the header-line that need to be skipped.

Any Text Import Settings

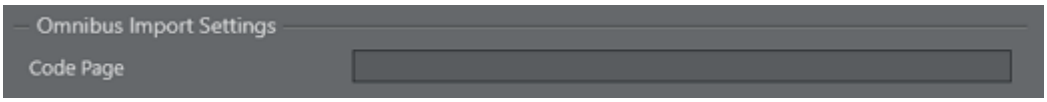
- **Header Lines in File:** Enter the number of header lines in the Any Text file.
- **Skip Lines:** Enter the number of lines to skip before beginning to read the import source file for data.
- **Columns Separator:** Enter the text symbol (for example `*`) that separates the columns in the text file.
- **File Encoding:** Sets the expected file encoding of the imported text file. Alternatives are ANSI, UTF-8, UTF-8 without BOM, and UTF-16.
- **Code Page:** Sets the expected code page of the imported text file (for example `28591` for ISO 8859-1 Latin 1 or `874` for ISO/IEC 8859-11 Latin/Thai).

XML Import Settings



- **Path of Primary Event Nodes:** Path to the element that contains the primary events.
- **Secondary Events Nested in Primary Events:** Check this box if secondary events are nested as child elements within primary event nodes.
- **Path of Secondary Event Nodes:** Path to the element that contains the secondary events.
- **Channel name is defined at the root level:** Assumes that the channel name is defined as a meta data entry (at the root level) outside the primary element entries.
- **Playlist date is defined at the root level:** Assumes that the playlist date is defined as a meta data entry (at the root level) outside the primary element entries.

Omnibus Import Settings

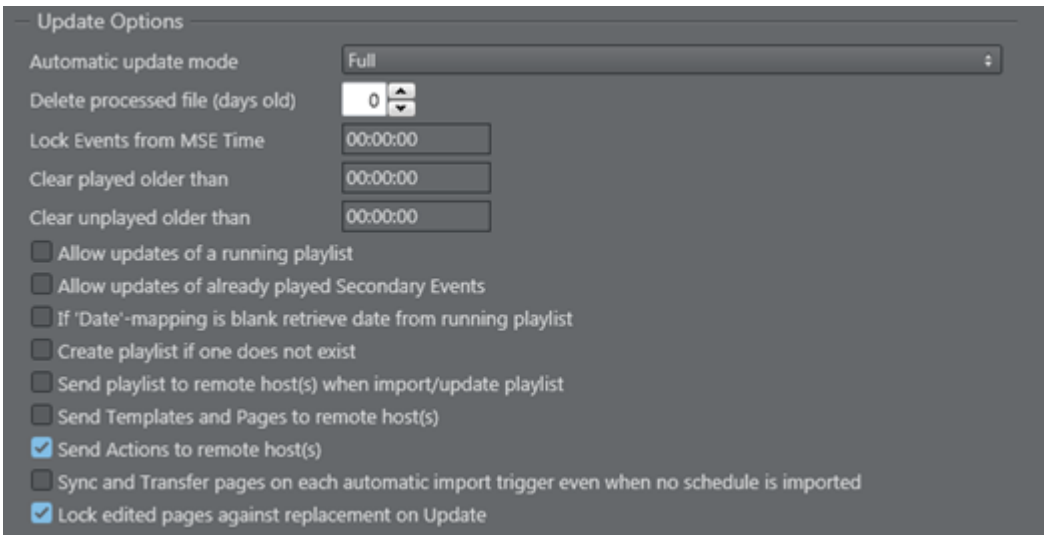


- **Code Page:** Sets the expected code page of the imported text file (for example `28591` for ISO 8859-1 Latin 1 or `874` for ISO/IEC 8859-11 Latin/Thai).

Update Settings

- Update Options
- Full Update Options for Secondary Events
- Update Times Options for Secondary Events

Update Options



- **Automatic Update Mode:** Options are:
  - **Full:** Merges the playlist in its current state in Viz Multichannel with changes that have been made to the original source file.
  - **Times:** Updates primary event begin time and duration, and any changes made to the original source file. Any primary event additions or deletions are ignored. Only the times are updated.
  - **Full update without event deletion:** Merges the playlist in its current state in Viz Multichannel with changes that have been made to the original source file, without deleting any (primary) elements.
- **Delete Processed Files (days old):** Enter the number of days after which processed playlist files (`*.done`) will be deleted.
- **Lock Events from MSE Time:** Sets an interval (hh:mm:ss) during which scheduled events will not be updated. The interval starts as of the next update, whether scheduled or manual, and is timed according to the Media Sequencer clock. The default Lock-Time is 00:01:00.
- **Clear played older than (hh:mm):** When updating the playlist, primary and secondary events that have not been played and are older than the time entered in this option are removed.
- **Allow updates for a running playlist:** When checked, playlists that are currently active will be updated. When unchecked, only playlists that are not playing will be updated.
- **Allow updates of already played Secondary Events:** When checked, all secondary events will be updated. If unchecked, secondary events that already have been played will not be updated.
- **If 'Date'-mapping is blank retrieve date from running playlist:** When checked, an attempt will be made to find the date from the running playlist when "Date"-mapping is blank.
- **Create playlist if one does not exist:** If you update a playlist that does not have an existing date, the playlist will be created/imported for you.
- **Send Playlist to remote hosts when import/update playlist:** Sends the playlist to remote Media Sequencer hosts (see Remote Hosts).

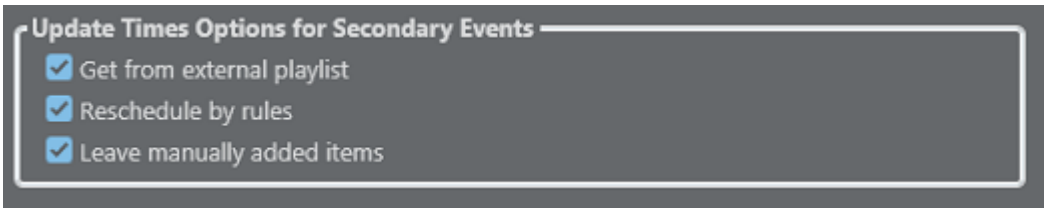
- **Send Actions to remote host(s):** Sends actions to remote Media Sequencer hosts after import or update of a playlist (see Remote Hosts). If the remote host has an action with the same name, its replacement will be skipped. The default value is false.
- **Sync and Transfer pages on each automatic import trigger even when no schedule is imported**. Although there is no schedule in the import/update folder, templates and pages are sent to Remote Hosts via the Playlist Importer.
- **Lock edited pages against replacement on updates:** self explanatory.

Full Update Options for Secondary Events

These settings apply both manual and automatic updates and are checked by default.

- **Get from external playlist:** When checked, secondary events will also be updated from source files when performing full updates. When unchecked, secondary events will not be updated.
- **Reschedule by rules:** When checked, secondary events will be updated according to rules (see Working with Rules) when performing full updates. When unchecked, secondary events will not be updated.
- **Leave manually added items:** When checked, secondary events added manually in Viz Multichannel will not be affected when performing full updates. When unchecked, secondary events will be affected.

Update Times Options for Secondary Events



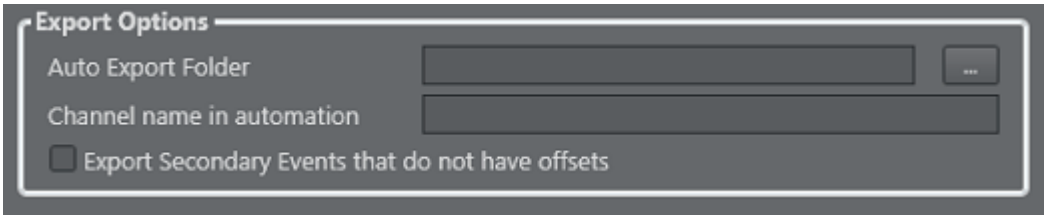
These settings apply both manual and automatic updates.

- **Get from external playlist:** When checked, secondary events will also be updated from source files when performing update times. When unchecked, secondary events will not be updated.
- **Reschedule by rules:** When checked, secondary events will be updated according to rules (see Working with Rules), when performing update times. When unchecked, secondary events will not be updated.
- **Leave manually added items:** When checked, secondary events added manually in Viz Multichannel will not be affected, when performing update times. When unchecked, secondary events will be affected.

Export Settings

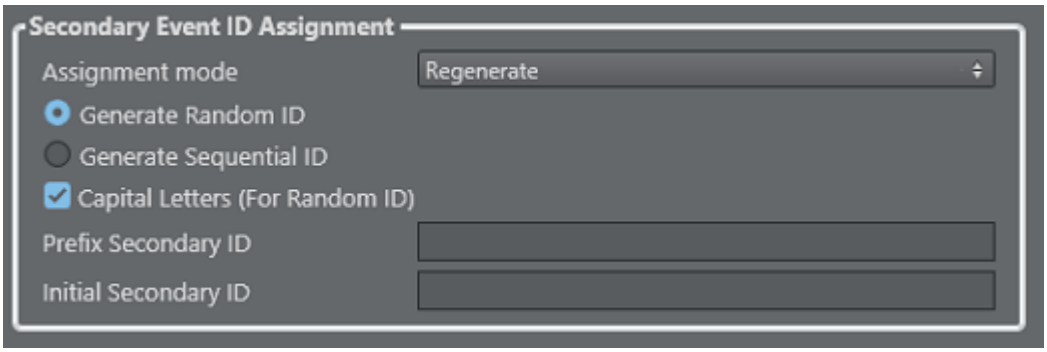
- Export Options
- Secondary Event ID Assignment
- Harris (LST)

Export Options



- **Auto Export Folder:** Enter the folder path where automatic exports are to be stored.
- **Channel Name in Automation:** Enter a channel name that will be recognized by the automation. This is used for all export types except XML. If you leave this field blank, the channel name will be the *Channel Name in Schedule* under General Settings.
- **Export Secondary Events that do not have offsets:** When checked, secondary events that do not have offsets are included in the exported file.

Secondary Event ID Assignment



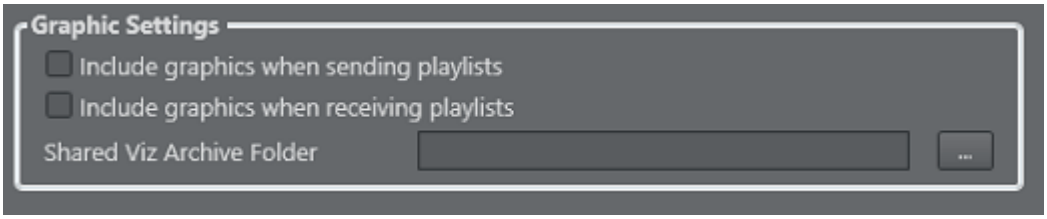
- **Assignment Mode:** Generation of IDs for secondary events during export to an LST file. Options are:
  - **Automatic:** Generates IDs on secondary events that do not have an ID.
  - **Manual:** Takes no action.
  - **Regenerate:** Generates IDs on all secondary events, overwriting existing IDs.
- **Generate Random ID/Generate Sequential ID:** Select Random ID for IDs to be assigned randomly by the system. Select Sequential ID for the numbers to run sequentially from the first item in the playlist onward.
- **Capital Letters (for Random ID):** This option is only relevant if select Random IDs has been selected in the previous option. Selecting capital letters will ensure that the letter portion of the generated ID is always in capitals. Otherwise the letters will be a combination of lower and upper case.

- **Prefix Secondary ID:** This option is only relevant if you are generating sequential IDs. Enter the string you wish to use as the ID prefix.
- **Initial Secondary ID:** This option is only relevant if you are generating sequential IDs. Enter the first number of the ID list.

Harris (LST)

- **Merge Into Existing File:** If left unchecked, the selected playlist is exported from scratch on export. If checked, you are prompted to select an existing file, and any new secondary events are added to that file. The resulting file replaces the old one, which is saved as a backup with the extension{{.orig}}.

Graphic Settings

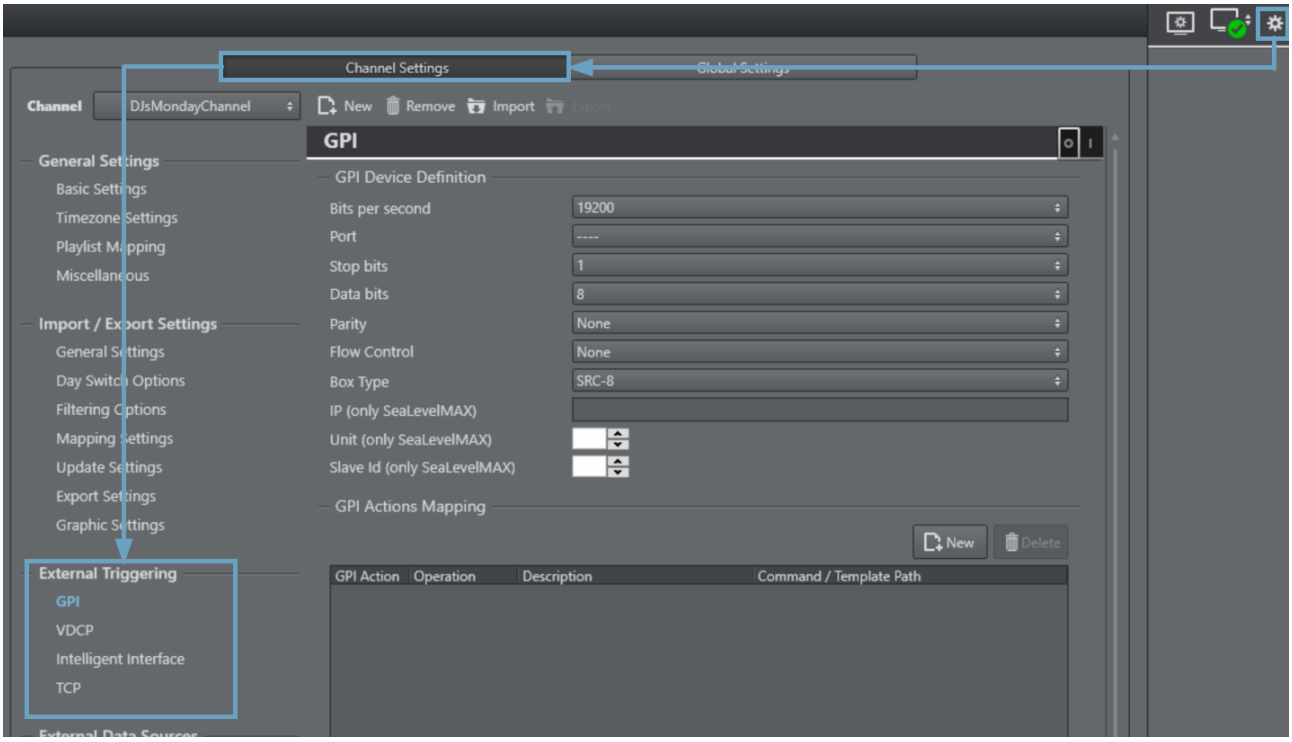


- **Include graphics when sending playlists:** When checked, exported playlists will include Viz Multichannel templates converted back into Viz Artist archive files (`.via` or{{.eva}}). When unchecked, no graphics will be included.
- **Include graphics data when receiving playlists:** When checked, Viz Multichannel will search for and import playlists along with associated graphics. When unchecked, only the playlist events will be imported.
- **Shared Viz Archive Folder:** Enter the folder path to the shared folder where the Channel Name (defined in General Settings) will find playlists when Sending Playlists to the Master Control.

6.3.3 External Triggering

Channel-specific external triggering settings are accessed from the cog wheel icon. Select the **Channel settings** tab.

External triggering is relevant to the control room environment as the protocols involved may be used in the ongoing broadcast process.
External triggering is usually *not* relevant to a Traffic Department.

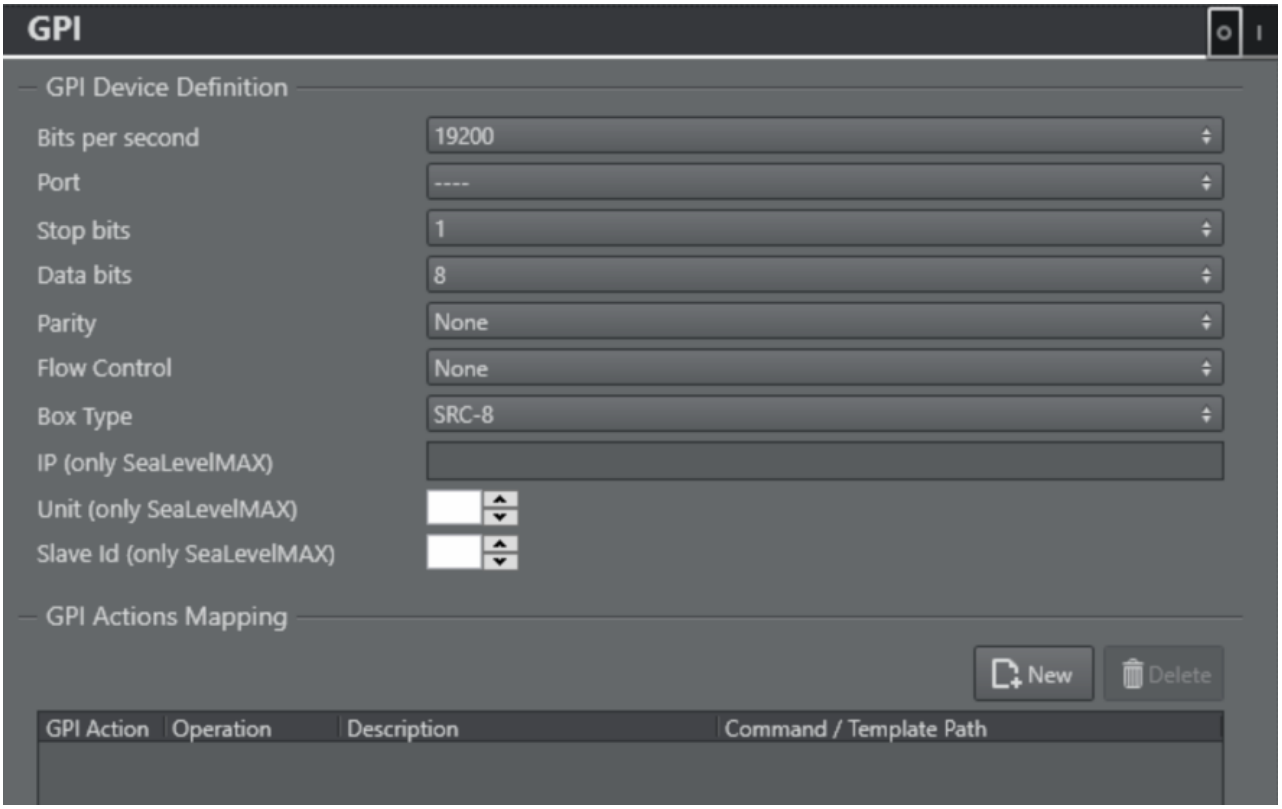


At the top-right corner of the **External Triggering** panel, there is an On/Off (**0 : 1**) switch. You can configure settings with the devices *on* or *off*. When *off*, the settings will take effect the next time the device is turned on.

The **External Triggering** settings group comprises:

- GPI
- VDCP
- Intelligent Interface
- TCP

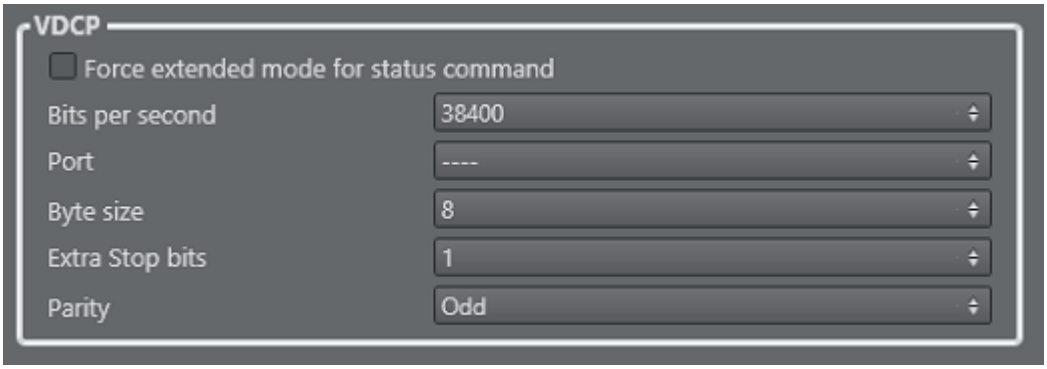
GPI



GPI is a type of trigger that does not relate directly to a playlist event. A list of commands allows you to define what happens when a playlist is received from an external device.

- **Bits per second:** Default is **19200**.
- **Port:** Select the relevant COM port on the Media Sequencer machine. Default is "--".
- **Stop bits:** Default is **1**.
- **Data bits:** Default is **8**.
- **Parity:** Default is **None**.
- **Box Type:** Default is **SRC-8**.
- **Flow Control:** Default is **None**.
- Each **GPI Action** is number DL_n_ or DH_n_, where *n* is a sequential number, beginning from 0.
- Under the **Commands** column, all Viz Commands, editable templates and general actions such as show logo, remove logo, stop active playlist are available as options.
- **Description** can be defined freely.
- **IP/Unit/Slave Id:** only for SeaLevelMAX.

VDCP

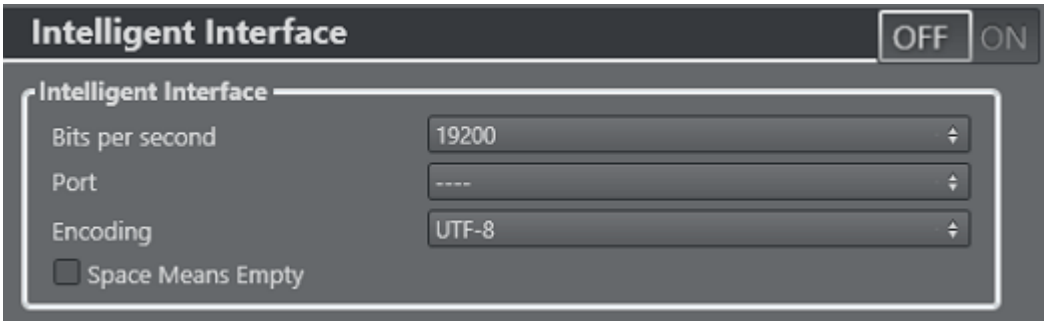


VDCP is one of the protocols used to communicate with external automation systems. Set UI button switch to *ON* if using the VDCP protocol, otherwise set it to off.

- **Force extended mode for status command:** if checked, all IDs longer than 8 characters in "PORT STATUS REQUEST" and "SYS STATUS REQUEST" VDCP commands will be included.
- **Bits per second:** Default is **38400**.
- **Port:** Select the relevant COM port on the Media Sequencer machine.
- **Byte size:** Default is **8**.
- **Stop bits:** Default is **1**.
- **Parity:** Default is **Odd**.

> **Tip:** When setting up the interface to an automation system, start the Media Sequencer in console-mode to see if VDCP commands are properly sent and received as required. In normal production mode is it recommended to run the Media Sequencer as an automatically started service process.

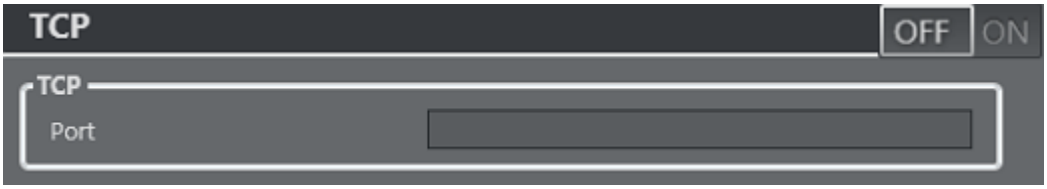
Intelligent Interface



Intelligent Interface is one of the protocols used to communicate with external automation systems.

- **Bits per second:** Default is **19200**.
- **Port:** Select the relevant COM port on the Media Sequencer machine.
- **Encoding:** Default is **UTF-8**.
- **Space Means Empty:** Default is **No**.

TCP



If you want to receive TCP triggers, you must set a port that the Media Sequencer will listen to for that purpose.

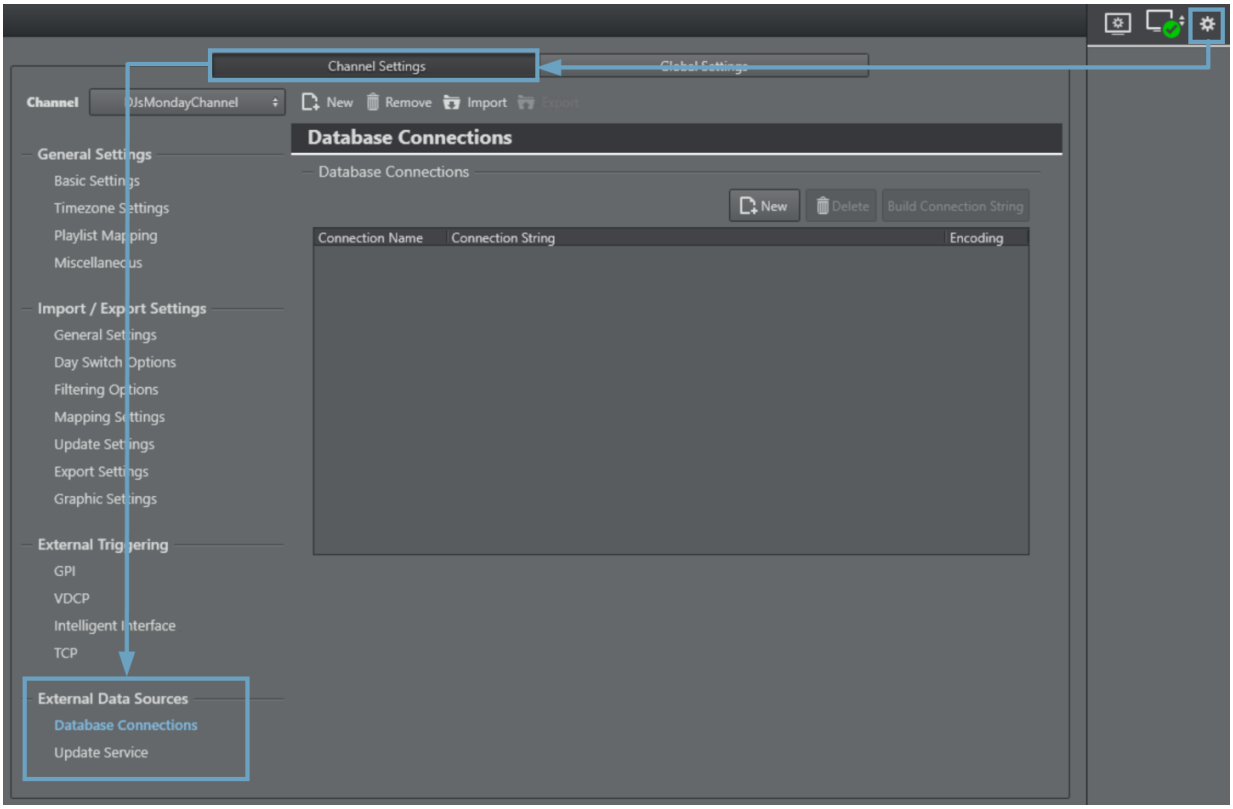
- **Port:** Enter the port number. This option is disabled when the field is left blank.

See Also

- Media Sequencer documentation on **pb_listener** actor.
- Media Sequencer documentation regarding **vdcp_client_actor**.
- Media Sequencer documentation regarding **Intelligentif actor**.

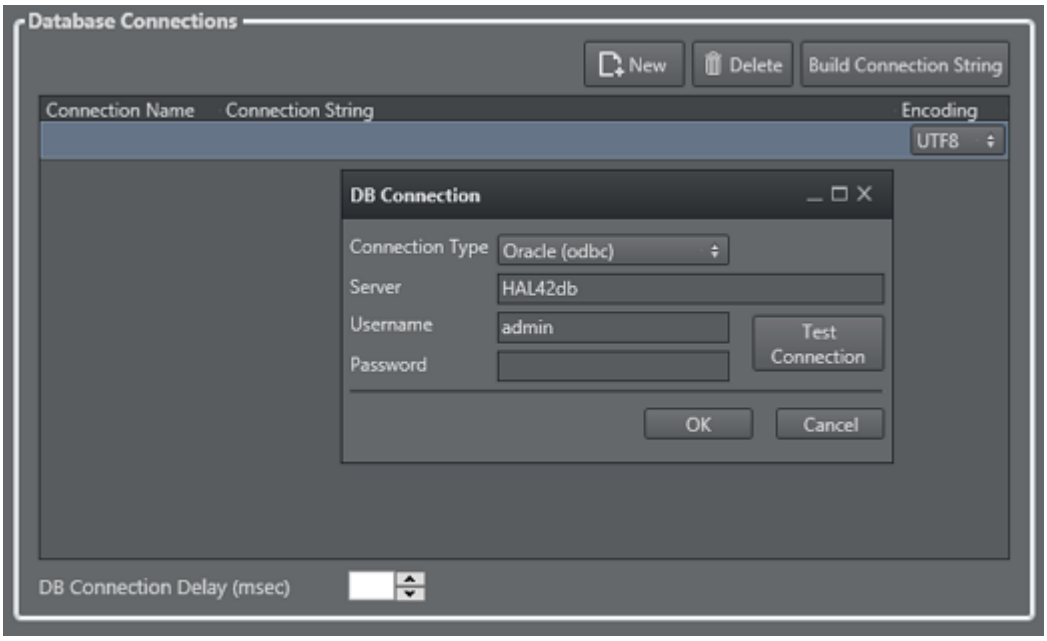
6.3.4 External Data Sources

Channel-specific general settings are accessed from the cog wheel icon. Select the **Channel settings** tab.



The **External Data Sources** settings group comprises:

Database Connections



This section describes the Viz Multichannel's database connections interface, listing all available database connections.

- **New connection (first button):** Allows you to manually enter a connection string. Clicking the New connection button adds a new entry to the list of available connections.
- **Delete connection (second button):** Deletes the selected connection.
- **Build connection string (third button):** Allows you to build a connection string. Clicking the Build connection string button opens a dialog box that allows you to set all parameters needed in order to successfully connect to your source.

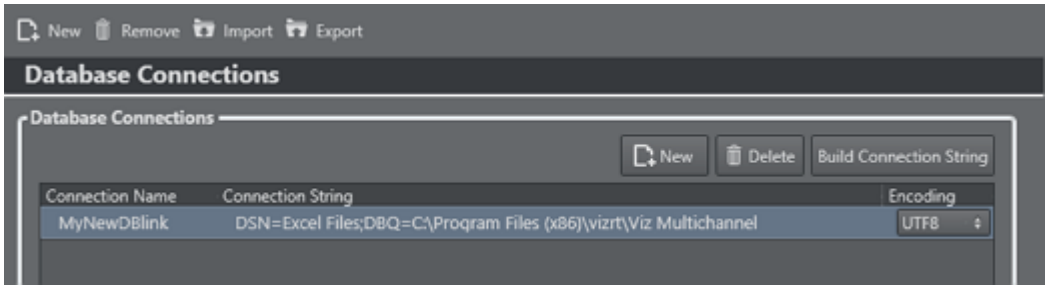
Creating Database Connections

Before populating page content from database look-ups you must first configure the connection to the external data source. You can then proceed with mapping according to your data source.

IMPORTANT! If using ODBC in a 64-bit Windows environment, please be aware of minor driver and driver-name changes, see Using ODBC 64-bit Drivers. The driver names and connection strings below are for the 32-bit drivers. The procedures will be the same for 64-bit systems, but the driver names/connection-strings may differ slightly.

Configure The Connection To An External Data Source

1. In the Settings dialog, click **Database Connections**.
2. Click **New**.
3. Enter a name for the connection.
4. Enter the connection string provided by your administrator.

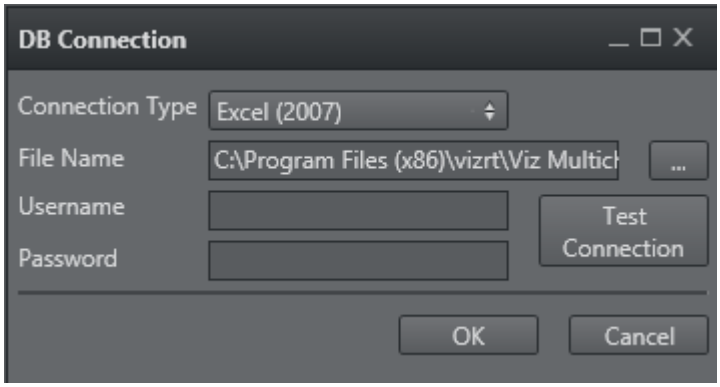


5. Click **OK**.

Map From A Microsoft Excel Spreadsheet

Note: The file must only contain data of type *text*.

1. Perform the procedure **To configure the connection to an external data source** above.
2. Click the **Build Connection String** button.
   The DB Connection window is displayed.



3. For Connection Type, select **Excel 2003** or **Excel 2007**.
4. Click the ellipsis to select the desired Excel file.
5. Click the **Test Connection** button.
6. If the test is successful, click **OK**.

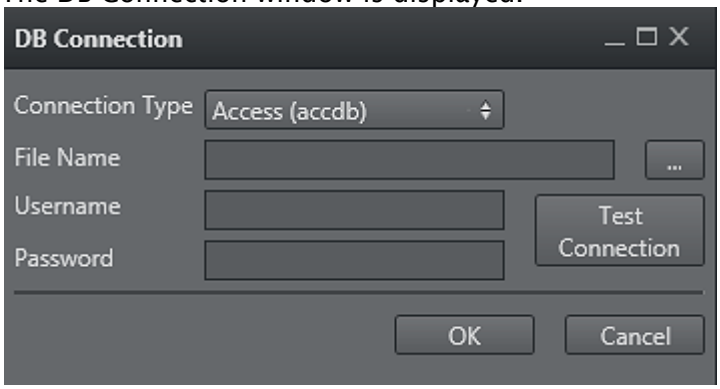
```
DSN=Excel Files;DBQ=C:\Temp\Movies.xls;UID=<username>; PWD=<password>;
```

Note: An Excel spreadsheet is available in the SampleContent folder (for example `C:\Program Files (x86)\vizrt\Viz Multichannel\SampleContent\Database`).

Map From A Microsoft Access Database

Note: The file must only contain data of type *text*.

1. Perform the procedure Configure the Connection to an External Data Source.
2. Click the **Build Connection String** button.
   The DB Connection window is displayed.



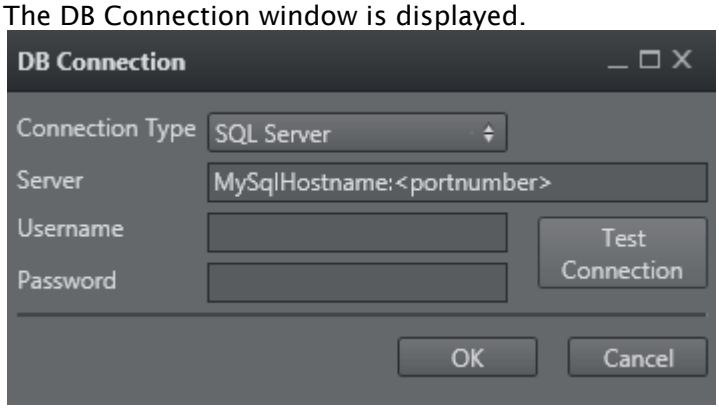
3. For Connection Type, select **Access (accdb)** or **Access (mdb)**.
4. Click the ellipsis to select the desired Access file.
5. Enter the database's username and password.
6. Click the **Test Connection** button.
7. If the test is successful, click **OK**.

```
Driver={Microsoft Access Driver (*.mdb)};DBQ=C:\Temp\Movies.mdb;UID=<username>;
PWD=<password>;
```

Map From A Microsoft SQL Server Database

1. Perform the procedure Configure the Connection to an External Data Source.

2. Click the **Build Connection String** button.
   The DB Connection window is displayed.

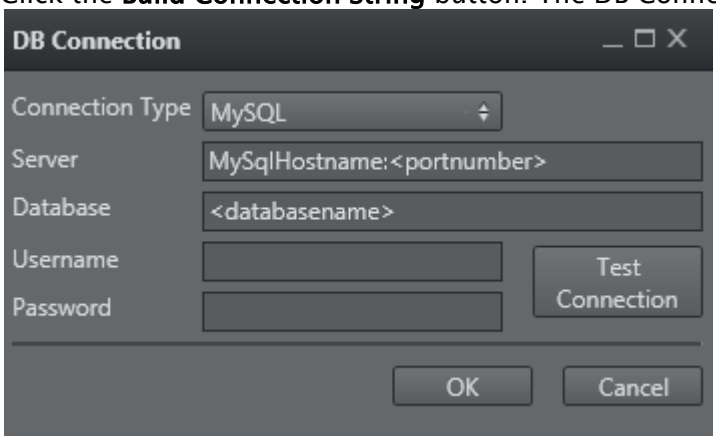


3. For Connection Type, select **SQL Server**.
4. Enter the database's server name, using the following format: *<hostname>:<port>* or *<IP address>:<port>*.
5. Enter the database's username and password.
6. Click the **Test Connection** button.
7. If the test is successful, click **OK**.

```
Driver={SQL Server};Persist Security
Info=True;Mode=ReadWrite;SERVER=<hostname>:<port>;UID=<username>;
PWD=<password>;
```

Map From A MySql Database

1. Perform the procedure Configure the Connection to an External Data Source.
2. Click the **Build Connection String** button. The DB Connection window is displayed.

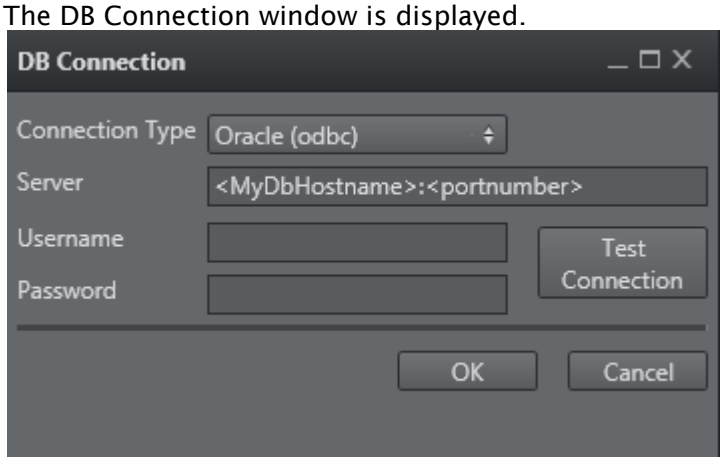


3. For Connection Type, select **MySql**.
4. Enter IP address or hostname of the database.
5. Enter the name of the database.
6. Enter the username and password for the database.
7. Click the **Test Connection** button.
8. If the test is successful, click **OK**.

```
Driver={MySQL ODBC 5.1
 Driver};SERVER=<hostname>;DATABASE=<name>;USER=<username>;
PASSWORD=<password>;
```

Map From An Oracle Database

1. Perform the procedure Configure the Connection to an External Data Source.
2. Click the **Build Connection String** button.
   The DB Connection window is displayed.



3. For Connection Type, select **Oracle (native)** or **Oracle (odbc)**.
4. Enter the database's server name, using the following format: *<hostname>:<port>* or <IP *address>:<port>*.
5. Enter the database's username and password.
6. Click the **Test Connection** button.
7. If the test is successful, click **OK**.

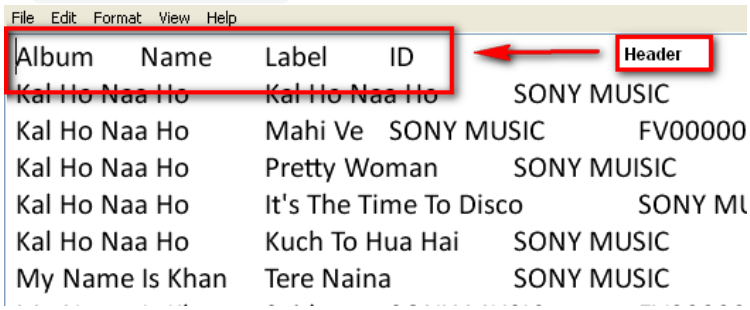
```
DRIVER={Microsoft ODBC for Oracle};SERVER=<hostname>:<port>;UID=<username>;
PWD=<password>;
```

Map From A Text File

1. Perform the procedure Configure the Connection to an External Data Source.
2. Create a folder for the text file database, for example `C:\Channel32DB`.
3. In the folder, create two files, such as `Channel32DB.txt` and `Schema.ini`.

   The structural details for the `Schema.ini` file can be found at:
   - http://www.connectionstrings.com/Providers/microsoft-text-odbc-driver
   - http://msdn.microsoft.com/en-us/library/ms709353(v=VS.85).aspx

4. In `Channel32DB.txt` enter a database header for mapping.



5. In `Schema.ini`:
   - `[v-ind.txt]` : Name of txt file database
   - `Format=TabDelimited` : This example uses TabDelimited
   - `ColNameHeader=True` : If using a header (recommended), set to `True`.

   > **Note:** Another option is not to use a header, in which case you set this parameter to `False`; the column mapping will then be F1, F2, F3 and F4.

   ```
   {{MaxScanRows=0}}{{CharacterSet=ANSI}}
   ```

6. In the **Database Connections** panel, enter a connection string for the text file database, in the following format:

   ```
   Driver={Microsoft Text Driver (*.txt; *.csv)};Dbq=C:
   \Channel1_DB;Extensions=asc,csv,tab,txt; If using the Microsoft Access 64-bit
   ODBC drivers the format would be: Driver={Microsoft Access Text Driver (*.txt,
   *.csv)};Dbq=C:\Channel1_DB;Extensions=asc,csv,tab,txt;
   ```

   > **Note:** For further connection string detail, see: http://www.connectionstrings.com/textfile.

7. Click **OK**.

Using ODBC 64-bit Drivers

When configuring and using ODBC in a 64-bit environment you need to have 64-bit ODBC drivers installed or bridge 32-bit drivers in a 64-bit system.

A solution is to install the Microsoft native 64 drivers that are part of the Microsoft Access Database Engine 2010 Redistributable driver pack, available at (external link): http://www.microsoft.com/downloads/details.aspx?familyid=C06B8369\-60DD\-4B64\-A44B\-84B371EDE16D&displaylang=en

However, please note that all 64-bit ODBC drivers from the Microsoft Access Database Engine 2010 Redistributable have altered their driver names slightly to differentiate them from their 32-bit counterparts.

The connection string for ODBC text and csv files will be:

```
Driver={Microsoft Access Text Driver (*.txt, *.csv)};
```

See www.microsoft.com for more information.

Update Service

Update Service is an option that makes use of your own custom web service for page content filling. **Update Service** settings are *per channel* settings. In addition you may define separate update service settings *per template*.

When configured and enabled on one or more templates, the Update Service will activate the Media Sequencer (MSE) to send an **XML Payload** to a custom web service when a Page is pre-queued for triggering. The web service can modify the content of the payload and send it back. When Media Sequencer Engine receives the payload it will parse it and put the data into the page's tab field.

This could typically be used for sport-results or the latest headlines from a feed. Since it relies on a custom web service, the solution can be tailored. This update service is *not* an existing server solution; it is a path for external modules to be able to integrate and function with Multichannel and the Media Sequencer.

A **timeout** of N seconds may be set on the available actions (**Take**, **Preview** and **Update**). This is to ensure that a reply is sent back within the configured timeout (default is 5 seconds) for a given action. If no reply is received within the timeout, the action has not been sent/issued, even though a reply will be received later.

See Also

- Playlists

6.4 Local Settings

Some local Viz Multichannel client settings are configured directly in Viz Multiplay's configuration files, rather than through the Configuration menus.

6.4.1 Local Viz Engine Characteristics

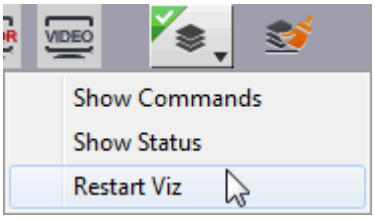
You can modify some local Viz Engine renderer settings in the config file `VizRundown.ini`, located in your Viz Multichannel program folder.

- **Viz Engine Connection Timeout**: Viz Engine connection timeout, in milliseconds (for example `30000`).
  If Viz Engine is not sending a response within the set amount of milliseconds, an error is displayed in the **Information** panel with status. The **Viz Engine connection** icon turns red. At timeout you must restart it.
  By default the connection timeout is set to 30000 ms (30 sec).
  See also To Restart the Viz Engine Connection below.
- **Scenes in Viz Engine Memory**: Maximum number (`0-8`) of Viz Artist scenes to reside in the Viz Engine preview memory.
  These function as a cache for previewing templates. If a lot of manual template previewing and editing is expected, this number can be higher.
  0 means unlimited. The recommended default is 8.
- **Renderer Force Sleep**: Set this option (`true` / `false`) if an NVIDIA G-force graphics card is installed on the Viz Multichannel client machine.
  Otherwise the machine might use excessive CPU power in some cases.

```
[LocalVizEngine]
VizEngineConnectionTimeout=30000
ScenesInVizEngineMemory=8
IsRendererForceSleep=true
```

Restart the Viz Engine Connection

- Click the **Viz Engine connection** icon. Select **Restart Viz** from the context menu.



See Also

- Global Settings
- Working with Channel Settings
- Channel Settings
- Video Configuration

7 Import Guide

This section describes the supported import modules and how to set up Viz Multichannel to import schedules and thereby create playlists for the client.

To help in filling out the Mapping Settings and Secondary Mapping Settings, the following topics explain how to perform various types of imports into Viz Multichannel:

- Basic Mapping Table Field Names
- Importing from Text
- Importing from XML
- Importing from Excel
- Harris ADC-100
- Omnibus
- Reading Channel and Date Values from Filenames
- Merging Fields

See Also

- Page Content Filling

7.1 Basic Mapping Table Field Names

The following field names are the basic field names used by Viz Multichannel. Specific import types may have additional requirements.

> ⚠ **Note:** Field Name variables can only use ASCII characters (a-z/A-Z). If underscores are used the variable name *must* be bracketed, like this [`field_name_variable`].

7.1.1 Required Field Names

If the following field names are not present during import you will not be able to import the schedule.

- **channel**: Is compared against the *Channel Name in Schedule*. If it does not match, primary and/or secondary events will not be imported or updated. If the schedule file has no channel name available you must leave the *Channel Name in Schedule* blank.
- **date**: Is the date the primary event is supposed to be played out.
- **time**: Is the time the primary event is supposed to be played out.
- **begin_at**: Is the combination of date and time the primary event is supposed to be played out.
- **event_id**: Is the unique ID of the primary event, and is used to track updates. When you cannot guarantee unique event IDs, you must create a combined mapping using other Field Names (for example *ReconcileKey* and *Segment*).

> ⚠ **Note:** The field format (date, time, etc.) depends on the data input type and is defined in Configuration settings.

7.1.2 Optional Field Names

The following field names are optional.

- **ignore**: Used to define which Primary Events Ignore Settings for Page Content Filling. An update of your playlist is always required if these settings are changed.
- **duration**: Is the duration of the primary event.
- **description**: Is the description of the primary/secondary event.
- **event_type**: Is the type of event, primary or secondary. Values for primary and secondary event types are set in the Mapping Settings.
- **trigger_id**: Is the ID for triggering events by the automation system.
- **secondary_page**: Is the page name, and must match the name of the page created in Viz Multichannel. See Working with Templates, Pages and Pilot Data Elements.
- **secondary_timecode**: Offset relative to the primary event's start time.
- **secondary_duration**: Duration of the secondary event.
- **house_id**: Map the house ID to the `house_id` keyword. This will allow Viz Multichannel client to resolve assets on Viz One (see the Viz One Integration chapter). Will create a composite group in your playlist (i.e. a primary element containing a video asset). The composite group may also contain pages. This requires Viz One 5.4 or later.
- **isLive**: The value can be '1' or 'true' for live events, not case sensitive.
- **isLocked**: The value can be '1' or 'true' if the event is locked, not case sensitive.

> ⚠ **Note:** When a live event is scheduled at a preset time, the timetrigger will pause. The elements following the live event will be scheduled only when the user clicks Continue from the LIVE show button. When a playlist is resumed from a live event earlier or later than planned, the begin time of events following the live event are shifted to be taken on air immediately. The begin time of events will be adjusted up until the first locked event.

7.1.3 Additional Field Names

Additional field names can be used to add in extra columns in the playlist to show metadata or to add data to pages when editing an attribute (see Page Content Filling Window's Attribute options). You can define as many additional Field Names as you like. Additional Field Names are supported by any format apart from the LST Import Type.

7.2 Importing From Text

The **Any Text** import module supports any format of text file. There are two such types of text file: with a *delimited field* structure and with a *fixed width information* structure.

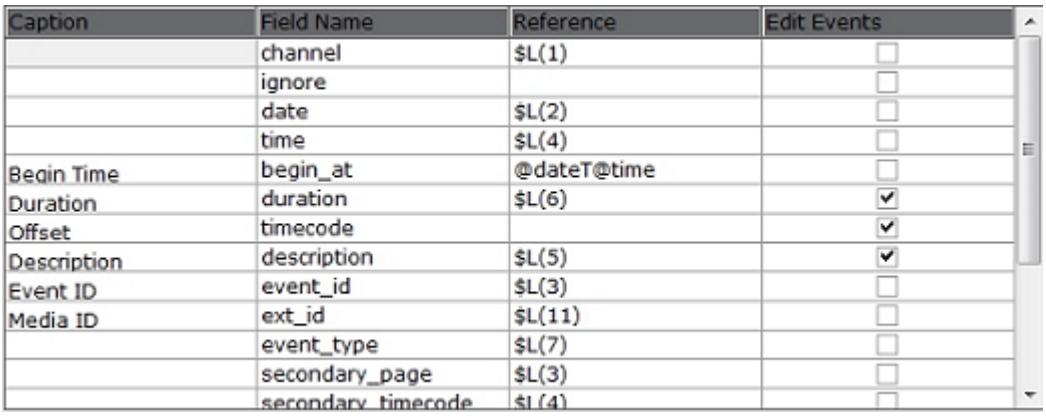
In a *delimited field structure* file, each line contains a list of values, delimited by a configured character such as a comma or tab. In a *fixed width information* file, each line contains a list of values, and each value is stored in a given place, such as the first to tenth characters.

Viz Multichannel's import facility also supports reading information from the file header lines of the imported file (delimited or fixed width (indexed)).

Before performing either of the procedures below you need to ensure that a **schedule** is available in the required format (Any Text) and a channel has been created.

7.2.1 Import Delimited Files

1. Open the **Settings** window.
2. Select the General Settings section and set the **Channel Name in Schedule.**
   This procedure uses channel *demo* as seen in the screenshot below.
3. Select the Mapping Settings section and set **Import Type** to **Any Text.**
4. Set the **File name pattern** to match the file extension (for example *.txt).
5. For the **Any Text Import Settings** section enter the **delimiter** being used in the **Column Separator (Any Text)** field (for example *).



Caption	Field Name	Reference	Edit Events
	channel	$L(1)	☐
	ignore		☐
	date	$L(2)	☐
	time	$L(4)	☐
Begin Time	begin_at	@dateT@time	☐
Duration	duration	$L(6)	☑
Offset	timecode		☑
Description	description	$L(5)	☑
Event ID	event_id	$L(3)	☐
Media ID	ext_id	$L(11)	☐
	event_type	$L(7)	☐
	secondary_page	$L(3)	☐
	secondary_timecode	$L(4)	☐

6. In Mapping Settings, map the **Field Name** and **Reference** fields by adding a location counter for each relevant **Reference** field.
   - Use the format *$L(counter)*, where *L* refers to the *location* of the segment.
   - *$L(1)* maps the first value (for example `demo`) in the list, *$L(2)* the second (for example `20100923`), *$L(3)* the third (for example `1051270_23_VM_16_01_1`), and so on.

```
demo*20100923*1051270_23_VM_16_01_1*05:48:17:07*Le radeau LE CRASH DU VOL
29,,gg,hh*32293*MAIN demo*20100923*nextshow*00:00:10:00**0*SECONDARY
```

> **Note:** The segment counter starts at 1, hence, it is not zero-indexed.

7. Click the **Import Schedule** button  , select your schedule file (for example `20100923_demo`) and click **Open.**
   - This will import the schedule and create a playlist in Viz Multichannel.
     Note that you may not have all the **secondary elements** (pages) in your playlist. Check the **schedule file** for secondary elements, **create** the pages required and perform an **update** of your playlist.
8. Right-click your playlist (for example Continuous Playlist) and select **Update Playlist > Full Update.**
9. Select your schedule file (for example `20100923_demo`) and click **Open.**

7.2.2 Import Delimited Files with Header Lines

1. If a delimited file contains header lines, configure the number of header lines for Viz Multichannel to recognize them as such, with the setting **Header lines in file** under the Excel Import Settings.
2. For fields read from the header lines, link the field's line and location counters in the file, in the format *$H(line, location)*, where *H* means header.

> **Example:** Map *$H(1,3)* for the third value in the first header line, *$H(4,2)* for the second value in the fourth header line, etc.

7.2.3 Import Fixed Width Files

1. Open the **Settings** window.
2. Select the **General** Settings section and set the **Channel Name in Schedule.** This procedure uses channel *demo* as seen in the example shown below.
3. Select the **Mapping Settings** section and set **Import Type** to **Any Text**
4. Set the *File name pattern *to match the file extension (for example *.txt).

Caption	Field Name	Reference	Edit Events
	channel	$L(1,4)	☐
	ignore		☐
	date	$L(6,13)	☐
	time	$L(46,56)	☐
Begin Time	begin_at	@dateT@time	☐
Duration	duration	$L(102,109)	☑
Offset	timecode		☑
Description	description	$L(62,99)	☑
Event ID	event_id	$L(22,44)	☐
Media ID	ext_id	$L(165, 185)	☐
	event_type	$L(111,119)	☐
	secondary_page	$L(22,42)	☐
	secondary_timecode	$L(46,56)	☐

5. In the **Mapping Settings**, map the Field Name and Reference fields by adding starting and ending character indexes for each relevant Reference field. Use the format *$L(start- index, end-index)*, where *L* means line.

7.2.4 Sample Content – Fixed Width (Indexed)

```
demo 20100923 ····· 1051867_1_VM_16_01_1 ··· 07:50:01:23 ··· Man of Steel - Official Trailer 3
demo 20100923 ····· 1053297_21_VM_16_01_1 ·· 08:10:05:00 ··· The Avengers Behind The Scenes ···
```

Example: *$L(1,2)* maps the first value (for example `demo`) in the list, *$L(4,11)* the second (for example `20100923`), *$L(20,40)* the third (for example `1051270_23_VM_16_01_1`), and so on.

1. If the imported file contains header lines, configure the number of the header lines for Viz Multichannel to recognize them as such, with the setting **Header lines in file** in the **Mapping Settings**.
2. For fields read from the header lines, link the field's line counter and location indexes in the file, in the format *$H(line, start-index, end-index)*.

   Example: Map *$H(2,5,10)* if the field is in the second header line's 5th-10th characters, etc.

7.3 Importing From XML

The Any XML file import module supports any XML structures that are available for playlist information with the following features:

- Reading values from any node's text or from any node's attributes.
- XML containing primary events only or both primary events and secondary events.
- Secondary events structured at the same level as the primary events, or secondary events nested inside each primary event.
- Reading the channel name and playlist date from every primary event, or from one external location taken by path relative to the XML root.

Note: All the settings mentioned in the following procedure are located in the **Mapping Settings**.

7.3.1 Map Primary and Secondary Events

Map Primary and Secondary Events

1. Start Viz Multichannel.
2. Open the **Settings** window.

3. Select your channel.
4. Select **Primary Mapping Settings.**
   See examples below on how to set the paths in advance.
5. Under **XML Import Settings** set the parameters **Path Of Main Event Nodes** and **Path Of Secondary Event Nodes** to the main events' path relative to the XML root.
   - Do not include the XML root node in the path and/or the secondary event nodes' path relative to the main event node.
   - Do not include the root/main event node in the path.
   - Start the path with the "/" character but don't end it with "/".
6. Check the **Secondary events located inside main events** box if the **Secondary events** are nested inside primary events.
7. Set the parameters **Channel node location** and **Date node location** to value **XML root** or **Secondary Events Nested inside Primary Events** according to the XML format.
8. Map each field relative to the main/secondary event node.
   - Start the path with the "/" character, and do not include the main/secondary node name in the path.
   - If the field value is a node's text, end the path with the "/" character.
   - If the field value is an attribute, write the path, then the "/" character and then "@" with the attribute name.

7.3.2 Secondary Events at the Same Level as Primary Events

The following example shows a one-level XML where the secondary events are placed at the same level as the primary events. Mapping for both events under the **XML Import Settings** section will be as follows:

- **Path of Primary Event Nodes**: `/event`
- **Path of Secondary Event Nodes**: `/event`

```
<playlist>
      <event>
         …
         <type>MAIN</type>
      </event>
      <event>
            …
         <type>SECONDARY</type>
      </event>
      <event>
          …
          <type>MAIN</type>
      </event>
            …
</playlist>
```

7.3.3 Secondary Events Nested Inside Primary Events

The following example shows a two-level XML where the secondary events are nested inside the primary events. Mapping for both events under the **XML Import Settings** section will be as follows:

- **Path of Primary Event Nodes**: `/primary_event`
- **Path of Secondary Event Nodes:** `/secondary_events/secondary`

```
<playlist>
   <primary_event>
      …
     <secondary_events>
     <secondary>…</secondary>
     <secondary>…</secondary>
     </secondary_events>
   </primary_event>
   <primary_event>
     …
   </primary_event>
</playlist>
```

7.3.4 Channel Name and Playlist Date in a Separate Node

The following example shows how to map the channel name and the playlist date when those tags are placed in other nodes than the default primary element nodes.

> ⚠ **Note:** Keeping the playlist date separate *limits the playlist to one broadcast day*.

Note that the following example mapping requires you to set an **absolute path** for the channel name and playlist date in your **mapping table**. Your mapping table under the **Primary Mapping Settings** section will be as follows:

- **channel:** `/general_info/channel_name/` (ensure **Channel name** is defined at the *root level* setting in the **XML Import Settings** section)
- **date**: `/general_info/date/` (ensure **Playlist date** is defined at the *root level* setting in the **XML Import Settings** section)
- **begin**: `/begin_time/@time`
- **duration**: `/duration/@time`
- **description**: `/title/`
- **type**: `/type/`

```
<playlist>
   <general_info>
     <channel_name>…</channel_name>
```

```
    <date>…</date>
  </general_info>
    <event>
   <begin_time time="…" />
   <duration time="…" />
  <title>…</title>
  <type>MAIN</type>
  </event>
</playlist>
```

7.4 Importing From Excel

Caption	Field Name	Reference	Edit Events
	channel	$A	☐
	ignore		☐
	date	$B	☐
	time	$D	☐
Begin Time	begin_at	@dateT@time	☐
Duration	duration	$F	☑
Offset	timecode		☑
Description	description	$E	☑
Event ID	event_id	$C	☐
Media ID	ext_id	$L	☐
	sponsor	$H	☐
	event_type	$G	☐
	secondary_page	$F	☐

The Excel module supports both *.xls and *.xlsx formats.

	A	B	C	D	E	F	G
1	**Channel**	**Date**	**ID**	**Time**	**Description**	**Duration**	**Type**
2	demo	31/01/2013	1	06:30:00	Despicable Me 2	00:01:35:00	MAIN
3	demo	31/01/2013		00:00:00:00	ticker_system_Main		SECONDARY
4	demo	31/01/2013		00:00:01:00	program_Main		SECONDARY
5	demo	31/01/2013	2	06:31:00	The Incredible BURT WONDERSTONE	00:02:20:00	MAIN
6	demo	31/01/2013		00:00:05:00	BUG		SECONDARY
7	demo	31/01/2013		00:02:10:00	viz_cleanup		SECONDARY
8	demo	31/01/2013	3	06:33:30	Man of Steel - Official Trailer 3	00:02:56:00	MAIN
9	demo	31/01/2013	4	06:47:00	The Avengers Behind The Scenes	00:13:25:00	MAIN
10	demo	31/01/2013		00:00:10:00	BUG		SECONDARY
11	demo	31/01/2013		00:01:00:00	LOWER3RD		SECONDARY
12	demo	31/01/2013		00:13:22:00	viz_cleanup		SECONDARY
13	demo	31/01/2013	5	12:10:00	Coldplay - Viva La Vida	00:03:59:00	MAIN
14	demo	31/01/2013	6	16:00:00	GIRLS GENERATION - Oh	00:03:42:00	MAIN
15	demo	31/01/2013	7	16:30:00	Pitbull - International Love	00:04:02:00	MAIN
16	demo	31/01/2013	8	18:30:00	Now You See Me	00:02:15:00	MAIN
17	demo	31/01/2013	9	18:35:00	Now You See Me	00:02:15:00	MAIN
18	demo	31/01/2013	10	18:40:00	Now You See Me	00:02:15:00	MAIN
19	demo	31/01/2013		00:01:03:00	ticker_system_Main		SECONDARY
20	demo	31/01/2013		00:01:04:00	program_Main		SECONDARY

The Excel sheet column is your **Reference** in the mapping table. For example, for column A set $A, and so on.

When working with Excel files, the first row should always be the header row, which must span all columns in use. The *Header Lines Included* option must also be checked.

Enter $ and the letter representing the sequential column. You can call multiple columns/elements in a chain. You can also add characters to separate them. For example: `$A / $G / $X`

You can also take a portion of the column with the following notation: `&(COLUMN,"DELIMITER",FROM,COUNT)`. If the delimiter is empty, it will split into characters. For example, if `L` is `31.12.2006`.

```
&(L,"",1,2) => "31" &(L,"",11,2) => "" &(L,"",10,2) => "6" &(L,".",1,2) => "31.12"
 &(L,".",2,2) => "12.2006" &(L,".",2,3) => "12.2006" &(L,".",4,1) => "" &(L,".",3,2)
=> "2006" &(L,"/",2,1) => "" &(L,"/",1,1) => "31.12.2006"
```

7.4.1 Secondary Fields in Excel

Type	field1	field2	field3	field4
MAIN				
MAIN				
SECONDARY	data			
SECONDARY	data	data	data	data
MAIN				

Data can be added to the schedule file that can be used by Viz Multichannel to fill pages with data. In order to achieve this you need to add in additional columns after the other columns in the Excel sheet.
If you are using column headers you also need to define column headers for the additional columns (for example field1, field2, and so on).

Viz Multichannel will start reading the fields, one by one, from that column until it gets to the first empty column header.

IMPORTANT! To use the Excel Import Type you must install Microsoft® Excel on the machine that imports the schedule file.

Note: There is a limitation of 100 columns when importing from Excel files.

7.5 Harris ADC-100

Caption	Field Name	Reference	Edit Events
	channel	channel	☐
	ignore	ignore	☐
	date	date	☐
	time	time	☐
Begin Time	begin_at	@dateT@time	☐
Duration	duration	duration	☑
Offset	timecode		☑
Description	description	description	☑
Event ID	event_id	event_id	☐
Media ID	ext_id	ext_id	☐
Segment	segment	segment	☐
ReconsileKey	ReconcileKey	event_id	☐
SOM	SOM	SOM	☐

The LST import module supports importing schedules based on binary *.lst and *.rcv files from the Harris ADC-100 automation systems.

*.rcv files are generally only used when it is necessary to receive last-minute updates from the Harris automation system.

Before performing the procedure below you must ensure a **schedule** is available in the required format - LST (Harris ADC-100) - and that a **channel** has been created.

> **Note:** Base your mapping on the sample content. See the directory `c:\Program Files (x86)\Vizrt\Viz Multichannel\SampleContent\LST`

7.5.1 Import LST Format Files

1. Open the **Settings** window.
2. Select the **General Settings** section and set the **Channel Name in Schedule.**
   - This procedure uses channel _demo _as seen by the name of the schedule file.
3. Select the **Mapping Settings** section and set **Import Type** to **LST (Harris ADC-100)**.
4. Use the **Mapping Table** to map the **Field Name** and **Reference** fields.
5. Set the **Code Page**, seen under the **LST Import Settings** section.
6. Click **OK**.
7. Click the **Import Schedule** button  , select your schedule file (for example `19_07_2011_demo`) and click **Open**.
   This will import the schedule and create a playlist in Viz Multichannel.
   Note that you may not have all the **secondary elements** (i.e. pages) in your playlist. Check the schedule in your Harris system for secondary elements and **Create** the pages required and perform an **Update** of your playlist.
   a. Right-click your playlist (for example Continuous Playlist) and select **Update Playlist > Full Update**.

b. Select your schedule file (for example `19_07_2011_demo`) and click **Open**.

7.5.2 Mapping Table

The mapping table for *.*lst* and *.*rcv* files must be as follows:

Caption	Field Name	Reference
channel	channel	
ignore	ignore	
date	date	
Begin Time	begin_at	time
Duration	duration	duration
Offset	timecode	
Description	description	description
Event ID	event_id	event_id
Media ID	trigger_id	trigger_id
Segment	segment	segment
ReconcileKey	ReconcileKey	event_id
SOM	SOM	SOM
Effect1	effect1	effect1
Effect2	effect2	effect2
Effect3	effect3	effect3
secondary_page	secondary_page	
secondary_timecode	secondary_timecode	
secondary_event_id	secondary_event_id	

Caption	Field Name	Reference
secondary_ext_id	secondary_ext_id	
event_type	event_type	
overlay_type	overlay_type	

Build Unique Instructions in case of Duplicate Reconcile Keys in LST

In case of duplicate reconcile keys in the LST file, you can generate a unique instruction by using combination mapping. For combination mapping, you must use concatenation of the fields as **textFieldName**
To configure this navigate to **Multichannel > Settings > Channel Settings > Mapping Settings**

Sample mapping settings can be found at `<Multichannel installation directory>\SampleContent\LST\LST_Combination_Mapping_Settings.xml`
In the screenshot above we have defined a new unique instruction named *TimeAndRKey* which concatenates fields *time* and *ReconcileKey*.

Support Concatenation:

- Define "Field Name" *time* and *ReconcileKey* as: *time = time* and *ReconcileKey = event_id*
- Define new combination mapping field *TimeAndRKey* as *TimeAndRKey = @time+@ReconcileKey*

> ⚠ **Note:** The fields that are used for concatenation (time and ReconcileKey) should be defined before the concatenating field (TimeAndRKey).

7.6 Omnibus

Caption	Field Name	Reference	Edit Events
	channel	channel	☐
	ignore	ignore	☐
	date	date	☐
	time	time	☐
Begin Time	begin_at	@dateT@time	☐
Duration	duration	duration	☑
Offset	timecode		☑
Description	description	description	☑
Event ID	event_id	event_id	☐
Media ID	ext_id	ext_id	☐
	secondary_page	secondary_page	☐
	event_type	event_type	☐

The Omnibus import module supports the *.osc file format. Each element starts with an `ITEM` line and ends with an `end` line. In between the element's fields are one in a line.

> ⚠ **Note:** It is **recommended** to base your mapping on the sample content.

```
ITEM
type 1
mode 2
channel_id demo
title Friends
clip CGIUJ101HS11A
preset_date 01/06/11
preset_time 06:30:00
in_src 982501
out_src 982751
user_data 0001-06_0000002
end
ITEM
mode 3
preset_time 00:00:00:00
overlay 1
clip 1190
title BUG_ON
type 1
end
```

As shown above, the rest of the fields are in a `<key><value>` format (for example `title Friends)`.

7.7 Reading Channel And Date Values From Filenames

You can use the schedule's file name to extract information if your collected schedule does not contain channel and date values.

Viz Multichannel can read these two fields from the imported filename when using Importing from Text, Importing from XML, Importing from Excel, or Harris ADC-100.

In order to read these fields from the filename, set their mapping to *$Filename* and define the filename format in the **Schedule File Name Info** parameter in **Mapping Settings**.

The file format should contain D/M/Y to represent the day/month/year character location in the file name, and C to represent the character locations of the channel name in the file name. Characters that do not belong to the channel/date can be written as any character except for D/M/Y/C.

For a filename `Channel10_20090627.txt`, set **Schedule File Name Info** to `CCCCCCCCC_YYYYMMDD` or `CCCCCCCCC_YYYYMMDD.txt`.

7.8 Merging Fields

The correct format for merging (joining) fields is:

```
freetext<at:var at:name="FIELDNAMEfreetext" />FIELDNAMEfreetext…
```

where *free-text* can be empty (`FIELDNAME@FIELDNAME`).

Example: `@Hour:@Minute:@Second`

The mapping is divided into two: one for each field reading its values, and one for concatenating (merging) them.

IMPORTANT! The merging field must be located in the table after its parts-fields.

7.8.1 Example 1 for Fixed Width Any Text Import Type

- **StartHour** `= $L(1,2)`
- **StartMin** `= $L(3,4)`
- **StartSecond** `= $L(5,6)`
- **Begin** `= @StartHour:StartSecond`

7.8.2 Example 2 for Delimited Any Text Import Type

- **StartHour** `= $L(4)`
- **StartMin** `= $L(5)`
- **StartSecond** `= $L(6)`
- **Begin** `= @StartHour:StartSecond`

7.8.3 Example 3 for Any XML Import Type

This example shows time read in a format `HH-MM-SS-FF` from an entry `/begin_time/time/`.

- **TheStartTime** `= /begin_time/time/`
- **StartHour** `= &(TheStartTime,"-",1,1)`
- **StartMin** `= &(TheStartTime,"-",2,1)`
- **StartSecond** `= &(TheStartTime,"-",3,1)`
- **StartFrame** `= &(TheStartTime,"-",4,1)`
- **Begin** `= @StartHour:@StartMin:@StartSecond:@StartFrame`

8 Playlist Importer

The Playlist Importer (PLI) contains all import logic for Viz Multichannel. The Playlist Importer can be run automatically by the Media Sequencer, or by the Schedule Collector. The purpose of the Playlist Importer is to convert a schedule, received from an automation system, for example, into a native Media Sequencer playlist format using mapping settings configured by the Viz Multichannel client.

8.1 Installation And Configuration

Viz Multichannel's Playlist Importer is a separate installer and can be installed or upgraded without upgrading the core of the full Viz Multichannel installation.
For detailed information on how to install Viz Multichannel, see the Setup and Configuration chapter.

> **Note:** The PlaylistImporter (PLI) installer is typically named `VizMultichannelPlayListImporter-VERSION.exe` where *VERSION* indicates the version/release and build numbers of the software.
> There will also be a corresponding <identical_filename>.MD5 file that can be used to check that the downloaded installer has a correct md5-checksum.
> It is recommended to always check that the downloaded installers have the correct checksum.
> Installers will normally be downloaded with ftp from download.vizrt.com using your customer support login credentials.

For the Playlist Importer to be launched by the Media Sequencer, the **Enable Automatic Import** option must be selected in the **Automatic Import Settings** section.

> **IMPORTANT!** The location of the *PlaylistImporter.exe* program must be specified in **Settings > Channel > Global Settings > Import/Export Settings > Automatic Import > Playlist Importer Folder Path**

For this option to work, the `PlaylistImporter.exe` file must be installed on the Media Sequencer machine. Viz Multichannel is usually *not* installed on the Media Sequencer machine, so you *must* install the Playlist Importer on that machine. The installation directories for Playlist Importer are usually: `C:\Program Files (x86)\Vizrt\Viz Multichannel\PlayList Importer`

8.2 Playlist Importer Log File

The Playlist Importer (PLI) application writes a log file when executing. The log file is normally written to the directory: %ProgramData%\Vizrt\Multichannel\PlaylistImporter

The log file is a normal textfile that can be inspected with any text editor. Each time PLI is run, a new log file is created with a timestamp. The verbosity level of the log file is set by the "*-loglevel <LEVEL HERE AS NUMBER>*" startup parameter.

The loglevel should be set in the Multichannel configuration settings found in **Settings > Channels > Global Settings**.

For changes in the log-level to take effect, a playlist must be stopped and re-activated.

> **Caution:** Care should be taken to delete old log files when they are no longer needed or they will eventually fill up the server hard-drive.

8.3 Viz Multichannel Startup Parameters

The following parameters may be used during startup of the Play List Importer.

Parameter	Description	Example
`-channel`	Defines which channels to process within the Integrations Hub/Media Sequencer for the Playlist Importer. Each channel name is bracketed by an '`@`' sign.	`-channel @` *<channelName1>* `@` *<channelName2>* `@`
`-loglevel`	Specifies the log level of the Playlist Importer. Values range from 0 to 100. Default is 25, 50 is Increased, 75 is Extended, 100 is Debug.	`-loglevel 100`
`-msehost`	Host name or IP address for Media Sequencer. When host name is "none" Playlist Importer will read each channel's Media Sequencer from `channels.ini`. When no parameter is provided, Playlist Importer will attempt to connect to *localhost*.	`-msehost none` `-msehost 10.11.10.11` `-msehost localhost`
`--refresh`	PLI only refreshes the current running playlist. It does not import/update the playlist.	`--refresh`
-viz2	Allows you to use Viz Engine 2.x. Viz 3.x as default. Version 3 is recommended.	

8.4 Automatic Import Of Files

Files imported automatically by the Playlist Importer are given a timestamp and one of the following suffixes:

- **.done** is appended if the file was successfully imported.
- .**fail** is appended if the file was not successfully imported.

8.5 Troubleshooting

- Error - Automatic import of Microsoft Excel schedule files fail:
  This error is a known issue with certain Windows installations, particularly when the Media Sequencer is running in *Service* mode.
  To resolve this issue, *create the following directory* on your Windows 64-bit system:
  - C:\Windows\SysWOW64\config\systemprofile\Desktop
  - Set full control permissions for the new directory

9 Integrations Hub

The Integrations Hub provides a standard, easy to use interface for Direct Integration modules that can read playlists and schedule data from automation systems, integrating this information with Viz Multichannel.

In addition, the Integrations Hub provides a REST-based interface for services and components to integrate with Viz Multichannel. Representational state transfer (REST) is a way to create, read, update or delete information on a server using simple HTTP calls. It is beyond the scope of this manual to fully explain REST-based architecture. For general information the Wikipedia article REST (external link) can be a good starting point.

The Integrations Hub offers Direct Integration modules provided by Vizrt; and customers and 3rd party system vendors and integrators can create additional services with the REST interface.

The Direct Integration (DI) and Direct Integration modules are software tools that directly integrate with automation systems. The integration module handles all the details of interfacing the automation systems and will thereafter deliver the data in a standard http-format to Multichannel using the REST interface.

This section presents:

- Installation, Requirements and Configuration Check
- Selecting the Integrations Hub Media Sequencer

Note: For REST documentation, see sections:
- REST Interface for Integrations Hub Version 1.0

9.1 Installation, Requirements And Configuration Check

The Integrations Hub service requires .NET Framework 4.6.1 or higher. If the server is behind a corporate firewall *in a secure environment*, is it recommended to change User Account Control (UAC) Settings to *off* and also turn *off* Windows Firewall.

To Install the Integrations Hub:

1. Locate the current Integrations Hub installer from your Vizrt representative or download.vizrt.com - `VizMultichannel_IntegrationsHub-VERSION.exe` here `VERSION` will be numbers indicating the version of the software.
2. Run the installer software, selecting the default installation directory.

   Important! The Integrations Hub runs as a Windows Service process. It is recommended that the Integrations Hub service process is enabled to start automatically and that the Integrations Hub is run as an Administrator service level process.

   The service is open at 9990 port.

3. Check the Integrations Hub installation:
   Browse to http://localhost:9990/restapi
   Expected response: HTTP-answer listing all channels

No further configuration of the Integrations Hub is required for normal operation, unless the Integrations Hub is to connect to a different Media Sequencer host than *localhost.*

> **Note:** Status message from Integrations Hub is stored in the 'infoIntegrationsHub' attribute of an event.

9.2 Selecting The Integrations Hub Media Sequencer

By default, the Integrations Hub service connects to the local Media Sequencer - the Media Sequencer running at localhost = 127.0.0.1. If required, use the following steps to direct the Integrations Hub to connect to a Media Sequencer at another host:

1. Open Windows File Explorer and browse to the programdata directory for Integrations Hub. The environment variable *%PROGRAMDATA%* will point to the actual location of the Program Data directory, normally the full path expanded will be _c:\Programdata\Vizrt\Viz Multichannel\Tools\Integrations Hub _

   > **Note:** `\ProgramData` is normally a hidden Windows directory so you must explicitly enter the path `\ProgramData` in Windows File Explorer

2. In the programdata directory, open the *IntegrationsHub.config* file with a text editor, for example Notepad.
3. Find node **appsettings**.

   Change the attributes as needed. Example file:

```
<appSettings>
     <add key="MseHost" value="localhost" />
     <add key="ContentFillingWaitTime" value="2" />
     <add key="ChannelCacheTime" value="30"/>
 </appSettings>
```

   MseHost: IP address or hostname of server the Media Sequencer (MSE) is running on.
   ContentFillingWaitTime: Time in seconds the application will wait before performing fill content.
   This is a method to improve performance of the application due to the burst notifications from integration systems.
   ChannelCacheTime: Time in seconds cache data will be used.
   Value is dependent on usage, but values between 15-30 secs should be reasonable. When this cache-time is elapsed, the application will fetch new data.
   It is important to be aware that ChannelCacheTime will affect settings, rules and pages. If ChannelCacheTime is set to, say, 60 seconds, options set in the Multichannel UI could be up to 60 seconds delayed before acted upon.

Although using cache can improve throughput in an application, it could have side effects due to delay that are hard to catch - always consider your options carefully.

4. Save the file.
5. Restart the windows service.

See Also

- REST Interface for Integrations Hub Version 1.0
- Promo Server

9.3 REST Interface For Integrations Hub Version 1.0

This section describes the simplified REST interface implementation and specification and is of most interest to advanced users or creators of software to integrate with Integrations Hub.

This simplified version 1.0 of the Integrations Hub REST interface uses the standard verbs GET, POST and DELETE and is optimized for speed.

- GET All Channels (Version 1.0)
- DELETE All Channels (Version 1.0)
- POST Channel (Version 1.0)
- GET Channel (Version 1.0)
- DELETE Channel (Version 1.0)
- GET Channel Settings for a Channel (Version 1.0)
- GET Page Pool (Version 1.0)
- GET Playlist from a Channel (Version 1.0)
- POST Playlist to a Channel (Version 1.0)
- DELETE Playlist (Version 1.0)
- GET Channel Pool Playlist from a Channel (Version 1.0)
- POST Group and Page to Channel Pool (Version 1.0)
- GET Group from a Playlist (Version 1.0)
- POST Group to Playlist (Version 1.0)
- DELETE Group (Version 1.0)
- GET Page from a Group (Version 1.0)
- POST Pages to a Group (Version 1.0)
- DELETE Page of a Group (Version 1.0)
- GET All Events with Matching Event ID (Version 1.0)

9.3.1 GET All Channels (Version 1.0)

GET All Channels

To obtain a collection of all channels known by a given Integrations Hub (i.e. channels that exists on the underlying Media Sequencer) use the following command:

Syntax

```
GET /restapi
```

Request

```
GET /restapi HTTP/1.1
```

Response

```
HTTP/1.1 200 OK
Content-Type: application/vizrt.integrationshub+xml; type=integrationshub
<integrationshub xmlns="http://www.vizrt.com/integrationshub">
  <title>Integrations Hub info for http://localhost:9990/restapi</title>
  <link href="http://localhost:9990/restapi" rel="self" type="application/
vizrt.integrationshub+xml; type=integrationshub" />
  <channel>
    <name>Channel1</name>
    <link href="http://localhost:9990/restapi/Channel1" rel="self" type="application/
vizrt.integrationshub+xml; type=channel" />
  </channel>
  <channel>
    <name>Channel2</name>
    <link href="http://localhost:9990/restapi/Channel2" rel="self" type="application/
vizrt.integrationshub+xml; type=channel" />
  </channel>
</integrationshub>
```

Note

If trying to POST to this root end-point, a *HTTP 403 Forbidden* error will be returned.

9.3.2 DELETE All Channels (Version 1.0)

DELETE All Channels

Channels can only be deleted via the Viz Multichannel client.

Syntax

```
DELETE /restapi
```

Request

```
DELETE /restapi HTTP/1.1
```

Response

Returns a **403 Forbidden** status message.

9.3.3 POST Channel (Version 1.0)

POST Channel

A Channel can only be added via the Viz Multichannel client.

Syntax

```
POST /restapi
```

Request

```
POST /restapi HTTP/1.1
```

Reponse

Returns a **403 Forbidden** status message.

9.3.4 GET Channel (Version 1.0)

GET Channel

To obtain a collection of the playlists (headers) that exist under a specific channel use the following command. Note, each channel has a link to its full collection of groups.

Syntax

```
GET /restapi/[channel_name]
```

Example Request

```
GET /restapi/Channel1 HTTP/1.1
```

Example Response

```
HTTP/1.1 200 OK
Content-Type: application/vizrt.integrationshub+xml; type=channel
<channel xmlns="http://www.vizrt.com/integrationshub">
  <title>Channel info for http://localhost:9990/restapi/Channel1</title>
  <name>Channel1</name>
  <link href="http://localhost:9990/restapi/Channel1" rel="self" type="application/
vizrt.integrationshub+xml; type=channel" />
  <playlist>
    <description>Channel Pool</description>
    <name>channel_pool</name>
    <link href="http://localhost:9990/restapi/Channel1/channel_pool" rel="self" type="
application/vizrt.integrationshub+xml; type=playlist" />
    <ischannelpool>true</ischannelpool>
    <ispagepool>false</ispagepool>
  </playlist>
  <playlist>
    <description>Continuous Playlist</description>
    <name>continuous</name>
    <link href="http://localhost:9990/restapi/Channel1/continuous" rel="self" type="a
pplication/vizrt.integrationshub+xml; type=playlist" />
    <ischannelpool>false</ischannelpool>
    <ispagepool>false</ispagepool>
  </playlist>
  <playlist>
    <description>Page Pool</description>
    <name>page_pool</name>
    <link href="http://localhost:9990/restapi/Channel1/page_pool" rel="self" type="ap
plication/vizrt.integrationshub+xml; type=pagepool" />
    <ischannelpool>false</ischannelpool>
    <ispagepool>true</ispagepool>
  </playlist>
</channel>
```

9.3.5 DELETE Channel (Version 1.0)

DELETE Channel

A Channel can only be deleted via the Viz Multichannel client.

Syntax

```
DELETE /restapi/[channel_name]
```

Request

```
DELETE /restapi/Channel1 HTTP/1.1
```

Reponse

Returns a **403 Forbidden** status message.

9.3.6 GET Channel Settings for a Channel (Version 1.0)

GET Channel Settings for a Channel

Query Integrations Hub for a channels settings and their current values, using REST. Note: Query / channelsettings to get a full list of channels that have settings available, for proper discovery of the URI used in the example below.

Syntax

```
GET /channelsettings/[channelname]
```

Request

```
GET /channelsettings/Channel1 HTTP/1.1
```

Response

Example expected reply:

```
HTTP/1.1 200 OK
Content-Type: application/vizrt.integrationshub+xml; type=channelsettings
<channelsettings xmlns="http://www.vizrt.com/integrationshub">
  <title>Channel Settings info for http://localhost:9990/channelsettings/Channel1</
title>
  <name>Channel1</name>
  <link href="http://localhost:9990/channelsettings/Channel1" rel="self" type="applic
ation/vizrt.integrationshub+xml; type=channelsettings" />
  <settingsversion>4.0.0</settingsversion>
  <setting name="GeneralSettings.BasicSettings.ChannelBasicInfo.ScreenDimension">
    <value>1920*1080</value>
  </setting>
  <setting name="GeneralSettings.BasicSettings.ChannelBasicInfo.AspectRatio">
    <value>16/9</value>
  </setting>
[..]
  <setting
name="GeneralSettings.BasicSettings.PlaylistDataMapping.ColumnDataMappings">
    <value>
      <entry attributeName="begin_at" columnName="Begin Time" editable="true" />
      <entry attributeName="duration" columnName="Duration" editable="true" name="ent
ry#2" />
      <entry attributeName="timecode" columnName="Offset" editable="true" name="entry
#3" />
      <entry attributeName="description" columnName="Description" editable="true"
 name="entry#4" />
      <entry attributeName="event_id" columnName="Event ID" name="entry#5" />
      <entry attributeName="trigger_id" columnName="Media ID" name="entry#6" />
    </value>
  </setting>
[..]
</channelsettings>
```

9.3.7 GET Page Pool (Version 1.0)

GET Page Pool

Syntax

```
GET /restapi/[channelname]/page_pool
```

Example Request

```
GET /restapi/test/page_pool HTTP/1.1
```

Example Result GET page_pool playlist

```
HTTP/1.1 200 OK
Content-Length: 1256
Content-Type: application/vizrt.integrationshub+xml; type=pagepool
Server: Microsoft-HTTPAPI/2.0

<pagepool xmlns="http://www.vizrt.com/integrationshub">
  <title>Page pool info for http://localhost:9990/restapi/test/page_pool</title>
  <description>Page Pool</description>
  <name>page_pool</name>
  <link href="http://localhost:9990/restapi/test/page_pool" rel="self" type="applicat
ion/vizrt.integrationshub+xml; type=pagepool" />
  <page>
    <description>GEOM*products/MCP/Packages/Music_demo/CONCEPT=HD/DEFAULT_LOGO</
description>
    <name>1000</name>
    <link href="http://localhost:9990/restapi/test/page_pool/1000" rel="self" type="a
pplication/vizrt.integrationshub+xml; type=pagepoolpage" />
    <take_duration />
  </page>
  <page>
    <description>The Super Band/Bullet With Butterfly Wings</description>
    <name>6000</name>
    <link href="http://localhost:9990/restapi/test/page_pool/6000" rel="self" type="a
pplication/vizrt.integrationshub+xml; type=pagepoolpage" />
    <take_duration />
  </page>
  <page>
    <description>Coming Up Next.../The Band live and unplugged/ </description>
    <name>8000_clip</name>
    <link href="http://localhost:9990/restapi/test/page_pool/8000_clip" rel="self"
 type="application/vizrt.integrationshub+xml; type=pagepoolpage" />
    <take_duration />
  </page>
</pagepool>
```

9.3.8 GET Playlist from a Channel (Version 1.0)

GET Playlist from a Channel

To obtain a collection of playlists associated with a given channel with links to each, use the following GET command. The command will obtain a full representation of the playlist's header and a full list of primary elements with a limited set of data and links to each primary elements.

Syntax for GET

```
GET /restapi/[channel_name]/[playlist_name]
```

Example Request

```
GET /restapi/Channel1/continuous HTTP/1.1
```

Example Response

```
HTTP/1.1 200 OK
Content-Type: application/vizrt.integrationshub+xml; type=playlist
<playlist xmlns="http://www.vizrt.com/integrationshub">
  <title>Playlist info for http://localhost:9990/restapi/Channel1/continuous</title>
  <description>Continuous Playlist</description>
  <name>continuous</name>
  <link href="http://localhost:9990/restapi/Channel1/continuous" rel="self" type="app
lication/vizrt.integrationshub+xml; type=playlist" />
  <broadcast_date>continuous</broadcast_date>
  <group>
    <description>Schedule1</description>
    <name>1958a5d9-87bb-42f0-a208-5ea7968c7649</name>
    <link href="http://localhost:9990/restapi/Channel1/continuous/1958a5d9-87bb-42f0-
a208-5ea7968c7649" rel="self" type="application/vizrt.integrationshub+xml;
type=group" />
    <begin_at>2017-08-28T10:00:00.000Z</begin_at>
    <duration>5289.12</duration>
    <event_id>1001</event_id>
    <trigger_id>1</trigger_id>
    <take_count />
  </group>
  <group>
    <description>Despicable Me 2</description>
    <name>b536b347-ad9a-4ff7-9fb7-b097cd4b8230</name>
    <link href="http://localhost:9990/restapi/Channel1/continuous/b536b347-
ad9a-4ff7-9fb7-b097cd4b8230" rel="self" type="application/vizrt.integrationshub+xml;
type=group" />
    <begin_at>2017-08-28T11:28:09.120Z</begin_at>
    <duration>300</duration>
    <event_id>1002</event_id>
    <trigger_id>2</trigger_id>
    <take_count />
  </group>
  <group>
    <description>The Incredible BURT WONDERSTONE</description>
```

```
    <name>d84ac0fc-bcbe-4a8a-a134-6ff0384ac8e0</name>
    <link href="http://localhost:9990/restapi/Channel1/continuous/d84ac0fc-bcbe-4a8a-
a134-6ff0384ac8e0" rel="self" type="application/vizrt.integrationshub+xml;
type=group" />
    <begin_at>2017-08-28T11:33:09.120Z</begin_at>
    <duration>3525.04</duration>
    <event_id>1003</event_id>
    <trigger_id>3</trigger_id>
    <take_count />
  </group>
  <group>
    <description>Man of Steel - Official Trailer 3</description>
    <name>63e76944-f62e-4c24-b425-15fd603942b0</name>
    <link href="http://localhost:9990/restapi/Channel1/continuous/63e76944-f62e-4c24-
b425-15fd603942b0" rel="self" type="application/vizrt.integrationshub+xml;
type=group" />
    <begin_at>2017-08-28T12:31:54.160Z</begin_at>
    <duration>181.12</duration>
    <event_id>1004</event_id>
    <trigger_id>4</trigger_id>
    <take_count />
  </group>
  <ischannelpool>false</ischannelpool>
</playlist>
```

9.3.9 POST Playlist to a Channel (Version 1.0)

POST Playlist to a Channel

Playlists can only be added via the Viz Multichannel client.

Syntax

```
POST /restapi/[channel_name]
```

Request

```
POST /restapi/Channel1 HTTP/1.1
```

Reponse

Returns a **403 Forbidden** status message.

9.3.10 DELETE Playlist (Version 1.0)

DELETE Playlist

Playlists can only be deleted via the Viz Multichannel client.

Syntax

```
DELETE /restapi/[channel_name]/[playlist_name]
```

Request

```
DELETE /restapi/Channel1/continuous HTTP/1.1
```

Reponse

Returns a **403 Forbidden** status message.

9.3.11 GET Channel Pool Playlist from a Channel (Version 1.0)

GET Channel Pool Playlist from a Channel

For retrieving channel pool data.

Syntax for GET

```
GET /restapi/[channel_name]/channel_pool
```

Example Request

```
GET /restapi/Channel1/channel_pool HTTP/1.1
```

Example Response

```
HTTP/1.1 200 OK
Content-Type: application/vizrt.integrationshub+xml; type=playlist
<playlist xmlns="http://www.vizrt.com/integrationshub">
```

```
  <title>Playlist info for http://localhost:9990/restapi/Channel1/channel_pool</
title>
  <description>Channel Pool</description>
  <name>channel_pool</name>
  <ischannelpool>true</ischannelpool>
  <link href="http://localhost:9990/restapi/Channel1/channel_pool" rel="self" type="a
pplication/vizrt.integrationshub+xml; type=playlist" />
  <page>
    <description>15:00/16:00/ /1/Jerry the dog/KZA/ /C:/vizrt/mcp-clips/
Francois0000.avi/</description>
    <name>69aad93a-d2dc-41fc-928b-6ce3cfe6d2f3</name>
    <link href="http://localhost:9990/restapi/Channel1/channel_pool/69aad93a-
d2dc-41fc-928b-6ce3cfe6d2f3" rel="self" type="application/vizrt.integrationshub+xml;
type=page" />
    <timecode />
    <take_duration />
    <page>556</page>
  </page>
  <group>
    <description>Test</description>
    <name>82b793fe-3f1a-4807-a110-3cb2610e8c12</name>
    <link href="http://localhost:9990/restapi/Channel1/channel_pool/
82b793fe-3f1a-4807-a110-3cb2610e8c12" rel="self" type="application/
vizrt.integrationshub+xml; type=group" />
    <begin_at />
    <duration>600</duration>
    <event_id />
    <trigger_id />
  </group>
</playlist>
```

9.3.12 POST Group and Page to Channel Pool (Version 1.0)

POST Group and Page to Channel Pool

Syntax for POST

```
POST /restapi/[channel_name]/channel_pool
```

Example Request

```
POST /restapi/MovieChannel/channel_pool/ HTTP/1.1
Content-Type: application/vizrt.integrationshub+xml; type=payload
<payload>
  <page name="page1" take_duration="50" page="basic" />
```

```
  <group name="group1" event_id="1" description="group 1" duration="3600" />
</payload>
```

Example Response

```
HTTP/1.1 201 Created
Content-Type: application/vizrt.integrationshub+xml; type=playlistpostreply
Content-Location: http://localhost:9990/restapi/MovieChannel/channel_pool
<playlistpostreply xmlns="http://www.vizrt.com/integrationshub">
  <title>Post result info to http://localhost:9990/restapi/MovieChannel/
channel_pool</title>
  <description>Channel Pool</description>
  <name>channel_pool</name>
  <ischannelpool>true</ischannelpool>
  <link href="http://localhost:9990/restapi/MovieChannel/channel_pool" rel="self"
 type="application/vizrt.integrationshub+xml; type=playlistpostreply" />
  <page>
    <title>Page info for http://localhost:9990/restapi/MovieChannel/channel_pool/
page1</title>
    <description>My Page</description>
    <name>page1</name>
    <link href="http://localhost:9990/restapi/MovieChannel/channel_pool/page1" rel="s
elf" type="application/vizrt.integrationshub+xml; type=page" />
    <timecode />
    <take_duration>50</take_duration>
    <page>basic</page>
    <attributes>
      <attribute name="description">
        <value>My Page</value>
      </attribute>
      <attribute name="event_created_by">
        <value>schedule</value>
      </attribute>
      <attribute name="page">
        <value>basic</value>
      </attribute>
      <attribute name="take_duration">
        <value>50</value>
      </attribute>
      <attribute name="name">
        <value>page1</value>
      </attribute>
    </attributes>
    <fields />
  </page>
</playlistpostreply>
```

9.3.13 GET Group from a Playlist (Version 1.0)

GET Group from a Playlist

To obtain a group and associated pages of a group in a playlist for a given channel use the following command.

Syntax

```
GET /restapi/[channel_name]/[playlist_name]/[group_name]
```

Request

```
GET /restapi/Channel1/continuous/1958a5d9-87bb-42f0-a208-5ea7968c7649 HTTP/1.1
```

Response

```
HTTP/1.1 200 OK
Content-Type: application/vizrt.integrationshub+xml; type=group
<group xmlns="http://www.vizrt.com/integrationshub">
  <title>Group info for http://localhost:9990/restapi/Channel1/continuous/
1958a5d9-87bb-42f0-a208-5ea7968c7649</title>
  <description>Schedule1</description>
  <name>1958a5d9-87bb-42f0-a208-5ea7968c7649</name>
  <link href="http://localhost:9990/restapi/Channel1/continuous/1958a5d9-87bb-42f0-
a208-5ea7968c7649" rel="self" type="application/vizrt.integrationshub+xml;
type=group" />
  <begin_at>2017-08-28T10:00:00.000Z</begin_at>
  <duration>5289.12</duration>
  <event_id />
  <trigger_id />
  <take_count />
  <attributes>
    <attribute name="adjust_begin_at_after_resume">
      <value>yes</value>
    </attribute>
    <attribute name="begin_at">
      <value>2017-08-28T10:00:00.000Z</value>
    </attribute>
    <attribute name="description">
      <value>Schedule1</value>
    </attribute>
    <attribute name="duration">
```

```
      <value>5289.12</value>
    </attribute>
    <attribute name="house_id">
      <value>QZJBJEQXMVERLAET</value>
    </attribute>
    <attribute name="instance">
      <value>composite_Channel1</value>
    </attribute>
    <attribute name="presentation">
      <value>composite</value>
    </attribute>
    <attribute name="name">
      <value>1958a5d9-87bb-42f0-a208-5ea7968c7649</value>
    </attribute>
  </attributes>
   <page>
      <description/>
      <name>bb2ec7e4-c94b-4eb7-8611-2972ef782dfb</name>
      <link href="http://localhost:9990/restapi/test/continuous/9770f5ff-de09-4436-
a54a-3d64989a3c31/bb2ec7e4-c94b-4eb7-8611-2972ef782dfb" rel="self" type="application/
vizrt.integrationshub+xml; type=page"/>
      <timecode>10</timecode>
      <take_duration>7</take_duration>
      <page>6</page>
      <take_count/>
   </page>
   <page>
      <description>Coming Up Next.../The Band live and unplugged/</description>
      <name>d0b0dd15-499e-4bd3-8ffa-878b03f5303e</name>
      <link href="http://localhost:9990/restapi/test/continuous/9770f5ff-de09-4436-
a54a-3d64989a3c31/d0b0dd15-499e-4bd3-8ffa-878b03f5303e" rel="self" type="application/
vizrt.integrationshub+xml; type=page"/>
      <timecode>5</timecode>
      <take_duration>10</take_duration>
      <page>8000_clip</page>
      <take_count/>
   </page>
   <page>
      <description/>
      <name>7e79878f-9ae7-48d6-bff3-3d1c7a545efc</name>
      <link href="http://localhost:9990/restapi/test/continuous/9770f5ff-de09-4436-
a54a-3d64989a3c31/7e79878f-9ae7-48d6-bff3-3d1c7a545efc" rel="self" type="application/
vizrt.integrationshub+xml; type=page"/>
      <timecode>3</timecode>
      <take_duration>3570</take_duration>
      <page/>
      <take_count/>
   </page>
</group>
```

9.3.14 POST Group to Playlist (Version 1.0)

POST Group to Playlist

To add or update a single or collection of groups in a playlist for a given channel use the POST command documented below.

For this command two examples are given. The first example (Request 1 - Example with 2 groups/ Response 1 - Example with 2 groups) shows how to post two groups. Note that for this example page(s) is added by rules for both groups.

The second example (Request 2 - Example with 1 group and 2 pages/Response 2 - Example with 1 group and 2 pages) shows how to add one group and two pages. No additional pages are added by rules.

Groups can be added with or without pages depending on the requirements.

Note: Posting of multiple resources are allowed. The Location in the reponse points to the nearest parent (i.e. the entry the POST was made to). Each specific element is linked in the verbose response.

Note: After this request is done the system is primed to perform a Page Content Filling process against Promo Server as soon as there is no immediate additional requests sent.

Syntax

```
POST /restapi/[channel_name]/[playlist_name]
```

Request 1 – Example with Two Groups

```
POST /restapi/MovieChannel/continuous/ HTTP/1.1
Content-Type: application/vizrt.integrationshub+xml; type=payload
<payload>
  <group name="group1" event_id="1" description="group 1" duration="3600" begin_at="2
014-06-13T01:00:00.000" />
  <group name="group2" event_id="2" description="group 2" duration="3600" begin_at="2
014-06-13T00:00:00.000" />
</payload>
```

Response 1 – Example with Two Groups

```
HTTP/1.1 201 Created
Content-Type: application/vizrt.integrationshub+xml; type=playlistpostreply
```

```
Content-Location: http://localhost:9990/restapi/MovieChannel/continuous/
<playlistpostreply xmlns="http://www.vizrt.com/integrationshub">
  <title>Post result info to http://localhost:9990/restapi/MovieChannel/continuous/</
title>
  <description>Continuous Playlist</description>
  <name>continuous</name>
  <link href="http://localhost:9990/restapi/MovieChannel/continuous/" rel="self"
 type="application/vizrt.integrationshub+xml; type=playlistpostreply" />
  <broadcast_date>continuous</broadcast_date>
  <group>
    <title>Group info for http://localhost:9990/restapi/MovieChannel/continuous/
group1</title>
    <description>group 1</description>
    <name>group1</name>
    <link href="http://localhost:9990/restapi/MovieChannel/continuous/group1" rel="se
lf" type="application/vizrt.integrationshub+xml; type=group" />
    <begin_at>2014-06-13T01:00:00.000</begin_at>
    <duration>3600</duration>
    <event_id>1</event_id>
    <trigger_id />
    <attributes>
      <attribute name="begin_at">
        <value>2014-06-13T01:00:00.000</value>
      </attribute>
      <attribute name="description">
        <value>group 1</value>
      </attribute>
      <attribute name="duration">
        <value>3600</value>
      </attribute>
      <attribute name="event_id">
        <value>1</value>
      </attribute>
      <attribute name="instance">
        <value>relative_MovieChannel</value>
      </attribute>
      <attribute name="name">
        <value>group1</value>
      </attribute>
    </attributes>
    <page>
      <description>00:27/00:30/00:33/00:36/00:39/Africa 2/sso4/SSO3/SSO2/confomr a
conform SD/FOX 2007 EMMY WINNERS/FOX 2007 EMMY WINNERS</description>
      <name>nextshow</name>
      <link href="http://localhost:9990/restapi/MovieChannel/continuous/group1/
nextshow" rel="self" type="application/vizrt.integrationshub+xml; type=page" />
      <timecode>00:00:05:00</timecode>
      <take_duration />
      <page>nextshow</page>
    </page>
  </group>
  <group>
```

```
    <title>Group info for http://localhost:9990/restapi/MovieChannel/continuous/
group2</title>
    <description>group 2</description>
    <name>group2</name>
    <link href="http://localhost:9990/restapi/MovieChannel/continuous/group2" rel="se
lf" type="application/vizrt.integrationshub+xml; type=group" />
    <begin_at>2014-06-13T00:00:00.000</begin_at>
    <duration>3600</duration>
    <event_id>2</event_id>
    <trigger_id />
    <attributes>
      <attribute name="begin_at">
        <value>2014-06-13T00:00:00.000</value>
      </attribute>
      <attribute name="description">
        <value>group 2</value>
      </attribute>
      <attribute name="duration">
        <value>3600</value>
      </attribute>
      <attribute name="event_id">
        <value>2</value>
      </attribute>
      <attribute name="instance">
        <value>relative_MovieChannel</value>
      </attribute>
      <attribute name="name">
        <value>group2</value>
      </attribute>
    </attributes>
    <page>
      <description>00:27/00:30/00:33/00:36/00:39/Africa 2/sso4/SSO3/SSO2/confomr a
conform SD/FOX 2007 EMMY WINNERS/FOX 2007 EMMY WINNERS</description>
      <name>nextshow</name>
      <link href="http://localhost:9990/restapi/MovieChannel/continuous/group2/
nextshow" rel="self" type="application/vizrt.integrationshub+xml; type=page" />
      <timecode>00:00:05:00</timecode>
      <take_duration />
      <page>nextshow</page>
    </page>
  </group>
</playlistpostreply>
```

Request 2 – Example with One Group and Two Pages

```
POST /restapi/MovieChannel/continuous/ HTTP/1.1
Content-Type: application/vizrt.integrationshub+xml; type=payload
<payload>
  <group name="group1" event_id="1" description="group 1" duration="3600" begin_at="2
014-06-13T01:00:00.000">
```

```
    <page name="page1" page="now" take_duration="30" timecode="00:00:10:00" />
    <page name="page2" page="nextshow" take_duration="14" timecode="00:59:30:00" />
  </group>
</payload>
```

Response 2 – Example with One Group and Two Pages

```
HTTP/1.1 201 Created
Content-Type: application/vizrt.integrationshub+xml; type=playlistpostreply
Content-Location: http://localhost:9990/restapi/MovieChannel/continuous/
<playlistpostreply xmlns="http://www.vizrt.com/integrationshub">
  <title>Post result info to http://localhost:9990/restapi/MovieChannel/continuous/</
title>
  <description>Continuous Playlist</description>
  <name>continuous</name>
  <link href="http://localhost:9990/restapi/MovieChannel/continuous/" rel="self"
 type="application/vizrt.integrationshub+xml; type=playlistpostreply" />
  <broadcast_date>continuous</broadcast_date>
  <group>
    <title>Group info for http://localhost:9990/restapi/MovieChannel/continuous/
group1</title>
    <description>group 1</description>
    <name>group1</name>
    <link href="http://localhost:9990/restapi/MovieChannel/continuous/group1" rel="se
lf" type="application/vizrt.integrationshub+xml; type=group" />
    <begin_at>2014-06-13T01:00:00.000</begin_at>
    <duration>3600</duration>
    <event_id>1</event_id>
    <trigger_id />
    <attributes>
      <attribute name="begin_at">
        <value>2014-06-13T01:00:00.000</value>
      </attribute>
      <attribute name="description">
        <value>group 1</value>
      </attribute>
      <attribute name="duration">
        <value>3600</value>
      </attribute>
      <attribute name="event_id">
        <value>1</value>
      </attribute>
      <attribute name="instance">
        <value>relative_MovieChannel</value>
      </attribute>
      <attribute name="name">
        <value>group1</value>
      </attribute>
    </attributes>
    <page>
```

```
      <description>Good words need great graphics/A bad graphic is worse than no
graphic/Size DOES matters! Superb HD graphics from Vizrt/Your analogue station  just
entered  a new era - history/No Viz. No Fizz/It...s TV. You must VIZualize it/Mood
music for the eyes. Vizrt/No story is complete without a Viz graphic</description>
      <name>page1</name>
      <link href="http://localhost:9990/restapi/MovieChannel/continuous/group1/page1"
 rel="self" type="application/vizrt.integrationshub+xml; type=page" />
      <timecode>00:00:10:00</timecode>
      <take_duration>30</take_duration>
      <page>now</page>
    </page>
    <page>
      <description>00:27/00:30/00:33/00:36/00:39/Africa 2/sso4/SSO3/SSO2/confomr a
conform SD/FOX 2007 EMMY WINNERS/FOX 2007 EMMY WINNERS</description>
      <name>page2</name>
      <link href="http://localhost:9990/restapi/MovieChannel/continuous/group1/page2"
 rel="self" type="application/vizrt.integrationshub+xml; type=page" />
      <timecode>00:59:30:00</timecode>
      <take_duration>14</take_duration>
      <page>nextshow</page>
    </page>
  </group>
</playlistpostreply>
```

Example of Content for POST Group to Playlist with isLive and isLocked Set to True

```
<group name="group1"
isLive="true"
isLocked="true"
event_id="1"
description="group 1"
duration="3600"
begin_at="2016-06-13T01:00:00.000"
/>
```

9.3.15 DELETE Group (Version 1.0)

DELETE Group

To remove a specific group and all pages a part of it use the following command.

> **Note:** After this request is done the system is primed to perform a Page Content Filling process against Promo Server as soon as there is no immediate additional requests sent.

Syntax

```
DELETE /restapi/[channel_name]/[playlist_name]/[group_name]
```

Request

```
DELETE /restapi/Channel1/continuous/group1 HTTP/1.1
```

Response

Returns a **204 No Content** status message as no content is found because the group was found and its content **successfully deleted**.

Returns a **404 Not Found** status message because the group was not found.

9.3.16 GET Page from a Group (Version 1.0)

GET Page from a Group

To obtain pages for a specific group in a playlist for a given channel use the following command.

Syntax

```
GET /restapi/[channel_name]/[playlist_name]/[group_name]/[page_name]
```

Request

```
GET /restapi/Channel1/continuous/group1/page2 HTTP/1.1
```

Response

```
HTTP/1.1 200 OK
Content-Type: application/vizrt.integrationshub+xml; type=page
<page xmlns="http://www.vizrt.com/integrationshub">
  <title>Page info for http://[true_ip]:9990/restapi/[channelname]/[playlist_name]/
[group_name]_pool/[page_name]</title>
  <description>[page_description]</description>
  <name>[page_name]</name>
  <timecode>[page_timecode]</timecode>
```

```
  <take_duration>[page_take_duration]</take_duration>
  <page>[page_page]</page>
  <scene>[scene info from sceneinfo]</scene>
  <attributes>
    <attribute name="[attribute_name]">
      <value>[value]</value>
    </attribute>
    <attribute name="[attribute_name]">
     <value>[value]</value>
    </attribute>
    [..]
  </attributes>
  <fields>
    <field name="[tabfield_name]">
      <mapping>[tabfield_mapping]</mapping>
      <value>[tabfield_value]</value>
      <type>[tabfield_type]</type>
    </field>
    [..]
  </fields>
  <link href="http://[true_ip]:9990/restapi/[channelname]/[playlist_name]/
[group_name]/[page_name]" rel="self" type="application/vizrt.integrationshub+xml;
type=page" />
</page>
```

9.3.17 POST Pages to a Group (Version 1.0)

POST Pages to a Group

To add or update a collection of pages for a given group, in a playlist for a given channel use the following command.

The Request (example)/Response example given shows how to post two pages to a group.

> **Note:** Posting off multiple resources are allowed. The Location in the response points to the nearest parent (i.e. the entry the POST was made to). Each specific element is linked in the verbose response.

> **Note:** After this request is done the system is primed to perform a Page Content Filling process against Promo Server as soon as there is no immediate additional requests sent.

Syntax

```
POST /restapi/[channel_name]/[playlist_name]/[group_name]/
```

Request (example)

```
POST /restapi/MovieChannel/continuous/9770f5ff-de09-4436-a54a-3d64989a3c31 HTTP/1.1
Content-Type: application/vizrt.integrationshub+xml; type=payload
<payload>
  <page name="page1" page="6000" take_duration="30" timecode="00:00:30:00" />
  <page name="pagePDS" page="2" take_duration="45"  timecode="00:00:35:00"/>
</payload>
```

Response

```
HTTP/1.1 201 Created
Content-Length: 3579
Content-Type: application/vizrt.integrationshub+xml; type=grouppostreply
Server: Microsoft-HTTPAPI/2.0

<grouppostreply xmlns="http://www.vizrt.com/integrationshub">
  <page>
    <title>Page info for http://localhost:9990/restapi/test/continuous/9770f5ff-
de09-4436-a54a-3d64989a3c31/page1</title>
    <description>The Super Band/Bullet With Butterfly Wings</description>
    <name>page1</name>
    <link href="http://localhost:9990/restapi/test/continuous/9770f5ff-de09-4436-
a54a-3d64989a3c31/page1" rel="self" type="application/vizrt.integrationshub+xml;
type=page" />
    <timecode>30</timecode>
    <take_duration>30</take_duration>
    <page>6000</page>
    <attributes>
      <attribute name="atomid">
        <value>urn:uuid:6e495b5c-a646-461b-964b-61be6d587b33</value>
      </attribute>
      <attribute name="description">
        <value>The Super Band/Bullet With Butterfly Wings</value>
      </attribute>
      <attribute name="event_created_by">
        <value>schedule</value>
      </attribute>
      <attribute name="guid">
        <value>2019-06-14T09:36:33Z_Johan-PC2.vizrt.internal_17232_0</value>
      </attribute>
      <attribute name="infoIntegrationsHub">
        <value>[A:17:42:51]</value>
      </attribute>
      <attribute name="layer">
        <value>LTTOGGLE</value>
      </attribute>
```

```
      <attribute name="modified_date">
        <value>2019-06-14T09:36:32.641Z</value>
      </attribute>
      <attribute name="page">
        <value>6000</value>
      </attribute>
      <attribute name="showautodescription">
        <value>true</value>
      </attribute>
      <attribute name="take_duration">
        <value>30</value>
      </attribute>
      <attribute name="templatedescription">
        <value>Lower third</value>
      </attribute>
      <attribute name="timecode">
        <value>30</value>
      </attribute>
      <attribute name="updated">
        <value>2019-06-14T09:36:33Z</value>
      </attribute>
      <attribute name="name">
        <value>page1</value>
      </attribute>
    </attributes>
    <fields>
      <field name="01LT">
        <mapping />
        <value>The Super Band</value>
      </field>
      <field name="02LT">
        <mapping />
        <value>Bullet With Butterfly Wings</value>
      </field>
    </fields>
    <take_count />
  </page>
  <page>
    <title>Page info for http://localhost:9990/restapi/test/continuous/9770f5ff-
de09-4436-a54a-3d64989a3c31/pagePDS</title>
    <description />
    <name>pagePDS</name>
    <link href="http://localhost:9990/restapi/test/continuous/9770f5ff-de09-4436-
a54a-3d64989a3c31/pagePDS" rel="self" type="application/vizrt.integrationshub+xml;
type=page" />
    <timecode>35</timecode>
    <take_duration>45</take_duration>
    <page>2</page>
    <attributes>
      <attribute name="event_created_by">
        <value>schedule</value>
      </attribute>
```

```
      <attribute name="infoIntegrationsHub">
        <value>[A:17:42:51]</value>
      </attribute>
      <attribute name="is_pilot_data_element">
        <value>true</value>
      </attribute>
      <attribute name="page">
        <value>2</value>
      </attribute>
      <attribute name="take_duration">
        <value>45</value>
      </attribute>
      <attribute name="timecode">
        <value>35</value>
      </attribute>
      <attribute name="name">
        <value>pagePDS</value>
      </attribute>
      <attribute name="ref_link">
        <value>/external/pilotdb/elements/2</value>
      </attribute>
    </attributes>
    <fields />
    <take_count />
  </page>
</grouppostreply>
```

9.3.18 DELETE Page of a Group (Version 1.0)

DELETE Page of a Group

To remove a specific page of a given group use the following command.

Syntax

```
DELETE /restapi/[channel_name]/[playlist_name]/[group_name]/[page_name]
```

Request

```
DELETE /restapi/Channel1/continuous/group1/page1 HTTP/1.1
```

Reponse

Returns a **204 No Content *status message as no content is found because the page was found and *successfully deleted**.

Returns a **404 Not Found** status message because the page was not found.

9.3.19 GET All Events with Matching Event ID (Version 1.0)

GET All Events with Matching Event ID

To retrieve a selected list of one or more items with a specific event-id associated with it, call this end-point and specify event-id to filter by:

Syntax

```
GET /GetEventsByEventId/[channel_name]/[playlist_name]/[event_id]
```

Request

```
GET /GetEventsByEventId/test/continuous/070bf70c-0dbd-4fa6-a609-71bd34d6361c HTTP/1.1
```

Response

```
HTTP/1.1 200 OK
Content-Type: application/vizrt.integrationshub+xml; type=geteventsbyeventid
<ResponseGetEventsByEventId xmlns="http://www.vizrt.com/integrationshub">
   <title>GetEventsByEventId result from channel: continuous and Event Id filter:
070bf70c-0dbd-4fa6-a609-71bd34d6361c</title>
   <description>GetEventsByEventId result from channel: continuous and Event Id
filter: 070bf70c-0dbd-4fa6-a609-71bd34d6361c with Uri called at: http://
127.0.0.1:9990/GetEventsByEventId/test/continuous/070bf70c-0dbd-4fa6-
a609-71bd34d6361c</description>
   <name>GetEventsByEventId result from channel: continuous and Event Id filter:
070bf70c-0dbd-4fa6-a609-71bd34d6361c</name>
   <link href="http://127.0.0.1:9990/GetEventsByEventId/test/continuous/
070bf70c-0dbd-4fa6-a609-71bd34d6361c" rel="self" type="application/
vizrt.integrationshub+xml; type=ResponseGetEventsByEventId"/>
   <primaryeventcount>0</primaryeventcount>
   <secondaryeventcount>1</secondaryeventcount>
   <page>
      <description>TEST 4 - The Smashing Pumpkins/Bullet With Butterfly Wings</
description>
      <name>070bf70c-0dbd-4fa6-a609-71bd34d6361c</name>
      <link href="http://127.0.0.1:9990/restapi/test/continuous/
21479131448478/070bf70c-0dbd-4fa6-a609-71bd34d6361c" rel="self" type="application/
vizrt.integrationshub+xml; type=page"/>
      <timecode>60</timecode>
      <take_duration>0</take_duration>
```

```
      <page>lowerthird</page>
      <take_count>1</take_count>
   </page>
</ResponseGetEventsByEventId>
```

10 Page Content Filling

Page content can come from multiple sources. You are advised to use Promo Server for content filling. In addition, Viz Multichannel supports the following ways of adding content to pages:

- Manual Input
- Referenced Pages
- Page Content from Playlist Metadata
- Page Content from Database Lookups
- Page Content from External Update Services
- Page Content filling using Promo Server

10.1 Manual Input

In this mode, pages are filled with content without any connection to a schedule, playlist, database or web service (using update service). Open a page and fill it with data. You can also reference pages that are already filled with data.

For details of UI fields, see the section Dialog Menu and Explanations of Options. Adding pages as referenced pages allows you to edit a single page that will also change all other referenced pages.

10.1.1 Edit Page Fields

1. Preview the page.
2. Click a field or press the **TAB** button to move between fields.
3. Edit the field as necessary and move on to the next field.
4. When you are finished editing, click **OK**.

10.2 Referenced Pages

Once a playlist is sent to the control room, there is often little scope for across-the-board changes. Each occurrence of a page in a playlist is *independent*, and editing it from within the playlist will only change that specific instance.

However, you can set up a playlist in such a way as to allow for last-minute global changes by associating referenced pages to primary events. In this use case, a page is associated by reference to primary events in the playlist. When the content of the page has changed, either in the page list (left panel) or by double-clicking on one of the referenced pages in the actual playlist, all occurrences in all playlists in the current channel are changed both retroactively and henceforth.

10.2.1 Create a Referenced Page

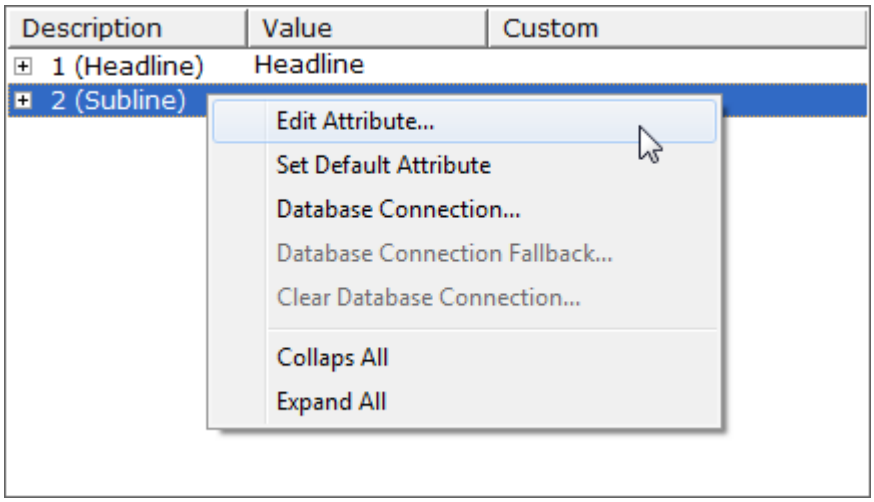
1. Preview the page.
2. Edit the page.
3. Press and hold **ALT + drag and drop** the page to the playlist. The page receives the following icon: 

10.3 Page Content From Playlist Metadata

Pages can automatically retrieve information from primary event meta data in any playlist or channel, using Page Content Filling mapping that is carried out and fulfilled by the Promo Server. Changes to a page in the Page Pool view will effect all referenced occurrences of that page in a playlist. Changes to a page in the Playlists view will only have an effect on page.

10.3.1 Populate a Page Based on Playlist Fields

1. Select your channel.
2. Open the Page Pool or the Playlists view.
3. Double-click a page.
   - This opens the Page Editor.
   - Select a page from the Templates, Pages and Pilot Data Elements view to affect all subsequent occurrences of a page in the playlist.
   - Select a page from the Playlists view to affect only this occurrence.



4. Right-click a field and from the context menu and select **Edit Attribute...** This opens the Page Content Filling Dialog Menu.
5. Make your configurations.
6. Click **OK**.

10.4 Page Content From Database Lookups

Pages can automatically retrieve information from a range of Database Connections, using the Promo Server to carry out the queries.

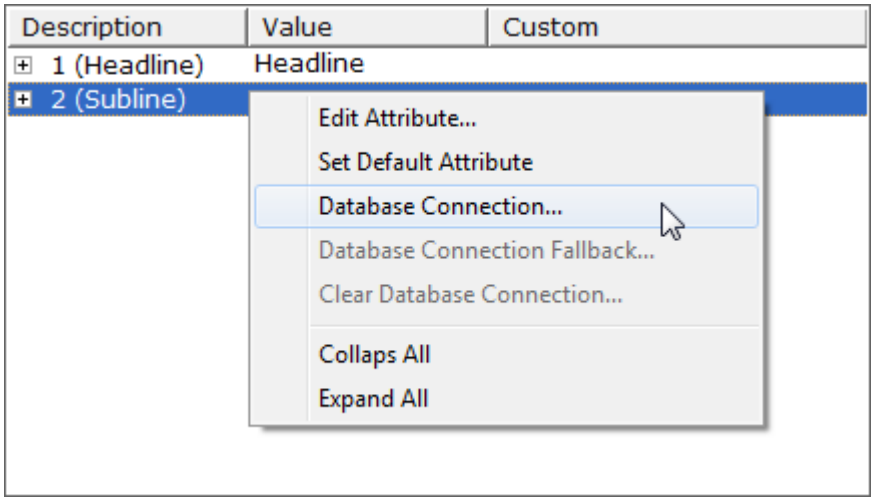
When working with databases, it is important to always make sure the database columns **match the data type** of a page's field. If a database column is of type *Integer*, and your field is of type *String,* you will not be able to make any updates.

Note that changes to a page in the Page Pool view will effect all referenced occurrences of that page in a playlist. Changes to a page in the Playlists view will only have an effect on page.

10.4.1 Populate a Template from a Database

Note: Before you start make sure you have configured your Database Connections.

1. Select your channel.
2. Open the Page Pool or the Playlists view.
3. Double-click a page. This opens the Page Editor.

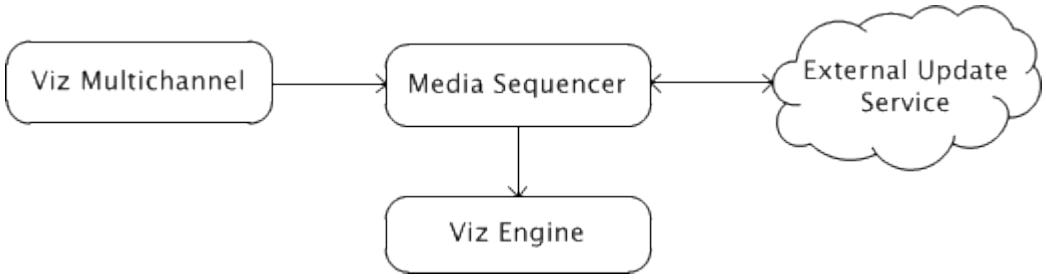


4. Right-click a field and from the context menu select **Database Connection** or **Database Connection Fallback**.
   - This will open the **Database Connection** window.
   - The *fallback* connection allows you to map up a second database, supporting automatic fallback if the first database lacks the ID supplied in the query.
5. Make your configurations.
6. Click **OK**.

10.4.2 Clear a Database Connection

1. Select your channel.
2. Open the Page Pool or the Playlists view.
3. Double-click a page. This opens the Page Editor.
4. Right-click a field and from the context menu select **Clear Database Connection**
5. Click **Yes**. The connection to the database is cleared for this page only.

10.5 Page Content From External Update Services



Page content filling can be done by pointing your template (without a script) to an external update service (for example third party), that can return updated data using the Vizrt Data Format (VDF).

In addition to the service mechanism, you can also select which actions are triggered on the Media Sequencer during an update (read, take etc.) and set the timeout for each action.

Note: Using an update service currently does not allow updates at regular intervals.

Vizrt has developed a small stub-implementation for an external update service called ExternalUpdateServiceSample for interested developers and 3rd party integrators. This project is available as source code on request and at no cost, and can be used as a starting point for developing external update services.

10.6 Page Content Filling Using Promo Server

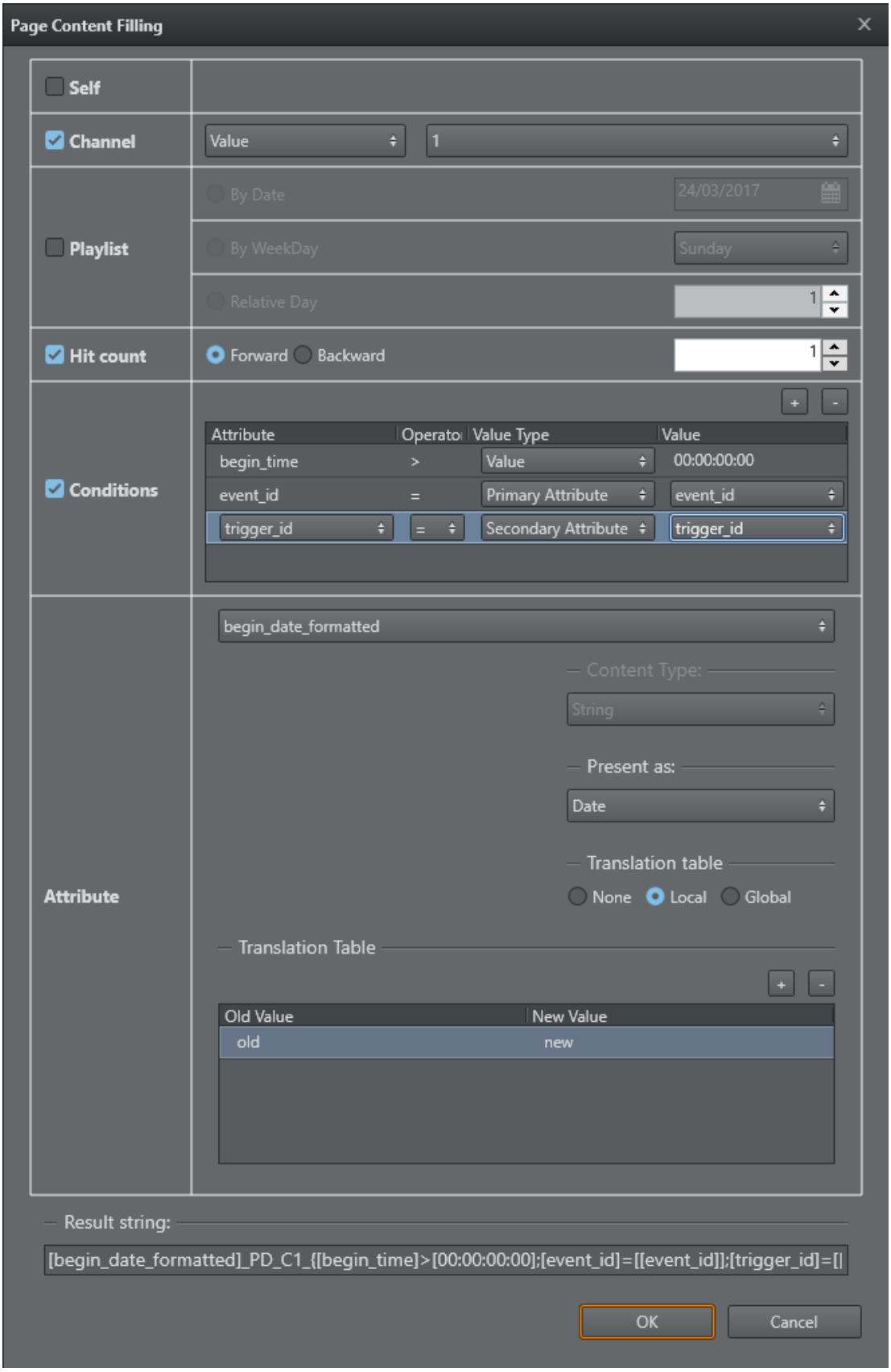
Page content can be filled or updated by using the Promo Server. Promo Server is particularly effective and recommended in a cross-promotion usage scenario. Cross-promotion is when one channel needs to fill templates or pages with data fetched from other channels.

See Also

- Vizrt Data Format (VDF)
- Working with Rules
- Dialog Menu and Explanations of Options

10.7 Dialog Menu And Explanations Of Options

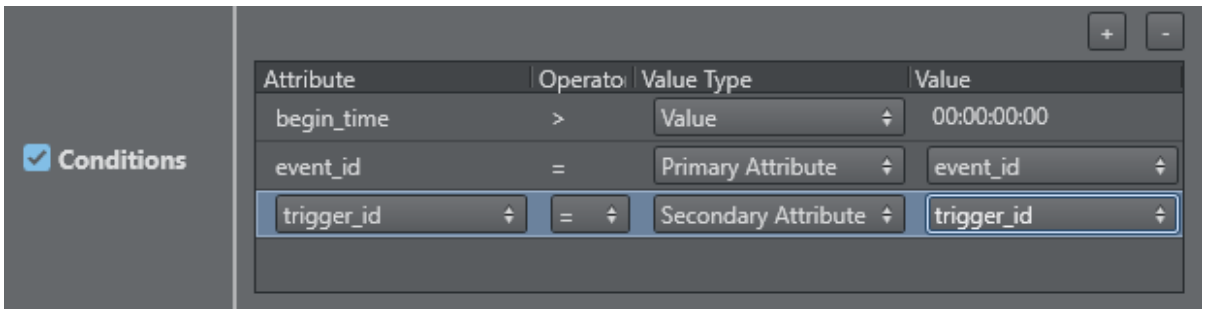
This section provides guidelines and sample values for working with the **Page Content Filling** dialog menu.



- **Self**: Gets information from the primary event the page resides under. This will disable the Channel, Playlist, Item and Conditions options.
- **Channel**: Allows you to select the relevant channel if you want to populate your pages with primary event content from another channel. Can have one of 3 values.
  - **Value**: Select the relevant channel from the list. Channels are configured in Promo Server configuration (*see* Promo Server Installation and Configuration)
  - **Primary Attribute**: Channel name derived from the specific attribute value of primary event.
  - **Secondary Attribute:** Channel name derived from the specific attribute value of page itself.
- **Playlist**: Allows you to select another playlist than the current. If you are working on the current playlist do not select this option. For selecting other playlists than the current, your options are:
  - **By Date**: Reads from the playlist of the date selected.
  - **ByWeek Day**: Reads from the next day selected.
  - **By Relative Day**: Reads from the playlist as many days in the future as selected. Select **1** for the following day, **2** for two days after the current date's playlist, etc.
- **Hit count**: Allows you to select an item from a different playlist than the current one. Do not select this option if you are working on the current playlist

> ⚠ **Note:** The old behavior of selecting an item by time or relative to a current event has been replaced by the **Hit count** option. Unlike the **Item** option, **Hit count** does not allow for negative (relative).
> Also, setting the *time* is now mandatory.

- **Conditions**: Looks for the first primary event that meets the conditions in the table. Any entry prefixed with `secondary_` indicates it is to check data from the page (itself) and not the parent (primary element). This allows you to use secondary data (for example `secondary_begin_time`) to find relevant primary event data, giving more dynamic conditions.



  - **Value Type** which has three options:
    Value: Compares attribute value with the condition value.
    Primary Attribute: Compare attribute value with the specific attribute value of primary event.

Secondary Attribute: Compare attribute value with the specific attribute value of page itself.

- **Attribute**: Allows you to select an attribute from a located primary event or the current secondary event. The fields available in the list depend on what is defined in the **Mapping Table** under **General Settings**. Translation tables can be used to define arbitrary value-translations, via a value=value-table. There are two translations tables:
  - *TranslationTable*: settings per page.
  - *GlobalTranslationTable*: As the name implies, a Global Translation Table. Can be configured in Channel Settings under Import/Export Settings > General Settings > Translation Tables.
- **Result string**: Displays the resulting string based on your configuration of the respective fields. Can be edited.

See Also:

- Page Content Filling Aliases

11 Promo Server

Promo Server is a Windows service process that enables efficient handling of page-filling and playlist data transfers, particularly for cross-promotional purposes. Once installed and configured, there is no direct user interaction with Promo Server since it does not have a user interface. Use the Multichannel Client Configuration settings to configure the server address of the Promo Server and to direct Multichannel to use Promo Server.

Cross-promotion is typically used in scenarios where one or more channels in Viz Multichannel need to access information about events in other channels in order to fetch data for page-filling. For example, the channel MUSIC might need to know what events are scheduled on channel MOVIES in order to answer such queries as "The Next event on channel MUSIC is program Foo while channel MOVIES now shows the film Bar". Promo Server is a utility for handling such cross-channel queries.

To use Promo Server you must:

1. Install Promo Server on a server. Although a separate server is recommended for security and efficiency, a shared server can also be used.
2. Configure Promo Server by editing the *PromoServer.config* configuration file. This step tells Promo Server the *channel names* and the *network addresses* of the Media Sequencer servers handling these channels.
3. Tell Viz Multichannel to use the Promo Server you are using by configuring and selecting it in Viz Multichannel's configuration settings (see **Settings > General Settings > Page Content Filling**).

This process is described in the following sections:

11.1 Promo Server Installation And Configuration

11.1.1 Installing the Promo Server

1. Locate the current Promo Server installer from your Vizrt representative or from the ftp server download.vizrt.com. The Promo Server is a separate installer image named `VizMultichannel_PromoServer-VERSION.exe` where *VERSION* are numbers indicating the release/version of the software. Double-click on the installer to start the installation.
2. Press **Next** and on the next page click **Next** again to install Promo Server to the default installation directory.
3. Press the **Install** button and wait until the software is installed. You can now exit the installer by pressing **Finish**.

IMPORTANT! The Promo Server runs as a Windows Service process. It is recommended that the Promo Server service process is enabled to start automatically and that the Promo Server is run as an Administrator service level process. See the next chapter for details.

11.1.2 Configuring the Promo Server

Promo Server must be told which target channels to serve and on which server (network address) these channel(s) reside. This is done by editing the XML textfile *PromoServer.config*

IMPORTANT! The *PromoServer.config* is an XML-formatted textfile. Make sure that you save the file in text format (not Word, RTF or any other special format) after editing. You can use Notepad to do the editing, for instance.

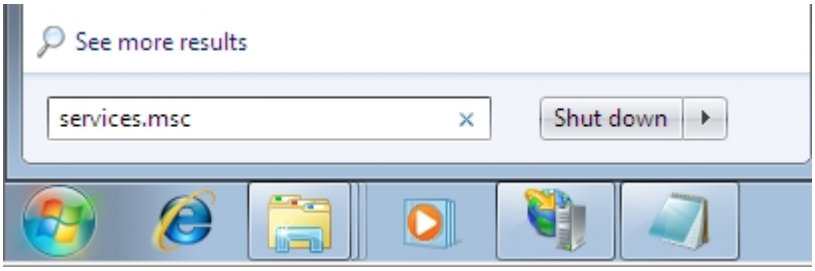
To configure Promo Server:

1. Use Windows Explorer to locate the directory *%ProgramData%\Vizrt\Multichannel\PromoServer* and locate the config-file. Normally: *c:\ProgramData\Vizrt\Multichannel\PromoServer.config.*
2. Open PromoServer.config in a text editor.
3. For key **ChannelsMapping** change the attribute name **value** to be the target channelname and either IP-address or hostname of the server. If you have several channels, each channel is separated by a "," (comma) character. Example format: *value="MUSIC=192.168.0.10, MOVIE=192.168.0.11"* , see the image below for an example.
4. Save the *PromoServer.config* file as a normal textfile.

```
<?xml version="1.0"?>
<configuration>
 <appSettings>
  <add key="ChannelsMapping" value="MTVChannel=localhost, SkyTV=10.211.9.129"/>
  <!--Example for multiple channels: [channelName1]=[msehost],[channelName2]=[msehost],[channelName3]=[msehost]-->
 </appSettings>
 <startup>
  <supportedRuntime version="v4.0" sku=".NETFramework,Version=v4.0"/>
 </startup>
</configuration>
```

After you have configured (or changed) the *PromoServer.config* file you must restart the Promo Server service process.
To restart the Promo Server and to configure the service-level:

Start the Windows Services administrator utility. On Windows 7-like systems: Select the Windows **Start** menu, type **services.msc** in the search bar and press **ENTER** to start the program.



1. In the Services window, scroll down in the list to locate the **Vizrt Viz Multichannel Promo Server** service.

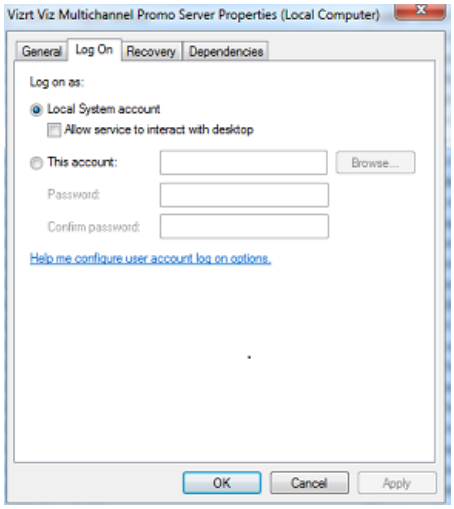
2. Right-click on the **Vizrt Viz Multichannel Promo Server** item and in the context menu select **Restart**.
3. Wait until the Service Window confirmation window disappears.
4. Check that Promo Server is running and that the option to have it start automatically at server startup is selected.

11.1.3 Checking That Promo Server Service has Administrator Privileges

Complete the steps below to ensure that the Promo Server runs with administrator privileges:

> ⚠ **Note:** This procedure normally only needs to be performed once.

1. Start Windows services.msc utility as described in the last procedure.
2. Locate the **Vizrt Viz Multichannel Promo Server** item, right-click and in the context menu select **Properties**.
3. In the properties window, set the Administrator username and password or a user account with Administrator privileges and press **OK**.
4. Check Promo Server logs
   You have now configured Promo Server.

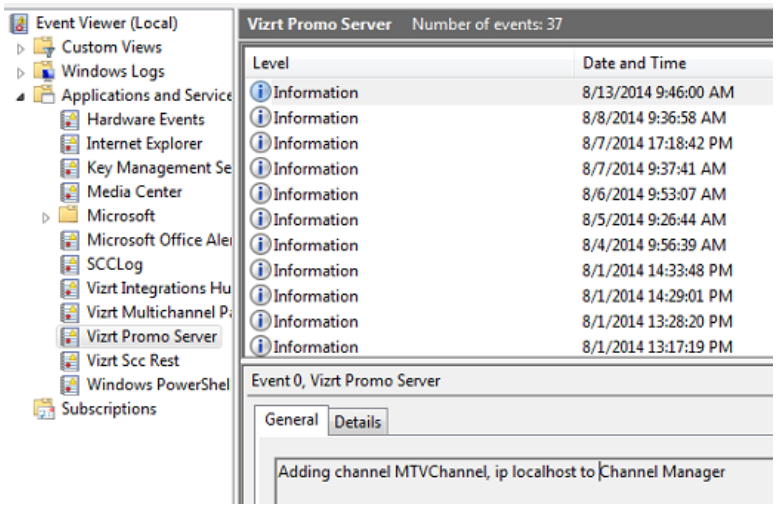


11.2 Promo Server Logs And Messages

Perform the steps below to check Promo Server logs. Note that this procedure is for Windows 7. Although minor differences may occur depending on your Windows version, the basic procedure will be the same.

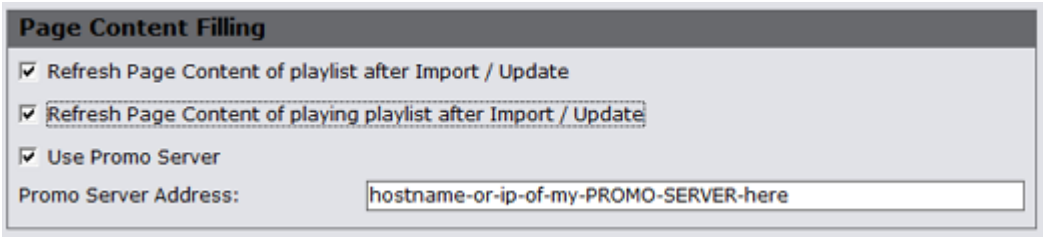
1. Press the Windows **Start** button and type **Event Viewer** in the search bar. Press **ENTER** to start the Event Viewer.
2. In the resulting Event Viewer application, expand **Application and Services** in the left pane.
3. Select and click the service process log you wish to view. In this example, Vizrt Promo Server, as seen in the screenshot below:

Note: Status message from Promo Server will be stored in 'infoPromoServer' attribute of an event.



11.3 Configuring Multichannel For Promo Server

1. Start Multichannel and select the Open **Settings** icon in the toolbar.
2. Under the Import/Export heading select **General Settings.**
3. In the **Page Content Filling** header check **Use Promo Server** and in the parameter field specify either the hostname or the IP-address of the Promo Server.



4. Press **OK** to save the changed settings.

Note: Only the Use Promo Server and the field to specify the Promo Server hostname address in the image above is specific for Promo Server. The *Refresh...* settings is definitions for when Page Content Filling should be run, for a normal schedule import, be it using the standalone Promo Server service or PlayListImporter.

11.4 Promo Server Web Interface

The Multichannel Promo Server has a web-interface. This section details the required format of a typical API call for interfacing towards the Promo server services.

11.4.1 Required Namespace

Namespace of payload is: "http://www.vizrt.com/types".

11.4.2 Required Data Format

The payload must contains a header node which contains the channel, playlist, group and page names. Example payload:

```
<header>
    <channel>1</channel>
    <playlist>continuous</playlist>
    <group>523d0bb9-2b6c-4278-b5ff-1f594b3d6e17</group>
    <page>4923de46-ff7c-452d-b7e5-79bec7d2bfe2</page>
</header>
```

If the request payload is invalid (incorrect namespace, no content, no header information) the response will be HTTP/1.1 400 Bad Request

11.4.3 Example API Call (POST)

POST /PayloadParserService/ResolvePayload HTTP/1.1

```
<payload xmlns="http://www.vizrt.com/types">
  <field name="pop_testing">
    <value>Good words need great graphics</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="2">
    <value>A bad graphic is worse than no graphic</value>
    <field name="kerning">
      <value>0</value>
    </field>
    <lookuprules xmlns="http://www.vizrt.com/2014/multichannel">[description]_0_IsStr
ing</lookuprules>
  </field>
  <field name="3">
    <value>Size DOES matters! Superb HD graphics from Vizrt</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="4">
    <value>Your analogue station just entered a new era - history</value>
    <field name="kerning">
```

```
      <value>0</value>
    </field>
  </field>
  <field name="5">
    <value>No Viz. No Fizz</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="6">
    <value>It...s TV. You must VIZualize it</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="7">
    <value>Mood music for the eyes. Vizrt</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="8">
    <value>No story is complete without a Viz graphic</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <header>
    <channel>1</channel>
    <playlist>continuous</playlist>
    <group>523d0bb9-2b6c-4278-b5ff-1f594b3d6e17</group>
    <page>4923de46-ff7c-452d-b7e5-79bec7d2bfe2</page>
  </header>
  <entry name="dblink" xmlns="http://www.vizrt.com/2014/multichannel" />
</payload>
```

11.4.4 Expected Response

```
HTTP/1.1 200 OK
Content-Type: application/octet-stream
<payload xmlns="http://www.vizrt.com/types">
  <field name="pop_testing">
    <value>Good words need great graphics</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="2">
    <value>Primary Event</value>
```

```
    <field name="kerning">
      <value>0</value>
    </field>
    <lookuprules xmlns="http://www.vizrt.com/2014/multichannel">[description]_0_IsStr
ing</lookuprules>
  </field>
  <field name="3">
    <value>Size DOES matters! Superb HD graphics from Vizrt</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="4">
    <value>Your analogue station just entered a new era - history</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="5">
    <value>No Viz. No Fizz</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="6">
    <value>It...s TV. You must VIZualize it</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="7">
    <value>Mood music for the eyes. Vizrt</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <field name="8">
    <value>No story is complete without a Viz graphic</value>
    <field name="kerning">
      <value>0</value>
    </field>
  </field>
  <header>
    <channel>1</channel>
    <playlist>continuous</playlist>
    <group>523d0bb9-2b6c-4278-b5ff-1f594b3d6e17</group>
    <page>4923de46-ff7c-452d-b7e5-79bec7d2bfe2</page>
  </header>
  <entry name="dblink" xmlns="http://www.vizrt.com/2014/multichannel" />
  <promoserverinfo xmlns="http://www.vizrt.com/2014/multichannel">
    <status>ok</status>
  </promoserverinfo>
```

```
</payload>
```

12 XML Translator

The XML Translator is a command-line tool for transforming a schedule-file in XML (BXF) format to a format Multichannel can import. Content is not changed - the data format is only transformed so the Playlist Importer can process it.

Any third-party can define an XSLT (*.xst*) transformation to an importer-friendly structure, currently:

- Ordered collections
- Two (2) layers deep only

12.1 Installing The XML Translator

You can install the XML translator with the bundle installer, for details see Bundle Installer in the Setup and Configuration chapter.

Alternatively, you can install the tool separately from the MSI installer:

1. Download the installer from ftp.vizrt.com or extract the MSI from the bundle installer.
2. Click `VizMultichannel_XMLTranslator_VERSION.msi` and follow the on-screen instructions.
   Normally, the XML translator will be installed to:

```
%PROGRAMFILES%\Vizrt\Viz Multichannel\XMLTranslator\XMLTranslator.exe
```

12.2 Using The XML Translator

Open a command window (**Windows-button+R CMD <enter>**) to use the XML translator. If you need admin rights when using the tool, start CMD as Administrator. Next, **right-click CMD** and select **Run as Administrator** to start an elevated session. In the following, it is assumed that you have XML translator program in the Windows PATH. If not, you must provide the full path in order to use the tool.

```
XMLTranslator.exe -SourcePath %path% -DestinationPath %dpath% -SuccessPath %spath%
-FailPath %fpath% -TranslationFile %tpath%\XSL.xslt
```

The example invocation above is on one line. All arguments are required. To get usage instructions, run the program with the help flag (-? or -h or):

```
XmlTranslator.exe -–help
```

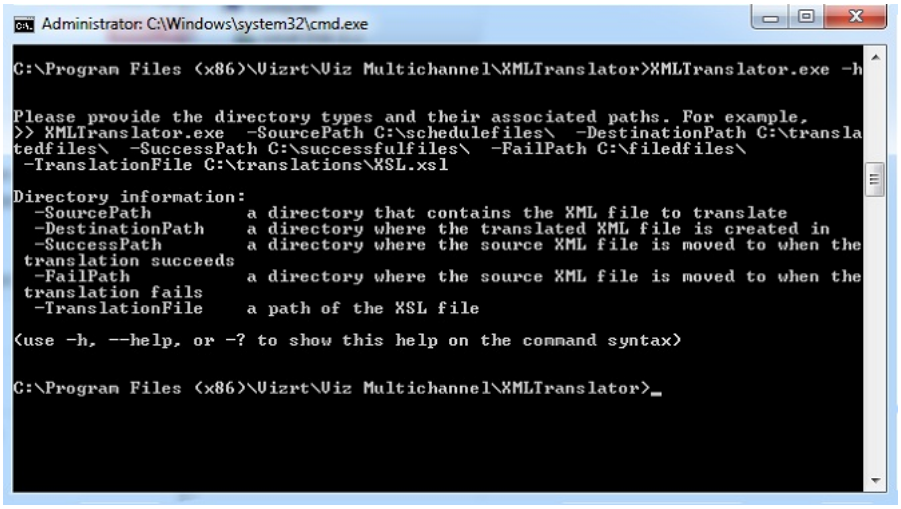
Program argument definitions:

- **SourcePath:** The directory that contains the XML file to translate.
- **DestinationPath:** A directory in which the translated XML file is created.
- **SuccessPath:** A directory to which the source XML file is moved when translation succeeds.
- **FailPath:** A directory to which the source XML file is moved if the translation fails.
- **TranslationFile:** Path to the XSL file defining the transformations.

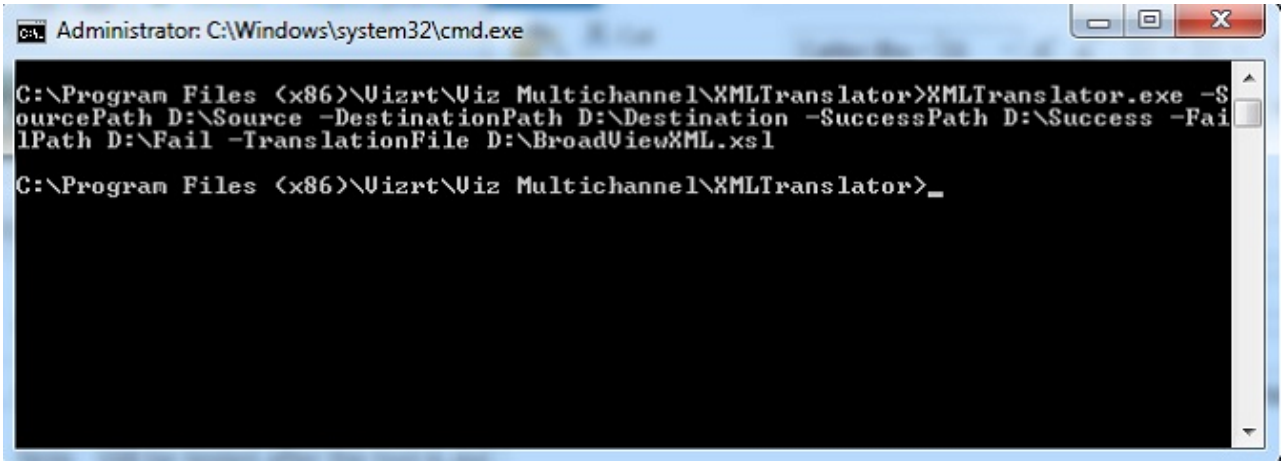
A typical run (the command must be entered on a single line) could be:

```
XMLTranslator.exe -SourcePath D:\Source -DestinationPath D:\Destination -SuccessPath
D:\Success -FailPath D:\Fail -TranslationFile D:\BroadViewXML.xsl
```

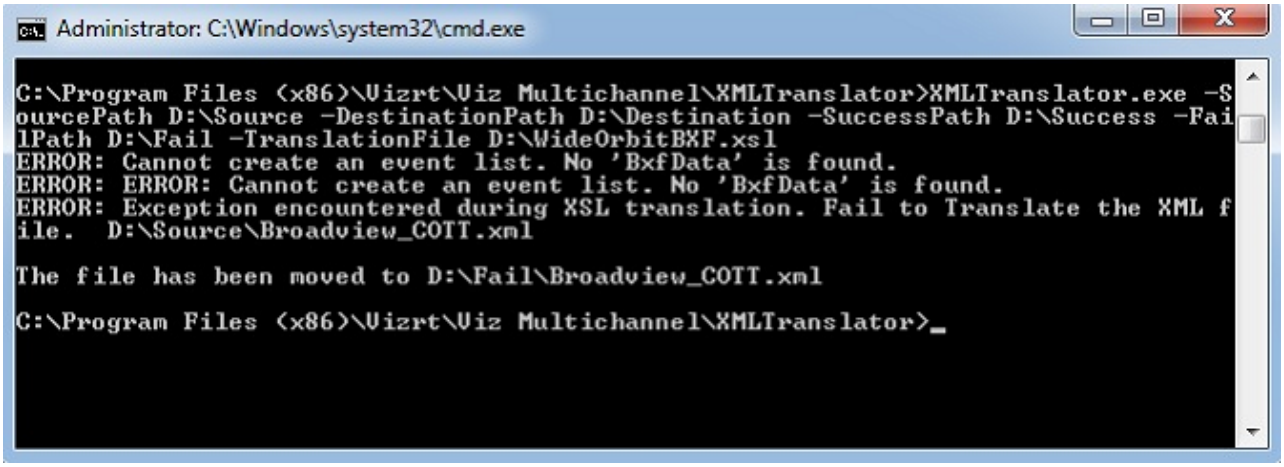
Example invocation: help



Example invocation: success



Example invocation: fail



12.3 External References

- Wikipedia: Extensible Markup Language: XML
- Wikipedia: Extensible Stylesheet Language Transformations: XSLT
- Wikipedia: Broadcast Exchange Format: BXF

13 Traffic Department Workflow

This is a collection of common Traffic Department procedures performed before handing playlist control to the automation system in master control.

This chapter contains information on the following topics:

See Also

- Master Control Workflow

13.1 Working With Templates, Pages And Pilot Data Elements

The first step in populating a playlist with graphics is to import Viz Artist scenes into Viz Multichannel. These scenes become templates, and are saved in Multichannel as an editable form known as a *Page*.

> **Note:** All pages added to a playlist are added as secondary events.

A page can be added to the playlist, creating a standalone instance of that page. Changes to the added page do not affect the original page. Likewise, you can also create *rules* on pages, and each page resulting from the rule in the playlist is also standalone.

This section covers the following topics:

13.1.1 Importing Scenes

Templates are scenes imported from Viz Artist. Although the scene cannot be edited, information in the tab fields can be adjusted and pages (instances of the template) can be created that can be edited from the Template, see Creating Pages.

Import a Template

1. Click the Import Scene button.
   - A tree representing the Viz Graphics Hub is displayed.
2. Browse for scene(s) to import, and do one of the following:
   - **Double-click** the scene to import it
   - **Right-click** the scene and from the appearing context menu select **Import Template(s)**
   - **Select the scene(s)** and click the **Import** button (lower-right)
   - **Select a scene folder**, right-click and from the appearing context menu select **Import Recursively** to import all scenes in that folder and sub-folders
3. Click **OK**.
   - The imported templates now appear in the Templates view (left panel).

13.1.2 Creating Pages

A page is an instance of a template that is made editable. If the template contains editable elements, you can add text, images, and videos to it before adding your page to the playlist. Once a page is added to the playlist it is treated as a secondary event.

Create a Page

1. Select your channel.
2. Click the Templates button (left pane).
   All templates are displayed in the left pane.
3. Right-click the template and from the context menu select either **Create Page** or **Create Page As.**
   The **Create Page** option will create a page with the same name as the Template selected, while **Create Page As** allows you to create a page with a new name you select.
4. Enter a name and click **OK**.
   The page is now added to the Page list, seen below the Templates list.

13.1.3 Previewing Pages

You can preview all pages, regardless of whether or not they are editable.

Preview a Page

1. Select your channel
2. Click the Templates, Pages and Pilot Data Elements button (left pane).
   All templates and pages are shown.
3. Double-click the page you wish to preview.
   The page is shown in the preview window.

13.1.4 Editing Page Duration

You may edit the duration field for a page by setting a default duration before adding it to your playlist.

Edit Page Duration

1. Select your channel.
2. Click the Templates, Pages and Pilot Data Elements button (left pane).
3. Select the page you want to edit.
4. Double-click the **Duration** field.
   The Duration field becomes editable.
5. Enter the desired duration and press **Enter.**

13.1.5 Sending Templates and Pages

Templates and pages can be manually or automatically sent to the MCR setup or another machine for backup purposes. Both options require that Media Sequencer host for the remote machine is defined in the **Remote Hosts** section under Working with Templates, Pages and Pilot Data Elements.

Manually Send Templates and Pages to a Remote Host

1. Select your channel.
2. Click the Templates, Pages and Pilot Data Elements button (left pane).
3. Right-click the relevant template and select **Send Template(s)** and **Send Page(s)**.
   This will send templates and pages to the remote Media Sequencer host.

Automatically Send Templates and Pages to a Remote Host

1. Open the Channel Settings, and select Update Settings
2. Under the Update Options section check the **Send Templates and Pages to remote host(s)** option.
   When the Playlist Importer updates the playlist, templates and pages are sent to the remote Media Sequencer host.

13.1.6 Pilot Data Elements

If enabled in the channel settings then Secondary Elements that isn't resolved as a normal page or action event will be inserted in the playlist and resolved as a Pilot Data Element. The elements resolved by Media Sequencer will also be seen under the section Pilot Data Elements in the main UI, in the left hand side accordion control.

To manually add an existing resolved Pilot Data Element into a playlist, drag the element from the element pool, hold down the Alt key and drop the element on a Primary Event.

Take note that any editing of the data within a Pilot Data Element will affect all instances of this element since they are shared reference pages.

See Also

- Page Content Filling
- Sending Playlists to the Master Control
- Resolving Conflicts

13.2 Working With Actions

Actions, such as *Viz Commands* and *GPI Functions*, can automate certain tasks. For example, Viz commands can be used in Viz Multichannel to:

- Take specific pages on air.
- Clear specific render layers.
- Send Stop, Continue, Start and other commands to a specific render layer.

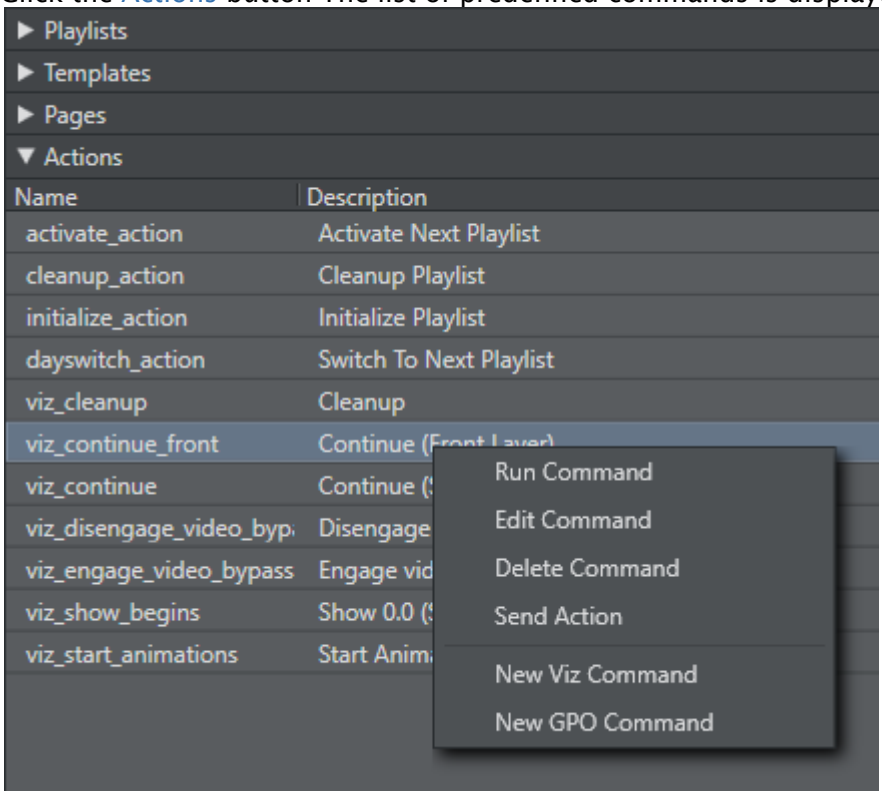
Viz commands are created globally, and can be used on all defined channels.

> **Note:** All commands must first be defined in Viz Multichannel in order to be available as secondary events.

13.2.1 Defining Actions

Define Secondary Event Actions

1. Click the Actions button The list of predefined commands is displayed:



2. Right-click one of the actions and from the context menu select **New Viz Command** or **New GPO Command**
3. In the dialog box enter:
   - **Description** is the descriptive term that is seen in the Actions list, as well as any drop-down list in the Rules and GPI settings panels.
   - **Command** is the actual command line sent.
   - **Name** is a pre-generated name based on type selected (for example `viz_newcommand`) that is verified as unique upon generation and may be changed into something more descriptive. Name is the value used for scheduling (as "page name"').
4. Click **OK**.

> ⚠ **Note:** For more information about Viz Commands, consult the *Viz Command* documentation included with your Viz Engine/Viz Artist installation.

13.2.2 Referenced Actions

Each occurrence of a Viz or GPI action in a playlist is *independent*, and editing it from within the playlist will only change that specific instance.

However, you can set up a playlist in such a way as to allow for last-minute global changes by associating referenced actions to primary events. In such a use case, an action is associated by reference to primary events in the playlist. When the action has been changed, either in the actions list (left panel) or by double-clicking on one of the referenced actions in the actual playlist, all occurrences in all playlists in the current channel are changed both retroactively and henceforth.

Create a Referenced Action

1. Use an existing action or create a new one.
2. Press and hold **ALT + drag and drop** the action to the playlist.
   The action will receive the following icon:  .

See Also

- Working with Ticker Actions

13.3 Working With Ticker Actions

Ticker actions are used to automate the playout and control of tickers.

In order to automate playout of tickers you must first export available ticker actions from your Viz Multichannel client in the MCR. When ticker actions are exported they can be imported into a Viz Multichannel client in the scheduling department. This lets you schedule ticker actions as secondary events and test playout of tickers from scheduling.

> ⚠ **Note:** For Viz Multichannel 2.8 and Media Sequencer 2.0.1 and higher, a **Take** will put the ticker in state ON in Viz Ticker3D, and a **Take Out** will set it in state OFF. This also lets you set Duration for a Ticker Action command.

This section covers the following topics:

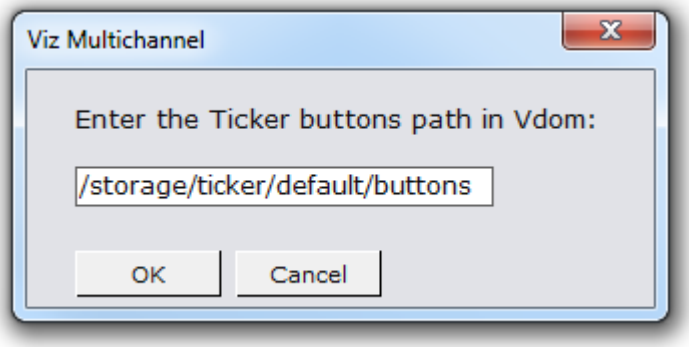
13.3.1 Export Ticker Actions

This procedure takes the ticker action's structure in the Media Sequencer and virtually maps its XML structure (without the logic) for use by Viz Multichannel in scheduling mode.

The export is performed on the Media Sequencer where the real ticker resides (Viz Multichannel in MCR mode).

Export Ticker Actions

1. Click the Actions menu on the Main Menu.
2. Select **Ticker** and then **Export...**



3. Use the default path (or select another) and click **OK**.
   You may enter the Viz Ticker buttons path in the Media Sequencer's VDOM structure.
4. Enter a file name and click **Save**.

13.3.2 Import Ticker Actions

This procedure imports only a virtual version of the ticker actions (without its logic). Before you can import ticker actions you must Export Ticker Actions.

Import Ticker Actions

1. Click the Actions menu on the Main Menu.
2. Select **Ticker** and then **Import...** .
3. Select the file to import and click **Open**.

dayswitch_action	Switch To Next Playlist	logic
LowerThird Main	LowerThird Main	ticker
program_Main	Program Main	ticker
RSS-Ticker Main	RSS-Ticker Main	ticker
Side Main	Side Main	ticker
ticker_system_Main	Ticker System Main	ticker
viz_cleanup	Cleanup	viz
viz_continue_front	Continue (Front Layer)	viz

The ticker actions are displayed in the left pane.

IMPORTANT! The Ticker actions that are read from the imported Ticker XML-file needs to have **ON** or **OFF** (capital or lowercase will both work) in the ticker button name for the action to be imported correctly. For example, ticker buttons named *All ON*, *All of* and *Command ON* will all import correctly, while buttons named *Engine IN* or *Engine OUT* will **not** import correctly.

13.3.3 Scheduling Ticker Actions Manually

Ticker actions, can be manually added to the playlist as secondary events in the same way as pages and other actions.

Manually Schedule Tickers

- Follow the same procedure Manually Add a Page to the Playlist.

13.3.4 Scheduling Tickers Actions Automatically

Ticker actions can be automatically added to the playlist as secondary events in the the same way as pages and other actions. You can also add actions through import rules.

Note that all it is possible to map to all actions via a schedule by referring to the action's name while mapped as a secondary event. See the **secondary_page** setting in the **Table Column**.

Automatically Schedule Tickers

- Use the name of the ticker actions in your schedule.

Define a Rule on a Ticker Command

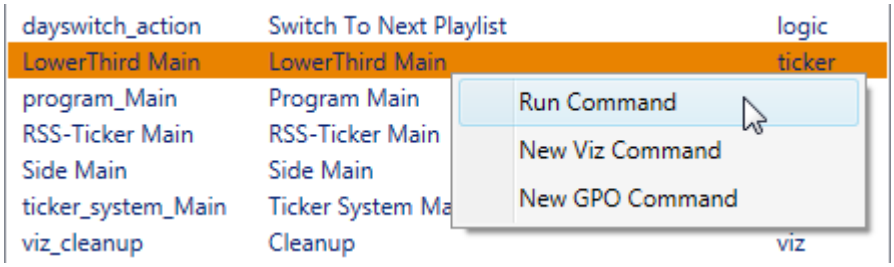
1. Select your channel.
2. Click the Rules button.
3. Continue with the procedures in the Working with Rules section.

13.3.5 Playing Tickers Manually

This procedure is performed on Viz Multichannel in MCR where the real tickers reside.

Manually Play Tickers

1. Select your channel.
2. Click the Actions button.



3. Right-click the command you want to play and select **Run Command**.

See Also

- Actions
- Working with Actions

13.4 Working With Playlists

Viz Multichannel's main task is to import schedules, and consequently create, update and execute programming playlists. A playlist is composed of primary events (programs), which in turn can contain associated secondary events (pages and actions).

Playlists can be created as a continuous playlist or as a playlist per broadcast day. When creating a continuous playlist you cannot add playlists per broadcast day, nor conversely.

Each new broadcast day playlist will have a different date, regardless of the day on which it was created. For example, if you create two playlists today, the first one will be dated today by default, and the next one will be dated tomorrow.

This section covers the following topics:

- Import a Schedule
- Creating a Playlist
- Deleting a Playlist
- Adding Primary Events to a Playlist
- Adding Secondary Events to a Playlist
- Deleting Events from a Playlist
- Updating a Playlist
  - Full Update
  - Full Update Without Event Deletion

13.4.1 Import a Schedule

Viz Multichannel can import a schedule from an external source. However, certain parameters must be configured the first time you import a schedule.

Schedules are generally composed by the traffic departments. Many scheduling systems can create schedules with both primary events and secondary events - a schedule plus associated pages. Viz Multichannel also supports user-defined rules for automatic insertion of secondary events.

The following schedule file formats can be imported as playlists:

- Importing from Text (*.csv, *.txt, *.vicc)
- Importing from XML (*.xml)
- Importing from Excel (*.xls, *.xlsx)
- Harris ADC-100 (*.lst, *.rcv)
- Omnibus (*.osc)

If this is the first time you are importing a schedule, you must first complete the procedures in the following sections:

- Working with Playlists
- Working with Rules

Import a Schedule

1. Select your channel.
2. From the toolbar, click the **Import schedule** button.
3. Select the file to import and click **Open**.

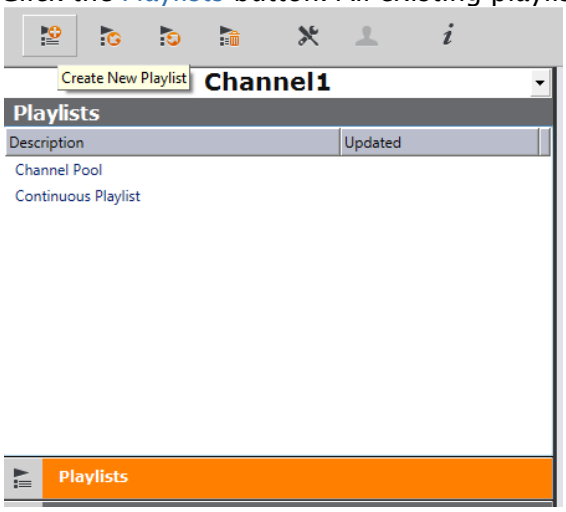
13.4.2 Creating a Playlist

Viz Multichannel can create a playlist based on an imported schedule or create a playlist manually. Note that the most common and preferred method is to import schedules from scheduling systems.

Manually Create a Playlist

1. Select your channel.

2. Click the Playlists button. All existing playlists for the selected channel are displayed.



3. Click the **Create New Playlist** button. A new row representing the new playlist is added.

13.4.3 Deleting a Playlist

Manually Delete a Playlist

1. Select your channel.
2. Click the Playlists button. All existing playlists for the selected channel are displayed.
3. Select the playlist and do one of the following:
   - Right-click the playlist item and select **Delete Playlist** from the context menu, or
   - Click the **Delete Playlist** button on the toolbar.
4. Click **Yes** to confirm.

13.4.4 Adding Primary Events to a Playlist

Manually Add Primary Events to a Playlist

1. Select your channel.
2. Click the Playlists button. All existing playlists for the selected channel are displayed.
3. Open your Playlist.
4. Right-click the relevant playlist and from the context menu, select **Add Primary Event**.

13.4.5 Adding Secondary Events to a Playlist

Secondary events can be pages and video clips, or a combination of both.

Manually Add a Page to the Playlist

1. Select your channel.
2. Click the Playlists button. All existing playlists for the selected channel are displayed.

3. Open your playlist.
4. Click the **Templates and** Pages or **Video Clips** button.
5. Drag and drop a page or video clip on top of a primary event.

   > **Note:** If you press **ALT** when dragging a page onto the playlist, the resulting secondary event will be associated to the original page by reference only.

   - The secondary event appears below the primary event. Any several secondary events will be sorted according to their offsets.
   - The most important fields to edit are generally the offset and **Duration** fields.

     > **Note:** If a field is not editable, you can check the relevant column's **Edit Events** check-box seen in the mapping table.

13.4.6 Deleting Events from a Playlist

Manually Delete Events from a Playlist

1. Select your channel.
2. Click the Playlists button.
   All existing playlists for the selected channel are displayed.
3. Open your playlist.
4. In the playlist, right-click the relevant event and select **Remove** from the appearing context menu.

13.4.7 Updating a Playlist

If there are changes to be made to a playlist, you have the following options:

- Full Update
- Full Update Without Event Deletion
- Update Times

> **Note:** You can schedule automatic updates in the **Update Settings**.

Full Update

The **Full Update** option merges the current playlist with changes made to the schedule.

Priorities and updates of existing secondary events are determined by configurations done in the **Full Update Options** for **Secondary Events** section.

See also the Working with Rules and Resolving Conflicts sections.

Full Update Without Event Deletion

The **Full Update Without Event Deletion** option merges the current playlist with changes made to the schedule, without deleting existing primary events.

Update Times

The **Update Times** option is for imported schedules only. It is an update the begin time, duration and offset from changes that have been made to the schedule for primary events. Any primary event additions or deletions are ignored. Only times are updated.

13.4.8 Exporting a Playlist

Export a Playlist

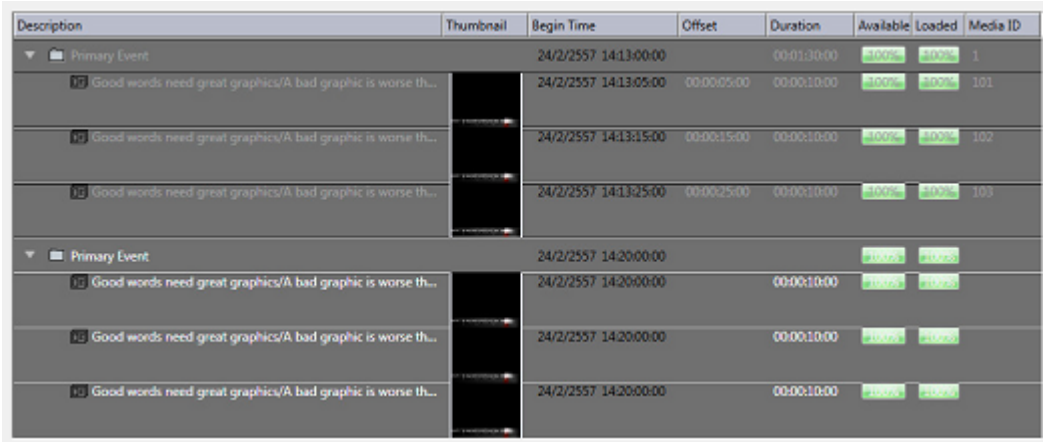
1. Select your channel.
2. Click the Playlists button. All existing playlists for the selected channel are displayed.
3. Open your playlist.
4. From the toolbar, click the **Export Playlist** button. If the original playlist was LST, then the exported playlist can be merged with the original file.

For all other formats, you are prompted to save the file and assign a name in the relevant format.

13.4.9 Playlist State Definitions

The playlist currently has six states for elements that reside inside the playlist. Each of these states uses a color on the playlist elements to provide a visual indication of their state:

- **Normal state**: The state of an un-played element. Elements are shown in *White* text.
- **Played state**: The state of an element that has been played out at least once. Elements in are shown in *Gray* text.

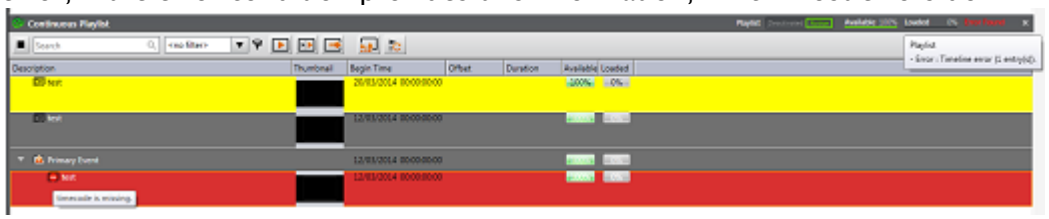


- **Cue state**: The state of an element in a group has been called by MSE, to prepare for playing. These elements are shown in *Yellow*.

- **Pre-queue state**: The state of a next element that will start playing within 5 seconds. Elements are shown in *Orange*.

- **Playing state**: The state of an element that is currently playing. These elements are shown in *Green*. The cue state of a playlist that is activated by an *external trigger* has a *yellow* arrow in front of its element, otherwise the playing state has a *green* arrow in front. External triggering can be a VDCP-signal from the automation system, for example.

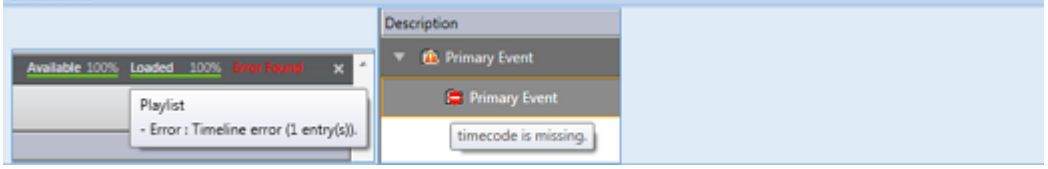
- **Error state**: The state of an element where it has been set incorrectly and cannot be played. Elements in error are shown in *Red* and will also have a tool-tip indicating what caused the error, if the error condition provides this information, which most errors do.



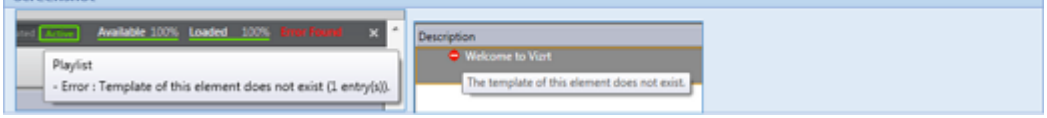
13.4.10 Playlist Errors

Playlist Errors in the playlist will most likely stop the playlist instantly or make the playlist work incorrectly. All indicated errors should therefore be treated as **severe**. The cause of the error must be investigated and corrective action must be taken to prevent the error from happening again. Errors can occur if the playlist was set incorrectly, if the elements residing in the playlist aren't created correctly, or as a result of other circumstances. Errors are separated into six groups as shown in the list below. There is one additional error type if the MAM system Viz One is enabled:

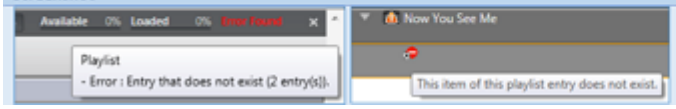
- Timeline error:

Error Type	Timeline error
Description	This error occurred because a timeline in the playlist isn't defined for element(s). To fix this, user need to define a timecode for each element correctly such as a begin time, offset, duration, etc. The errors that usually occurred for this type of error are timecode has already passed, timecode is missing.
Screenshot	

- Template does not exist:

Error Type	Template of this element does not exist
Description	This error occurred because the master template of elements inside the playlist is missing.
Screenshot	

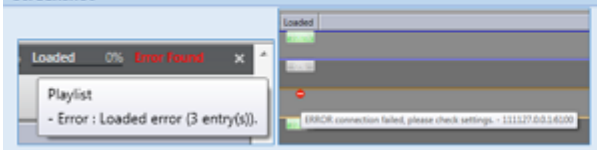
- Entry does not exist:

Error Type	Entry that does not exist
Description	This error is occurred because there are some entries missing in any elements inside the playlist. For example, an element which created by a page as a reference element then refers to that page. If the page has been removed then this error is occurred as it has no entry which it refers to.
Screenshot	

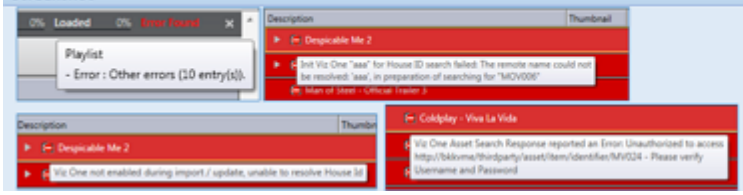
- Available error for playout devices:

Error Type	Available error
Description	This error occurred when the **Playout Devices** isn't set correctly in a setting form.
Screenshot	

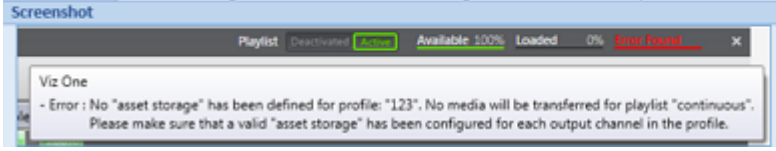
- Loading error:

Error Type	Loaded error
Description	Loaded error occurred when the playout device was set with an incorrect host. After that, the client try to load the scene into Viz engine by using an initialize command.
Screenshot	

- Other error types:

Error Type	Other Errors
Description	Other errors aren't specific errors it can be occurred by any reason which is not related to above cases.
Screenshot	

- Viz One specific errors: A Viz One Error is an error related to an asset storage. There are specific details on the solution in the tooltip.

Error Type	Error
Description	This error occurred because of an asset storage isn't defined. To fix this, go to **Settings** > **Playout Devices** and click edit at the defined **Viz Engines** and **Video Devices**. A configuration form with a drop down box for selecting an **Asset Storage** will appears.
Screenshot	

See Also

- Working with Templates, Pages and Pilot Data Elements
- Working with Video Clips
- Master Control Workflow on how to activate, initialize and manually take events On Air
- Working with Actions as secondary event actions in a playlist

---

13.5 Working With Video Clips

Viz Multichannel integrates with Viz One which allows you to add video clips to your graphics, and graphics to your video clips. Graphics with video clips can be added to the playlist as secondary events.

In order to preview video clips locally, you must install and configure the relevant codecs, see Video Preview Configuration. In order to work with graphics and video clips together, a Preview Server must also be configured and running.

This section covers the following topics:

- Preview of Video Clips
- Video Clips in Playlists
- Video Clips and Graphics

13.5.1 Preview of Video Clips

Video clip preview in Viz Multichannel is based on a low-resolution proxy version streamed from Viz One.

Note that in order to preview video clips locally you need to install and configure the relevant codecs, see Video Preview Configuration.

Preview a Video Clip

1. Click the Clips button.
2. Search for a video.
3. Double-click the video to preview it.

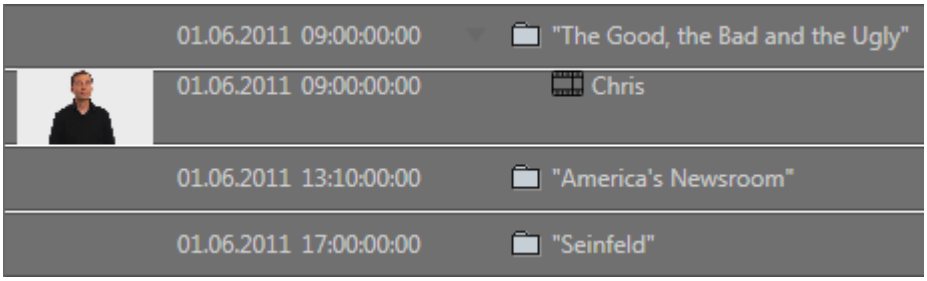
Alternatively, you can:

1. Click the Playlists button and open your playlist.
2. Search for a video.
3. Double-click the video to preview it.

13.5.2 Video Clips in Playlists

Note that video clips may be manually added to the playlist as **secondary events**; however, it is more common to import clips from the schedule.

Add Video Clips to the Playlist



1. Select your channel.
2. Click the Playlists button and open your playlist.
3. Click the **Video Clips** button.
4. Search for a video.
5. Drag and drop your video placing it as a secondary event.
6. Double-click the video to preview it in the Timeline Editor.

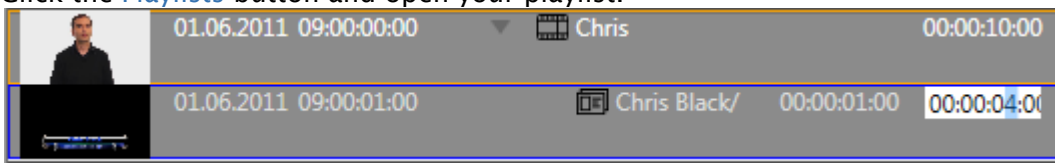
13.5.3 Video Clips and Graphics

Viz Multichannel supports two ways of combining graphics and video. You can add graphics on top of a video clip, or you can add video to graphics.

Note that in order to work with graphics and video clips together you also need to have a Preview Server configured and running.

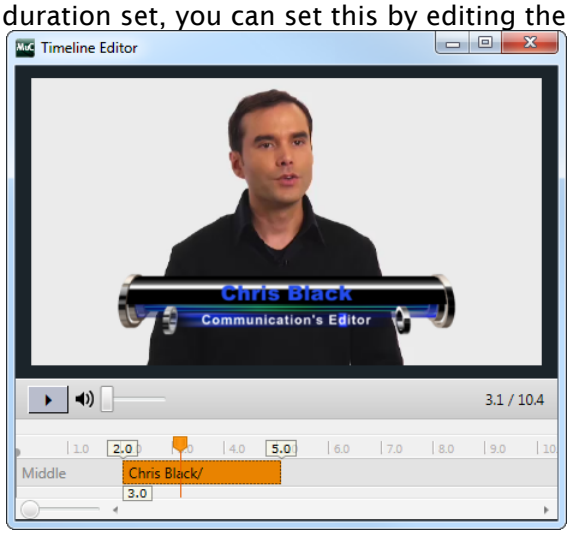
Add Graphics to Video Clips

1. Select your **channel.**
2. Click the Playlists button and open your playlist.



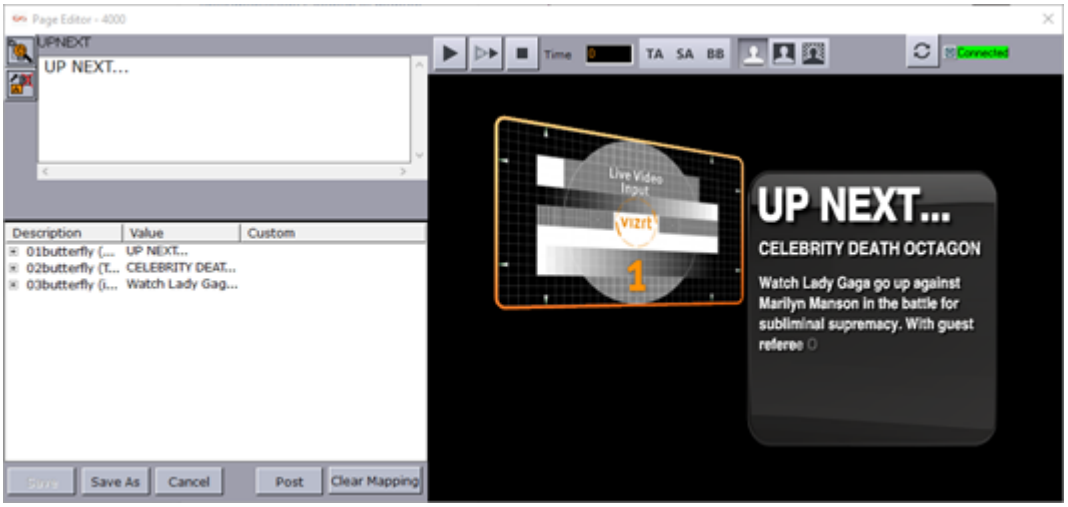
3. Add a video clip as a secondary event (see Add Video Clips to the Playlist).
4. Add a page to the video clip (see Manually Add a Page to the Playlist). This adds the page as a sub element of the video clip, grouping them together. If the page does not have a default

duration set, you can set this by editing the page's **Duration** column.



5. Double-click the video clip to open the Timeline Editor. This lets you adjust the offset and duration of the graphics.

Add Video Clips to Graphics



1. Select your **channel**.
2. Click the Templates, Pages and Pilot Data Elements button.
3. Open your template or page to open the Page Editor.
4. Select the tab field that will hold the video. This opens the video search frame.
5. Search for and select (for example double-click) a video. If the clip channel is set to automatically play the video you should be able to see a low-resolution version of the video.
6. Click **Save As** and enter a new page name.

See Also

- Page Editor
- Timeline Editor

13.6 Working With Rules

For imported and subsequently updated playlists, you can create sets of rules that govern how pages can be automatically inserted into certain events within a playlist. Rules are applied when working with schedules or updating playlists from an external source. Any number of conditions can be applied to defined rules for exact filtering.

When rules are defined and marked as active, the following actions will automatically be applied upon receiving or updating playlists:

- When schedules are received or changed:
  - For each event in the schedule, the rules engine will try to match each rule against the current event read.
  - If the rule matches it will then apply the action/page specified in the rule; if not, no action will be taken and the event will be inserted in the playlist unchanged.

Repeat this until all events are read and processed.

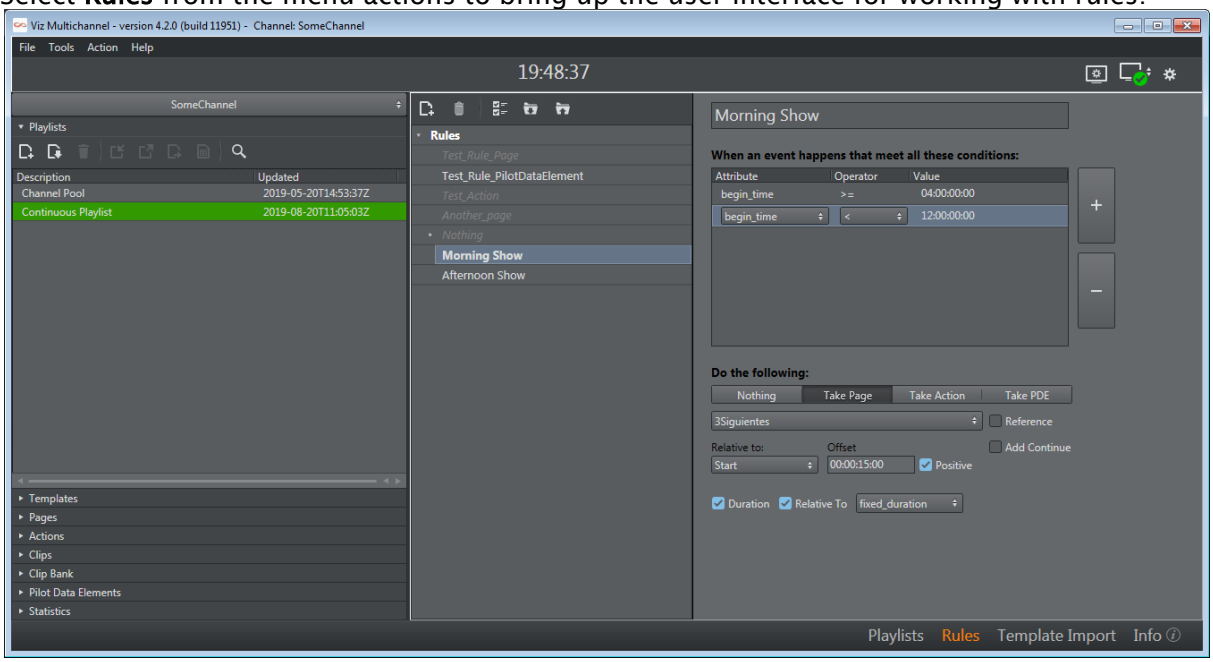
Contents of this page:

13.6.1 Rules UI and using Rules Overview

Create, delete or change the definitions of rules:

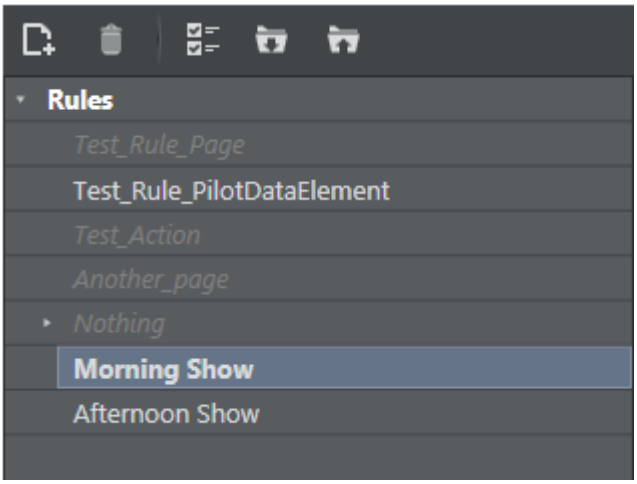
1. From the main menu, ensure that the channel you want to work with is selected.

2. Select **Rules** from the menu actions to bring up the user interface for working with rules:



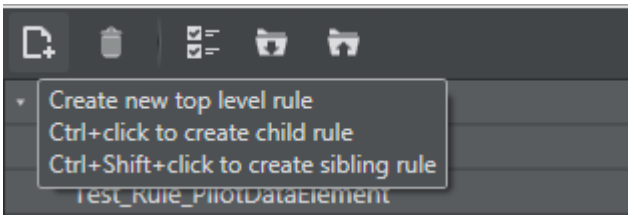
3. In the screenshot above, there are now two window panes on the right-hand side:
   In the left pane, you can create, delete, activate/deactivate, select and import/export rules.
   In the right pane, you can work with a selected rule: name the rule and give it the appropriate conditions and actions.

13.6.2 Working with Rules

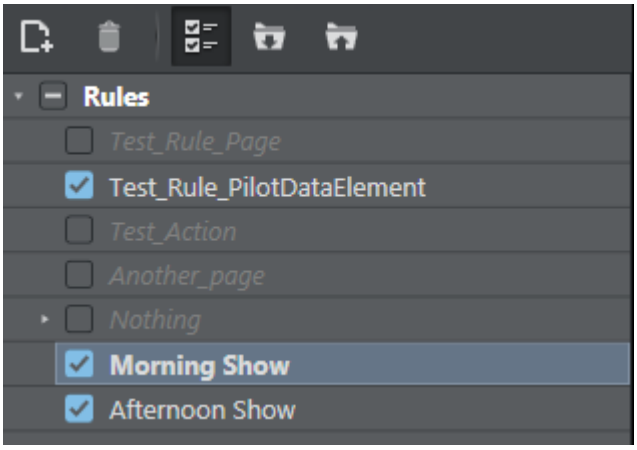


Select by clicking the rule you want to work with, or select the appropriate icon to create, delete, activate/deactivate or import/export rules.

Rules can be grouped into a hierarchy with children and siblings. Hover the cursor over the create rule icon to see the options: **CTRL + click** to create a child rule and **CTRL + SHIFT + click** to create a sibling rule:



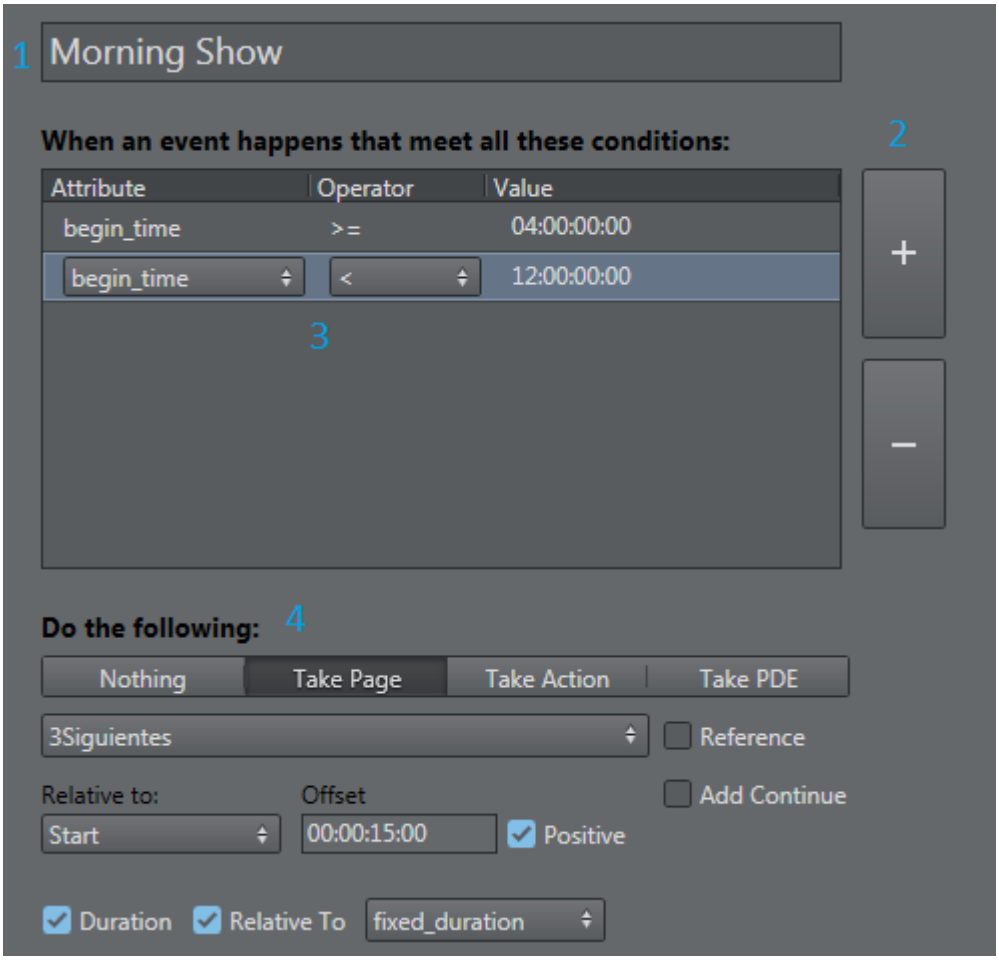
Existing rules can be activated/deactivated as required. In the example below for example the rule *Another_page* is deactivated while *Morning_Show* are activated.



The Import/Export of rules is from/to XML-files. Since existing rules will be overwritten when importing rules, make sure you want to overwrite, or create a copy safely stored to disk as backup, before importing.

13.6.3 Defining Rules for Conditions and Actions

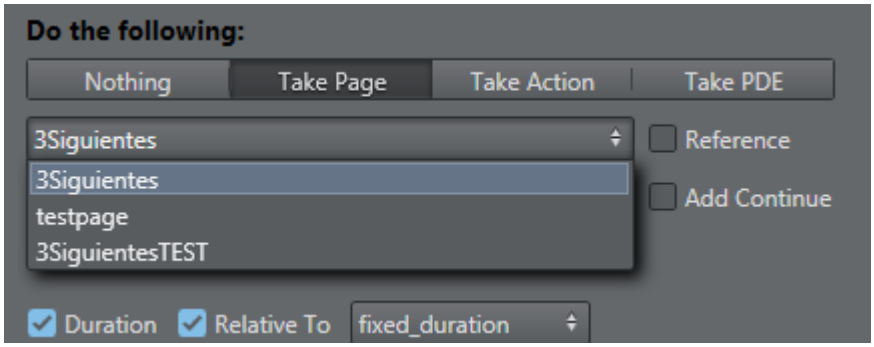
Once you have selected a rule, you can use the rules panel to create conditions and actions for the rule:



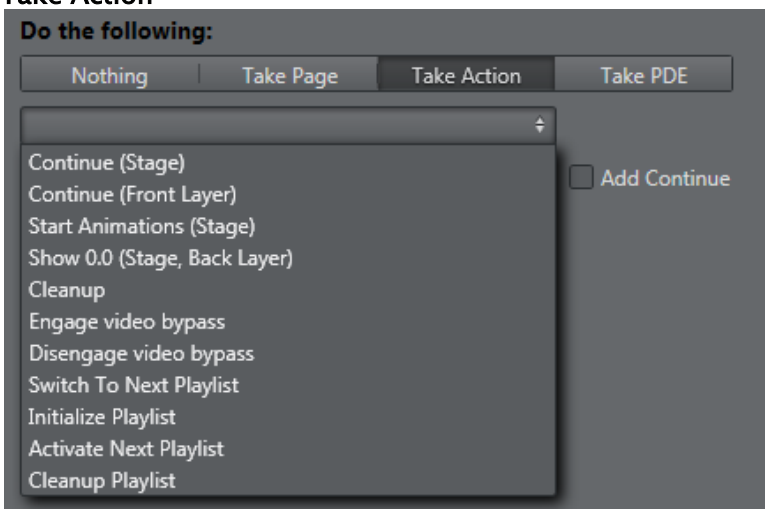
Referring to the screen-shot above:

1. Name the rule (if newly created).
2. Create or delete **conditions**. You can have as many conditions as needed. Conditions are expressions that specify if the rule should be applied. Using the various condition operators you can answer questions such as: *if the next film is for the ages over 12, display a legal-age page as graphics 10 seconds into the film.*
3. Define the conditions of the rule. A rule is only applied if all the criteria in the conditions are met. Click the column **Attribute**, **Operator** or **Value** to select possible values from a dropdown-list or to change the actual **Value**. Condition types are explained in more detail in the next section, **Rules criteria and conditions**.
4. If all conditions for the rule are met, the rule will be acted upon and you can specify what should happen: do **Nothing**, insert a specific **Page,** a predefined **Action** or a Pilot Data Element. Clicking on the **Page, Action** or Pilot Data Element button will enable a dropdown list where you can select the appropriate element as shown in the screenshots below:

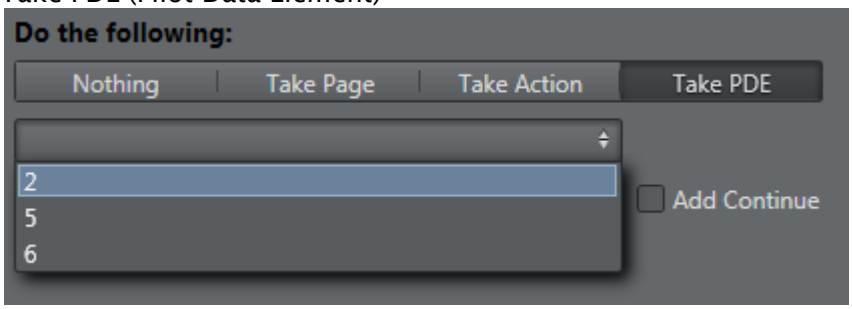
   Take Page



Take Action



Take PDE (Pilot Data Element)



Modifiers / checkbox selectors in the Rules UI panel:

- Select the **Reference** checkbox to allow page/action to be added as a referenced page/ action.
- Select the **Add Continue** checkbox to add Continue action after the event added by rules. This option lets you set the offset time for the continue action.
- **Relative to**: the starting reference point for time calculations, example: Start or End.
- **Offset**: The offset from the selected reference point.
- **Positive**: if selected, the offset is positive from the reference point.
- **Duration**: Duration for the action. If no duration is set, the call-back will be the origin page.

13.6.4 Rules Criteria and Conditions

Any number of conditions can be applied to a rule so that the rule is applied only when specific criteria are met. If there are no conditions, rules are applied on every primary event when a playlist is imported.

Conditions are made up of an attribute representing a column in the playlist table, an operator (greater than, less than, equal to, etc.) and a value (time, number, text). Only when the condition as defined is met will the rule be applied on a particular event. Likewise, when there are multiple conditions, only when all of them are met will the rule be applied to an event.

For any event dealing with time (for example 19:00:00), Viz Multichannel can look up elements that start after a given time (>) or at a given time and later (>=). In addition, Viz Multichannel can perform partial matches on strings which lets you find primary elements that are“right before”, “first one before this” or “current one at this time”.

Rules are executed in the order they are listed. However, the order of the rules has no impact on the final result as there is no adjustment for any pages already added. This means that when you are setting up rules you should make sure that the end-result you are seeking is not dependent on the order in which the rules are run.

While defining rules, it is possible that many of them share some common conditions. By having a parent rule defined with such conditions, we can define the remaining in child rules. The child rules will therefore only run if *all* the conditions in *parent rule* are met.

13.6.5 Partial Match

In order to find partial matches such as “NEWS*” to match against “NEWSROOM” you must use the partial match operator *(~=)*. This allows for string based comparisons of partial hits (“contains”) and time-based comparisons (“currently playing”).

The partial match operator can also be negated with ***!~=*** which can be read as “does NOT partial match”.

The logic for time-based look-up using the partial match operator is a proper check of the “time” (for example at 19:00:00) and start-time of a primary element (for example at 18:45:00), its duration (for example 00:30:00) and detecting that the primary element is currently on air.

13.6.6 Condition Types

Operator	Description
=	equal to
>	greater than
<	less than
>=	greater than or equal to

Operator	Description
<=	less than or equal to
<>	different from
~=	partial match
!~=	does NOT partial match
RegExp	a regular expression

Regular Expressions

You can also use regexp (regular expression) in conditions. This gives near unlimited flexibility in defining conditions and is a very powerful tool. It is advisable to test any regexp before using it in a rule. It is beyond the scope of this manual to explain regexp in detail. Please see one of the many books or internet resources that explain RegExp.

Some simple examples for the RegExp operator are shown below.

Attribute	Operator	Value	Meaning
Description	RegExp	^[a|b|c]	Description begins with a or b or c
Description	RegExp	[a|b|c]$	Description ends with a or b or c
Description	RegExp	^a.*b$	Description starts with a and ends with b
Description	RegExp	^[a|b].*[d|e]$	Description starts with a or b and ends with d or e
Description	RegExp	^[a|b]|[d|e]$	Description starts with a or b or ends with d or e
Description	RegExp	^(?=.*a)(?=.*b).*	Description contains a and b
Description	RegExp	^(?=.*a)|(?=.*b).*	Description contains a or b
Description	RegExp	^((?!a).)*$	Description does not contain a

Attribute	Operator	Value	Meaning
Description	RegExp	^(?=.*a)(?!.*b).*	Description contains a and does not contain b
Description	RegExp	\+	Description contains +

13.6.7 Back up and Restore Rules

All rules and their associated conditions can be saved as XML files for later use.

Back up Rules

1. Select your channel.
2. Click the Rules button. The list of rules is displayed in the pane.
3. Click the **Export Rules** icon.
4. Enter a file name and click **Save**.

Restore Rules

1. Select your channel.
2. Click the Rules button. The list of rules is displayed in the right pane.
3. Click the **Import Rules** icon. You are asked to confirm the overwriting of any existing rules.
4. Click **Yes** to proceed.
5. Select the XML rules file and click **Open**.

13.7 Resolving Conflicts

Viz Multichannel ensures that there will not be conflicts or clashes if all necessary data is available to an event. The playlist must include the following data for every instance:

- Event ID
- Primary event begin time
- Primary event duration
- Secondary event offset
- Secondary event duration

13.8 Sending Playlists To The Master Control

Once all aspects of the Playlist have been completely and properly configured, you can send the playlist to the master control room (MCR) for broadcast.

13.8.1 Send a Playlist to the Master Control

1. Select your channel.
2. Click the Playlists button.
   All existing playlists for the selected channel are displayed.
3. Right-click the relevant Playlist, and select **Send Playlist** from the appearing context menu.
   The Playlist is sent to the MCR machine indicated when defining the remote hosts in the Remote Hosts field.

13.9 Generating The Channels File

Once you have finished all scheduling tasks, you should manually regenerate the channels file before proceeding to monitor your playlists in MCR mode. It is essential that the IP addresses for **Remote Hosts** have been properly configured per-channel in **General Settings**.

13.9.1 Regenerate channels.ini File

1. From the **main menu** select the **Tools** option
2. From the Tools menu click **Generate Channels File**. You are prompted to allow Viz Multichannel to overwrite the existing file.
3. Click **Yes**.

The channels file is normally located in *C:\ProgramData\Vizrt\Multichannel* and is named `channels.ini`. It is a normal text file and can be manually edited.

14 Master Control Workflow

This chapter defines and describes tasks that are typically performed by the automation system after control of the playlist has been handed over by the scheduling system in the traffic department.

This section contains information on the following topics:

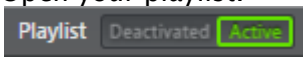
14.1 Activate The Playlist

When a playlist is activated for the currently selected channel, Media Sequencer can start to transfer full screen video clips from your media asset management system (for example Viz One) to Viz Engine for playout.

When activated, the Media Sequencer is made aware of the playlist's schedule. Without the schedule, the Media Sequencer will not be able to initialize the elements and run the playlist properly. Hence, once activated you can Initialize the Playlist.

A playlist can be automatically activated based on Rules or Master Control Workflow (day switch options are common for broadcast day playlists) or by manually clicking the **Activate** button when the playlist is open.

14.1.1 Manually Activate the Playlist

1. Select your channel.
2. Click the Playlists button.
   All existing playlists for the selected channel are displayed.
3. Open your playlist.
   

   ,
4. From the Playlist Toolbar, click the **Run Playlist** button.
5. Initialize the Playlist.
6. Run the Playlist.

14.2 Initialize The Playlist

All playlist pages (graphics including embedded video clips and imagery) that are initialized for the currently selected channel are loaded on the Viz Engine program for playout.

When activated and initialized, the Media Sequencer is aware of the playlist's schedule and is able to Master Control Workflow.

A playlist may be initialized based on Rules (this is common for continuous playlists), Day Switch Options (this is common for broadcast day playlists) or or by manually clicking the **Initialize** button when the playlist is open and active.

14.2.1 Manually Initialize the Playlist

1. Select your channel.
2. Click the Playlists button. All existing playlists for the selected channel are displayed.
3. Open your playlist.
4. Master Control Workflow.
   
5. From the Playlist Toolbar, click the **Initialize Playlist** button.
6. Run the Playlist.

14.3 Run The Playlist

When in run mode, a playlist is activated and initialized for the currently selected channel. All full screen video clips and all pages (graphics including embedded video clips and imagery) are then available and loaded on the Viz Engine program for playout.

When in run mode, the Media Sequencer has a playlist that is activated and initialized and the system can take elements on air.

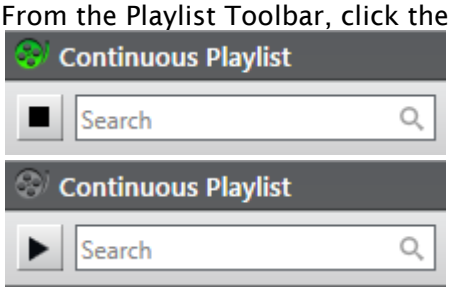
A playlist is almost always automatically run by the Media Sequencer. If there are multiple broadcast day playlists, these are run according to **Day Switch Options**. A playlist can be manually run by an operator, but this is not recommended nor common practice.

> ⚠ **Note:** Only one playlist per channel can be in **Run** mode at a time.

14.3.1 Manually Run a Playlist

1. Select your channel.
2. Click the Playlists button.
   All existing playlists for the selected channel are displayed.
3. Open your playlist.
4. Activate the Playlist.
5. Master Control Workflow.
   

6. From the Playlist Toolbar, click the **Run Playlist** button.



When in Run mode, the film roll icon seen at the top of the playlist will turn green. When stopped, the icon will be grayed out.

If **manual intervention** is required, control the playout using the control buttons available on the **Playlist Toolbar**.

- **Take**: Takes the selected playlist element (or group of elements) on air.
- **Continue**: Continues the animation of the playlist element.
- **Take Out**: Takes the current playlist element off air.

14.4 Triggers

Triggers can be set on *Primary Events* and *Secondary Events* (pages and video clips - see below). Note that triggers are configured in Master Control Workflow. Triggers are only accepted when a Playlist is in Run mode.

14.4.1 Primary Events

Primary events are triggered by automation systems that send triggers to start playing out groups (primary event/element). All secondary events that exist under each group are automatically played out by Viz Multichannel. Playout of the secondary events is relative to the time of the trigger of the primary event and based on the defined offset of the secondary events.

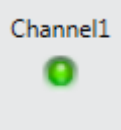
14.4.2 Secondary Events

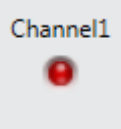
Secondary events can be triggered by automation systems. This includes all types of secondary events such as pages with video clips and video clips with graphics overlay.

In the case of secondary events, Viz Multichannel will simply act as a slave system listening for triggers to take events on air.

14.5 Monitoring

In most cases Viz Multichannel requires little or no monitoring as the automation system usually controls the playout. In the Control Room, playout is typically monitored live on TV displays set up for that purpose. Playout can also be monitored on the dedicated Viz Engine machine (if installed).





You can monitor the status of the Media Sequencer in the left pane. If the channel configuration is OK, the lights are green. If there is any problem, the lights are red. Hover your cursor over the red light to receive an indication of the problem. This will tell you if the Media Sequencer and your configured playout devices are working properly.

14.5.1 Disable the System Status LED Panel

1. In Windows Explorer, browse to Viz Multichannel's installation folder and open the `VizRundown.ini` file in the text editor of your choice.
2. Under `GUI OPTIONS`, ensure that the value for `IsIndicatorsPanelEnabled` is set to **0**.
3. Save and close the file.
4. Restart Viz Multichannel.

14.6 Live Schedule Updates

If playlists are liable to be changed a great deal, it is recommended that updates be done in the scheduling system and updates to Viz Multichannel be done automatically and frequently using automatic import.

Once a playlist is in Run mode, Viz Multichannel can be 100% synchronized with the schedule from the automation system.

14.7 Failover Procedure

In the case of failover, you need to be prepared beforehand to accommodate such a situation. The following procedure will help you be prepared and to subsequently take additional action as required.

The prerequisite to backing up is to have an extra machine for the Viz Engine and Media Sequencer, as well as for the Viz Multichannel client.

14.7.1 Back up your Viz Multichannel Client

1. Prepare the client machine as described in the Playout section.
2. From the main client, copy the `channels.ini` files to the backup client.
3. In the event of a client failover, launch Viz Multichannel from this backup client.

14.7.2 Back up your Channels

1. Prepare a Viz Engine machine with Viz Engine and Media Sequencer installed that can accommodate any existing channels.
2. Add the remote host as a new remote host for all channels to this backup machine, in accordance with the Master Control Workflow.

14.7.3 Channel Failover Procedure

1. Modify the `channels.ini` file on the Viz Multichannel client so that failed channel points to the backup machine, as described in the Playout section.
2. Restart the Viz Multichannel client.
3. Select the failed channel, initialize today's playlist, and run it.
4. Set the video router to point to the new machine.

See Also

- Traffic Department Workflow

15 Integration With Automation Systems

The Multichannel playout schedule (also called *playlist* or *running order*) is usually provided from an external source like an automation, traffic or scheduling system. The automation system can be Viz Mosart, Miranda, Pebble Beach or Harris, for example.

This chapter describes some common automation system integrations to Viz Multichannel.

15.1 Automation Systems

An **Automation System** is usually located in the master control room, controlling all devices in the room in real-time. For example video servers, keyers, and Character Generators.

A Viz Multichannel integration to an automation system typically performs:

- **Triggering**: The automation system triggers Viz Multichannel (via Media Sequencer) for starting either primary or secondary events. Triggering protocols TCP/IP, Intelligent Interface, VDCP, GPI, and REST are supported by Vizrt. It is important to understand that although Multichannel manages the playlist and events, the actual triggering of actions will be done by the Media Sequencer.
- **Schedules and last minute updates**: If an automation system provides an API or an option to automatically generate an update file, Viz Multichannel can update its playlist using them. This is usually done with the Schedule Collector and the **PlayListImporter** tools. An optional advantage in using Schedule Collector is that can store previous data in an internal cache and therefore make updates more efficient by saving idle updates and passing only changed events.

15.2 Automation System Integration Types

Although the precise manner in which external automation systems deliver the schedule and triggering varies greatly, the flexible and open architecture of Multichannel ensures that most commonly used automation systems are supported directly.

There are two main types of integration to automation systems:

- File based systems
- Direct integrations systems (API-based)

File based automation systems will typically deliver the schedule in a pre-defined Text, XML, Excel, CSV, database or proprietary binary format. The typical workflow is then to have a file or directory produced by the automation system watched (or have time-based tasks running) and use PlaylistImporter and Schedule Collector to fetch schedules and updates to the Multichannel playlist.

Direct Integration systems are automation and schedule systems that have an API (Application Programming Interface) that Multichannel can interface with and read information from, which is sometimes bi-directional. The main advantage with direct integration systems is that the file-based workflow can be avoided. This normally leads to significant performance gains. Direct integration

is also a more secure, clean and resilient setup than most file-based workflow systems and is the recommended integration type.

For an overview of the integration types and how to configure some of the more commonly used automation systems, see the following sections:

- Overview of Direct Integration Architecture
- Integration Module for Marina from Pebble Beach
- Integration Module for Neptune from Pebble Beach
- Integration module for Harris ADC
- ADC-100 by Harris Broadcast
- D-Series by Harris Broadcast
- Neptune by Pebble Beach Systems

Note: Vizrt may support additional automation systems not listed here. Please contact your local Vizrt representative for more information.

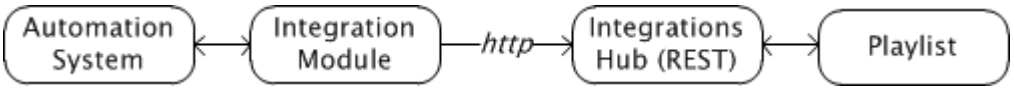
15.3 Overview Of Direct Integration Architecture

The architecture flow of an external system that communicated with the Integrations Hub is called Direct Integration (DI). The Integrations Hub component is a REST web service that lets an external system fully query, add, update and remove contents of a playlist.

The preferred setup is for the external system to have a native driver for communicating with the Integrations Hub, using the REST interface to maintain sync between the systems. Since the Integrations Hub has an open and easily accessible REST interface, integration modules can be written in a wide range of programming and scripting languages.

15.3.1 Integration Module

An alternative approach is to use a custom **Integration Module** if the external system lacks the ability to implement a native driver or already has its own web service. The integration module will handle all details relating to interfacing with a specific automation system and forward the required data (schedules etc.) to the Integrations Hub. Although the specific integration module can be provided by Vizrt, it is also possible for vendors and third parties to develop integration modules.



See Also

- Introduction to REST (external Wikipedia page)
- Integrations Hub

15.4 Integration Module For Marina From Pebble Beach

The integration for Pebble Beach's (PB) Marina system uses the PB Marina Integrations Module, as explained in the **Integrations Module** section of Overview of Direct Integration Architecture.

Before using the PB integration module, make sure that the Integrations Hub service is installed. In most cases, it is also required to have the Promo Server installed.

15.4.1 Installing the Integration Module for PB Marina

Locate the installer: `VizMultichannel_MarinaIntegration-VERSION.exe`

where *VERSION* is a four-digit version/release/fix/build number.

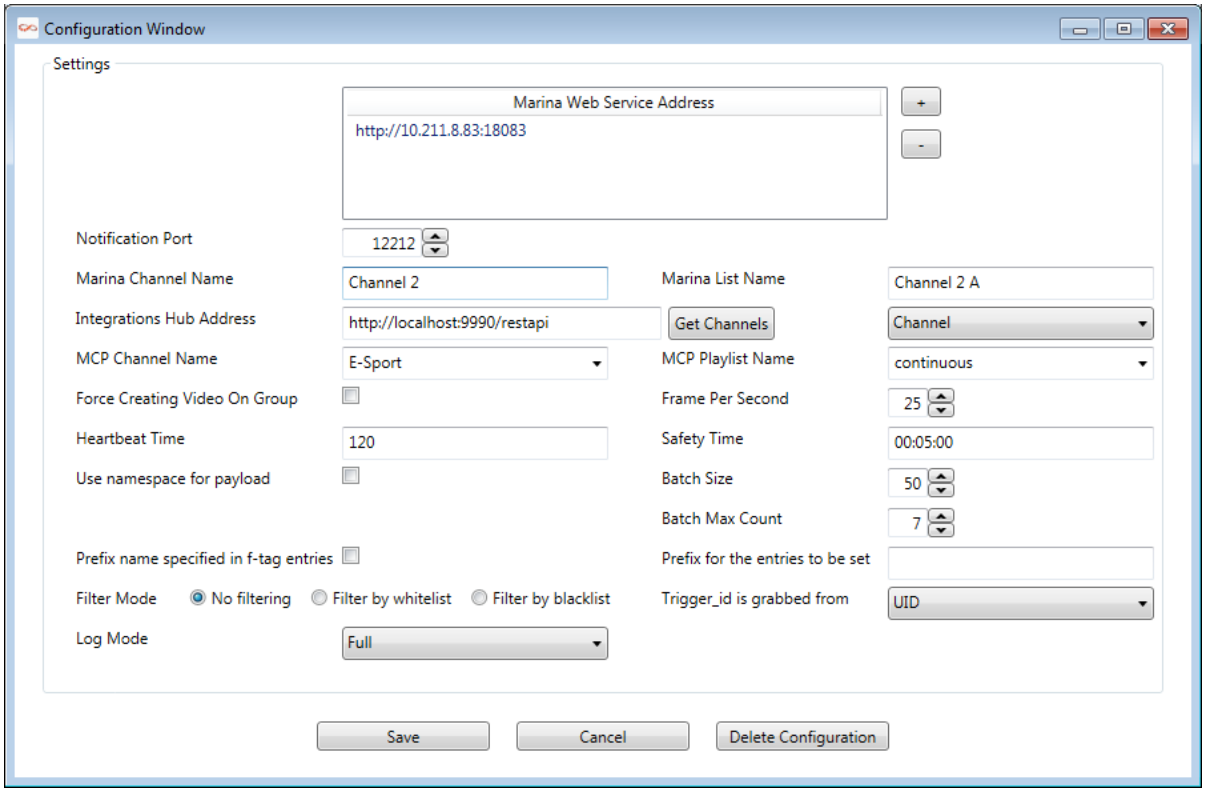
1. Double-click `VizMultichannel_MarinaIntegration-VERSION.exe`
2. Press **Next** to start the installation.
3. If required change the installation directory. This is normally not required nor recommended. Press **Next**.
4. Press the **Install** button and wait for the installation to finish.

> **IMPORTANT!** The PB Marina must be started by a user with Windows Administrator privileges or the application must be elevated on start-up. Although the method for elevating varies slightly between Windows versions, the basic concepts are the same.

15.4.2 Configuring the Integration Module for PB Marina

Before you start the PB Marina integration module you must collect some details from your local Viz Multichannel and PB Marina administrators. In particular, you need the network address (or IP-address) of Marina servers and the hostname where the Integrations Hub is installed. The required information is documented below.

- To start the Marina Integration Module go to **Start > All Programs > Vizrt > Viz Multichannel > Viz Multichannel - Marina Integration**.
- Click the **New** button to create a new configuration. This will display the configuration window:



Name	Definition
Marina Web Service Address	Use the + and - buttons to add (or delete) the address of PB Marina servers, including port number. Example: http://localhost:18083 . You can include both main and fallback Marina Web Service servers. Having several housekeeper addresses ready in advance makes it easy to quickly switch between them when needed. In addition, if a Marina server is not reachable due to Marina server problems or network issues, for example, the integration unit will make a note in the log and try the next one in the list in a rolling fashion.
Notification Port	The port that Marina Integrations opens to receive notification from Marina IS. The default value is 12212.
Integrations Hub address	The IP or hostname of the Multichannel Integrations Hub module. Example: http://MyServer:9990/restapi
Marina Channel Name	Define name for Channel as defined on the Marina system (applicable for newer Marina 2018+ versions).
Marina List Name	The Marina list name for the integration.

Name	Definition
Channel / TxList DropDown	Choose what component type to use to verify channel declaration in the Marina system (Marina 2018+ can now optionally choose 'Channel').
MCP Channel Name	The channel name you defined in Multichannel that should be used with this direct integration module.
MCP Playlist Name	The name of the playlist you want to sync data with. The format of playlist name is [dd_MM_yyyy] and you can also input "*continuous*" or "*running_playlist*". Use the playlist name `running_playlist` to sync data with the current running playlist.
Force Creating Video On Group	Enables the application to use Media Name to search for videos in Viz One and add to an event. For this feature to work, integration with Viz One must be enabled in Multichannel.
Frame Per Second	Used to calculate the begin-time of events that are received from Marina.
Heartbeat Time	(in seconds). Time watch that will wait for a notification from PB Marina. Otherwise, Marina Integration will collect the current playlist.
Use namespace for payload	Switch, either **on** or **off**. This option will depend on the current version / configuration of your PB Marina installation. If unchecked: If the PB Marina has AuxData node, the Marina Integration module will generate the element with attributes from the payload node inside AuxData. If checked: The Marina Integration module will look for a namespace in the payload received from Marina.
Safety Time	Specify as HH:mm:ss - this is the input period +/- from the current time to collect input from Marina. Example: If current time is 12:00:00 and Safety-Time is 00:05:00 then the integration module will only collect events that have been modified from Marina within 11:55:00 - 12:05:00.
Batch Size	Accepted values: between 1 and 50. Batch size will be used when requesting event data from Marina. If set to 50, Multichannel will ask for 50 events per set. If Marina has more than 50 events, Multichannel will ask multiple times until all events are received.
Batch Max Count	Optionally limit the number of elements to continuously retrieve from the Marina system by limiting the number of Batch requests. (0 = no limit)

Name	Definition
Prefix name specified in **f-tag** entries	Switch. Handle non-conforming XML-formatted f-tag entries by prefixing them if switched on. See also next bullet.
Prefix	For the entries to be **used**: If prefixing f-tag entries, use the prefix specified.
Filter Mode	Select from **No Filtering** or filtering by **Whitelist** or by *Blacklist * as explained in the bullets below. Comma-separated values for whitelist or blacklist must be provided in the edit-box. · Filter by **whitelist**: Each element's type-value is verified against each value set in the editbox, if the type-value *match* any of the values then it is allowed through. · Filter by **blacklist**: Each element's type-value is verified against each value set in the editbox, if the type-value *does* ***not*** match_ all of the values then it is allowed through.
Trigger_id is grabbed from	Select to grab value for trigger_id control data from ReconcileKey or the UID value from Marina payload
Log Mode	Enable or Disable log messages. Verbosity can be specified as **Off** (no logs), **Basic** or **Full**. Log files will normally be located in *%ProgramData%\Vizrt\Multichannel\MarinaIntegration*.

- When all required information is entered, press **Save** to save the settings and return to the main application window.
- Press **Start** to start the Marina Integration service.

15.5 Integration Module For Neptune From Pebble Beach

Pebble Beach (PB) Neptune systems can use the PB Neptune Integrations Module, as explained in the **Integrations Module** section of Overview of Direct Integration Architecture.

Before using the PB Neptune Integration Module, make sure that the Integrations Hub service is installed. In most cases, it is also required to have the Promo Server installed.

- Installing the Integration Module for PB Neptune
- Configure the Integration Module for PB Neptune
- Neptune Attributes

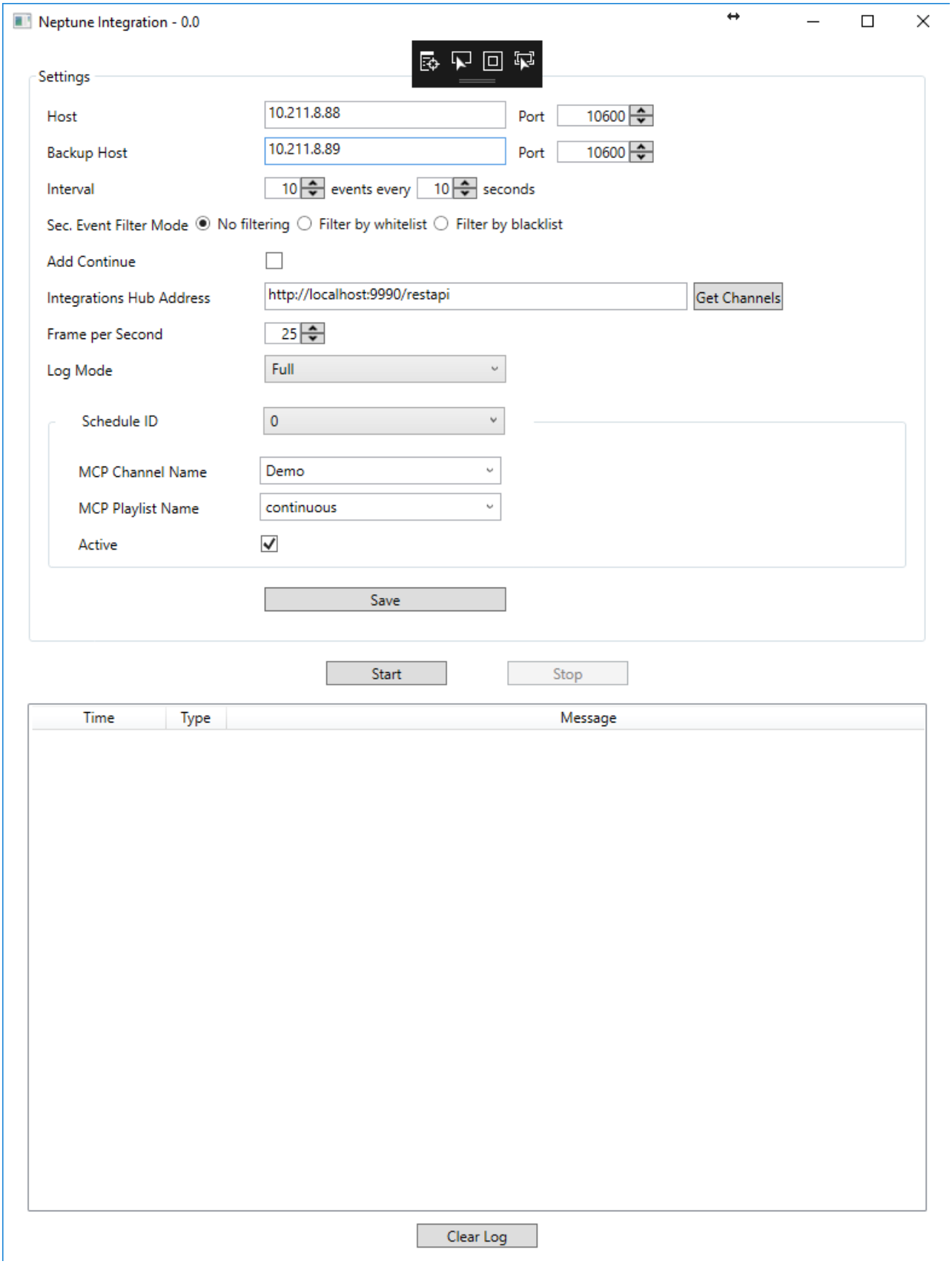
15.5.1 Installing the Integration Module for PB Neptune

Locate the installer: *VizMultichannel_NeptuneIntegration-VERSION.exe* where *VERSION* is a version number (format: version.release.fix.build).

1. Double-click *VizMultichannel_NeptuneIntegration-VERSION.exe*
2. Press **Next** to start the installation.
3. If required change the installation directory. This is normally not required nor recommended. Press **Next**.
4. Press the **Install** button and wait for the installation to finish.

15.5.2 Configure the Integration Module for PB Neptune

Before you start the PB Neptune integration module, you must collect some details from your local Viz Multichannel and PB Neptune administrators. In particular, you will need the network address (or IP-address) of Neptune servers and the hostname where the Integrations Hub is installed. The required information is shown in the screen-shot below.


Neptune Integration - 0.0
Settings
Host
10.211.8.88
Port
10600
Backup Host
10.211.8.89
Port
10600
Interval
10
events every
10
seconds
Sec. Event Filter Mode
No filtering
Filter by whitelist
Filter by blacklist
Add Continue
Integrations Hub Address
http://localhost:9990/restapi
Get Channels
Frame per Second
25
Log Mode
Full
Schedule ID
0
MCP Channel Name
Demo
MCP Playlist Name
continuous
Active
Save
Start
Stop
Time
Type
Message
Clear Log

Form Input	Description
Host	Neptune server host name/IP and port number.
Backup Host	Backup Neptune server host name/IP and port number.
Schedule ID	Index of Schedule from Neptune server, starting from 0, up to 20. Set the channel and playlist per schedule ID. You activate the schedule by selecting an active schedule (only schedule IDs that are active are displayed).
Interval	Number of events sent to MCP, and loop time in seconds. Default is to continuously ask for 20 events every 30 seconds.
Sec. Event Filter Module	Select either *No Filtering* or *Filter by whitelist* or by *Filter by blacklist*. Comma-separated values for whitelist or blacklist must be provided in the edit-box. • *Filter by whitelist:* Each element's type-value is verified against each value set in the edit box. If the type-value matches any of the values, then it is allowed through. • *Filter by blacklist:* Each element's type-value is verified against each value set in the edit box. If the type-value does not match all of the values, then it is allowed through.
Add Continue	Flag to insert 'Continue' action to each primary event.
Integration Hub Address	The IP or hostname of the Multichannel Integrations Hub module. Example: http://MyServer/integrationshub/restapi.
MCP Channel Name	The channel name you have defined in Multichannel that will be used with this direct integration module.
MCP Playlist Name	Name of the playlist you want to synch data with. The format of playlist name is `[dd_MM_yyyy]` and you can also input "continuous" or "running_playlist". Use the playlist name `running_playlist` to sync data with the *current* running playlist.
Frame per Second	Used to calculate begin-time of events received from Neptune.

Form Input	Description
Log Mode	Enable or Disable log messages. Verbosity can be specified as **Off** (no logs), **Basic** or **Full**. Log files normally located in `%ProgramData%\Vizrt\Multichannel\NeptuneIntegration.`

- When all the required information is entered, press **Save** to save the settings.
- Press **Start** to start the Neptune Integration service.

15.5.3 Neptune Attributes

All attributes found from Neptune will be added to the corresponding Viz Multichannel **primary** event.

15.6 Integration Module For Harris ADC

The Harris automation system can use the Harris Integrations Module, as explained in the **Integrations Module** section of Overview of Direct Integration Architecture. The integration is based on the Harris ADC-12 Web API.

In most cases, the Promo Server must be installed before using the integration module.

> ⚠ **Note:** Harris is now named Imagine Communications (http://www.imaginecommunications.com). This documentation uses the former Harris brand name.

- Installing the Harris Integration Module
- Configuration and Startup
- Pushing Optional Metadata from Harris to Multichannel

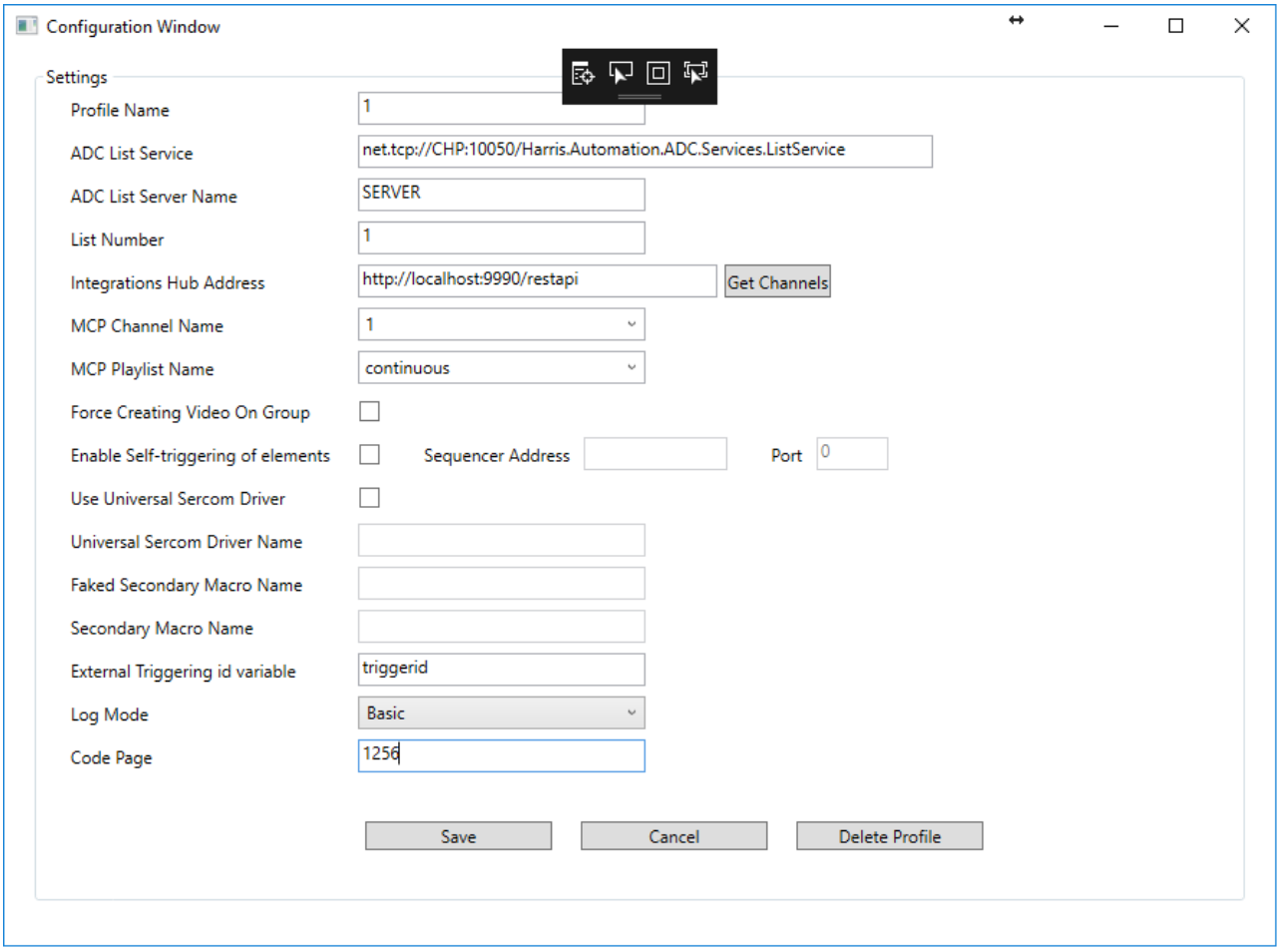
15.6.1 Installing the Harris Integration Module

1. To install the Harris Integration Module, locate the *VizMultichannel_HarrisIntegration-VERSION.exe* installer where *VERSION* is the version/release/build number. Double click the installer to start the installation.
2. Press **Next** to start the installation.
3. If required change the installation directory. This is normally not required nor recommended. Press **Next.**
4. Press the **Install** button and wait for the installation to finish.

15.6.2 Configuration and Startup

- To start and configure the integration module for Harris, click the Windows **Start** menu and open the program by browsing to **All Programs > Vizrt > Viz Multichannel > Viz Multichannel - Harris Integration**.

The Harris integration module will display the **Configuration window**:



Detail	Description
Profile Name	You can have multiple settings profiles. If you run multiple instances of the Harris Integrations service, it is recommended to make configuration changes from one instance only to avoid overwriting configuration changes.
ADC List Service	Address of the ADC List. Change the IP as required. Ask your Harris system administrators for the correct address.

Detail	Description
ADC List Server Name	The ADC List Server name that should be used in the integration.
List Number	Sequence of list that should be used in the integration. Example: If the actual Harris system has three list-names called "Playlist 1", "Playlist 2", "Playlist 3" and you want to use "*Playlist 2*" for the integration, specify **2** as the list-number.
Integrations Hub Address	Specify the URL of the REST service. Note: You can browse to this URL with a browser to check that the Integrations Hub is installed and working. Expected result answer is: *Integrations Hub.*
MCP Channel Name	The channel name you have defined in Multichannel that should be used with this direct integration module.
MCP Playlist Name	The name of the playlist you want to sync data with. The format of playlist name is [dd_MM_yyyy] and you can also input "*continuous*" or "*running_playlist*". Use the playlist name `running_playlist` to sync data with the current running playlist.
Force Creating Video On Group	Enable the application to use Media Name to search for videos in Viz One and add to an event. For this feature to work, integration with Viz One must be enabled in Multichannel.
Use Universal Sercom Driver Name	If checked, Harris Integration will activate the Universal Sercom Driver Name and this Macro Name will also be activated in the process.
Universal Sercom Driver Name	This ID must match the ID column in Harris Automation. Ask your Harris administrator for the driver name ID.
Faked Secondary Macro Name	Define the macro used here in order to use a secondary event to re-label the Primary event's trigger ID.
Secondary Macro Name	Prefix of page-name information from Harris Automation, related to Macro definition in Harris system. The value can be semi-colon (';') separated and contain multiple values.

Detail	Description
Log Mode	Enable or Disable log messages. Verbosity can be specified as **Off** (no logs), **Basic** or **Full**. The Log and Error Log files will normally be located in *%ProgramData%\Vizrt\Multichannel\HarrisIntegration*. You can also open the log directories in Windows Explorer by pressing **Show log folder** or **Show error folder**.
Code Page	The Description and CompileId fields returned from the Harris system are converted according to this defined code page. For example, code page with identifier *1256* will convert bytes to ANSI Arabic.

- When all the appropriate setting are configured press **Save**.
- Press **START**.

15.6.3 Pushing Optional Metadata from Harris to Multichannel

ADC systems using the LST12 format can optionally use the generic Harris "*Data*" field (max 4096 characters) to push meta-data information to Multichannel. If the Harris Data-field contains entries of type "*value=somedata*<CRLF>" (or several formatted as "value1=somedata<CRLF>value2=somemoredata<CRLF>" etc.), Multichannel will parse these entries and, if a valid combination *fieldname=value* is found, push this payload to the Integrations Hub.

15.7 ADC-100 By Harris Broadcast

This section describes how to configure the Automated Content Management and Distribution system (ADC-100) by Harris Broadcast for Viz Multichannel. It describes the setup on the ADC side and contains information on the following topics:

15.7.1 General Information and Setup

An ADC-100 system can trigger Viz Multichannel (by sending commands to Media Sequencer) through VDCP or Universal Sercom Device (USD) using either TCP/IP or VDCP.

> **Note:** Both version 11 and 12 of the LST format are supported.

The advantages of VDCP are that it is:

- Standard
- Proved to work for many customers

The advantages of USD are that it:

- Can be used over TCP/IP thus saving serial ports and additional cabling.

This section contains information on the following topics:

Triggering

Triggering should be Primary/Secondary Events selected.

Primary Event Defaults should be Triggered (Ext) selected. The ADC-100 system reads playlist data via files in LST format (binary files).

Reconcile field value in the LST is read into the Event ID field in Viz Multichannel and must be set in order to receive playlist updates. An empty or corrupted Reconcile value will omit that event from the update procedure.

If **primary events triggering** is selected then Viz Multichannel can import the same LST file that is provided by the ADC-100 system because the data required for the triggering is available in it.

If **secondary events triggering** is selected and all Vizrt secondary events are received from the scheduling system (in the LST file) then Viz Multichannel can **import** the same LST file that is provided by the ADC-100 system because the data required for the triggering is available in it (as long as secondary events contain assigned ID fields).

If **secondary events triggering** is selected and there are Vizrt secondary events that are generated by Viz Multichannel (manually or by import rules) then Viz Multichannel must **export** a new LST with the data required for the triggering in it.

Updating LST by Export

When exporting, Viz Multichannel will ensure that all secondary events have a **Media ID** value assigned and assign this value to the LST ID field, if secondary events triggering is selected.

Exporting LST from scratch or merging into the original LST are both optional. Merging is preferable since merging only appends the new secondary events to the LST file and will assure that original data is not touched.

Updating LST by Import

Two mapping options are available: with or without secondary events.

Refer to the (folder path) folder in Viz Multichannel installation for sample mapping settings and playlists.

Channel name can be read from the filename. If the filename does not contain a channel identifier, either do not map channel value or set Traffic Channel Name to 1 in Viz Multichannel's Basic Settings.

Updating Live

Recovery (RCV): The Harris ADC-100 can auto-generate a recovery file (*.RCV) on every playlist change. RCV files are in LST format. Viz Multichannel can monitor a folder and update its playlist according to the RCV file once it is generated.

Broadcast Exchange Format (BXF): Viz Multichannel supports processing BXF schedules.

LST files managed by Schedule Collector tool: Schedule Collector can monitor a folder for LST update files. Using its cache memory, updates will be attempted only for changed events.

Limitations

The LST format only allows for 32 character titles and misses other necessary fields such as local language titles.

Allow replay – Media Sequencer virtually removes played events from its exposable list, so Vizrt events will be marked as MISSED on ADC-100 side although played successfully.

15.7.2 Trigger Viz Multichannel Using VDCP

The standard configuration of Viz Multichannel is triggering by a serial connection using Video Disk Control Protocol (VDCP).

Any Device Server version permits controlling Viz Multichannel, provided that it has a Video Disk driver.

Connections

Use an RS422 board on the machine with Media Sequencer, for example: Blue Heat/PCI of Connect Tech Inc. The following custom cables are required to connect the Media Sequencer to the ADC-100 system.

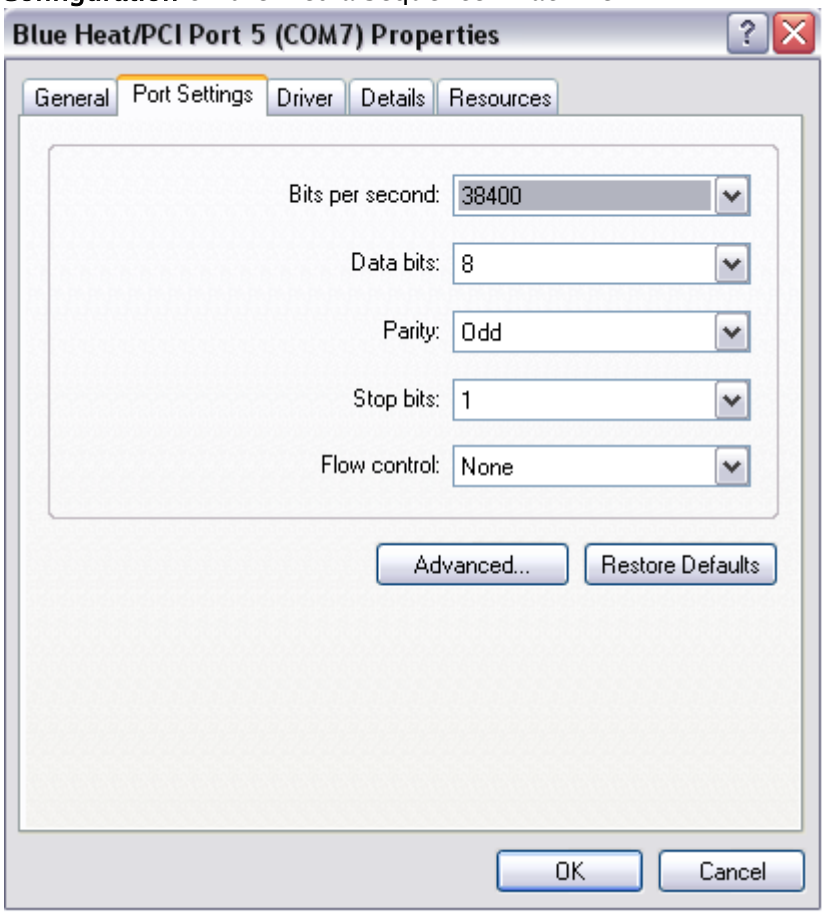
ADC-100 to Media Sequencer: Connections

ADC-100	Media Sequencer Machine
2 (Rx -)	2 (Tx -)
3 (Tx +)	3 (Rx +)
7 (Rx +)	7 (Tx +)
8 (Tx -)	8 (Rx -)

Device Configuration

Configure the Software

- Make sure the COM port used has the following suggested parameters under **Windows Configuration** on the Media Sequencer machine:

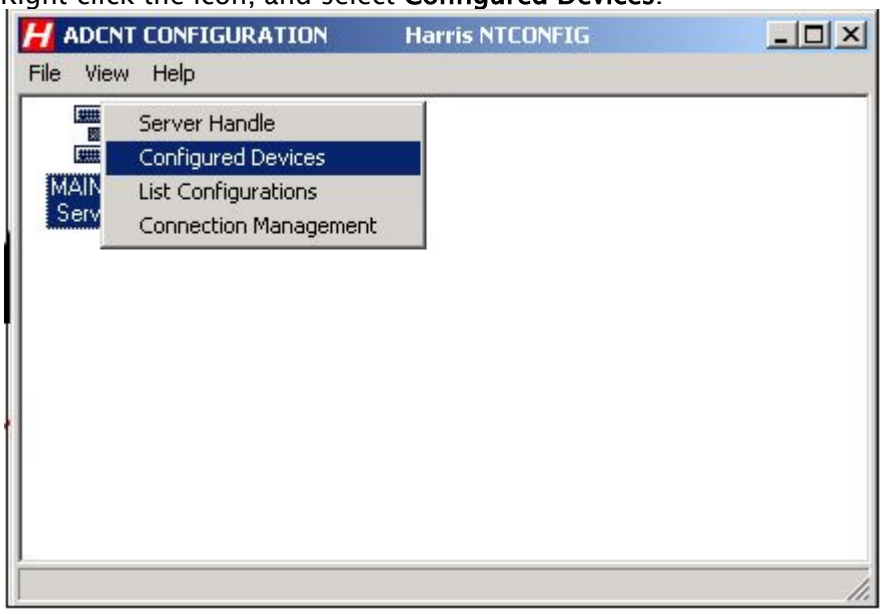


  - Bits per second: **38400**
  - Data bits: **8**
  - Parity: **Odd**
  - Stop bits: **1**
  - Flow control: **None**
- Enable the VDCP device on Viz Multichannel and ensure it is switched on and configured properly with the correct port.

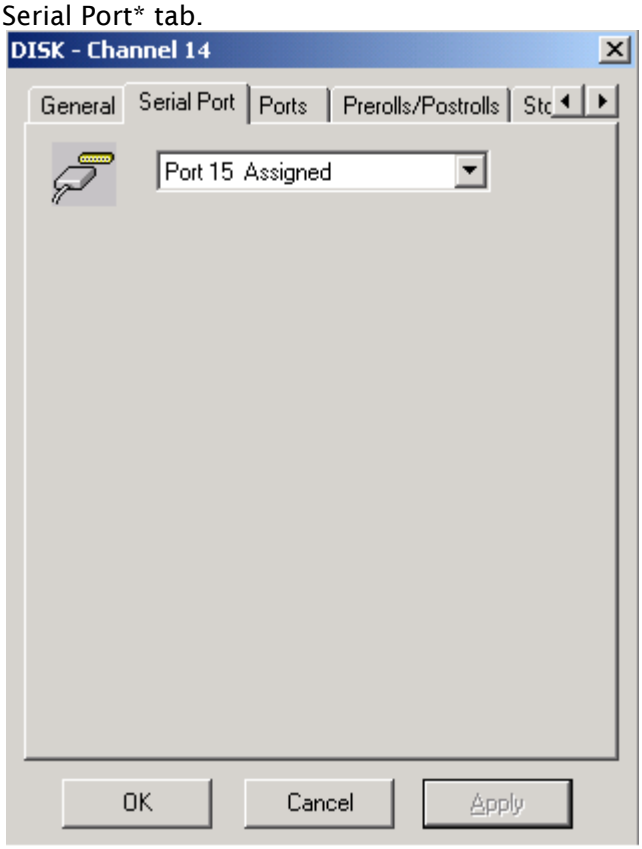
Configure the Viz Driver

1. Launch the ADC-100 Configuration Utility and locate the icon that represents your Device Server.

2. Right-click the icon, and select **Configured Devices**.

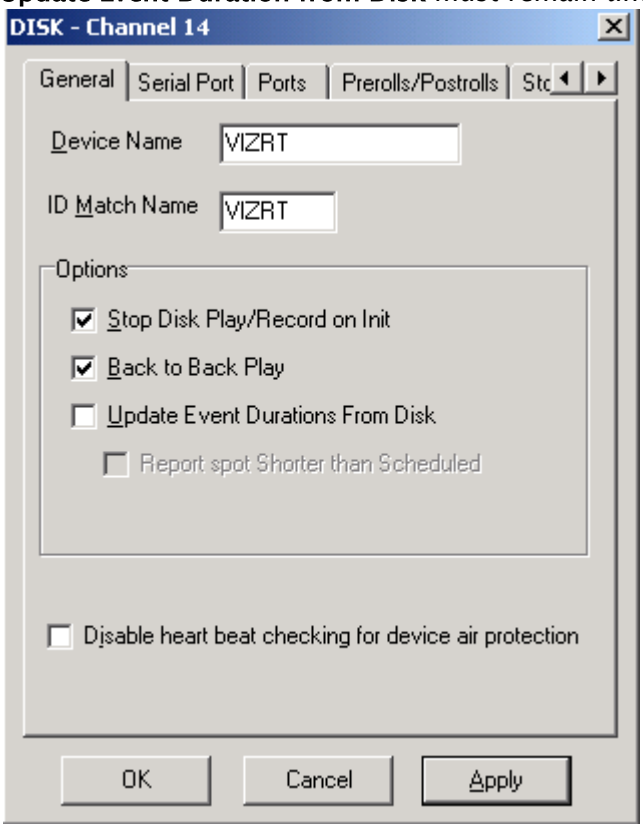


3. In the **Available** column on the left, locate the **Standard Video Disk** driver under the **Video Disk** category. Click and drag the driver to one of the channels on the **Configured** column that reads **NO DEVICE**.
4. Double-click on the Disk device that was just created. From the resulting dialog select the* Serial Port* tab.



5. Select the physical port the Media Sequencer is connected to. The Harris Device Server is now configured properly to communicate with the Media Sequencer.

6. Configure the following parameters on the General tab:
   - **Device Name** will appear in the **Device Status** and configuration windows on the client applications. The default name may be used, but it is recommended to use unique names to ease later identification.
   - **ID Match Name** will be used in the Transmission List's *ID Field *to let the system know that the event is intended for the Vizrt device.
   - **Stop Disk Play** can be selected as required.
   - **Back to Back Play** can be selected as required.
   - **Update Event Duration from Disk** must remain *unchecked*.



7. The Vizrt Standard Video Disk must also be assigned to a Transmission List to be scheduled to air.

> ⚠ **Note:** The Standard Video Disk driver cannot be used if you are using Extended IDs. In addition, the Media Sequencer does not contain the notion of duration, so the parameter **Update Duration from Disk** must be *unchecked* to avoid excessive error messages when ADC driver asks for the IDs list.

Operation

Viz Multichannel uses Secondary A/V or Secondary Backtimed events to execute the pre-loading and playout of media.

Transmission : Hold

Event	Time	Device	Status	Protect	PStatus	Sec	Type	ID	Seg
1	12:33:54.05		SKIPPED				A	00 HELLO O	
2	12:34:08.04		RAN SHOR				A	10 Bus crash	
3	12:34:11.09		SKIPPED				A	10 Dutch arr	
4	12:34:15.13		DONE				A	10 Gaza Wra	
5	12:34:40.23	VIZRT:1	PLAY				A	ddd	
6	12:35:13.08	PR2A:2	CUED	PR1A:2	CUED		A	00 HELLO O	
7	00:00:00.00	VIZRT:2	CUED			sAV	PT	zzz	
8	12:35:33.13	PR2B:2	CUED	PR1B:2	CUED		A	10 Bus crash	
9	12:41:42.00	PR2A:1	STOP	PR1A:1	STOP		A	10 Dutch arr	
10	12:42:32.20	PR2B:1	STOP	PR1B:1	STOP		A	10 Gaza Wra	
11	12:43:58.05	PR2A		PR1B			A	00 HELLO O	
12	12:44:18.10	PR2A		PR1B			A	10 Bus crash	
13	12:50:26.22	PR2A		PR1B			A	10 Dutch arr	
14	12:51:17.17	PR2A		PR1B			A	10 Gaza Wra	

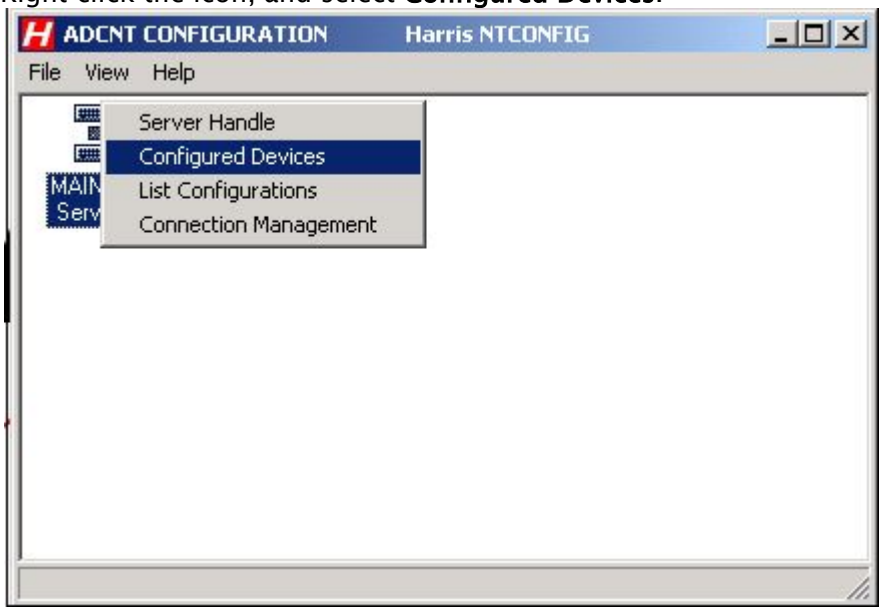
15.7.3 Trigger Viz Multichannel Using USD

When configuring Viz Multichannel to be triggered by a Universal Sercom Device (USD) driver you can either configure it to use TCP or Serial Communication.

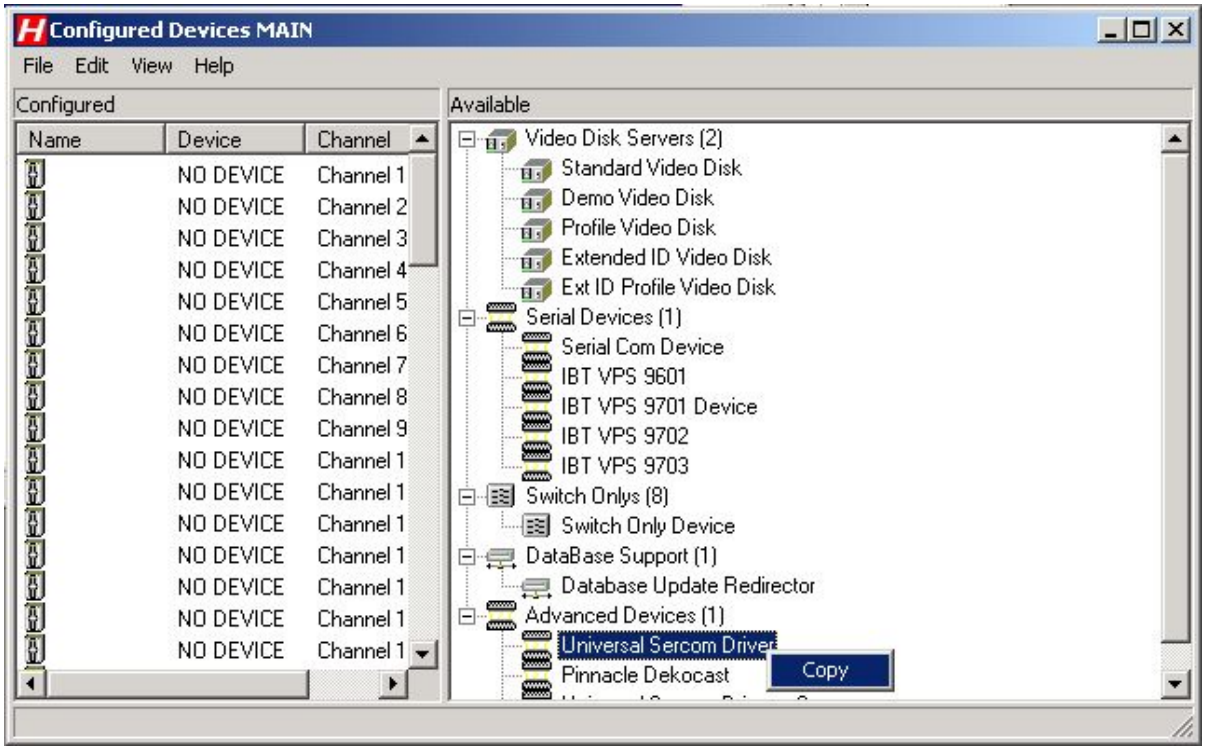
USD Device Configuration

Configure the Vizrt Driver

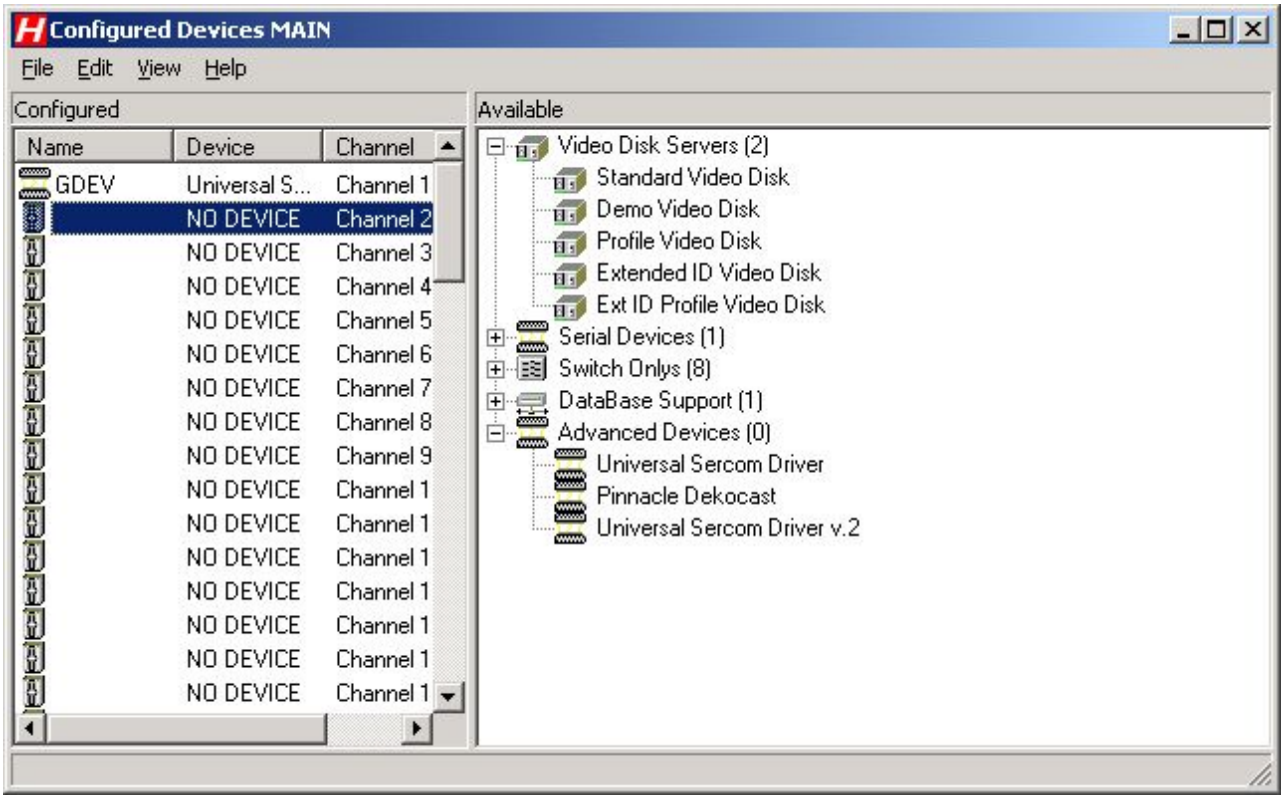
1. Launch the ADC-100 Configuration Utility and locate the icon that represents your Device Server.
2. Right-click the icon, and select **Configured Devices**.



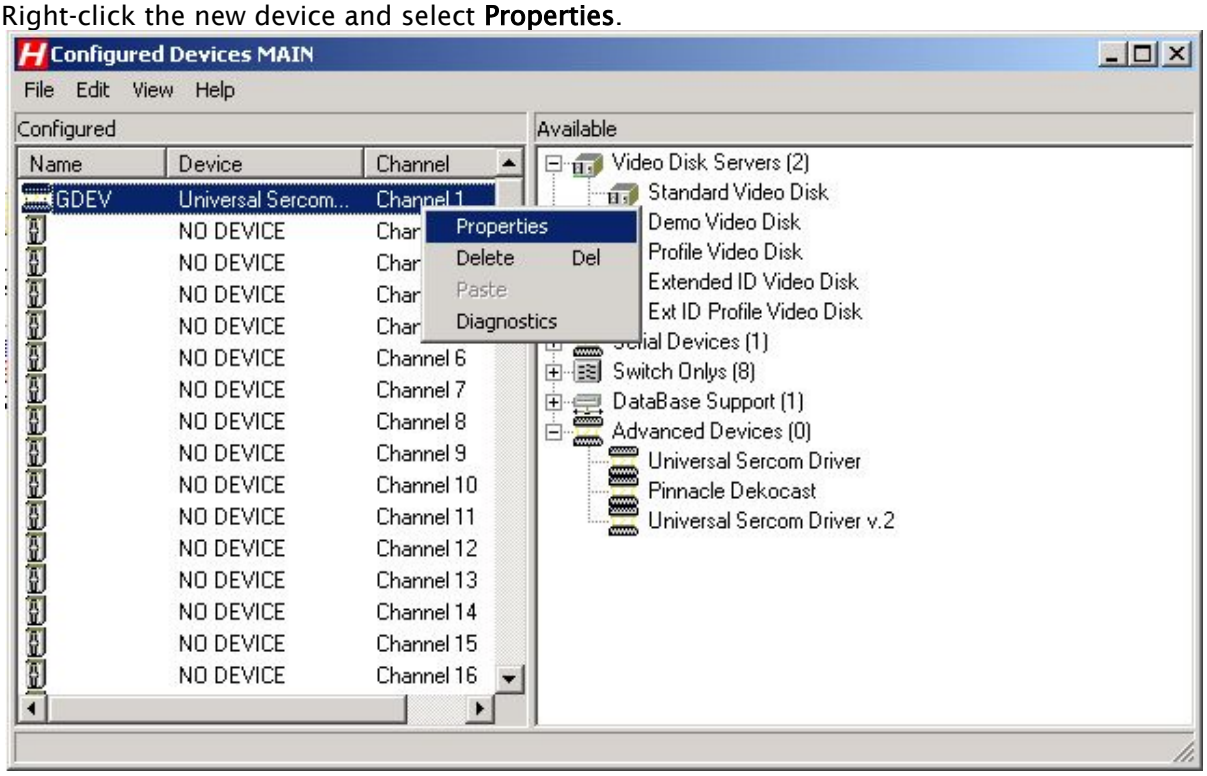
3. In the **Available** column on the right, under the **Advanced Devices** category, locate the **Universal Sercom Driver**. Click and drag the driver to one of the channels in the **Configured** column that reads **NO DEVICE**.



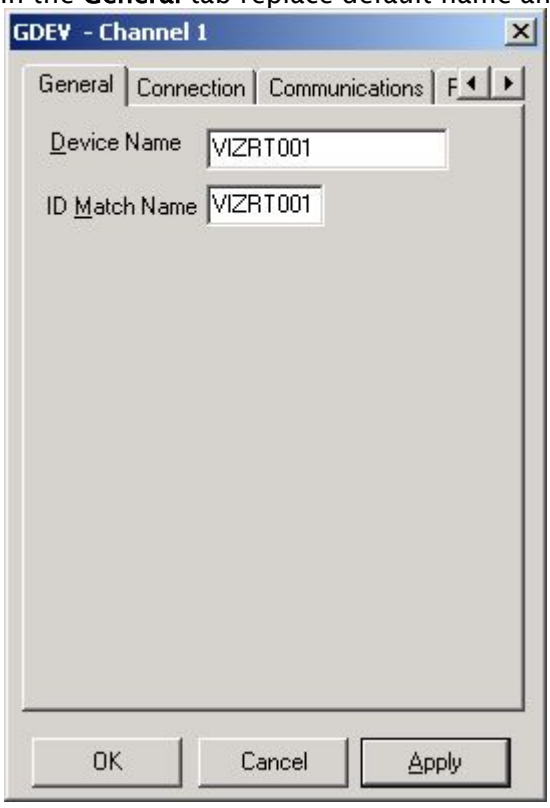
A new device will appear in the left pane of the **Configured Devices** main window.



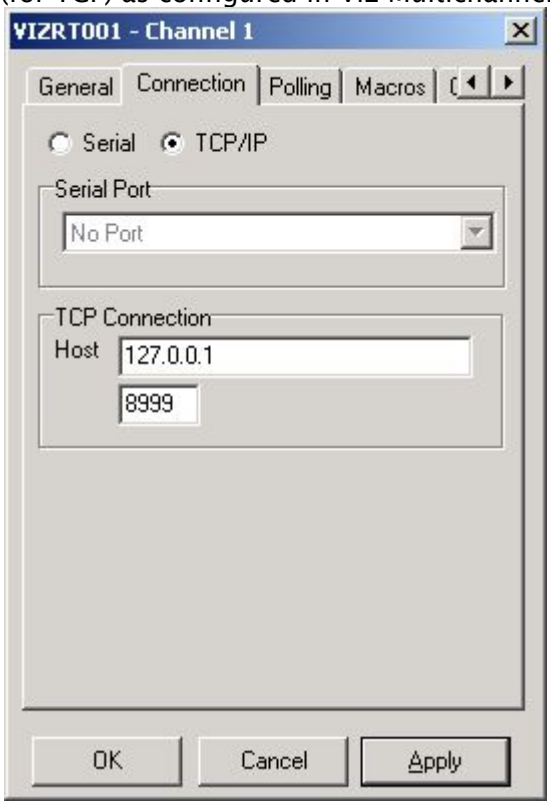
1. Right-click the new device and select **Properties**.



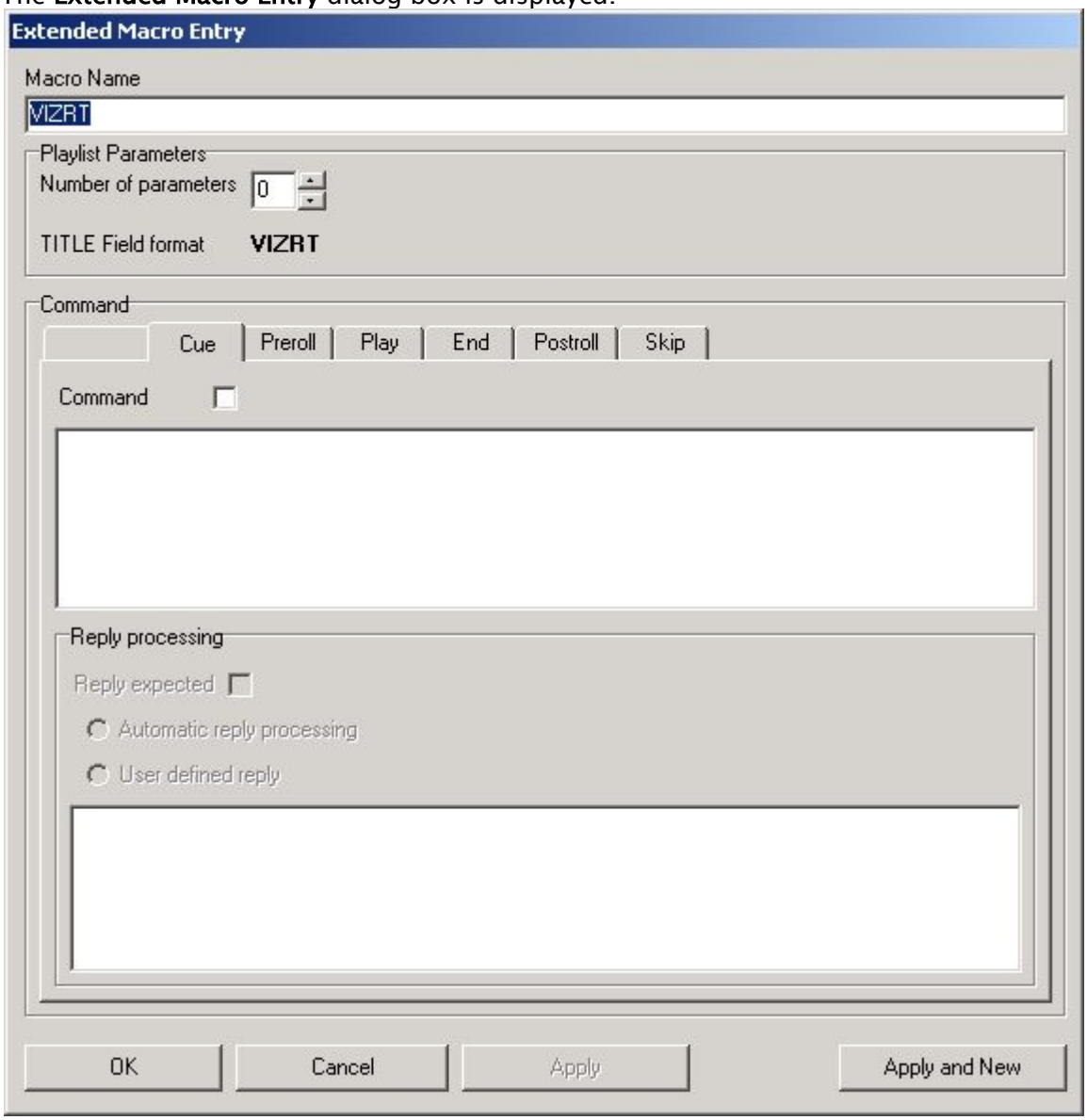
2. In the **General** tab replace default name and ID with **VIZRT001** and click **Apply**.



3. In the **Connection** tab, insert Media Sequencer machine's IP/Host or Serial value and the Port (for TCP) as configured in Viz Multichannel TCP or VDCP device settings.

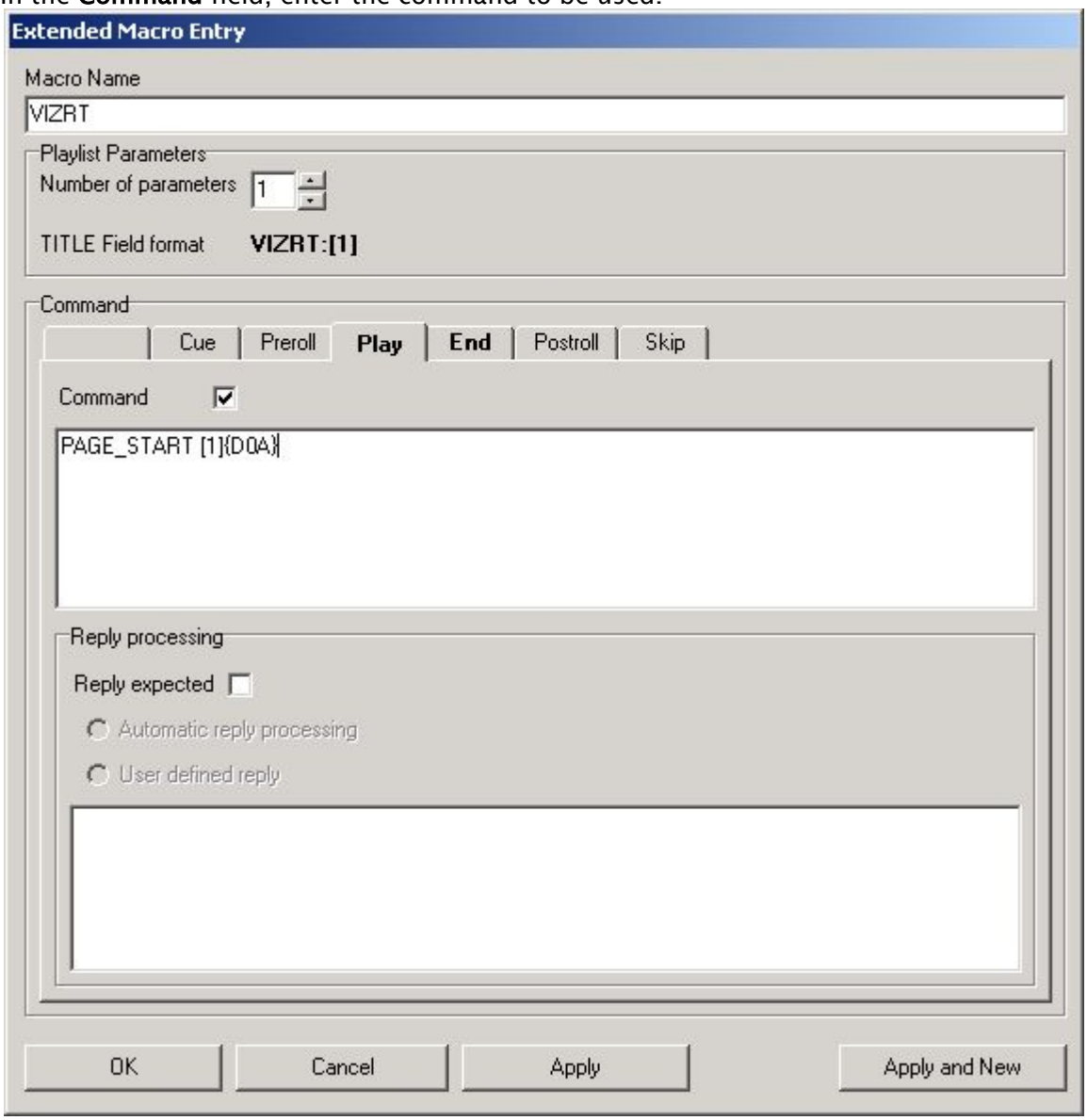


4. In **Macros** tab click the **Add** button to create a new macro.
   The **Extended Macro Entry** dialog box is displayed.



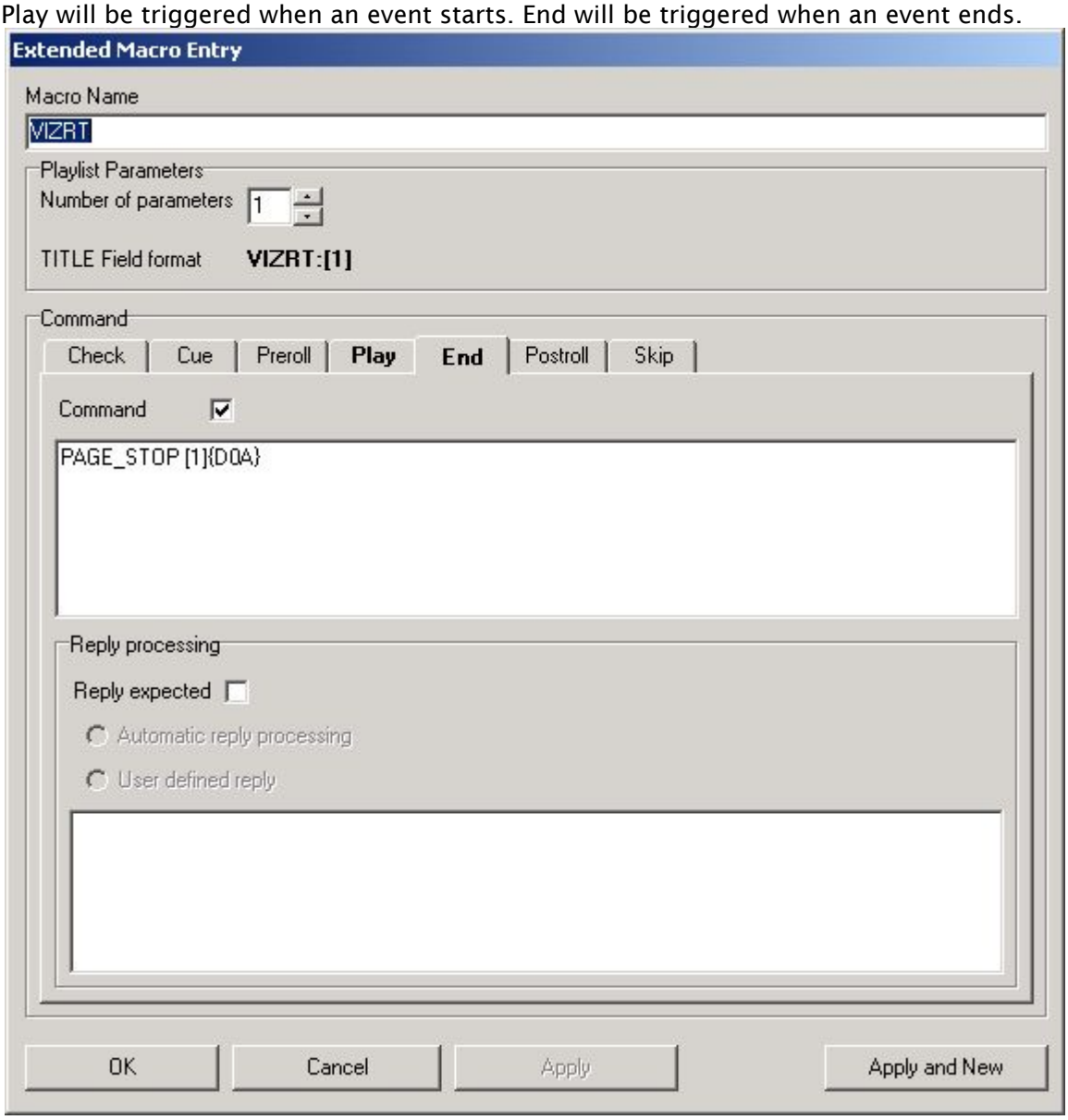
5. In the **Cue** tab set the **Macro Name** to **VIZRT**.
6. Set the **Number of Parameters** to **1**.
7. Check the **Command** check box.

8. In the **Command** field, enter the command to be used.



9. To edit the graphics stopping macro string, click the **End** tab.
10. Check the **Command** check box.

11. Set the **Number of Parameters** to **1**.
    Play will be triggered when an event starts. End will be triggered when an event ends.



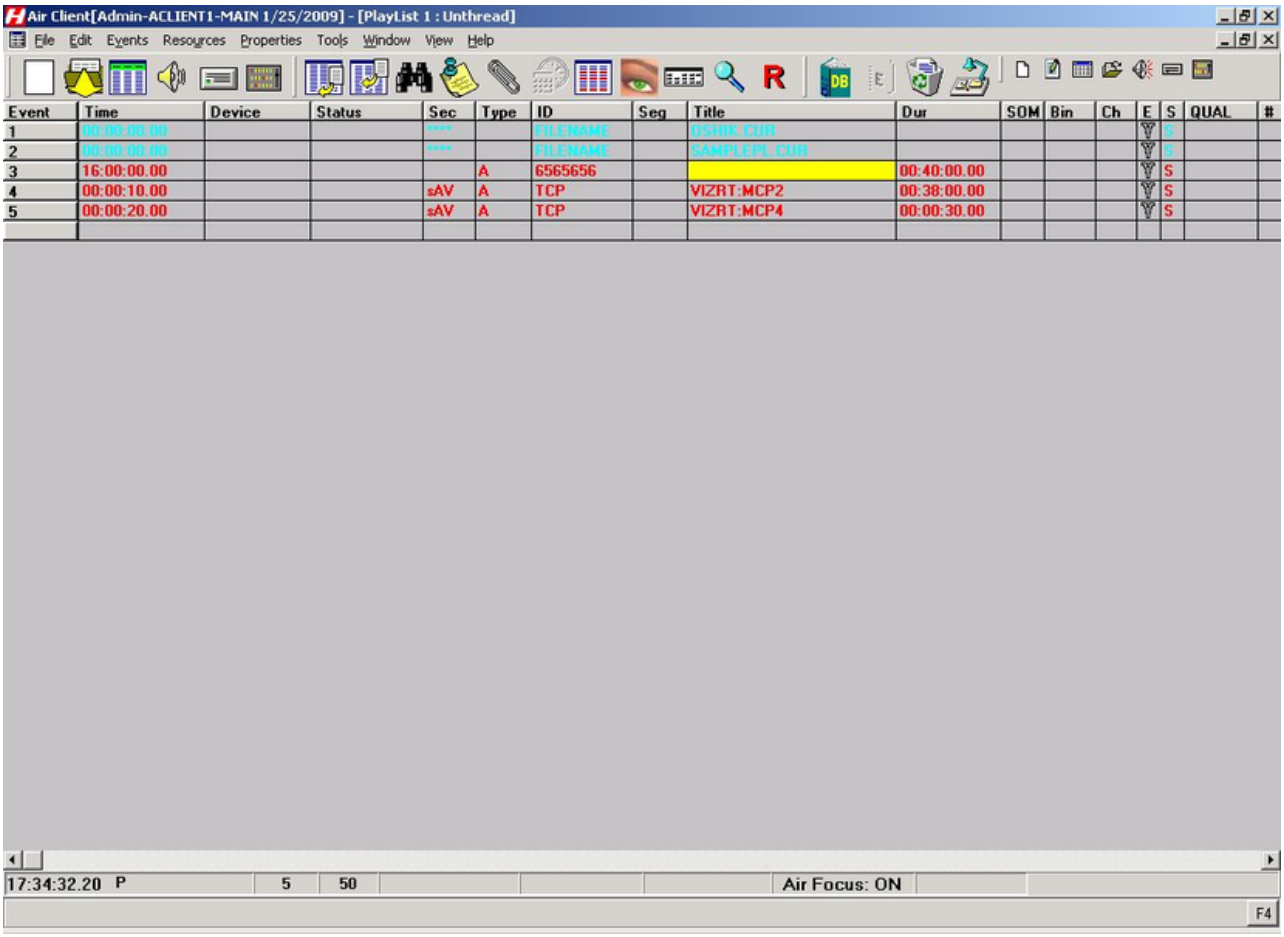
Notes

When an event is triggered (primary or secondary), the command **take id** is sent where id is the `Media ID` value in Viz Multichannel and `ID field` value in ADC-100.

- **Harris playlist (**.LST) USD format:*
  - **TITLE field**: macro_name:trigger_id (Media ID). For example: VIZRT:MCP2
  - **ID field**: USD_NAME (device) name
  - **Reconcile Key field**: Template name
- **Harris macro format**: trigger_command [1]{D0A}. For example: `PAGE_START [1] {D0A}`.
  { `D0A` } is the char symbol for Enter.

Operation

Viz uses A/V, Secondary A/V to execute the pre-loading and playout of media.



15.7.4 Automatic Playlist Updates Using RCV Files

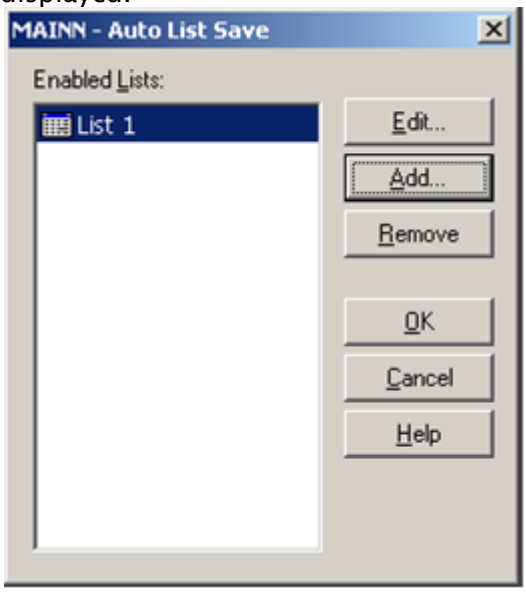
Auto List Save allows automatic list savings based on the number of list changes that occur on an active on-air transmission list.

Number of changes value indicates how often the list is automatically saved to an RCV file.

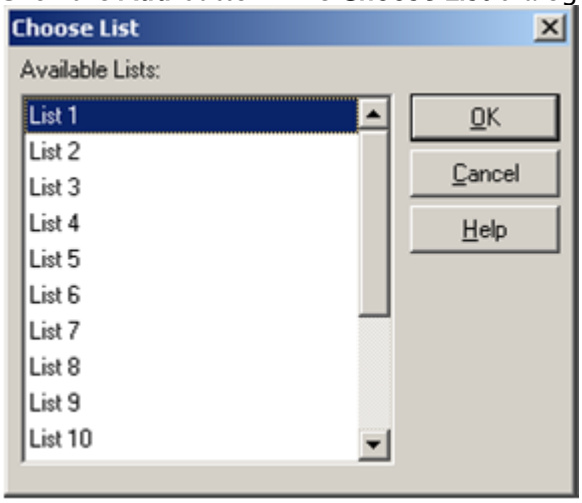
The RCV file will be read by Multichannel, which will update its playlist accordingly.

Enable Auto List Save

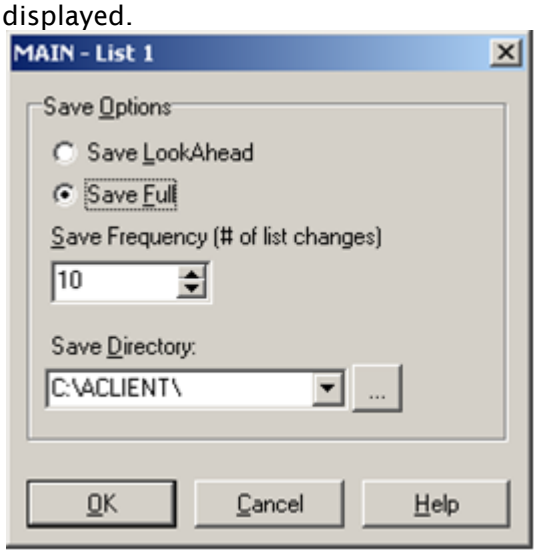
1. From the main menu select **Properties > Auto List Save**. The **Auto List Save** dialog box is displayed.



2. Click the **Add** button. The **Choose List** dialog box is displayed.



3. Select a list from the Available Lists pane and click **OK**. The **Save Options** dialog box is displayed.



4. **Save LookAhead**: (Default: enabled) Check to enable save of the LookAhead list only.
5. **Save Full**: Check to enable save of the full list.
6. **Save Frequency**: (Default: 10) Specify the number of changes required before a list save is initiated. This is the value of how many events go by, NOT how many edits are performed.
7. **Save Directory**: Specify the save directory for the saved list. Click '...' to browse for a location. Viz Multichannel will scan the specified folder for new RCV file updates.
8. Click **OK**. The list is added to the **Enabled Lists** pane.

15.8 D-Series By Harris Broadcast

This section describes how to configure the Playout Automation for Enterprise Environments system (D-Series) by Harris Broadcast to work with Viz Multichannel:

- General Information and Setup
- Updating Live
- Limitations

15.8.1 General Information and Setup

Setup on the Viz Multichannel side is similar to the ADC-100 setup; however, Universal Sercom Device is not available, and the LST file provided by the D-Series is not binary but text file based.

15.8.2 Updating Live

VICC: D-Series automatically generates text format *.VICC files into a drop-folder, a line per primary event (secondary events in the primary event's line). Viz Multichannel can scan that folder and update playlists accordingly.

15.8.3 Limitations

- VICC file size is limited so it may not contain all events in the playlist but only a portion of them.
- VICC file will not provide all the information available in scheduling system.
- Maximum number of playout channels exported = 25.
- Maximum number of schedule events exported per channel = 1000.
- Maximum number of as ran events exported per channel = 50.
- Maximum number of fields exported per event = 16.
- Maximum length of each event record = 256 characters.

15.9 Neptune By Pebble Beach Systems

The Neptune automation system by Pebble Beach Systems (PBS) can trigger Viz Multichannel (through Media Sequencer) as a TCP device (TCP/IP).

> ⚠ **Note:** Whenever possible, use the PB Neptune Integration Module. See Integration Module for Neptune from Pebble Beach.

The Neptune integrates with Viz Multichannel in the following ways:

1. Triggering primary events (via a TCP port to the Media Sequencer machine).
2. Triggering secondary events (via a TCP port or CII serial port to the Media Sequencer machine).
3. Automatically update playlist (via a TCP port to the Schedule Collector machine).
4. Hosting Viz Content Pilot's Newsroom Component for scheduling actions in Neptune.

This section contains information on the following topics:

15.9.1 Commands

The following commands are supported in Media Sequencer:

- `PROGRAM_START id` will play primary event with `Media ID = id`
- `PROGRAM_STOP id` will stop primary event with `Media ID = id`
- `PROGRAM_LOAD id` will load primary event with `Media ID = id`
- `PAGE_START id` will play secondary event with `Media ID = id`
- `PAGE_STOP id` will stop secondary event with `Media ID = id`

- `PAGE_LOAD id` will load secondary event with `Media ID = id`

15.9.2 Importing and Updating

The Neptune system reads playlist data via files in XML format.

Channel traffic name (`channel`) and **playlist date** (`txdate`) are provided in the list node. The rest of the fields are read from the event nodes (eventlist/event). **Begin Time** should be read from `onairtime` node. Different time formats are supported.

An event's on-air date can be read from `onairdate` node, if available. Sometimes this is merged with `onairtime` . Secondary events (if available) can be read from inside their primary event node (`../secondaryeventlist/secondaryevent`).

15.9.3 Updating Live

Two major workflows are usually implemented:

Reading playlists from a scheduling system: Viz Multichannel (usually in scheduling mode) reads playlist in any format from the scheduling system, generates all secondary events either manually or automatically (based on Rules) from the playlist file; or any combination of the three. A playlist is usually sent to Viz Multichannel in the Master Control Room when it is ready. When ready, the playlist is triggered by the Neptune automation system to play either primary or secondary events. This workflow may include live updates from Neptune via the Schedule Collector tool.

Reading playlists directly from the Neptune automation system: Viz Multichannel runs only in MCR mode and reads playlists directly from Neptune. This is done via the Schedule Collector tool. Schedule Collector uses the Pebble Beach Systems API, connects to it at every configured interval and receives X (configured) next events information from the API. When it recognizes any changes in the schedule, Schedule Collector generates an XML update file and triggers the Playlist Importer. A Neptune schedule is always automatically mirrored in Viz Multichannel.

This workflow provides several different options:

- Reading primary and secondary events with content from Neptune.
- Reading only primary events from Neptune and generating secondary events by Rules.
- Reading primary and secondary events from Neptune but populating secondary events content by Viz Multichannel.
- Any combination of the three options above.

> ⚠ **Note:** A Pebble Beach Systems' XML API license is required to enable the above feature in Neptune.

15.9.4 Newsroom Component

Viz Content Pilot's Newsroom Component lets you view available templates for a channel, create new editable templates, and edit, preview and schedule templates in the playlist.

For more information on Viz Content Pilot's Newsroom Component, see the *Viz Content Pilot User's Guide*.

Note: This integration connects to Media Sequencer for reading template information - it does not connect to Viz Content Pilot's database.

15.9.5 Limitations

The Pebble Beach Systems XML format is closed and strict. Viz Multichannel requires more information to add flexibility when scheduling (for example rules, conditions, auto-content); however, this is not possible with the Pebble Beach Systems XML format.

16 Viz One Integration

This chapter provides an overview necessary steps before using Viz One:

- Viz One and Viz Engine Configuration
- Viz Multichannel Configuration
- Video Preview Configuration
- Installation Options

16.1 Viz One And Viz Engine Configuration

When integrating Viz One with Viz Engine you must:

- allow Viz One to *transfer* assets to Viz Engine by installing the MediaFTP service on the Viz Engine.
- allow Viz One to *monitor* Viz Engine's transferred assets by installing the FSMon service. For more information on how to install these services, see the *Viz Enigne Administrator Guide* on Integrating with Viz One.

Once Viz Engine has been configured to allow Viz One transfer and monitor assets to/on the Viz Engine, you can start to configure Viz One.

When configuring Viz One you must:

- add a user to Viz One that will allow other applications to *search* for Viz One assets and metadata.
- add a Viz Engine as a *video server* to Viz One.
- define the *storage* and *access methods* Viz One requires in order to transfer and monitor assets to/on the Viz Engine.

  For more information on how to add users, and how to add and define Viz Engines as video servers, see the *Viz One Deployment Guide* on Integrating Video Production with Broadcast Graphics.

16.2 Viz Multichannel Configuration

When integrating Viz Multichannel with Viz One you must:

- allow Viz Multichannel to *resolve* the *schedule's house IDs* by matching them against Viz One assets. Once resolved, the playlist can be populated with assets from Viz One. See also Import Options on how to create placeholders in Viz One for missing House IDs.
- allow Viz Multichannel to *search* for and *preview media assets* locally before adding it to a template/page and/or the playlist.
- allow Viz Multichannel to *configure one or multiple device channels* (Viz Engine) with a Viz One connection for asset transfers to the same device channel.

For more information on how to configure Viz Multichannel's Viz One connection and playout devices, see the Viz One and Configuring Playout Devices sections.

16.3 Video Preview Configuration

If you are previewing proxy versions of video from Viz One using VCP's Newsroom Component (Timeline Editor) or Viz Engine (Viz Engine installed on your control client machine) you must 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: Codecs are only required when local preview is done, as in the cases above. Playout of the high resolution versions do not require a codec installation.

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

- Install Codecs for Local Preview
- Set Preferred Decoder

16.4 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

  IMPORTANT! On Windows 7 machines, the default installation of the LAV filters results in the *LAV splitter* and the *Windows video decoder* being used. This can lead to problems using the Timeline Editor. This situation can be avoided by ensuring that the *LAV decoder* is selected using the Windows 7 filter tweaker tool. See **Set a Preferred decoder.**

  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 of the marker.
Users 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; 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.

16.4.1 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 from Haali.

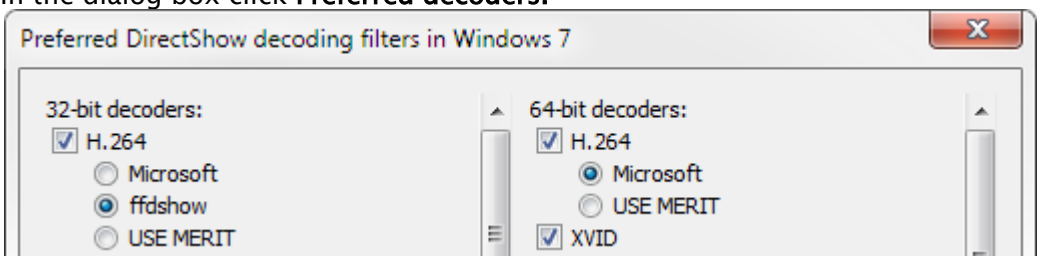
> ⚠ **Note:** You must have your own license for clip playback as FFDShow does not come with a decoding license.

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 *To set a Preferred Decoder* below).

   You should now be able to preview video clips from Viz One

16.4.2 Set Preferred Decoder

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



3. Set your **MPEG-4/H.264 32-bit decoder** to *FFDShow.*
4. *C*lick **Apply & Close**.
5. Click **Exit**.

See Also

- Working with Video Clips

17 Appendix

This appendix provides information for the following topics:

17.1 Upgrading Multichannel

Vizrt recommends that customers contact their local Vizrt representative before upgrading. Tools are available to assist upgrade from previous versions of Viz Multichannel.

IMPORTANT! The Upgrade tool shipped with Multichannel will upgrade an existing installation from 2.6.2 or higher to the current version. If upgrading from a version *older* than Multichannel 2.6.2 you will have to use the upgrade tools shipped with the Multichannel 2.6.2 installer.

To upgrade Multichannel for each version, follow the instructions below.

After upgrading please check that the Timezone settings in Multichannel are correct. In particular, after upgrading from 2.6 to 2.7, users *must* set a Timezone in the configuration: **General Settings > Timezone Settings** for Channel timezone and Schedule timezone, see Timezone Settings.

17.1.1 Upgrading Multichannel from 2.6.2+ to 4.x

1. Uninstall previous version.
2. Install Viz Multichannel 4.x (which includes **UpgradeTool**).
3. Run **UpgradeTool** (see Working with UpgradeTool and upgrade appropriate channels.
4. Media Sequencer should be upgraded to 4.1 or newer.

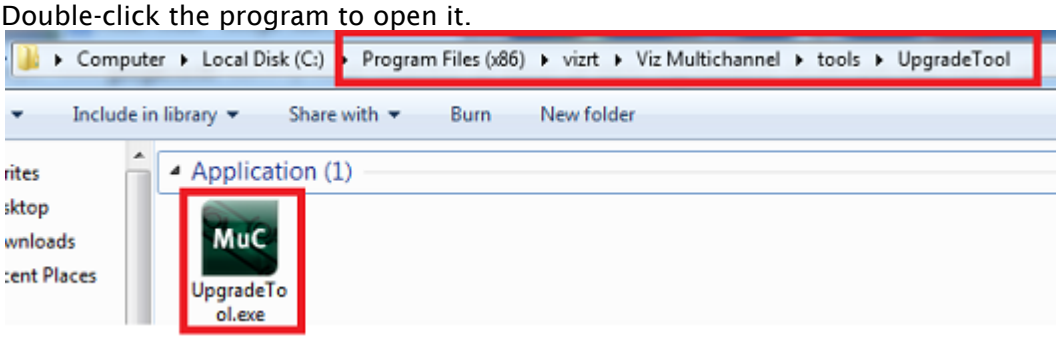
Note: Before upgrading Multichannel, turn *off* Media Sequencer handlers. After the upgrade is performed, (including upgrading Media Sequencer version where applicable), verify trigger settings and then enable the handlers again in **External Triggering** panel in Multichannel settings.

17.1.2 Working with UpgradeTool

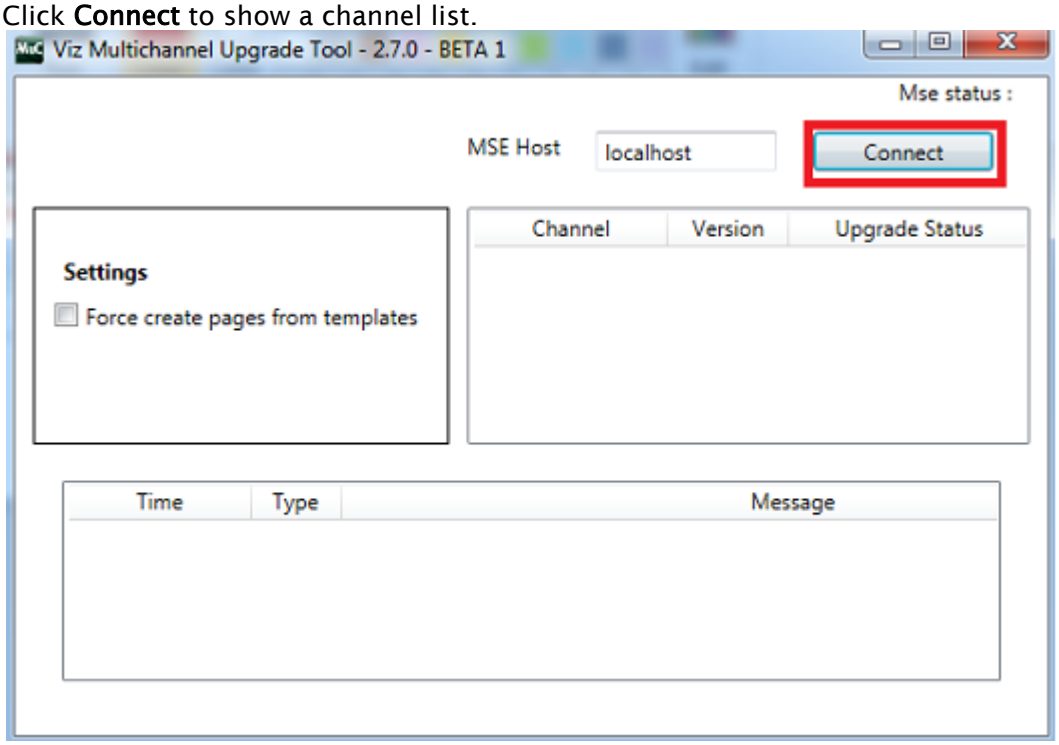
(included in 2.7 and later)

Multichannel 2.7+ provides an update tool which can be found at `[Viz Multichannel installation folder]\tools\UpgradeTool]`.

1. Double-click the program to open it.

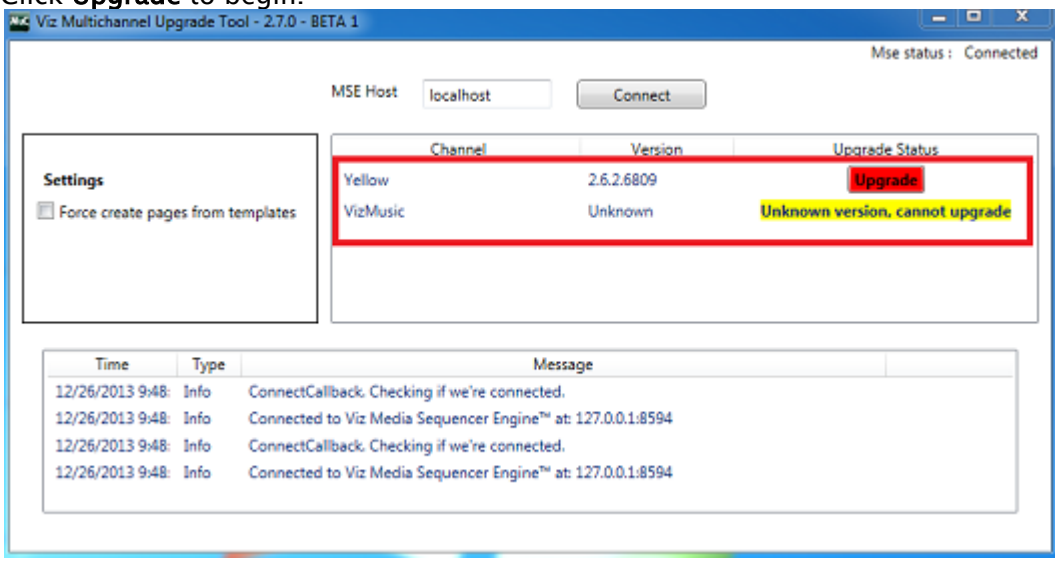


2. Click **Connect** to show a channel list.

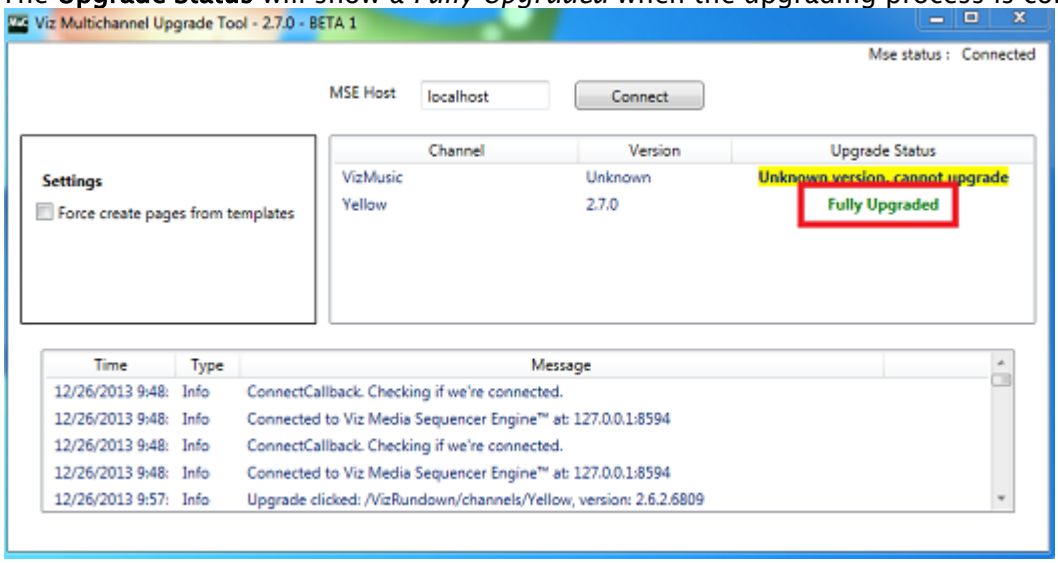


The channel lists which are upgradable are shown with an **Upgrade** button.

3. Click **Upgrade** to begin.



4. The **Upgrade Status** will show a *Fully Upgraded* when the upgrading process is completed.

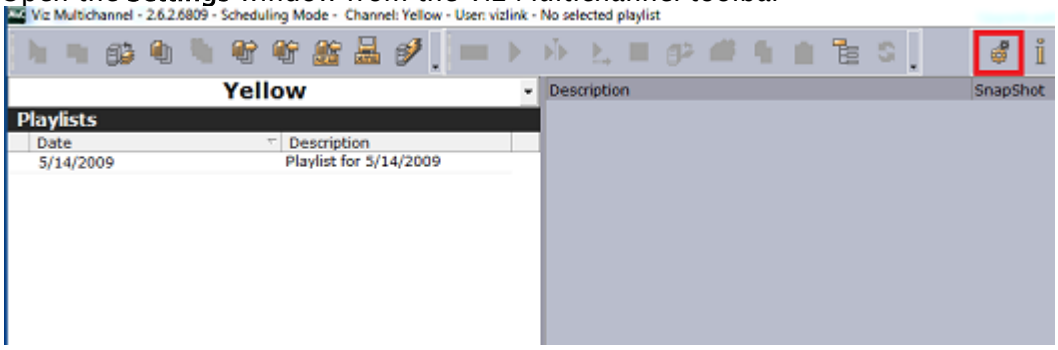


17.1.3 Upgrading Multichannel from 2.5 or 2.6 to 2.6.2

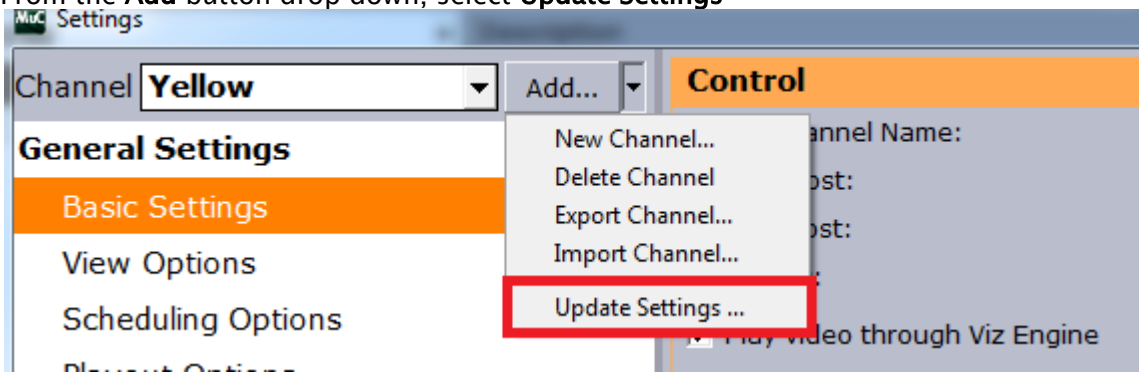
Caution: Always make sure you have a fully backed-up all relevant configuration settings before attempting an upgrade.

1. Double-click the application icon to open MuC 2.6.2

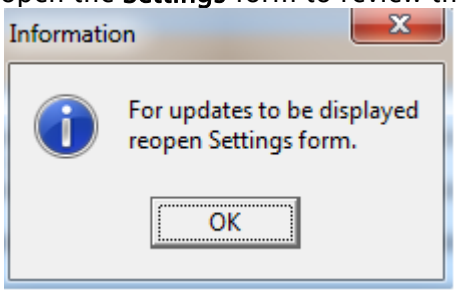
2. Open the **Settings** window from the Viz Multichannel toolbar



3. From the **Add** button drop-down, select **Update Settings**



4. After the upgrade has been performed an **Information** dialogue box will be displayed. Re-open the **Settings** form to review the upgraded configuration.



17.1.4 Upgrading Tools from Multichannel Versions Lower than 2.5

There are upgrade tools in the Multichannel 2.6 installation folder with names according to the Multichannel versions being upgraded.
The upgrade tools are designed to perform a complete upgrade after double-clicking on the tool.
The upgrade tools are:

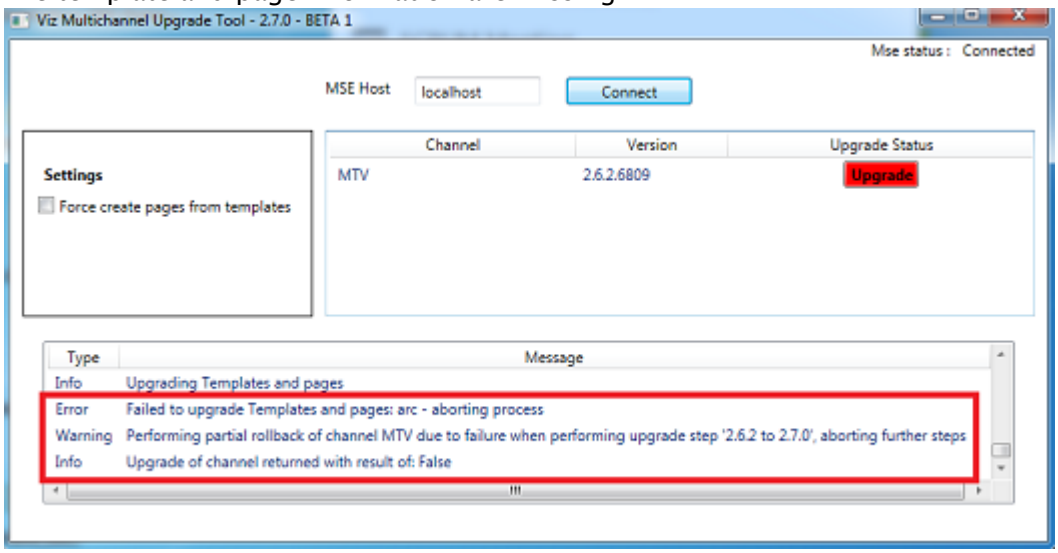
```
UpgradeTo20.exe is used for upgrading a default configuration of MuC to version 2.0.
UpgradeTo23.exe is used for upgrading a default configuration of MuC to version 2.3.
UpgradeTo25.exe is used for upgrading a default configuration of MuC to version 2.5.
```

17.1.5 Troubleshooting the Upgrade Tool

Normally the upgrade tool performs a complete upgrade automatically. In some cases a configuration or scene settings can prevent the upgrade tool from performing a complete upgrade. In case of failure, the upgrade tool either rolls-back the complete process (in case of an unrecoverable error) or provides warning messages (in case of non-critical errors).

Critical Failures when Running the Upgrade Tool

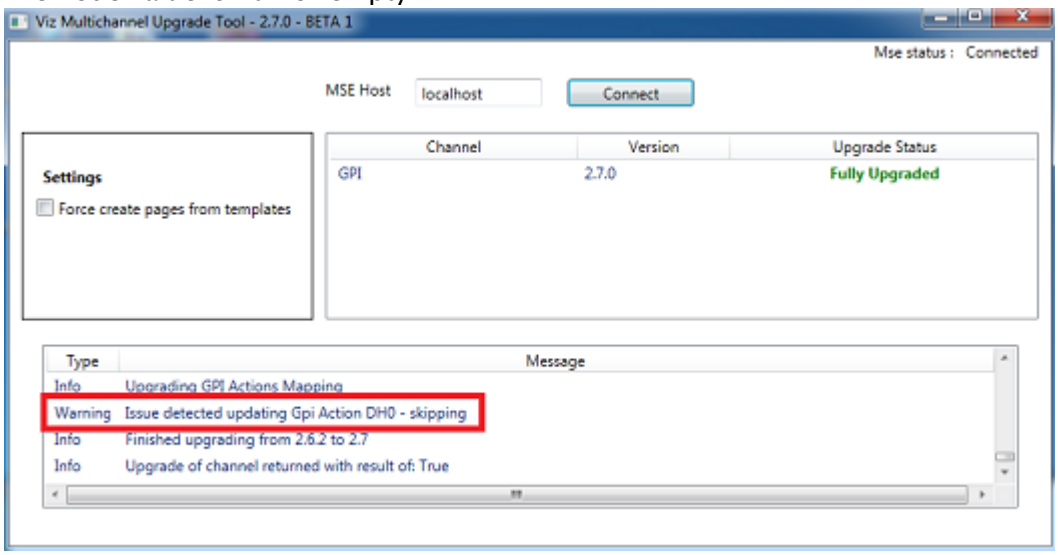
- The template and page information are missing



To fix this, re-import or delete the templates and pages indicating by the error message. Then run Upgrade Tool again by clicking the **Upgrade** button.

Non-Critical Warnings when Running the Upgrade Tool

- The node value is null or empty



The “Node value is null or empty” is not a serious problem. The Upgrade tool is able to upgrade successfully while skipping all of this failure type. However, to prevent a further error, users should fill all the missing node values *after* the completion of an upgrade. Often this relates to GPI-settings. Contact Vizrt support if unsure.

17.2 Vizrt Data Format (VDF)

To implement an external update service, you need to parse and return a Vizrt Data Format (VDF) document to the Media Sequencer. The document is posted to the update service by the Media Sequencer.

Working with the data formats requires knowledge on how the data is structured when sent from the Media Sequencer to Viz Engine. You can do this by, for example, looking at the Media Sequencer’s console, and then work with the data that is sent.
Vizrt recommends that you contact your local Vizrt Support representative and obtain the current version of the VDF.

17.2.1 Example of a VDF Document

```
<?xml version="1.0" encoding="utf-8"?>
<payload xmlns="http://www.vizrt.com/types">
<field name="foo">
    <value>bar</value>
    </field>
    <field name="otherfoo">
    <value>otherbar</value>
```

```
    </field>
</payload>
```

`Field Names` refer to Field Identifiers, a property available to all Viz Artist control plugins.

17.3 Page Content Filling Aliases

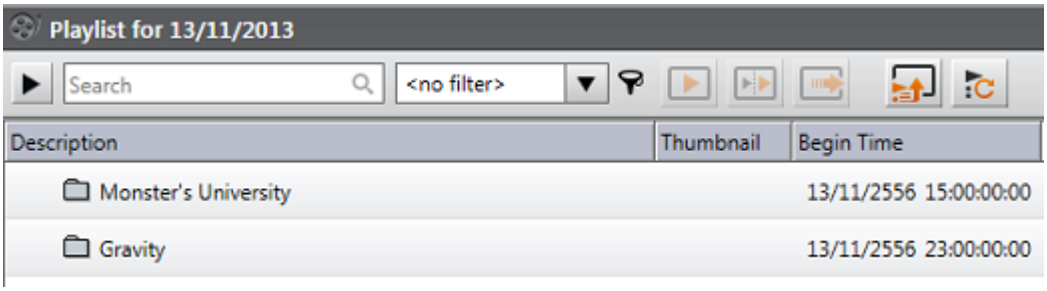
Built-in aliases can typically be used in the Data Content Filling dialog and will outline their usage and function.

17.3.1 Page Content Filling Aliases

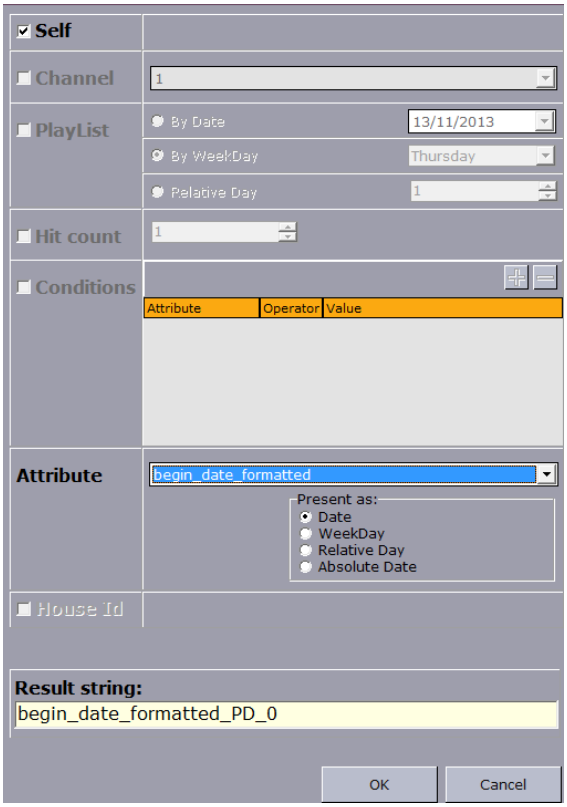
- **begin_date:** is the date property extracted from **begin_at** attribute, which refers to the *date* that the primary event is scheduled for play out.
- **begin_time:** is the time property extracted from **begin_at** attribute, which refers to the *time* that the primary event is scheduled for play out.
- **begin_date_formatted** It is a way of representing date and uses following states:
  - **Next** It represents the next program from currently selected program.
  - **Today** It represents the program within the same playlist, whose begin_time is less than 9 pm but doesn't indicate the program which is next from currently selected program.
  - **Tonight** It represents the program within the same playlist, whose begin_time is greater than 9 pm but doesn't indicate the program which is next from currently selected program.
  - **Tomorrow** It represents the program from next day's playlist, which is scheduled to be played tomorrow.

17.3.2 Page Content Filling Example

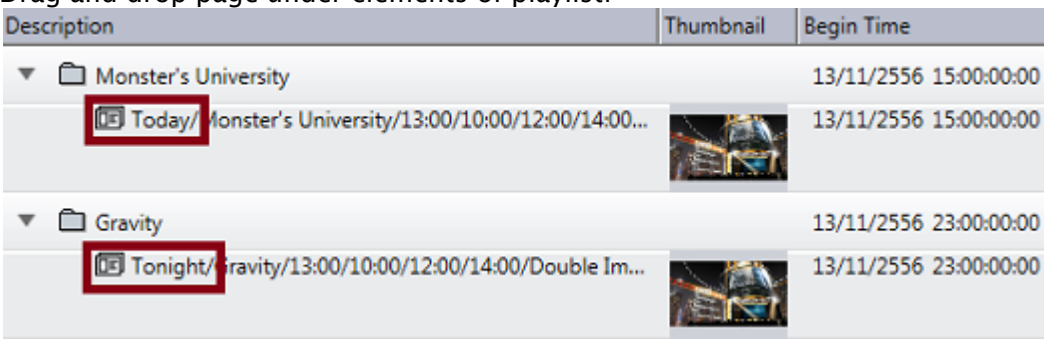
Consider an example playlist, in the image below Playlist 13/11/2013:



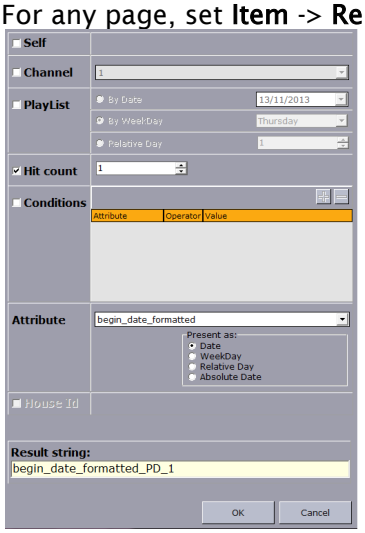
For any page, check Self and set Attribute to begin_date_formatted:



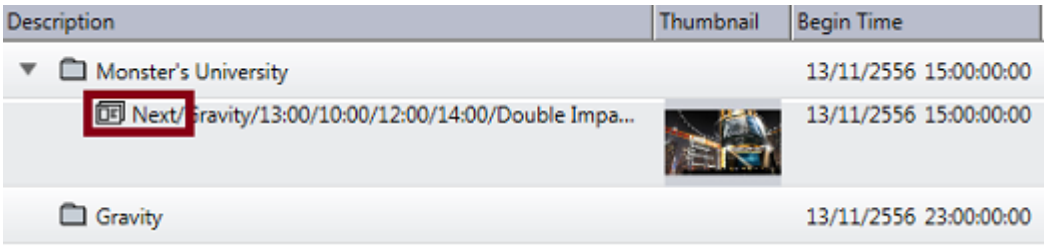
Drag and drop page under elements of playlist:



For any page, set **Item** -> **Relative Item** -> **After (1)** and *Attribute* to **begin_date_formatted:**

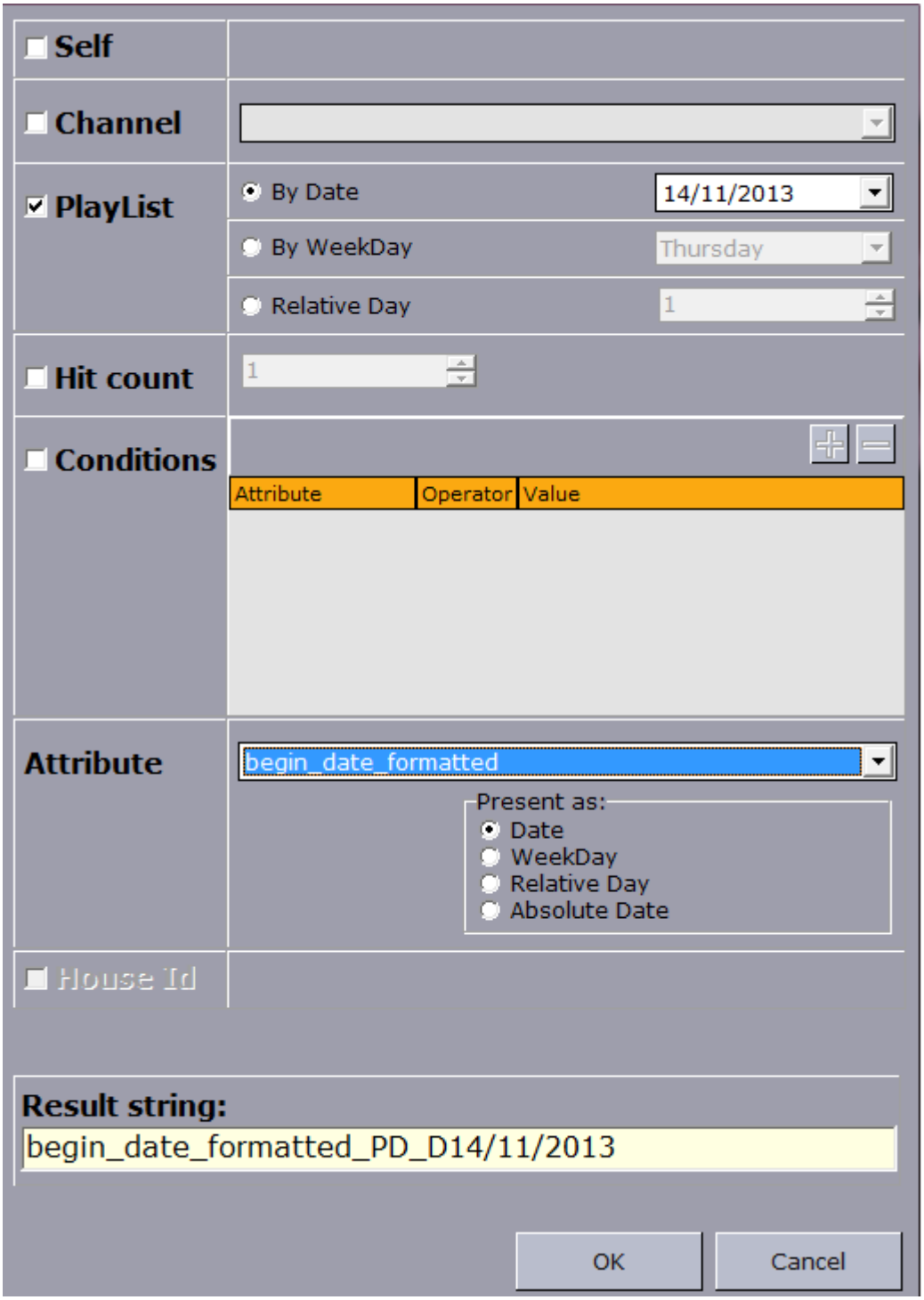


Drag and drop page under elements of playlist:

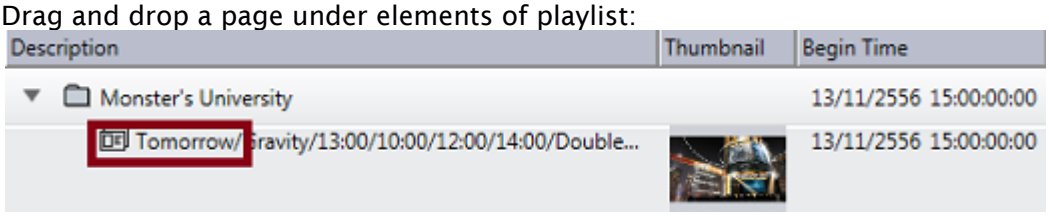


Next, create another playlist, say *Playlist 14/11/2013* with some elements.

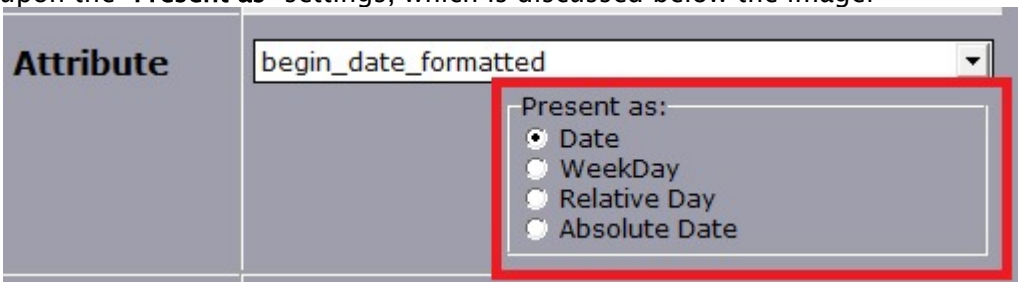
For any page in previous playlist *13/11/2013*, set Playlist to the newly created playlist and Attribute to **begin_date_formatted:**



Drag and drop a page under elements of playlist:



For the states of the program which is scheduled for the days *later* than *tomorrow*, it depends upon the "**Present as**" settings, which is discussed below the image:



- **Date:** Date is the default setting for attribute *begin_date_formatted*. It uses *Next*, *Today*, *Tonight* and *Tomorrow* states to define date. To represent program which is scheduled for the days later, it symbolizes the date of corresponding playlist as: *At dd/mm/yyyy*
- **WeekDay:** It uses *Next*, *Today*, *Tonight* and *Tomorrow* states to define date. To represent program which is scheduled for the days later, it symbolizes the scheduled day of corresponding playlist as: *At Sunday*
- **Relative Day:** It uses *Next*, *Today*, *Tonight* and *Tomorrow* states to define date. To represent program which is scheduled for the days later, it symbolizes total number of days from running playlist to selected playlist as: *In **n*** days
- **Absolute Date:** It uses *dd/mm/yyyy* to represent date. And to represent a program which is scheduled for the days later it uses: At *dd/mm/yyyy*

17.4 Hosted Page Editor Via ActiveX

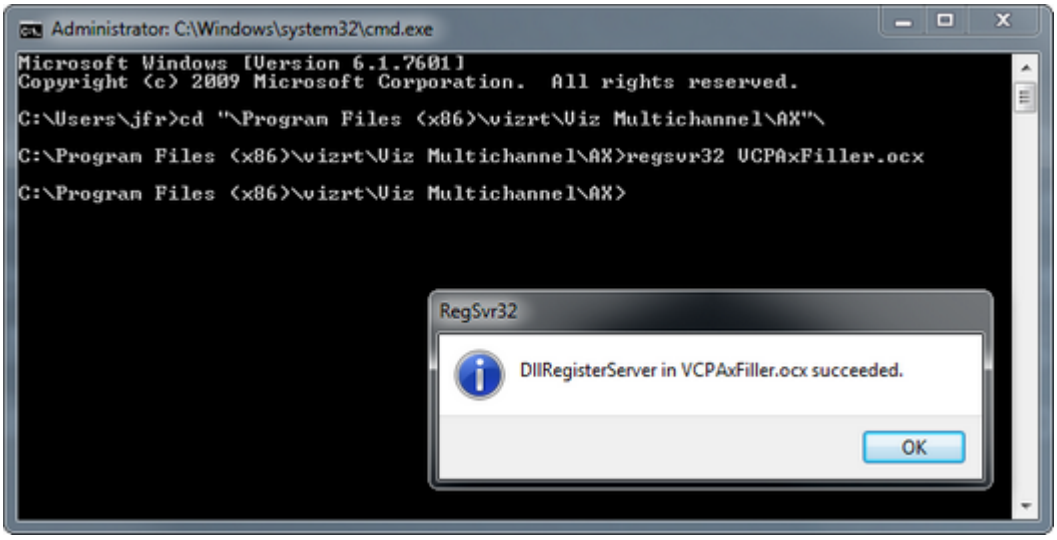
Included with the Viz Multichannel package is the Hosted Page Editor, delivered as an ActiveX component. This component can be hosted in a custom web-page or third party application.

Caution: As of version 4.0 the **Hosted Page Editor** via ActiveX is *DEPRECATED*. This means that *no* more features will be added to it and it may be removed from future releases.

17.4.1 Register the ActiveX Component

In the Viz Multichannel installation folder you will find a folder named AX containing the actual ActiveX component, its settings file and an HTML page for testing.

As the ActiveX component is not installed and registered during regular installation you need to register and configure it manually in order to create and test your own Page Editor.



1. Run Command
2. Change directory to Viz Multichannel's AX folder (e.g. *C:\Program Files (x86)\Vizrt\Viz Multichannel\Viz Multichannel ActiveX*)
3. Enter `regsvr32 VCPAxFiller.ocx` and press **ENTER**. This registers the ActiveX component.

To Register ActiveX Component Settings

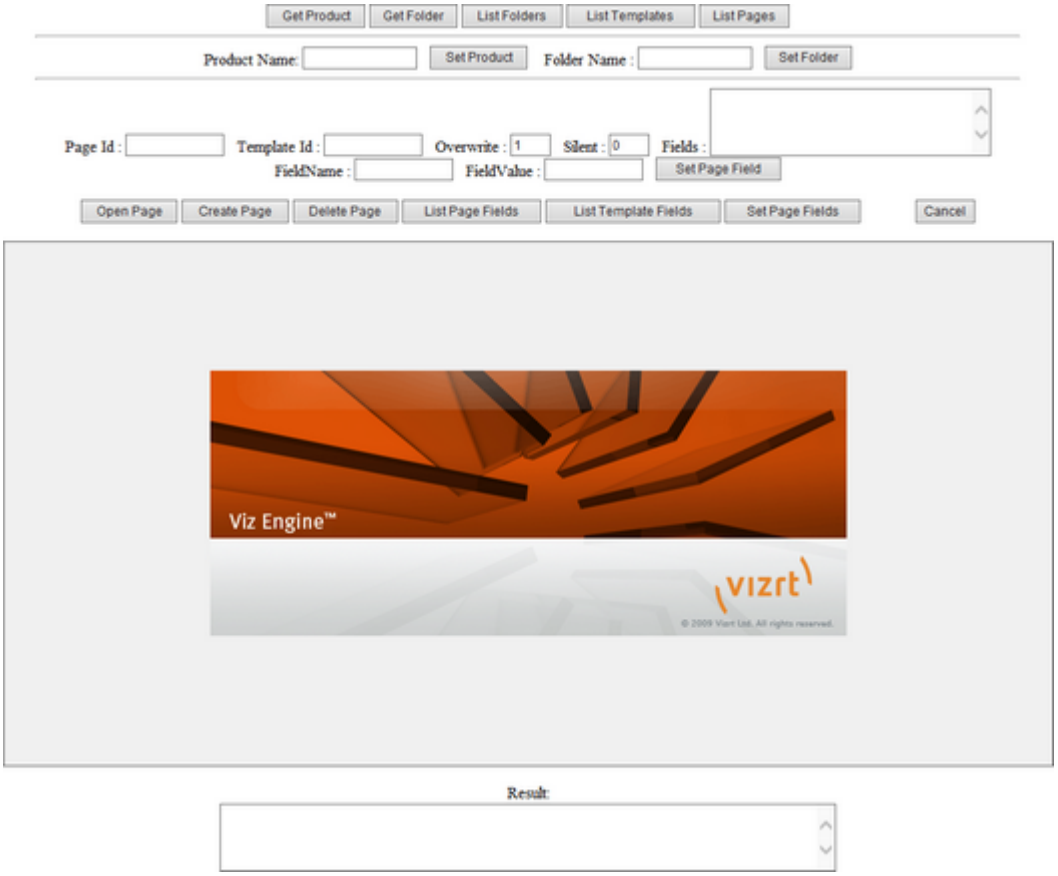
1. Open the **AX** folder in the Viz Multichannel installation directory.
   - If Viz Engine and Media Sequencer are not running on your local host you must edit the registry file and set the correct host names.
2. Double-click the **AX-HKEY_LOCAL_MACHINE.reg** file.
   - This sets the **PreviewPort** to `50008`, **PreviewHost** to `localhost`, and **MseHost** to `localhost`, and in registry.

17.4.2 Open the ActiveX Component

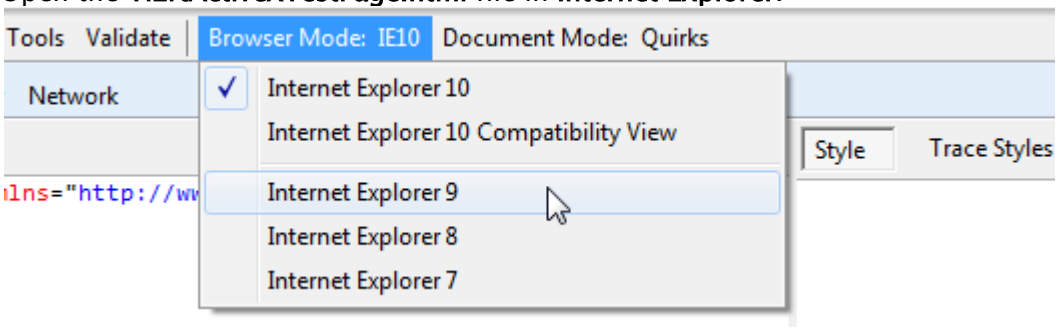
Before you can open the ActiveX component and its features you need to Register the ActiveX Component. Once that is done you can continue testing the ActiveX.

> ⚠ **Note:** The ActiveX component must run in **browser mode**: Internet Explorer 9.

To open the ActiveX component



1. Open the **AX** folder in the Viz Multichannel installation directory.
2. Open the **VizrtActiveXTestPage.html** file in **Internet Explorer**.



3. If Internet Explorer 10 is used, press **F12** and set browser mode to **Internet Explorer 9**.
4. **Allow** Internet Explorer to run *blocked content* (i.e. ActiveX).

17.4.3 Product and Channel Settings

Before you can use the ActiveX to create, edit and delete pages based on already available templates and pages you need to define the product and channel the you will work with.

To Set the Product

- Click the **Get Product** button.
- This will display the configured product in the **Result** area (at the bottom of the page).
- If `trio` is shown, enter `multichannel` in the **Product Name** field and click the **Set Product** button.

To Set a Channel

1. Click the **Get Folder** button, and the **Result** area will show the **channel name currently in use**.
2. If nothing is shown in the **Result** area then press the **List Folders** button, and the Result area will show a list of **channel names** stored on the Media Sequencer.
3. Enter the **channel name** in the **Folder Name** field and click the **Set Folder** button.

   > ⚠ **Note:** Channel name is case sensitive.

4. Click the **Get Folder** button again.

17.4.4 Templates and Pages

To List Templates and Template Fields

1. Click the **List Templates** button, and the **Result** area will show templates currently available.

   ```
   <result>
   <item>0400</item>
   <item>0030</item>
   <item>0200</item>
   ...
   </result>
   ```

2. Enter the item value (e.g. 0400) in the **Template ID** field and click the **List Template Fields** button, and the **Result** area will show the templates' exposed fields.

   ```
   <result>
   <item name="001" description="text" type="richtext">Arial-Regular</item>
   </result>
   ```

To List Available Pages and Page Fields

1. Click the **List Pages** button, and the **Result** area shows pages currently available.

   ```
   <result>
   <item>0011</item>
   ```

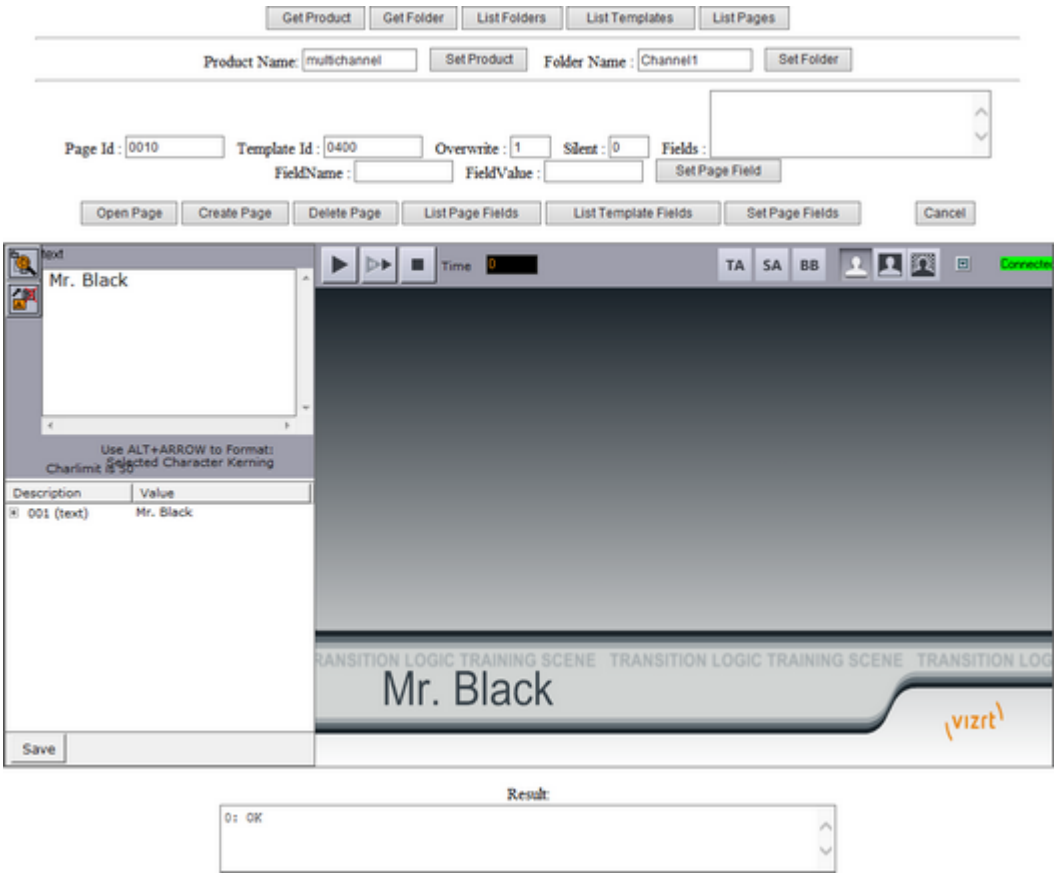
```
<item>0012</item>
...
</result>
```

2. Enter the item value (e.g. 0011) in the **Page ID** field and click the **List Page Fields** button, and the **Result** area shows the pages' filled content.

```
<result>
  <item name="001" description="text" type="richtext">Mr. Black</item>
</result>
```

17.4.5 The Page Editor

To Create a Page



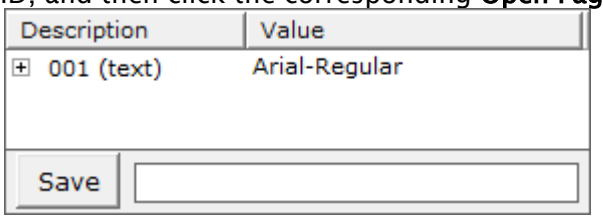
1. Enter a new **item** (e.g. 0010) in the **Page ID** field (see how To List Available Pages and Page Fields).

   > ⚠ **Note:** Alternatively, enter a new Page ID when saving the new page.

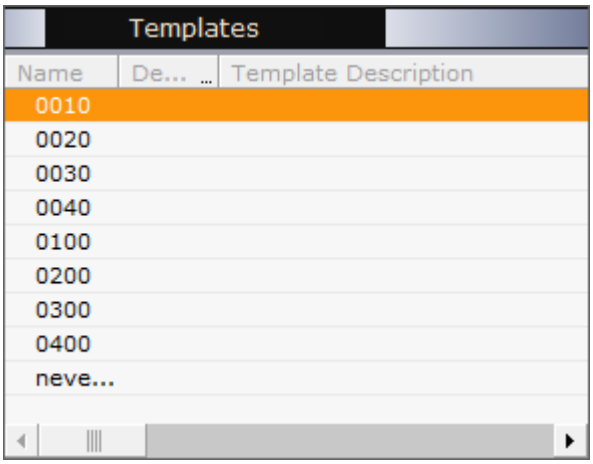
2. Enter an existing **item value** in the **Template ID** field (see how Hosted Page Editor via ActiveX).

> ⚠ **Note:** Alternatively, select the Template ID from the Page Editor's template list.

3. Click the **Create Page** button.
4. Edit the page and click the embedded page editor's **Save** button (see Page Editor).
   Similar to creating a page you may also **edit** or **delete** a page by providing an existing Page ID, and then click the corresponding **Open Page** or **Delete Page** button.



If you do not enter a new Page ID before creating a new page, you may enter it before you save the page.



If you do not enter a Template ID before creating a new page the Page Editor lists all available templates. This also requires that no Page ID has been set before clicking the **Create Page** button.

To Edit a Single Page Field Without a Page Editor

1. Enter an existing **item** (e.g. 0010) in the **Page ID** field (see how To list available pages and page fields).
2. Click the **List Page Fields** button, and the **Result** area will show the pages' existing content.
3. Enter the **item name** in the **Field Name** field.
4. Enter the new item value in the **Field Value** field.
5. Click the **Set Page Field** button.
6. Click the **List Page Fields** button, and the **Result** area will show the pages' new content.

To Edit Multiple Page Fields Without a Page Editor

1. Enter XML to the **Fields** area in the following format:

```
<fields>
<item name="[field name]">[new value]</item>
```

```
<item name="[field name]">[new value]</item>
<item name="[field name]">[new value]</item>
...
</fields>
```

2. Click the **Set Page Fields** button.

17.4.6 ActiveX API Error Messages

- In case of errors in the ActiveX (AX) API, the following list shows the possible messages and error codes that a client can receive:

```
0: OK
1: No Change Has Occurred During The function Call
2: Unknown Product
3: Unknown Folder
4: Page Id Not Supplied
5: Template Id Not Supplied
6: Page Id Does Not Exists
7: Page Id Already Exists
8: Template Id Does Not Exists
9: Error Opening Page, Ex Info: No templates found for page pagename
9: Error Opening Page, Ex Info: Read canceled because scene does not exist: scenename
9: Error Opening Page, Ex Info: Page 222 refers to /VizRundown/channels/1/sceneinfos/
02_GFX\VizMultiChannel\MOVIE\06fullframe which was not found.
10: Error Opening Template, Ex Info: No templates found for page pagename
10: Error Opening Template, Ex Info: Page 06fullframe refers to /VizRundown/channels/
1/sceneinfos/02_GFX\VizMultiChannel\MOVIE\06fullframe which was not found.
11: Error Saving Page, Ex Info: A page id cannot contain the character '\q.
12: Invalid Fields XML, Ex Info: invalid fields XML
12: Invalid Fields XML, Ex Info: Invalid at the top level of the document.
13: Field Does Not Exists, Ex Info: field 'fieldname' does not exists
14: List Templates Error
15: List Folders Error
16: Context not Fully Set. Check Folder
17: List Pages Error
900: Last API Call Was Not Completed
1000: Media Sequencer Engine Is Disconnected
1100: Not Connected to Viz Engine
Page already exists, can't overwrite
Unable to save. please enter a page id
Unable to open page
```

- Following error messages are present but not displayed in client:

```
11: Error Saving Page
Unable to save. Page not set
Error Opening Page, Ex Info: can't open a template for editing
Error Opening Template, Ex Info: can't open a template for editing
```

See Also

- Page Editor

17.5 Installing And Upgrading The Microsoft .NET Library

Microsoft .NET is a software framework that runs primarily on Microsoft Windows. It includes a large library and provides language interoperability across several programming languages. Software that uses the .NET Framework Class Library, (as many programs from Vizrt), requires the .NET library. Most Windows machines have .NET installed.

Please consult the Microsoft .NET website for updates, installers and support for the .NET library framework. As a general rule, Vizrt software requires .NET version 4 or later. Always check your product Release Notes for the minimum required version of .NET for a specific Vizrt software release.

If an upgrade or installation of .NET is required go to http://www.microsoft.com/net/downloads.

You can check for the currently installed version of .NET with the command shell (Windows Start-button + Ctrl-R + cmd + ENTER) and give the command:

```
dir /b /ad /o-n %systemroot%\Microsoft.NET\Framework\v?.*
```

which will list out all the versions of .NET installed, latest first.

17.6 Enabling Windows Crash Dumps

17.6.1 MS Windows Logging

It is recommended to enable Microsoft Windows to generate user-mode crash dumps.
This makes debugging easier, particular if there are hardware or general windows issues affecting program behavior.

Enabling User-mode Dumps requires Windows 7 or higher.

- Configure the `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\Windows Error Reporting\LocalDumps` registry setting.

For more detailed information, see the Microsoft web information at Collecting User-Mode Dumps.

> **Logging Features in Viz Multichannel:** There are valuable log files for understanding and analyzing unexpected Viz Multichannel program behavior. Refer to section Logging for more details about the logging options in Viz Multichannel.

17.7 Configuring Import And Update Folders For Network Drives

A Windows service does not have access to network drives mapped with aliases such as M:\ when mapped using a regular domain user.

The following procedures describe how to configure Viz Multichannel to use network drives for playlist imports and updates when running Media Sequencer as a Windows Service.

17.7.1 To Set Playlist Imports and Update Destination Path for Schedule Files

1. Start Viz Multichannel in **Scheduling** mode
2. Open the **Configuration** settings
3. Click Channel Settings **> Import/Export Settings > General Settings**
4. Set the **Destination path** for the schedule files to import or update

> ⚠ **Note:** For this case network paths, such as UNC paths (e.g. \network\...) are supported; however, mapped drives are not.

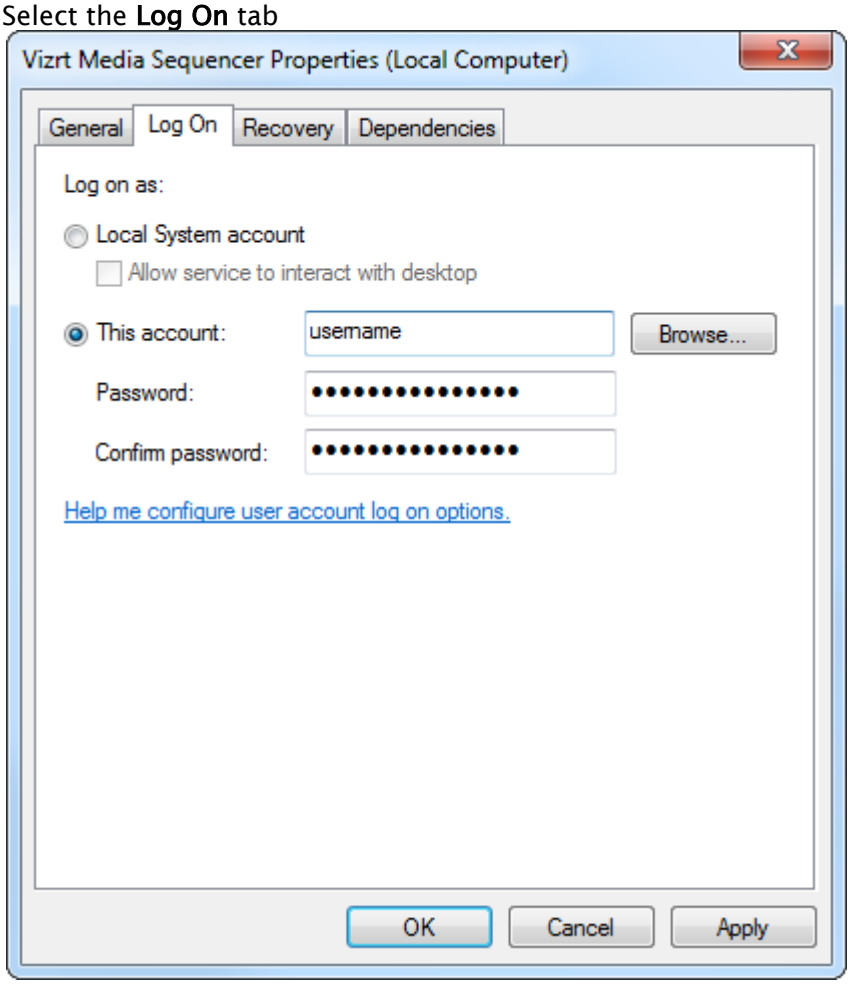
17.7.2 To Enable Automatic Import

1. Click **Global Settings > Import/Export settings > Automatic Import**
2. Set
   - **Automatic import interval**
   - **Playlist importer folder path**, and
   - **Playlist importer log level**

17.7.3 To Configure Media Sequencer Network Authentication

1. In Windows, click **Start**
2. Open the **Control Panel**, select **System and Security > Administrative Tools**
3. Open **Services**
4. Select and right-click the **Vizrt Media Sequencer** service
5. Select **Properties**

6. Select the **Log On** tab



7. Select the **This account** radio button
8. Enter a *username* and *password* that has access to the network share you want to connect to
9. **Apply** and click **OK**.

> ⚠ **Note:** If the Vizrt Media Sequencer service is already running, please *restart* the service for the new settings to take effect.

17.7.4 Troubleshooting

Microsoft Excel schedule files cannot be imported

> ⚠ Microsoft Excel and other Microsoft Office applications are not designed to be run as a server application, and Microsoft does not support this usage

1. Create a folder named Desktop in the following location:
   - 32-bit systems: `C:\Windows\System32\config\systemprofile`
   - 64-bit systems: `C:\Windows\SysWOW64\config\systemprofile`

2. For more information, see the following knowledge base article on Arcana Development and/or the following Microsoft knowledge base article on *Considerations for server-side automation of Office*.

17.8 Logging

17.8.1 Daily Log

For information and troubleshooting purposes there is a daily log file that provides details on every event that was played. The file is located on the **Media Sequencer** machine at: `%ProgramData%\Vizrt\Media Sequencer`. It is not set up as part of the installation process, and must therefore be created as part of the installation process described in the Playout section.

The logging file naming convention is `ChannelName-YY-MM-DD.log`. Each file includes the events played on that calendar day, which may not necessarily correspond to a playlist. As such, the events in a playlist that starts at 7 AM and extends till the following day at 6 AM will be saved in two separate files, one for each calendar day.

Below is an example of a log file's contents:

```
2007-12-18 12:06:36: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/PLAYLIST_DATA_ROMY_14_24_40_681_13_12_2007_823_IM_0
2007-12-18 12:06:41: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/PLAYLIST_DATA_ROMY_14_24_40_681_13_12_2007_823_IM_0
2007-12-18 12:07:15: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/PLAYLIST_DATA_ROMY_12_06_58_663_18_12_2007_22_PA_0
2007-12-18 12:08:28: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/PLAYLIST_DATA_ROMY_14_24_40_681_13_12_2007_823_IM_0
2007-12-18 12:09:34: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/PLAYLIST_DATA_ROMY_14_24_40_681_13_12_2007_823_IM_0
2007-12-18 12:09:39: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/PLAYLIST_DATA_ROMY_14_24_40_681_13_12_2007_823_IM_0
2007-12-18 12:09:46: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/PLAYLIST_DATA_ROMY_12_06_58_663_18_12_2007_22_PA_0
2007-12-18 12:16:50: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/PLAYLIST_DATA_ROMY_14_24_40_759_13_12_2007_715_IM_2
```

```
2007-12-18 12:16:53: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/PLAYLIST_DATA_ROMY_12_16_29_344_18_12_2007_319_DR_0
2007-12-18 12:18:12: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/102
2007-12-18 12:18:17: Running: read on /VizRundown/channels/AD/rundowns/21_11_2005_AD/
data/102
```

17.8.2 As Run Logs

Daily log files in and of themselves are difficult to understand. However, you can submit log files to log analysis in order to mine them for useful information.

You must manually transfer the logs to your machine in order to analyze the As Run logs. The log directory on your remote Media Sequencer is set under the Logging section.

Each log entry contains the event date and time, template name, and content of each template field.

If you want to perform a simple analysis of your logs you can use Viz Multichannel's built-in analysis tool.

Analyzing a Log

1. Start Viz Multichannel.
2. Select **Analyze Log** from the **Tools** menu.
3. Select your **channel**.
4. Select the **from** and **to** dates and click **OK.**
5. Select the **log folder** where you transferred the files to.
6. Click **OK**. A log file is replicated with the same file name except it starts with `Report-`.

Standard Log Sample

Below is an example of a standard log file's contents:

```
Date|Time|Action|Event Type|Description|Values
2013-05-31|14:03:57.970:|take|Element|1000|Fields: 1:
```

JSON Log Sample

Below is an example of a JSON log file's contents:

```
2006-10-06 23:29:34:  Template: START_SQUEEZE Fields: 30: IMAGE*world_sports/swoosh
31: IMAGE*YES_NEW/YesStars/Empty_Pic2 32: IMAGE*YES_NEW/YesStars/Empty_Pic2 Header:
Tonight IMG1: IMAGE*YES_NEW/YesStars/Empty_Pic IMG2: IMAGE*YES_NEW/YesStars/Empty_Pic
IMG3: IMAGE*YES_NEW/YesStars/Empty_Pic Text1: Special Text2: aaaaaaaaaaaaa
2006-10-06 23:29:37:  Template: Top-Year Fields: 1: <fo:wrapper scale-x="0"><fo:wrapp
er scale-y="0">1</fo:wrapper></fo:wrapper><fo:wrapper scale-x="0"><fo:wrapper scale-
y="0">9</fo:wrapper></fo:wrapper><fo:wrapper scale-x="0"><fo:wrapper scale-y="0">9</
```

```
fo:wrapper></fo:wrapper><fo:wrapper scale-x="0"><fo:wrapper scale-y="0">2</
fo:wrapper></fo:wrapper>
2006-10-06 23:29:38:  Template: PURPLE_TOP_COMM_CLIP Fields: Text1: bla bla  Text2:
soccer wife Title1: help me Title2: today 22:00 comm_clip: ./dataclip/Dog.avi
2006-10-06 23:31:54:  Template: START_SQUEEZE Fields: 30: IMAGE*world_sports/swoosh
31: IMAGE*YES_NEW/YesStars/Empty_Pic2 32: IMAGE*YES_NEW/YesStars/Empty_Pic2 Header:
Tonight IMG1: IMAGE*YES_NEW/YesStars/Empty_Pic IMG2: IMAGE*YES_NEW/YesStars/Empty_Pic
IMG3: IMAGE*YES_NEW/YesStars/Empty_Pic Text1: Special Text2: aaaaaaaaaaaaa
2006-10-06 23:32:26:  Template: START_SQUEEZE Fields: 30: IMAGE*world_sports/swoosh
31: IMAGE*YES_NEW/YesStars/Empty_Pic2 32: IMAGE*YES_NEW/YesStars/Empty_Pic2 Header:
Tonight IMG1: IMAGE*YES_NEW/YesStars/Empty_Pic IMG2: IMAGE*YES_NEW/YesStars/Empty_Pic
IMG3: IMAGE*YES_NEW/YesStars/Empty_Pic Text1: Special Text2: aaaaaaaaaaaaa
2006-10-06 23:33:11:  Template: START_SQUEEZE Fields: 30: IMAGE*world_sports/swoosh
31: IMAGE*YES_NEW/YesStars/Empty_Pic2 32: IMAGE*YES_NEW/YesStars/Empty_Pic2 Header:
Tonight IMG1: IMAGE*YES_NEW/YesStars/Empty_Pic IMG2: IMAGE*YES_NEW/YesStars/Empty_Pic
IMG3: IMAGE*YES_NEW/YesStars/Empty_Pic Text1: Special Text2: aaaaaaaaaaaaa
```

17.8.3 Channel and Playlist Reports

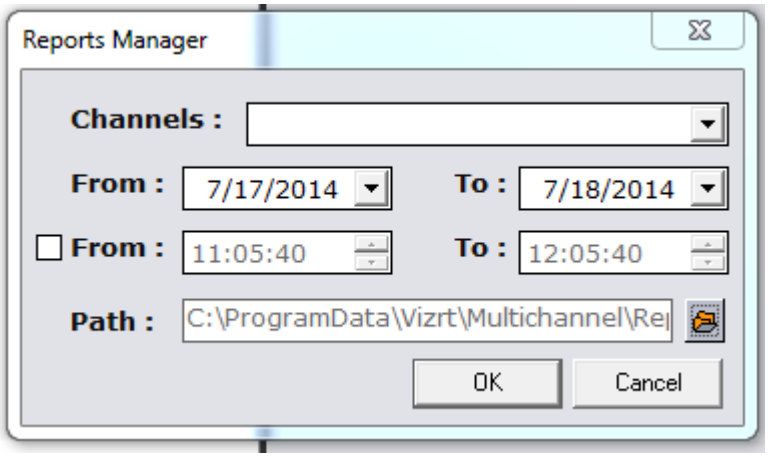
Channel and playlist reports can be created two ways: for a single channel and playlist or for multiple channels and playlists.

Create a Report Based on a Single Channel and Playlist

For information on how to set the **Playlist Reports Folder** , see the **Miscellaneous** section.

1. Select your channel.
2. Click the Playlists button.
3. Right-click your playlist and from the context menu select Generate Report. An HTML report opens in your default browser.

Create a Report based on Multiple Channels and Playlists



1. Select **Tools** from the main menu, and then **Reports Manager**.
2. From the **Channels** combo-box, select all the channels to run the report on.
3. Select the **From** and **To** dates to run the report on.

4. If desired, enable the **From** and **To** times with the check box, and select the times to run the report on.
5. Select the **Path** where the text file report will be saved. The default path used is %ProgramData%/Vizrt/Multichannel/Reports (i.e. normally C:\ProgramData\Vizrt/Multichannel/Reports) but if required you can select another location to use.
6. Click **OK**.
   The result will look like the report below:

```
Channel|Date|Time|Event Type|Duration|Program|Template|Fields
Channel1|continuous|2013-05-29T12:55:00.000|Primary|01:34:40:18|Glory God is peeking
through the blinds|
Channel1|continuous|2013-05-29T12:55:00.000|Secondary|00:00:00:00||1000|Bergen in
snow
```

17.8.4 Multichannel Log Files

Multichannel and several Multichannel components write log files as they run. The log files are ordinary textfiles and can be helpful for reporting or error detection and debugging.

- The log files are written to the directory *%PROGRAMDATA%\Vizrt\Multichannel.*
- This will normally be: C:\ProgramData\Vizrt\Multichannel.
- Note that since the *\ProgramData* directory is normally a Windows hidden directory, you will be required to explicitly insert *the directory name %PROGRAMDATA%* in the address field in Windows Explorer to reach it.
- Each Multichannel component (for example, PlayListImporter and Schedule Collector) will write it's log files in a separate directory as documented below.

> **Warning:** Care should be taken to set up automatic tasks or manual routines to prune or delete old log files that are no longer needed, otherwise the log files could eventually fill the disk.

17.8.5 Log File Locations

As explained above, all log files in the list below are relative to the log file base directory .*Logs* therefore refers to *C:\ProgramData\Vizrt\MultiChannel\Logs*

- Multichannel: .*Logs*
- Harris Integration Module: .*HarrisIntegration*
- Pebble Beach Marina Integration Module: .*MarinaIntegration*
- %ProgramData%\Vizrt\Multichannel\PlaylistImporterV2
  For 32 bit (legacy v1 setup): PlayListImporter: .*PlaylistImporter*
- SCC Schedule Collector: .*ScheduleCollector*
- Playlist History Manager: .*PlaylistHistoryManager*
- Promo Server: *No log-file on disk, use Windows Event Viewer*
- Integrations Hub: *No log-file on disk, use Windows Event Viewer*

17.8.6 ELF Log Dump Files

ELF dump files can be created in the event that a program crash should occur. ELF files are binary files, sometimes used by Vizrt support for debugging. If generated, the Elf files will be created in:

```
%PROGRAMDATA%\Vizrt\Multichannel\Logs
%PROGRAMDATA%\Vizrt\Multichannel\PlaylistHistoryManager
%PROGRAMDATA%\Vizrt\Multichannel\PlaylistImporterV2
```