Viz Connect Tetra
User Guide

Version 1.0.2

Viz Connect

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There are general best-practice solutions, these include setting the antivirus software to not scan the systems during operating hours and that the Vizrt components, as well as drives on which clips and data are stored, are excluded from their scans (as previously stated, these measures cannot be guaranteed).

Technical Support

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Created on

08/13/2025

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Chapter 1 INTRODUCTION AND SETUP

Welcome to the Viz Connect Tetra User Guide. This introductory chapter guides you through the crucial first steps: connecting power, displays, and your audio and video equipment. You will also learn how to easily register your device to ensure a seamless experience.

Built with the revolutionary NDI® protocol at its core, Viz Connect Tetra places you at the forefront of IP technology solutions for the modern broadcast and production industries, offering unparalleled flexibility and efficiency.

SECTION 1.1 OVERVIEW

Commitments and requirements can change from production to production. A powerful, versatile platform for multi-source production and multi-screen delivery workflows, Viz Connect Tetra quickly pivots to accommodate additional cameras, devices, displays or destinations.

From increasing your available inputs and outputs, to merging established and emerging technologies, to linking locations across your network, Viz Connect Tetra is a universal solution that adapts to your production needs.

- Up to 4x via 12G-SDI HD-BNC, or 1x quad-link 3G SDI, configurable as up to 2x key and fill pairs assignable to IO channels
- Video In: NDI® High Bandwidth, NDI|HX*, Viz Flowics HTML 5, SRT, SDI, RTMP, RTSP
- Video Out: NDI High Bandwidth, SDI
- NDI Tools Bridge integration (supporting *Join* and *Local* modes only) to connect to NDI Bridge hosts over public internet -
    - Up to 4x channels supported as NDI High Bandwidth in 4K UHD and HD
    - Or 1x channel 4K UHD as H.264 or HEVC code
    - 4x channels NDI|HX 2 in HD H.264 or HEVC codec
    - Please note multichannel and HEVC modes are not supported currently for 4K UHD feeds
- Configure for dual-channel 4K Ultra HD at 60 frames per second with support for 3G-SDI quad-link grouping.
- Convert SRT and RTMP video to NDI and vice versa.
- Up to 4x SDI embedded, USB Audio Devices, IP feeds with embedded audio.
- Each I/O channel supports 16x16 audio routing for patching on the go.
- Viz Connect Tetra supports NDI to NDI through all functions.
- Ingest Viz Flowics/ HTML 5 to NDI® for IP deployment, or SDI (including key & fill mode) for baseband systems integration. (To learn more about Viz Flowics - flowics.com)
- Integrate with compatible systems and devices across your network for switching, streaming, display, and delivery.

*NDI|HX Support for 4K Sources limited to 1x stream in either direction at launch. 4K and HD NDI High Bandwidth, and HD NDI|HX streams can be utilized across all 4x channels.

SECTION 1.2 SETTING UP

1.2.1 COMMAND AND CONTROL

1. Connect an external computer monitor to one of the 3 Display Ports (shown on the following page).
2. Connect the *mouse* and *keyboard* to Thunderbolt ports also on the front plate.
3. Connect the *power cord* to Viz Connect Tetra.
4. Turn on the computer monitor.
5. Press the *Power* switch on Viz Connect Tetra faceplate (located behind the drop-down door).

Hint: Viz Connect Tetra's interface requires a monitor resolution setting of at least 1280x1024.

At this point, the blue *Power LED* will illuminate, as the device boots up. (If this does not happen, check your connections and retry). Though not a requirement, we do strongly recommend that you connect Viz Connect Tetra using an uninterruptable power supply (UPS), as for any 'mission critical' system.

Likewise, consider A/C "power conditioning," especially in situations where local power is unreliable or 'noisy.' Surge protection is especially important in some locales. Power conditioners can reduce wear on Viz Connect Tetra's power supplies and other electronics, and provide a further measure of protection from surges, spikes, lightning, and high voltage.

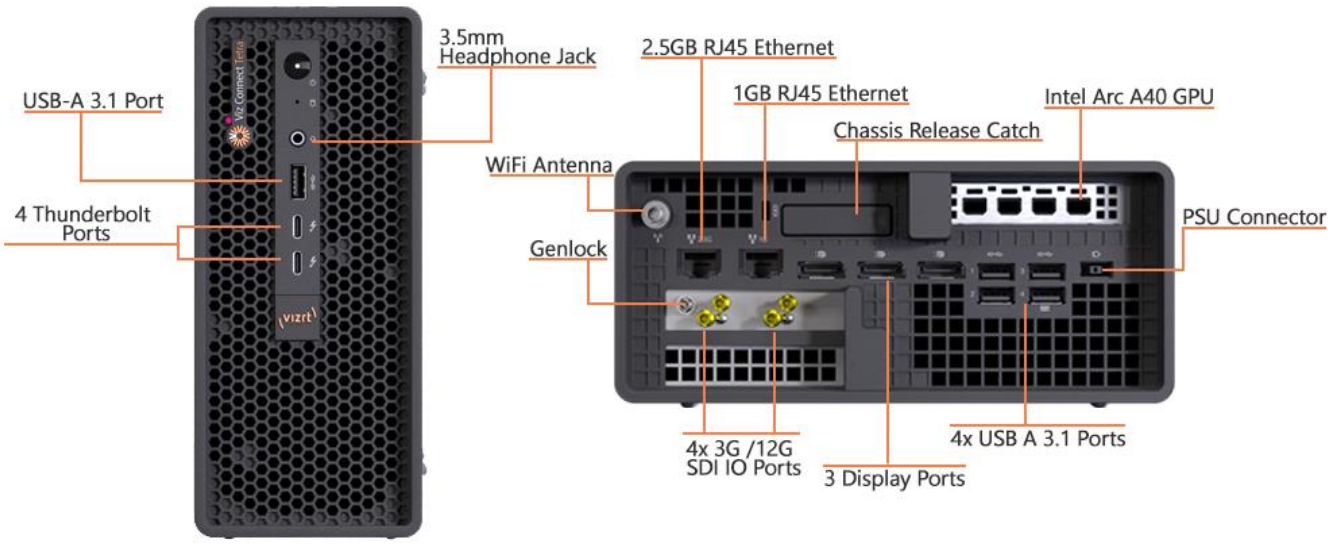
A word about UPS devices:

'Modified sine wave' UPS devices are popular due to low manufacturing costs. However, such units should generally be viewed as being of low quality and possibly inadequate to fully protect the system from abnormal power events.

For a modest added cost, consider a "pure sine wave" UPS. These units can be relied on to supply clean power, eliminating potential problems, and are recommended for applications demanding high reliability.

1.2.2 INPUT/OUTPUT CONNECTIONS

External audio and video sources are connected to the appropriate inputs.



Generally, simply connecting a suitable cable from one of the two Gigabit Ethernet ports on Viz Connect Tetra's backplane is all that is required to add it to a *local area network* (LAN). In some settings, additional steps may be required. You can access the system *Network and Sharing* control panel to accomplish more extensive configuration tasks. If further help connecting is required, please consult your system administrator.

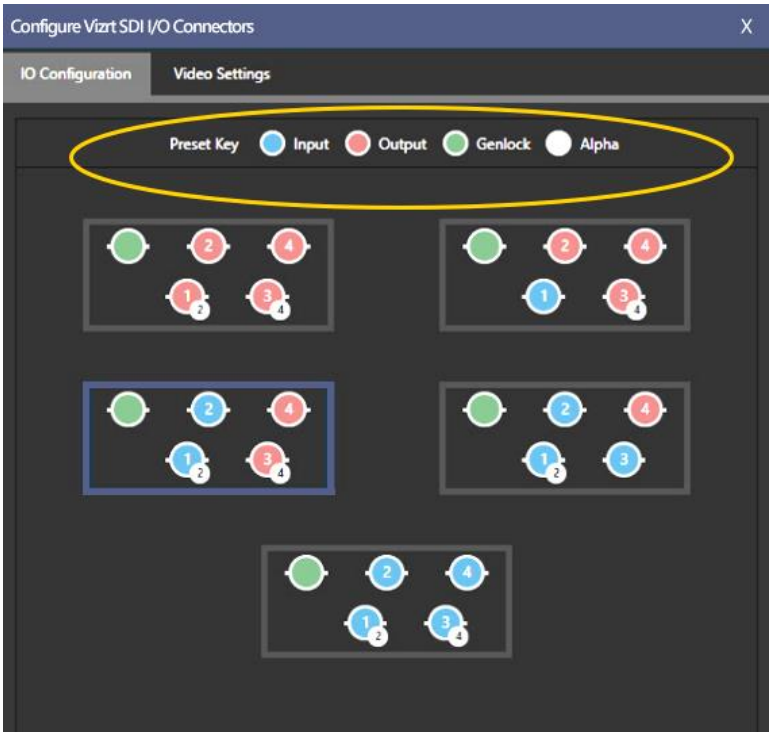
I/O CONFIGURATION

Upon first launch, the *Configure Vizrt SDI I/O Connectors* menu will appear, (this can also be accessed later when closing the application and selecting 'Exit to Admin') to modify the system configuration settings.

The *I/O Configuration* tab (next page) makes it a simple matter to select presets using graphic representations that reference which ports will be input vs output, as well as showing the port numbering and Alpha supporting connections

Note: Configuration changes require you to either reboot the system, or simply restart the application.

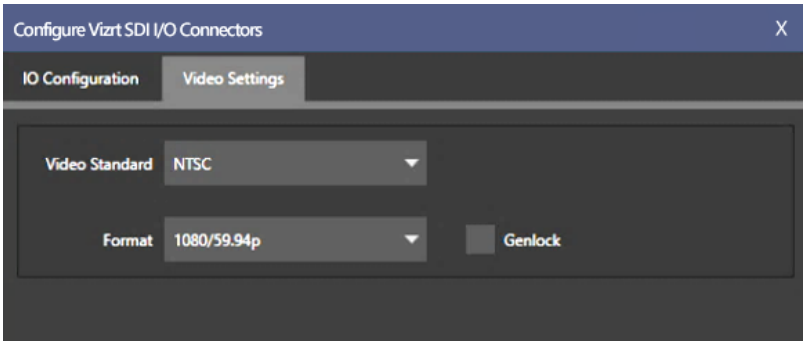
The SDI connectors on Viz Connect Tetra backplane can variously be assigned as either inputs or outputs. This panel presents various input/output preset options, providing access to all possible connector configuration alternatives.



The presets graphically display various I/O configurations as viewed from the rear of the system. Simply click a configuration preset to select it.

Video Settings

The *Video Standard* option is an important one, since it determines the framerate 'family' that the hardware can access, and thus what formats will be available for input and output. Options are NTSC and PAL.



If you configure the *Video Format* at the start of the session, you can easily be reminded of which inputs/outputs have a paired alpha by listing the SDI connection numbers in the drop down list under video *Format*.

Supported Video Formats

2160p: 59.94, 50, 29.97, 25, 24, 23.976	1080p: 59.94, 50, 29.97, 25, 24, 23.976
1080i: 59.94, 50	720p: 59.94, 29.97, 25, 24, 23.976
1080p: 60, 59.94, 50	1080p/PsF: 30, 29.97, 25, 24, 23.98
1080i: 30, 29.97, 25	720p: 60, 59.94, 50

Genlock

The *Genlock* input on Viz Connect Tetra backplane is for connection of a 'house sync' or *reference signal* (typically a 'black burst' signal intended specifically for this purpose). Many studios use this method to synchronize equipment in the video chain. Genlocking is commonplace in higher-end production environments, and genlock connections are typically provided on professional gear.

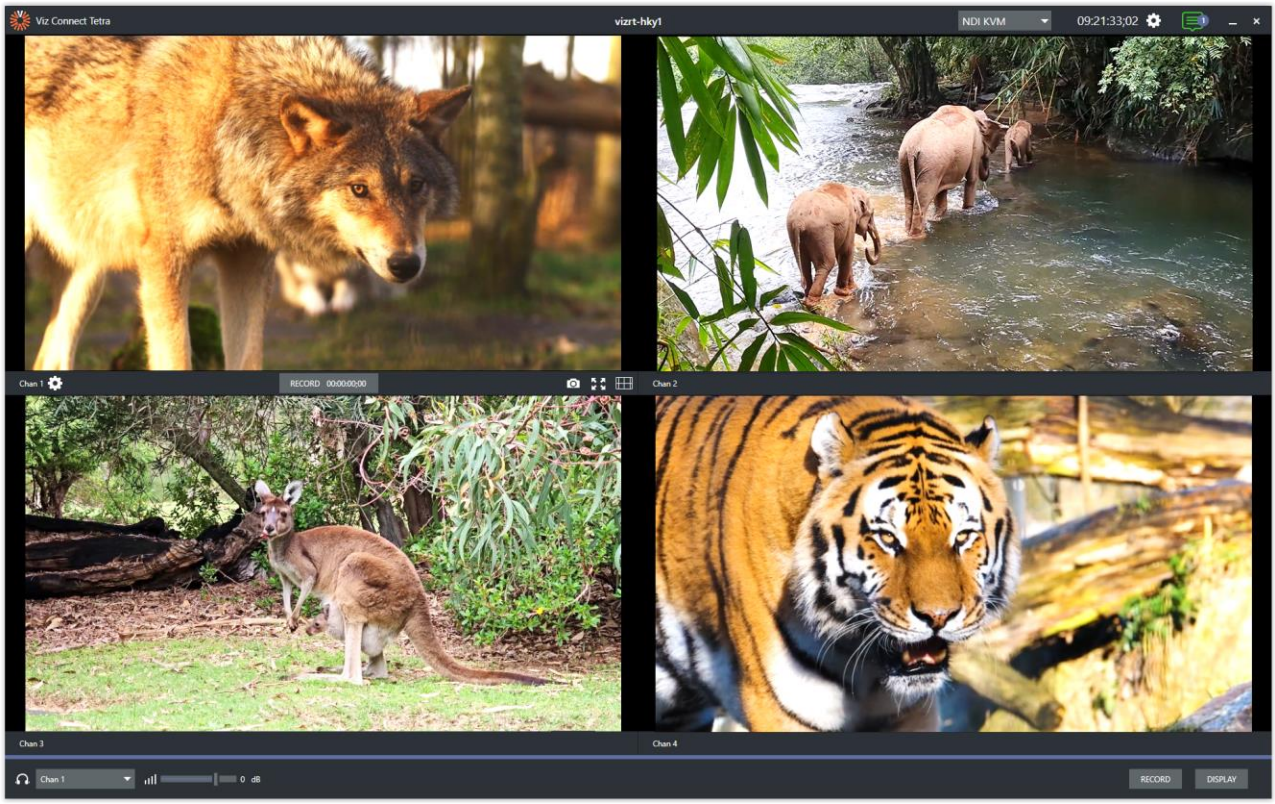
If your equipment allows you to do so, you *should* genlock all hardware sources supplying Viz Connect Tetra, *and* the Viz Connect Tetra unit. To connect the genlock source, supply the reference signal from the 'house sync generator' to the *Genlock* connector on the backplane. The unit can auto-detect an *SD (Bi-level)* or *HD (Tri-level)* reference. After connection, adjust the *Offset* (found in the *System Configuration* panel in the Titlebar) as necessary to achieve stable output.

Hint: The unit can be SD (Bi-level) or HD (Tri-level) reference. (If the Genlock switch is disabled, the unit operates in internal or 'free running' mode, instead.

Chapter 2 USER INTERFACE

In this chapter we will explore the Viz Connect Tetra user interface, understanding its layout and options for streamlined operation. You will also discover how to precisely configure your audio and video inputs and outputs. Beyond the basics, this section introduces Viz Connect Tetra's advanced features like Proc Amps for color correction, Scopes for signal analysis, and robust capture capabilities

SECTION 2.1 THE DESKTOP

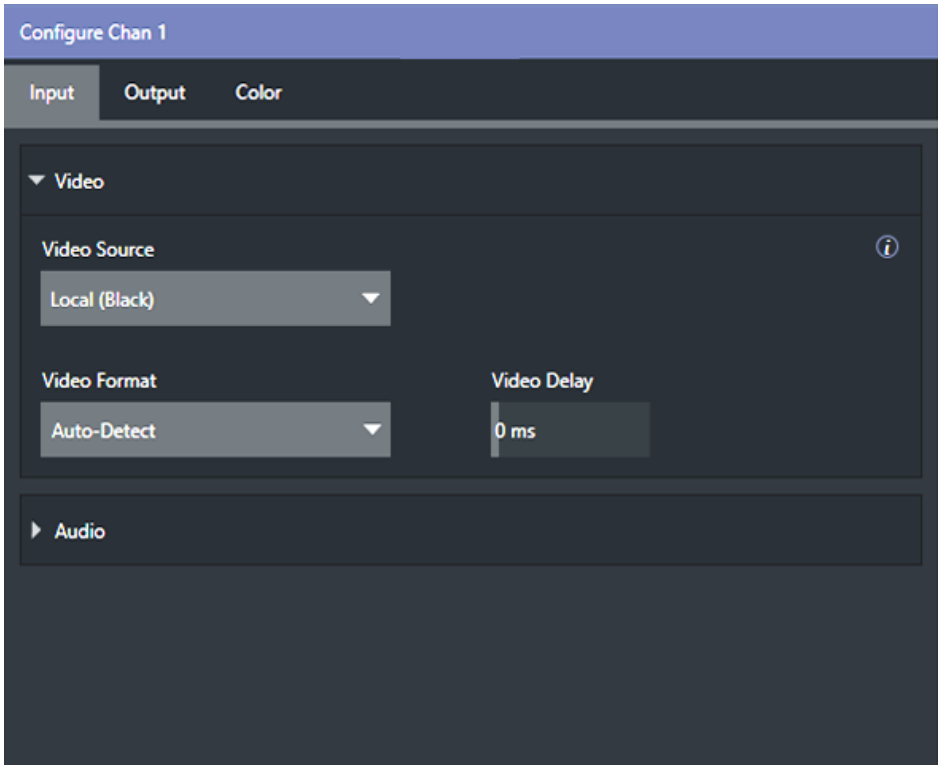


The *Desktop* interface includes *dashboards* running across the top and the bottom of the screen. By default, the large middle section of the *Desktop* is divided into quadrants, each displaying one video 'channel.' Beneath each channel's viewport is a toolbar. (Note that additional viewport toolbar controls are hidden when not in use, or until you move the mouse pointer over a viewport.)

2.1.1 CONFIGURE CHANNELS

Viz Connect Tetra allows you to select different audio and video sources for each channel via the *Configure* panel. Click the gear next to the channel label below a viewport to open its *Configure* panel.

2.1.2 INPUT TAB

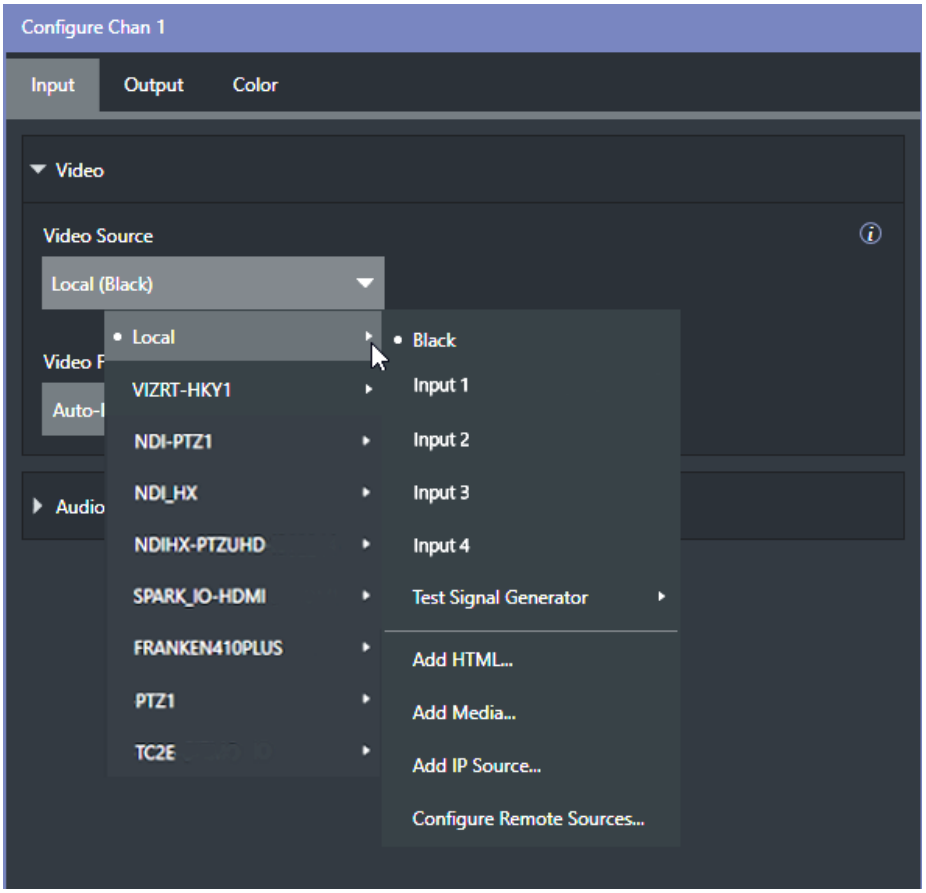


The tabbed *Input* pane allows you to select audio and video sources for this channel and set their format. You can immediately choose any NDI or SDI connector configured as an input (the latter are shown in the *Local* group), a webcam or PTZ camera with compatible network output, webpages, HTML 5 sources or even an input from a suitable external A/V capture device. (Quad-link selections list the four associated SDI input numbers that will be used, for reference.)

A *Delay* setting is provided for both audio and video sources, allowing precise A/V synchronization where a/v source timing differs.

NDI Access Manager, included in NDI Tools, can control which NDI sources are visible on this system.

CLIPS AND IP SOURCES



As mentioned in the previous section, an IP (network) source – such as a PTZ camera with NDI network video output – can be directly selected. You can choose an NDI source, an input from an external video capture card, a webcam or even a stored video file.

It is unnecessary to configure an Alpha Matte Source for NDI sources with an alpha channel. Video/Alpha sources must be synchronized and have the same format.

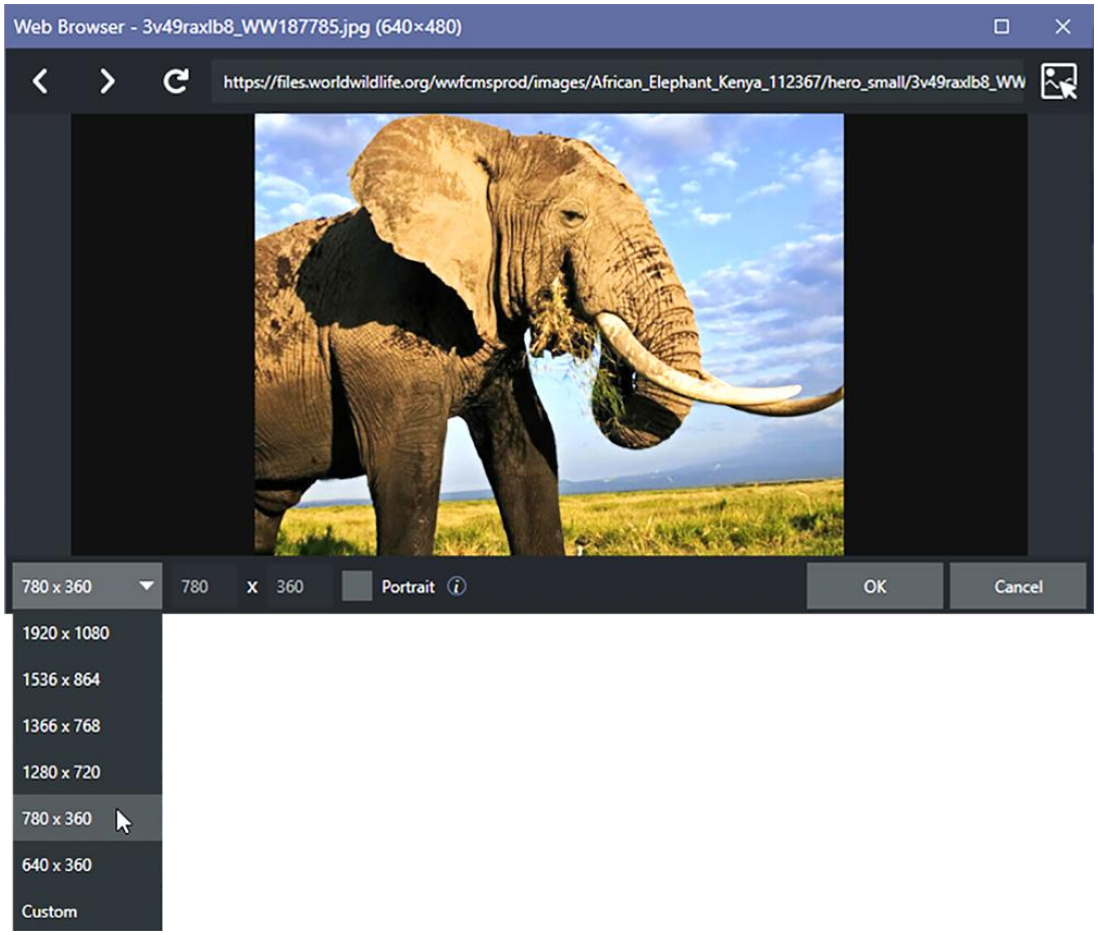
Additional options in the *Video Source* drop down menu contains the following:

- *Add HTML* to display live webpages or use with an online services that output HTML graphics.
- *Add Media* will open the Media Browser where you can select a video file.
- *Add IP Source* opens a dialog allowing configuration of various cameras with proprietary IP output, or SRT, or RTSP/RTMP.
- *Configure Remote Sources* allows you to quickly add remote NDI sources to live productions.

ADD HTML

Viz Connect Tetra supports Live Link, an HTML/CEF Implementation supporting macros, alpha transparency for HTML5 and audio. This small yet might feature allows you to:

- Enter a target URL and navigate (backward/forward) recent webpages.
- Set the resolution of the page requested from the web server (via presets or custom entries).
- Toggle the page aspect requested between landscape (default) or Portrait modes.
- Control within the webpage over mouse movement/clicks, back, forward, refresh, scrolling and keyboard input.
- Supports audio, macros, and alpha transparency.



To begin, click on 'Add HTML' from the video source drop down menu. Enter the URL in the *Web Browser* to assign to a channel (the web browser can open to a full page for better viewing). Once you have selected your image, click on the *Image Picker* (located on the top right of the browser), which works much like right-clicking to 'Open image in new tab' functionality.

The drop-down *Format Preset* menu sets the dimensions of your webpage, including a custom option. For a vertical aspect, enable the *Portrait* switch.

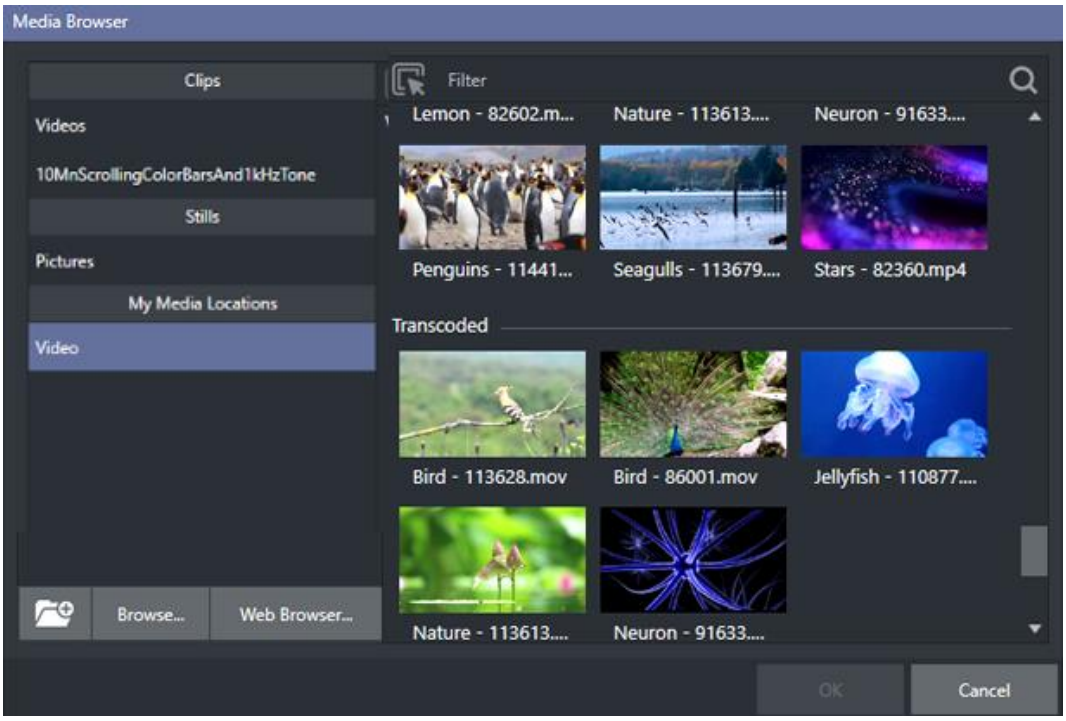
CG Buffers

Bring in professional live graphics into your production with an HTML outputting graphic renders-based platform from a CG website. By running the CG site on a separate system, simply copy the URL into an HTML buffer Web Browser URL.

Hint: Viz Flowics is the most comprehensive cloud-native HTML5-based graphics platform for broadcasters and content creators of all sizes and all production workflows. To purchase Viz Flowics or if you would like to learn more, visit www.flowics.com.

Changes made on the CG webpage (on a separate machine) will appear in your channel in real time. Transparent files are easy to bring into a live production system as it sends over the alpha to the render-based platform.

Add Media



The custom *Media Browser* provides easy navigation and selection of content on your live production system or on the local network.

The *Media Browser* is context sensitive, so the headings shown are appropriate for the purpose for which they were opened. Clicking *Browse* opens a standard system file explorer, rather than the custom Media Browser. The *Web Browser* button is also available within the *Media Browser* in the event and HTML source is needed.

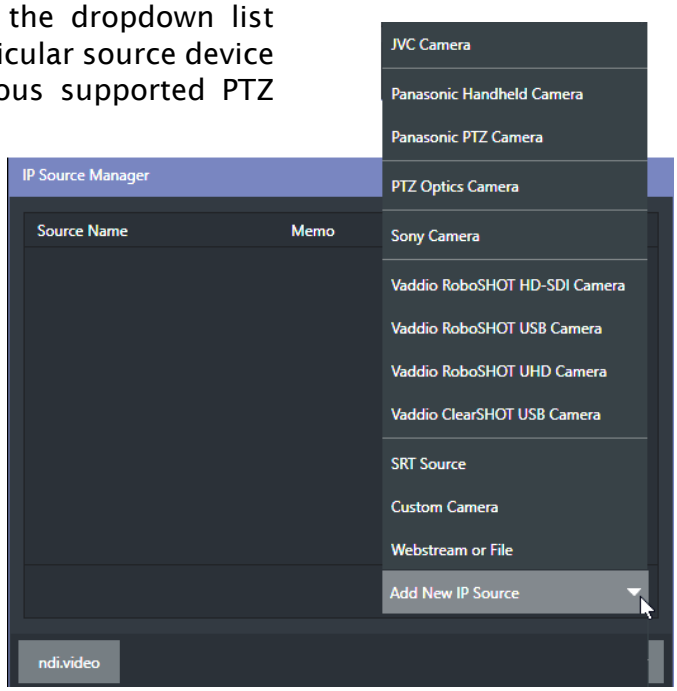
A list of sub-headings appears under the main headings on the left. These may correspond to named sessions, or groups of content. When you select a sub-heading, the right-hand pane – the File Pane – is populated.

Right-click on a file icon in the right-hand pane to show a menu providing Rename and Delete options. Be aware that Delete really does remove content from your hard drive. This menu is not shown if the item clicked is write-protected. For more detailed information, see 2.2.4 Media Browser.

ADD IP SOURCE

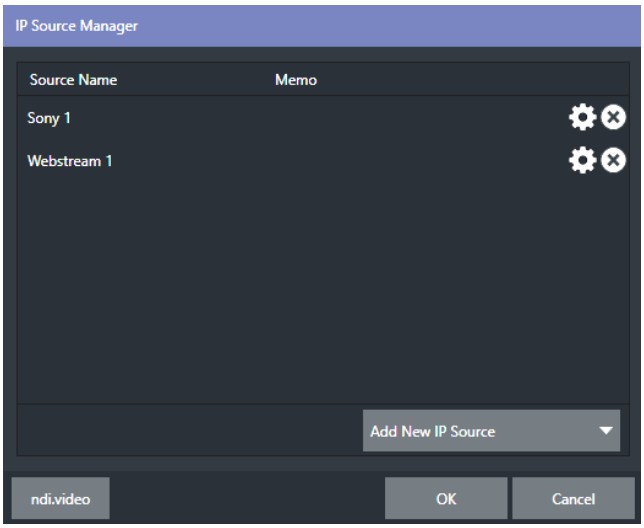
Clicking the *Add IP Source* entry opens the *IP Source Manager.* Adding entries to the list of sources shown in this panel causes corresponding entries for new sources to appear in the *Local* group shown in the *Video Source* menu of the *Configure Channel* panel.

To Add IP Source select a source type from the dropdown list provided. This opens a dialog suited to the particular source device you wish to add, such as one of the numerous supported PTZ camera brands and models.

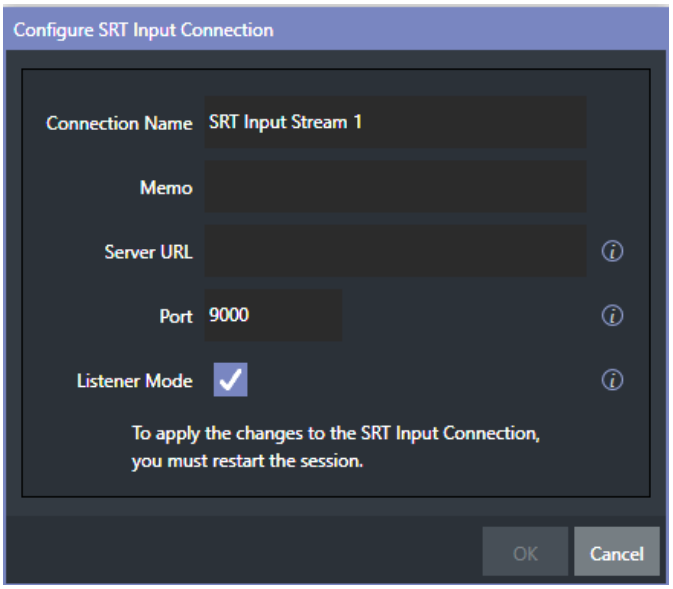


Additional protocols have been added to provide more options for video sources. RTMP (Real Time Message Protocol), a standard for delivering streams to your online video platform.

SRT Source (Secure Reliable Transport) is an open-source protocol that is managed by the SRT Alliance. SRT can be used to send media over unpredictable networks, like the internet.



The *IP Source Manager* panel displays the selected sources, here you can edit by clicking the gear to the right of the source name, or click the X to remove the source.



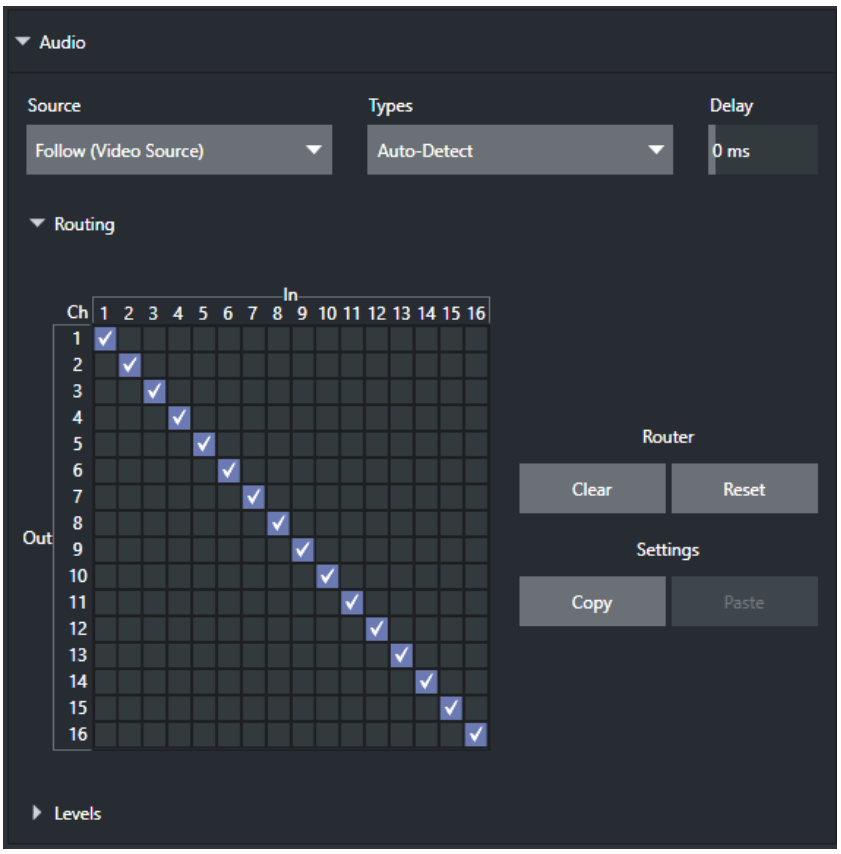
To open an SRT source, you will need to fill out the following information to configure the SRT Input Connection.

- Memo – enter a brief description for later reference.
- Server URL - Server URL – the server URL must be the public IP address of the remote source, either as a numerical address, or named such as: "entrypoint.cloud.website.com".
- Port – each SRT stream must have a unique port number. This can be any valid port, but ports in the 9000 or 10000 range are common.
- Listener Mode – the stream connects to the Caller machine, then waits for it to initiate streaming. Otherwise, this machine is the Caller, and the other side must be the Listener.

Note: After adding an IP source, you must exit and restart the software for the new settings to be applied.

Audio Routing

Recording audio during events or productions often requires routing individual channels from various audio sources to specific recorders. Viz Connect *Audio Routing* ensures that desired audio channels are captured in a particular order, facilitating post-production tasks and enabling optimal audio playback during rebroadcasts. This provides you with control over the audio streams stored alongside recorded event videos.



Clicking the second twirl-down triangle opens the *Audio Routing* menu. Here you can control which audio channels are recorded, Clear or Reset the Router, and Copy & Paste a routing matrix to other inputs when needed.

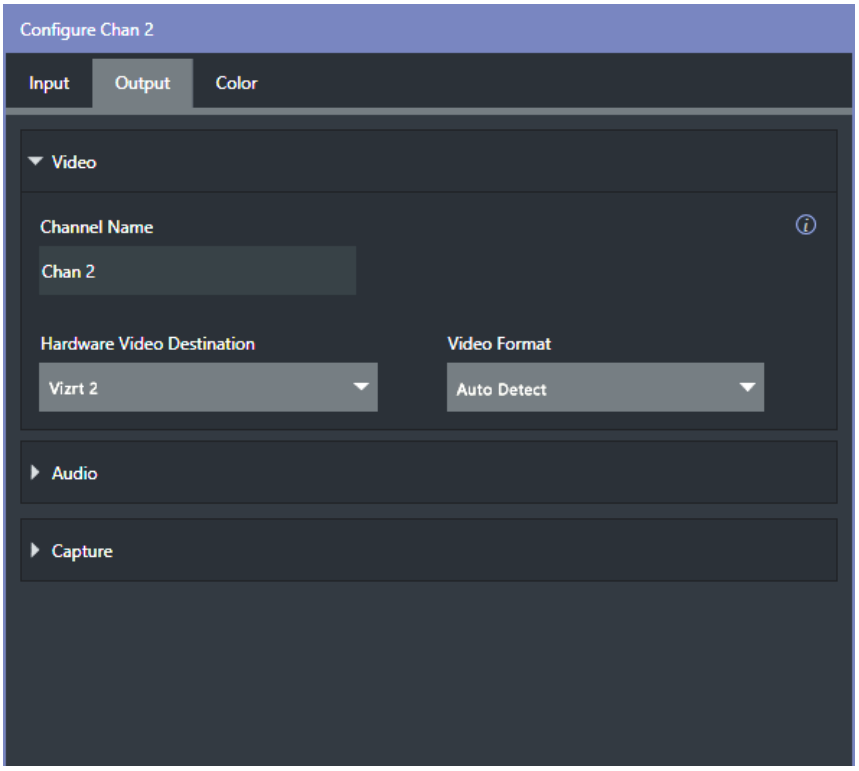
You can define the order in which the audio channels are captured by the recorders. This sequential ordering ensures consistency and facilitates post-production tasks, making it easier to synchronize audio with corresponding video footage.

Audio Levels

The *Levels* tab (located under the Routing tab) provides volume sliders for each audio source and output. Source sliders default to their 0dB gain setting on first launch. After adding audio sources, adjust these sliders as required.

2.1.3 OUTPUT TAB

The second tab in the *Configure Channel* pane hosts settings related to output from the current channel.



NDI OUTPUT

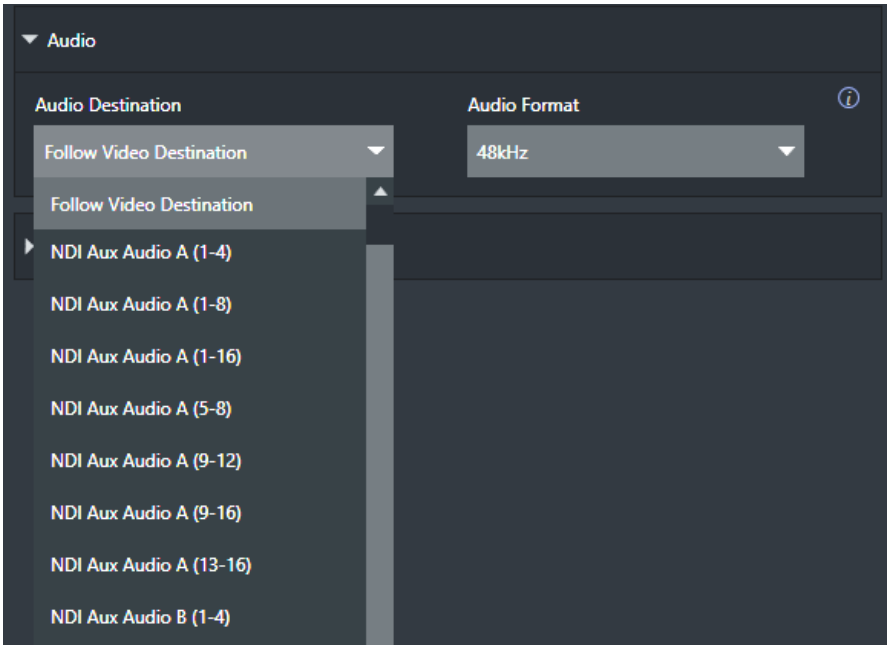
Output from channels assigned to local SDI input sources is automatically sent to your network as NDI signals. The editable *Channel Name* identifies output from this channel to other NDI-enabled systems on the network.

Note: NDI Access Manager, included with your Viz Connect Tetra, can be used to control access to NDI source and output streams. For additional NDI Tools, visit ndi.tv/tools.

HARDWARE VIDEO DESTINATION

The *Hardware Video Destination* menu allows you to direct video output from the channel to an SDI connector on the system's backplane that is configured as an output (or another video output device connected to and recognized by the system). *Video Format* options supported by the device are provided in a menu at right. (Quad-link selections list the four associated SDI output numbers that will be used, for reference.)

Audio Destination

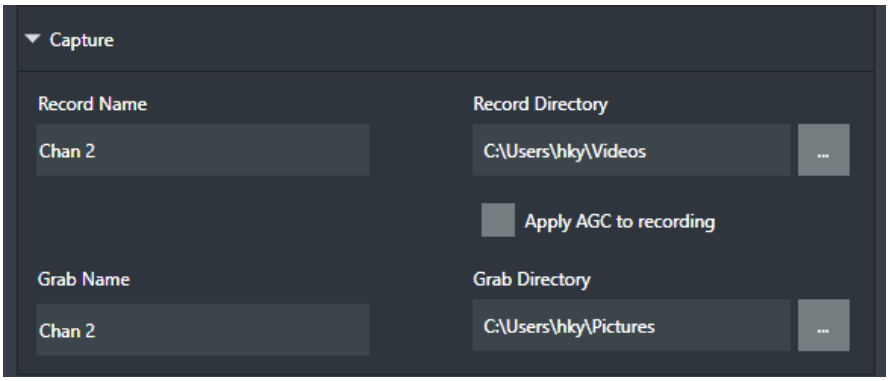


The *Audio Destination* tab allows you to direct audio output to system sound devices as well as any supported third part audio devices you may connect (typically by USB). As required, *Audio Format* options are provided in the menu at right.

Note: Additional audio output devices (including Dante) recognized by the system can be configured in this section.

Capture

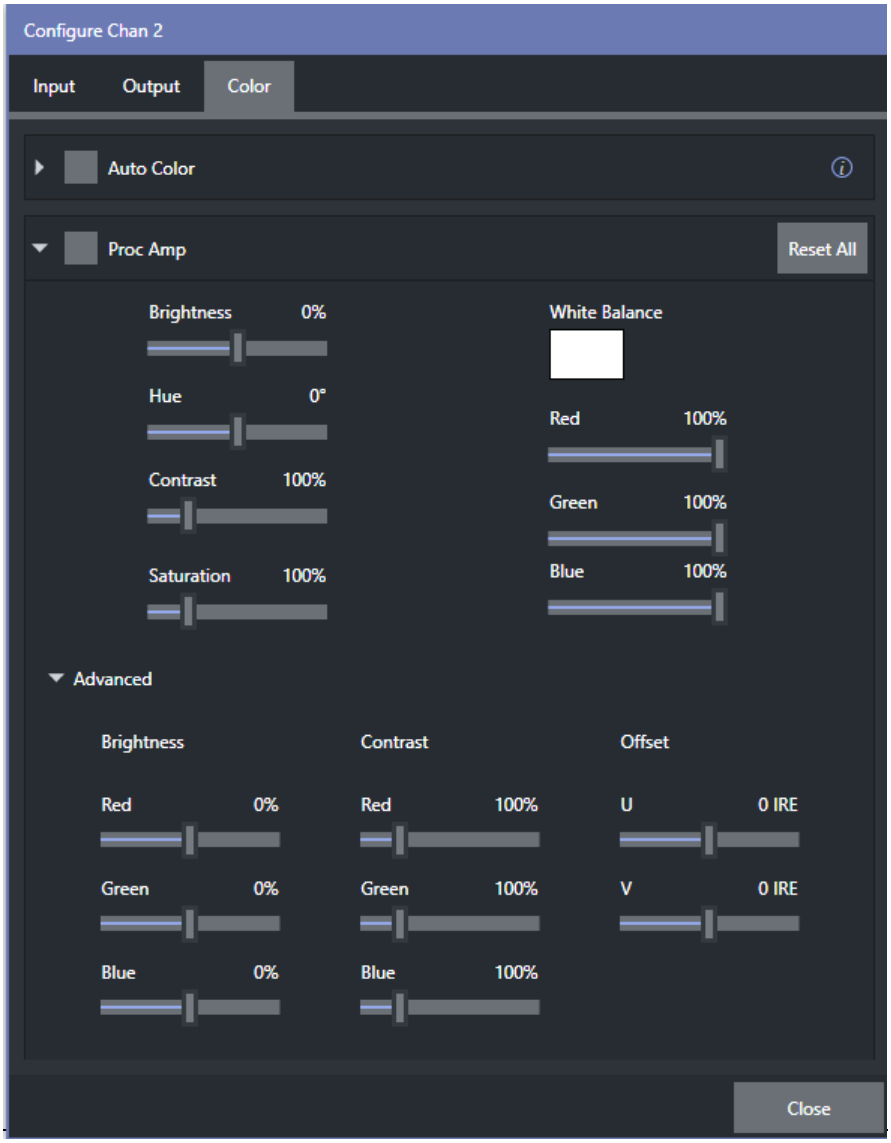
The *Capture* tab is also where you assign the path and filename for captured video clips and stills.



The initial *Record* and *Grab Directories* are the default *Videos* and *Pictures* folders on the system, but we strongly encourage you to use fast network storage volumes or an external drive connected to one of the ports on Viz Connect Tetra rear panel for video capture especially.

2.1.4 COLOR TAB

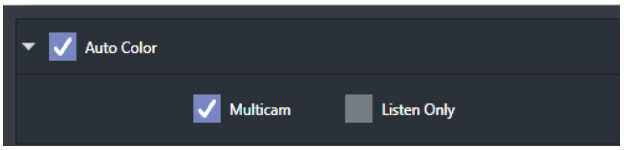
The *Color* tab provides an extensive set of tools for adjusting the color characteristics of each video channel.



Choosing *Auto Color* automatically adapts color balance as lighting conditions change over time.

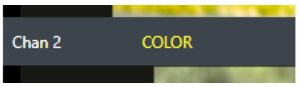
Note: Proc Amp adjustments follow Auto Color processing.

By default, each camera with *Auto Color* enabled is processed by itself. Enable *Multicam* to process multiple cameras as a group.



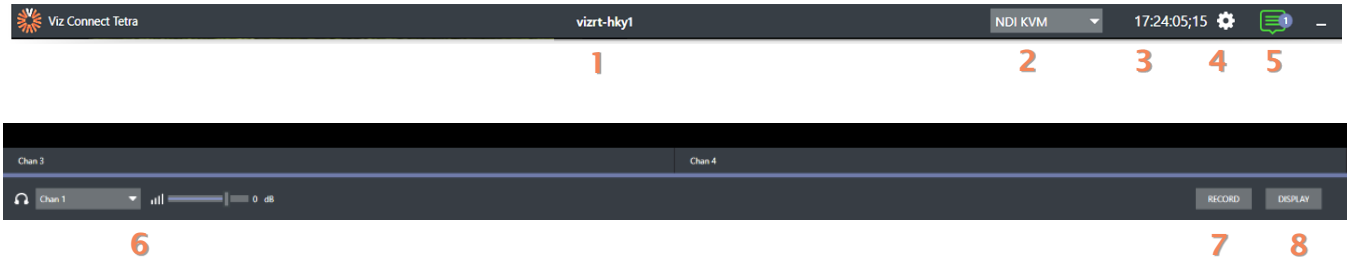
To apply *Multicam* processing to a source without its own colors being evaluated, checkmark *Listen Only*. Or enable *Listen Only* for all *Multicam* group members except one to make that source the 'master' color reference.

Note: Custom settings in the Color tab trigger a COLOR notification message that appears in the footer below the viewport of the channel.



SECTION 2.2 TITLEBAR & DASHBOARD

Viz Connect Tetra's *Titlebar* and *Dashboard* are home to several important displays, tools, and controls. Prominently located at the top and bottom of the *Desktop*, the *Dashboard* occupies the full width of the screen.



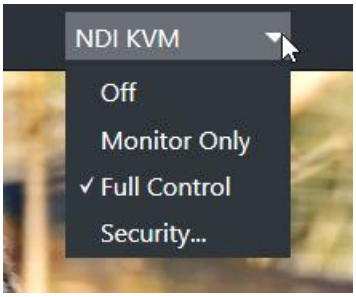
The various elements presented in these two bars are listed below (starting from the left):

1. *Machine name* (the system network name supplies the prefix identifying NDI output channels)
2. *NDI KVM menu* – Options to control Viz Connect Tetra remotely via NDI connection
3. *Time Display*
4. *Configuration*
5. *Notifications Panel*
6. *Headphones Source and Volume*
7. *Record*
8. *Display*

Of these items, some are so important that they rate their own chapters. Others are detailed in various sections of this guide.

2.2.1 TITLEBAR TOOLS

NDI KVM



Thanks to NDI, it is no longer necessary to configure complicated hardware KVM installations to enjoy remote control over your Viz Connect Tetra system. The free NDI Studio Monitor application brings network KVM connectivity to any Windows® system on the same network.

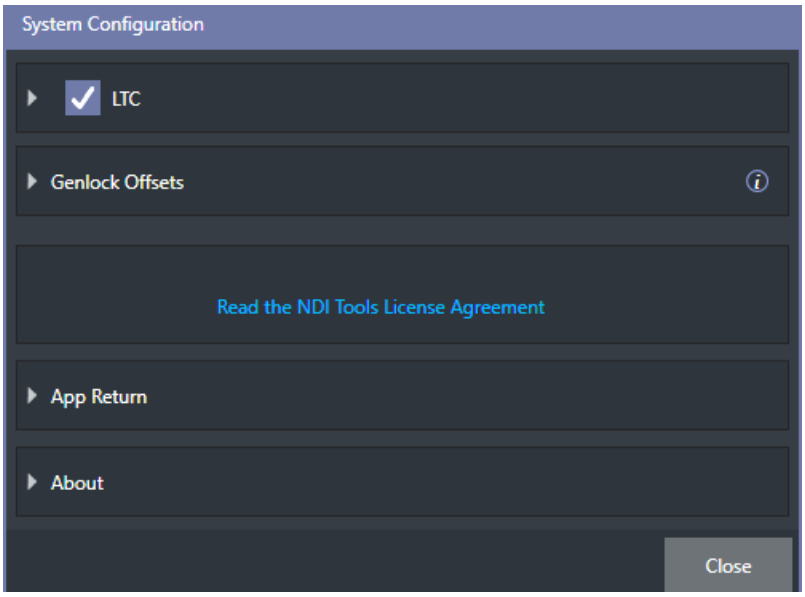
To enable, use the titlebar *NDI KVM* menu to select an operating mode, choosing between *Monitor Only* or *Full Control* (which passes mouse and keyboard operations to the remote system). The *Security* option lets you apply *NDI Group* control to limit who can view the *NDI KVM* output from the host system.

To view the output from the remote system and control it, select [Device Name]>*User Interface* in the *Studio Monitor* application supplied with the NDI Tool pack, and enable the KVM button overlaid at upper-left when you move the mouse pointer over the screen.

Hint: Touch is supported with KVM. For example, you can run the User Interface output on a Microsoft Surface for portable touch control over your entre live production system.

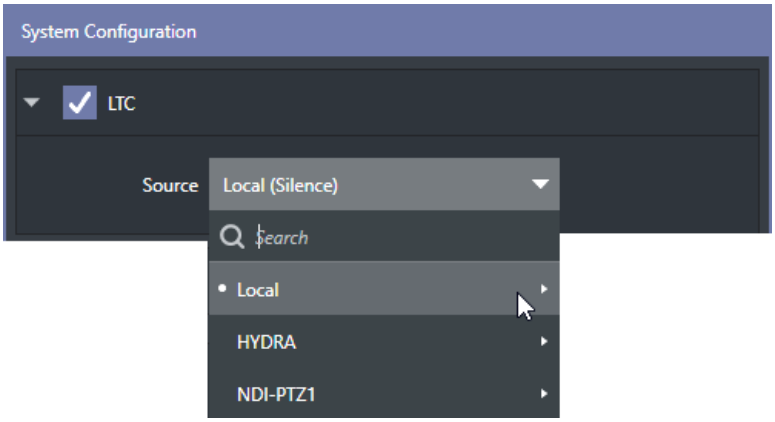
2.2.2 SYSTEM CONFIGURATION

The *System Configuration* panel is opened by clicking the configuration (gear) gadget found in the upper-right corner of the screen.



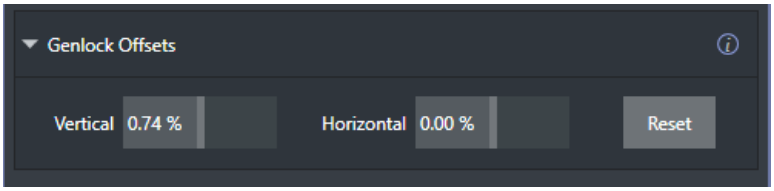
LTC Timecode

LTC timecode support can be activated by choosing an input using the *LTC Source* menu to choose almost any audio input to receive the timecode signal over and enabling the checkbox at left.



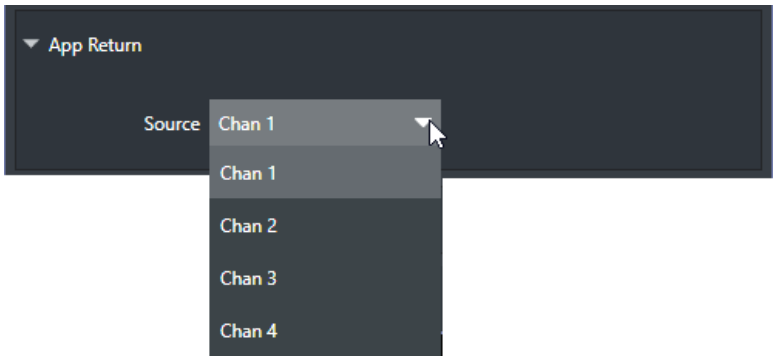
Genlock Offsets

Adjust the Genlock timing offsets with the *Vertical* and *Horizontal* settings, which effect all SDI outputs.



App Return

App Return is providing a "mix-minus" audio feed, particularly important for remote callers. A mix-minus feed sends all the program audio except the remote caller's own audio, back to them. This prevents echoes and other distractions that can occur when callers hear themselves in their own monitoring system.



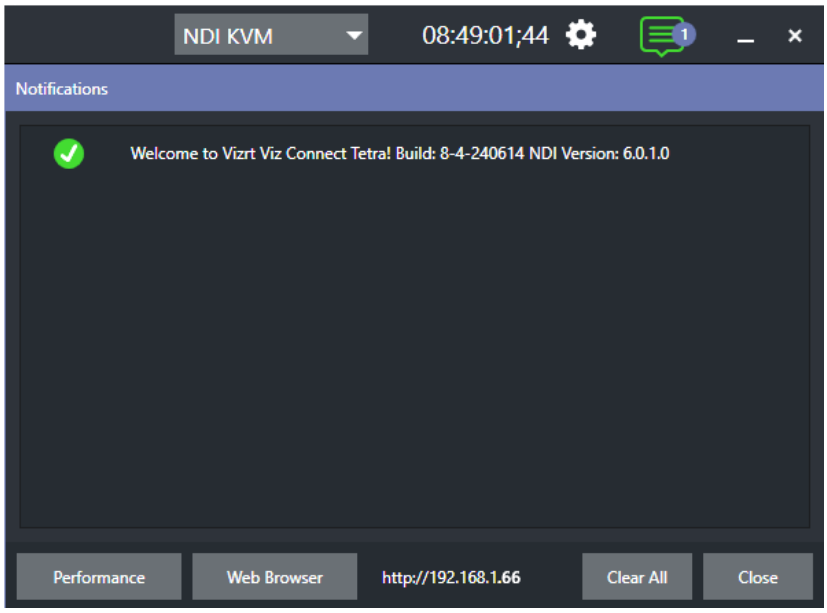
About

You will find the version of Viz Connect Tetra currently running on your system, along with additional license information.

Notifications

The last item on the Titlebar is the Notifications icon. A 'number bubble' indicates how many un-viewed entries have accumulated. Clicking the icon displays the Notification Pane, which provides both helpful information and some particularly useful tools.

Note: A secondary monitor is necessary for using the App Desktop (see Chapter 3 Application Desktop for more information). An amber warning icon will indicate this requirement in the Notifications pane if a second display is not connected



The color of the *Notification* icon indicates the type of messages available for review:

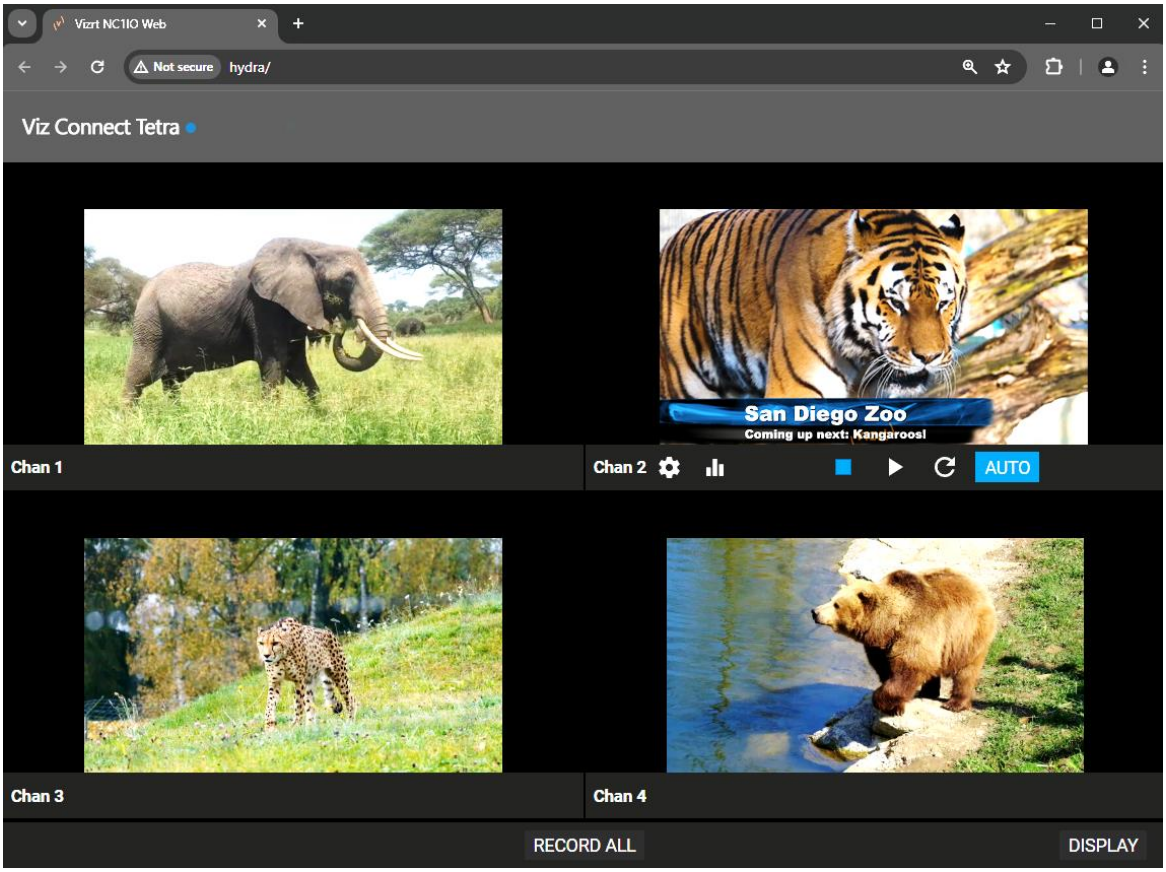
- A green icon denotes an informative message.
- An amber icon indicates a warning message has been received.
- Higher priority alert messages are denoted by a red icon.
- The highest priority (un-viewed) item in the list determines the *Notification* icon color. After you open the panel to review the notifications in the list, the icon turns white.

The individual entries can be cleared by right-clicking to show the item's context menu, or the *Clear All* button in the panel's footer.

Information appearing in the *Notification* Pane can include software build number or status messages pertaining to operations or system conditions; these may be benign notifications or cautionary.

The footer of the *Notifications* panel also features a Web Browser button, discussed next.

Web Browser

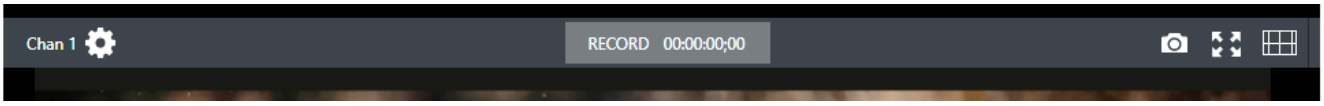


In addition to the remote control features provided for your Viz Connect Tetra system by the integrated NDI KVM feature, the unit also hosts a dedicated webpage.

The *Web Browser* button at the bottom of the *Notifications* panel provides a local preview of this webpage, which is served to your local network to let you control the system from another system on your network.

To visit the page externally, copy the IP address shown beside the *Web Browser* button in the *Notification* panel into the address field of a browser on any computer on your local network.

2.2.3 VIEWPORT TOOLBAR



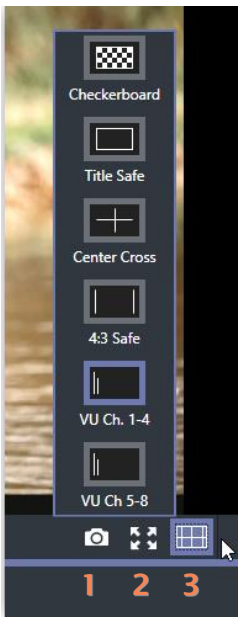
Viz Connect Tetra's channels each have a toolbar beneath their respective viewports. The various elements comprising the toolbar are listed below from left to right:

1. *Channel name* – Can be changed by clicking on the label, and also in the *Configure Channel* panel.
    a. A *Configuration* gadget (gear) appears next to the channel name when the mouse is over a viewport.
2. *Record* and *Record Time* – The record button below each viewport toggled recording that channel; the *RECORD* button in the bottom dashboard opens a widget enabling capture *from any SDI input*.
3. *Grab* – the base filename and path for still image grabs are set in the *Configure Channel* panel.
4. *Full screen*
5. *Overlays*

VIEWPORT TOOLS

GRAB

1. A *Grab* Input tool is in the lower right corner below the monitor for each channel. By default, still image files are stored in the system Pictures folder. The path can be modified in the Output window for the channel.



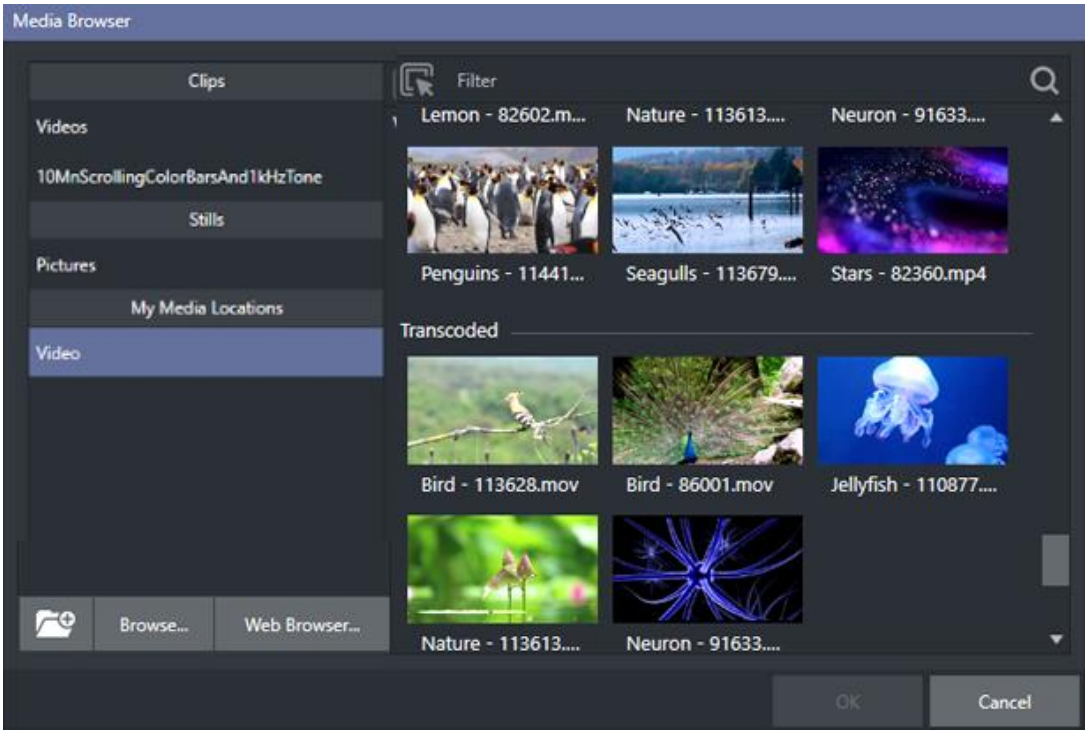
FULL SCREEN

2. Expands the video display for the selected channel to fill your monitor. Press ESC on your keyboard or click the mouse to return to the standard display.

OVERLAY

3. Found in the lower right corner of each channel, *Overlays* can be useful for visualizing safe zones, centering and more. To use an overlay, just click on an icon in the list, more than one overlay can be active at the same time.

2.2.4 MEDIA BROWSER



The custom *Media Browser* provides easy navigation and selection of content on the local network. Its layout is principally comprised of two panes on the left and right that we will refer to as the *Location List* and *File Pane*.

LOCATION LIST

The *Location List* is a column of favorite "locations", grouped under headings such as LiveSets, Clips, Titles, Stills, and so on. Clicking the + (plus) button will add selected directory to the Location List.

SESSION AND RECENT LOCATIONS

The *Media Browser* is context sensitive, so the headings shown are appropriate for the purpose for which they were opened.

In addition to locations named for your stored sessions, the *Location List* includes two notable special entries.

The *Recent* location provides quick access to newly captured or imported files, saving you time hunting through a hierarchy to find them. The *Session* location (named for the current session) shows you all files captured in the current session.

BROWSE

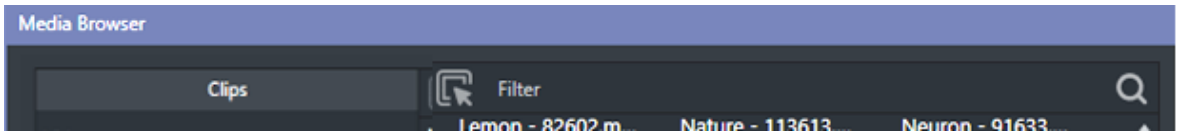
Clicking *Browse* opens a standard system file explorer, rather than the custom *Media Browser*.

File Pane

Icons appearing in the *File Pane* represent content located inside the sub-heading selected at left in the *Locations List*. These are grouped under horizontal dividers named for sub-folders, which allows related content to be organized conveniently.

File Filters

The *File Pane* view is filtered to show only relevant content. For example, when selecting *LiveSets*, the browser only shows *LiveSet* files (.vsfx).

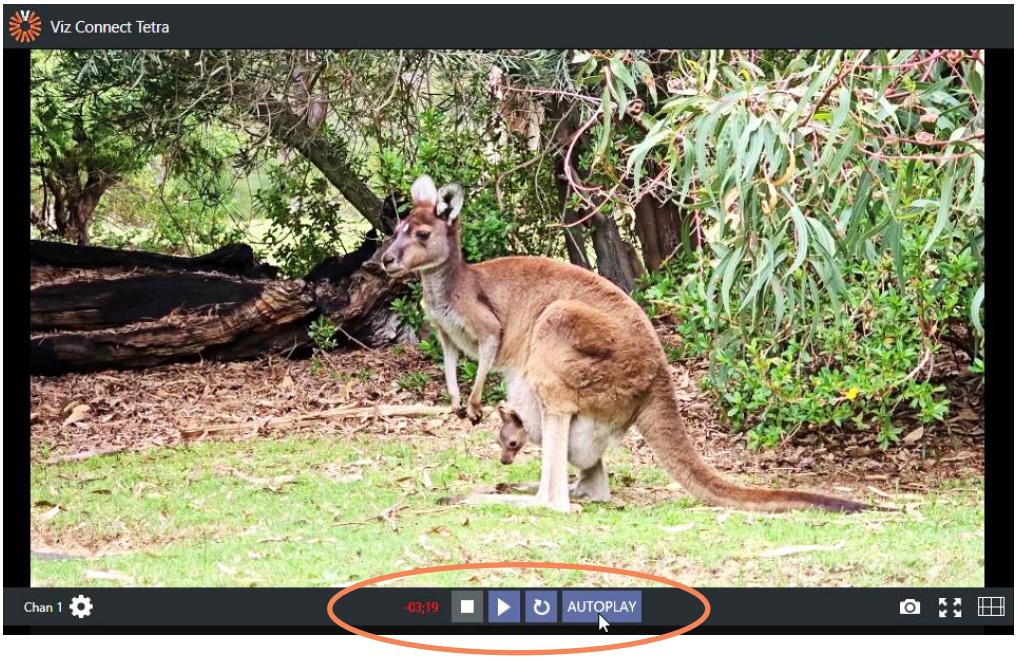


An additional filter appears above the *File Pane*. This filter quickly locates files matching criteria you enter, doing so even as you type. For example, if you enter “wav” into the filter field, the *File Pane* displays all content at the current location with that string as part of its filename. This would include any file with the extension “.wav” (WAVE audio file format), but also “wavingman.jpg” or “lightwave_render.avi”.

File Context Menu

Right-click on a file icon in the *right-hand* pane to show a menu providing *Rename* and *Delete* options. Be aware that *Delete* really does remove content from your hard drive. This menu is not shown if the item clicked is write-protected.

2.2.5 PLAYER CONTROLS



The *Player Controls* (located directly below the viewport) appear only when *Add Media* has been chosen as your video input source.

TIME DISPLAY

To the far left of the controls is the *Time Display*, during playback it displays the current countdown time for the embedded clip timecode. The time display provides visual indication that the playback is nearing its end. Five seconds before the end of play for the current item, the digits in the time display turn red.

STOP, PLAY AND LOOP

- *Stop* - clicking Stop when the clip has already stopped goes to the first frame.
- *Play*
- *Loop* - when enabled, playback of the current item repeats until manually interrupted.

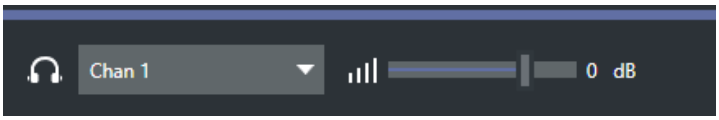
AUTOPLAY

Autoplay, located to the right of the *Loop* button, is linked to the player's current tally status, where it remains in the play state if at least one of the connected live production systems has it on Program (PGM), unless manually overridden through the user interface. However, once all the connected live production systems have removed this NDI output from PGM, it will automatically stop and return to its cue state.

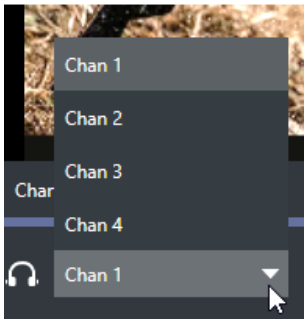
Note: The Autoplay button becomes hidden when the 4 Channel layout is selected for display, see 2.2.6 Dashboard Tools.

2.2.6 DASHBOARD TOOLS

AUDIO (HEADPHONES)



Controls for *Headphone audio* are found in the lower-left corner of the dashboard at the bottom of the screen.



1. The audio source supplied to the *Headphone* jack can be selected using the menu next to the *headphone icon*.
2. The *Volume* for the selected source can be adjusted moving the slider provided at right (double-click this control to reset it to the default 0dB value).

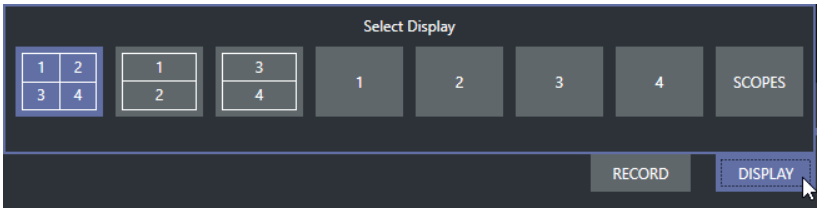
RECORD

The *Record* button is also located in the lower-right corner of the dashboard. Click it to open a widget allowing you to begin or stop recording of individual channels (or start/stop all recordings.)

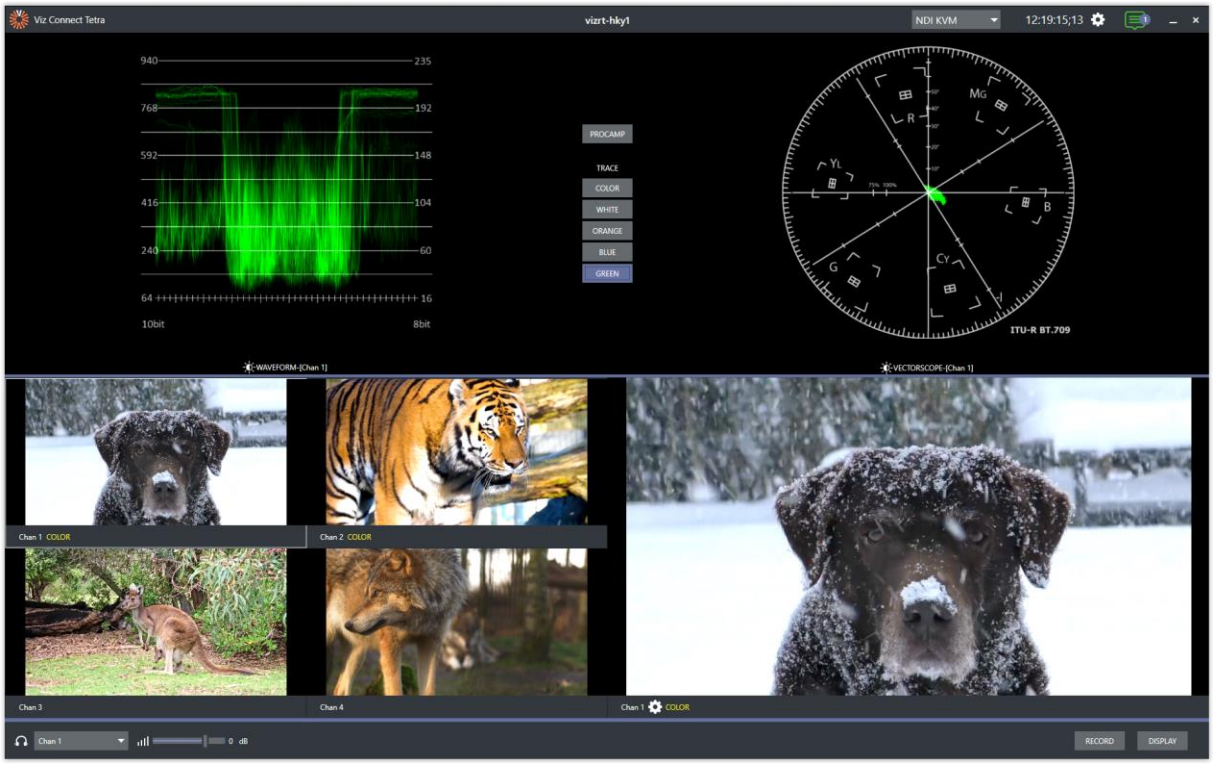
Notes: The destinations for recorded clips, their base file names and other settings are controlled in the Configuration panel. Recording NDI sources is not supported. The Share Local Recorder Folders can be used to expose local folders assigned to capture duties on your network, making it easy to access captured files externally.

DISPLAY

In the bottom-right corner of the *Dashboard* at the bottom of the (primary) screen, the *Display* widget offers a variety of layout options to let you view channels individually.

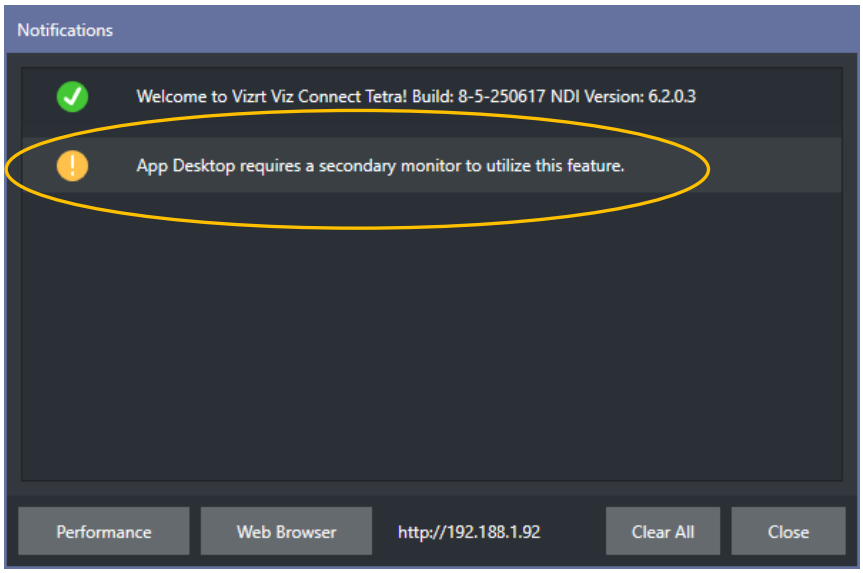


Waveform and *Vectorscope* features are shown when you select the *SCOPES* option in the *Display* widget.



Chapter 3 APPLICATION DESKTOP

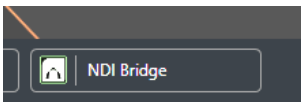
To access the Application Desktop, a second monitor is required. You will receive a notification warning in your notifications pane.



Upon launching Viz Connect Tetra, the *Application Desktop* will automatically display on your secondary monitor. The specific applications shown will vary depending on your system's configuration.

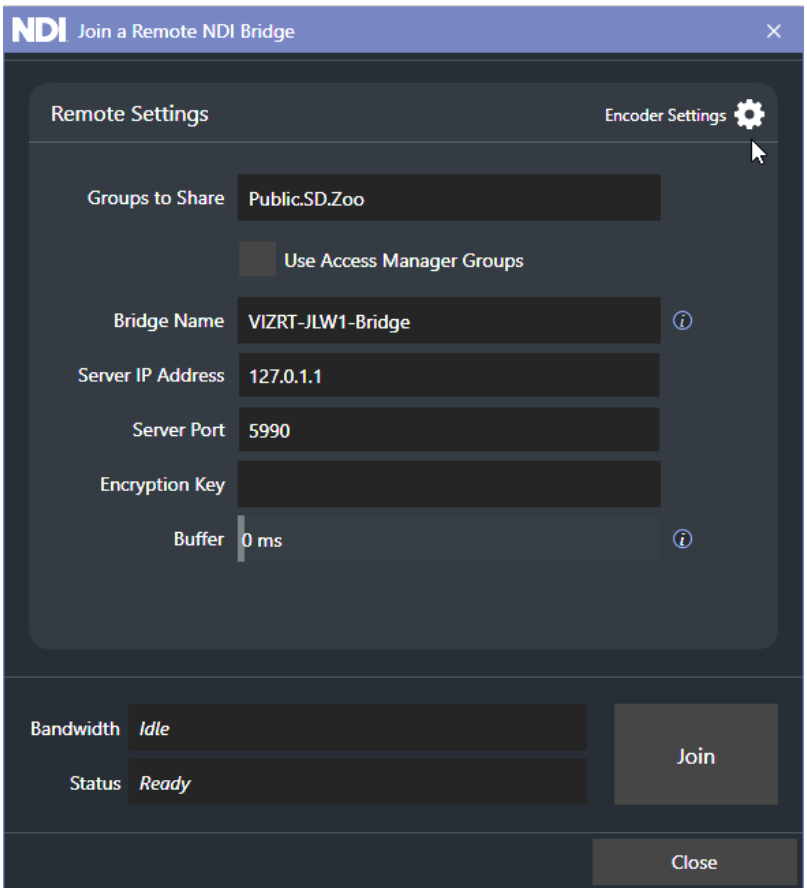
Supported applications are Zoom Workplace, Microsoft® Edge, Google® Chrome, NDI® Tools, NDI Bridge, and NDI Studio Monitor are all provided in the Dashboard.

Before we dive into *Live Call Connect*, let's go over *NDI Bridge* first, the application is accessible in the *App Desktop*.



3.1.1 JOIN A REMOTE NDI BRIDGE

NDI Bridge allows you to securely connect two entirely different NDI networks with full management of all audio and video streams automatically, no matter how many sources. Using just one publicly available IP address as Host, any number of networks can connect and share sources; allowing teams of any size to connect from anywhere on the planet.

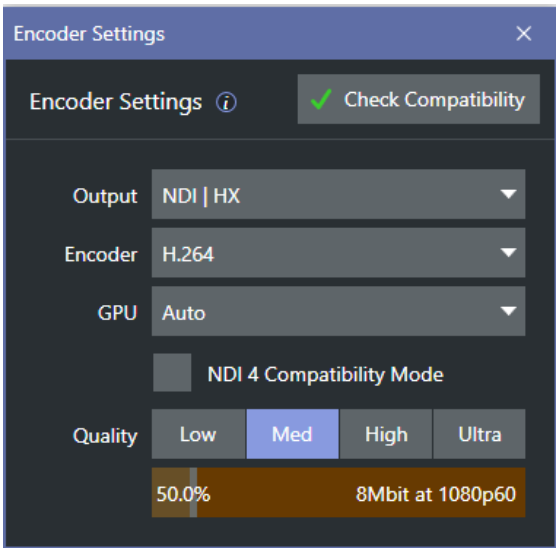


To join a remote NDI Bridge:

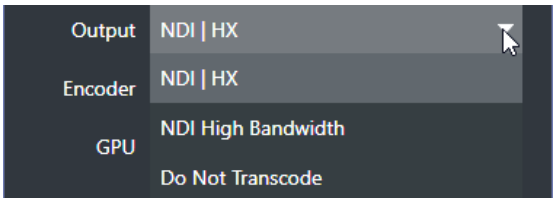
1. Enter the name of one or more groups to which the NDI sources you want to share belong, or check the *NDI Access Manager Groups* box after you have entered your group in Access Manager.
    a. Another option is to leave this field blank to share all public NDI signals.
2. NDI receivers of your LAN will list remote sources from the Bridge under *Bridge Name*.
3. The *Server IP Address* identifies the NDI Bridge Host you want to connect to.
4. The *Server Port* field requires you to enter the Host's external communication port number.
5. The *Encryption Key* is used to encrypt and decrypt your data. Enter the same key vales as on the NDI Bridge Host.

Note: Buffering can smooth out stuttering on incoming remote NDI Bridge sources, but increases latency of these streams by a corresponding amount.

3.1.2 ENCODER SETTINGS



The Encoder Settings are where you can define how the signals will be shared across the wide area network. You can reduce bandwidth needs by transcoding all signals to NDI HX using HEVC or H.264 encoding (using the *Encoder* pull down menu). With compression settings you can adjust for your needs and capacity.



Under the *Output* pull down menu, signals can also be encoded as high bandwidth NDI for use in workflows that do not have NDI HX compatibility, or you can choose not to transcode these signals and they will be passthrough in their native format.

The *GPU* setting controls which hardware encoders Bridge uses. Auto mode (the default) bases the assignment on current encoder utilization; otherwise, you can manually select a specific GPU.

NDI 4 Compatibility Mode provides backwards compatibility, though it is rarely needed; enabling this mode will limit NDI output on two audio channels.

> *Note: Changes to Output, Encoder, and GPU settings will only be applied the next time you start Bridge.*

The *Quality* buttons refer to Video Bandwidth allowing you to select between Low, Medium, High, and Ultra bandwidth options. The *Ultra* button will enable better video with reduced latency. Choosing which option works best depends on your network throughput capabilities and other traffic.

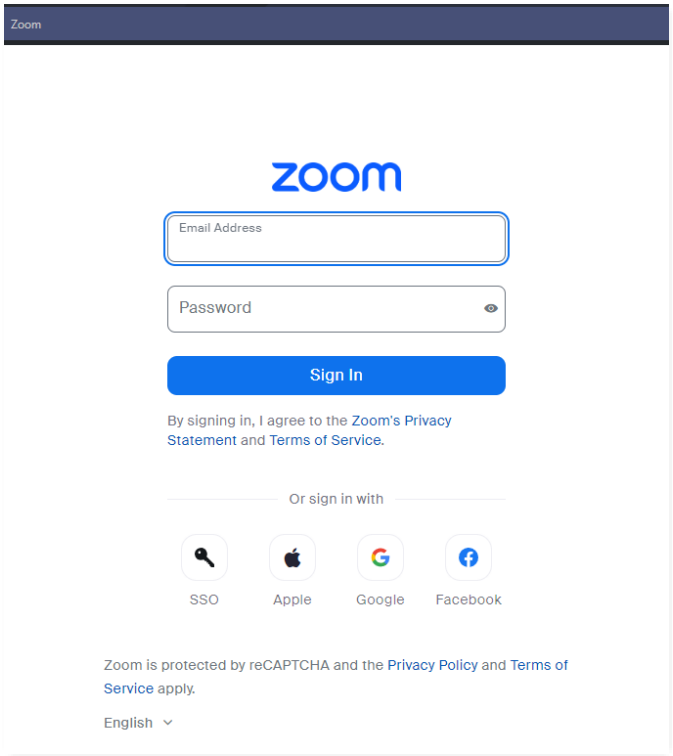
Click Join to connect to the remote Bridge Host.

Chapter 4 LIVE CALL CONNECT

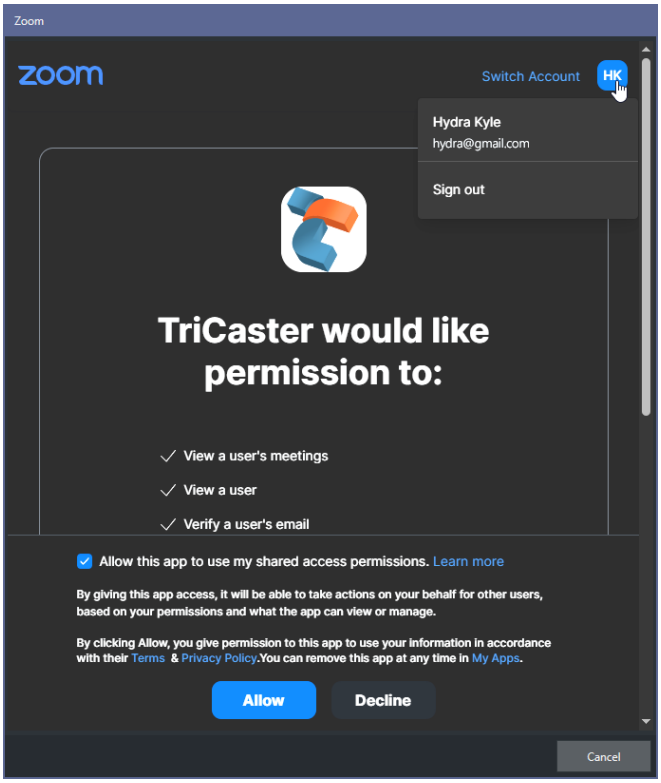
Integrate live video calls effortlessly into your Viz Connect Tetra productions using Live Call Connect. This functionality allows you to bring in remote participants with exceptional video and audio quality from anywhere in the world. Whether for interviews, discussions, or on-location reports, Live Call Connect ensures flexible presentations of remote content, irrespective of the caller's device.

SECTION 4.1 SETTING UP A ZOOM CALL

- Click on the Zoom icon in the taskbar.
- Enter your username and password. Note that for your first login, you might need to input a one-time passcode.
- After this initial sign-in, Zoom will save your credentials for future use.

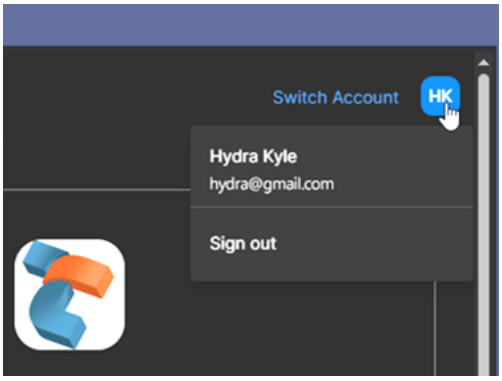


4.1.1 PERMISSIONS AND POLICIES



- You will be prompted to accept Zoom's Terms & Privacy Policy.
- Check the box next to 'Allow this app to use my shared access permissions'
- Click 'Allow' to proceed.

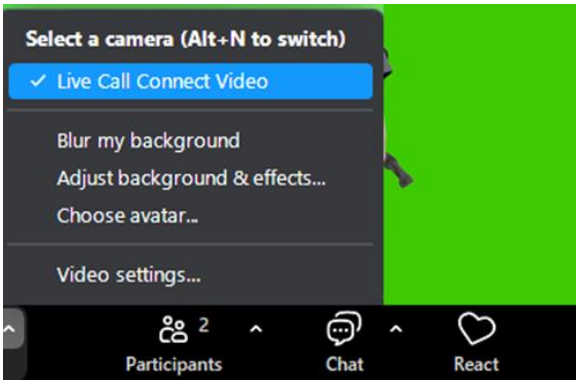
4.1.2 REMOVING THE APP

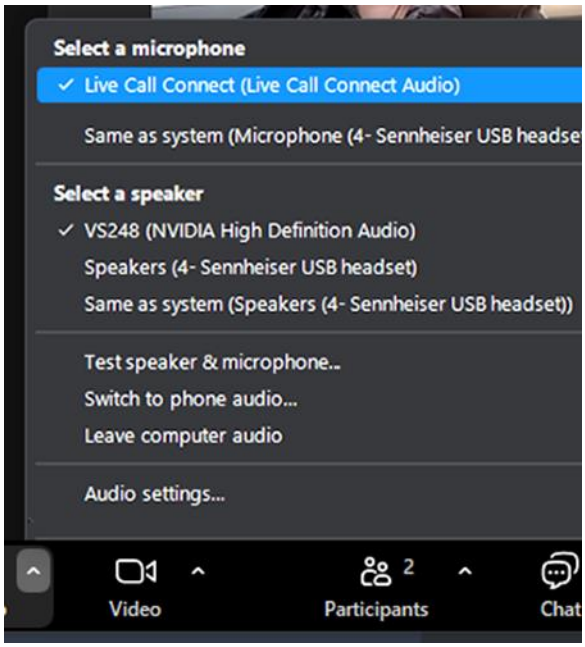


Click or highlight your profile icon in the top right of the Terms & Privacy Policy panel to sign out or switch the account to a different user. Signing out automatically removes permissions that the user previously enabled for the Zoom application.

4.1.3 CONFIGURE ZOOM'S VIDEO & AUDIO INPUTS

In Zoom's Video menu, select the *Live Call Connect Video* entry to provide TriCaster's video output to Zoom.



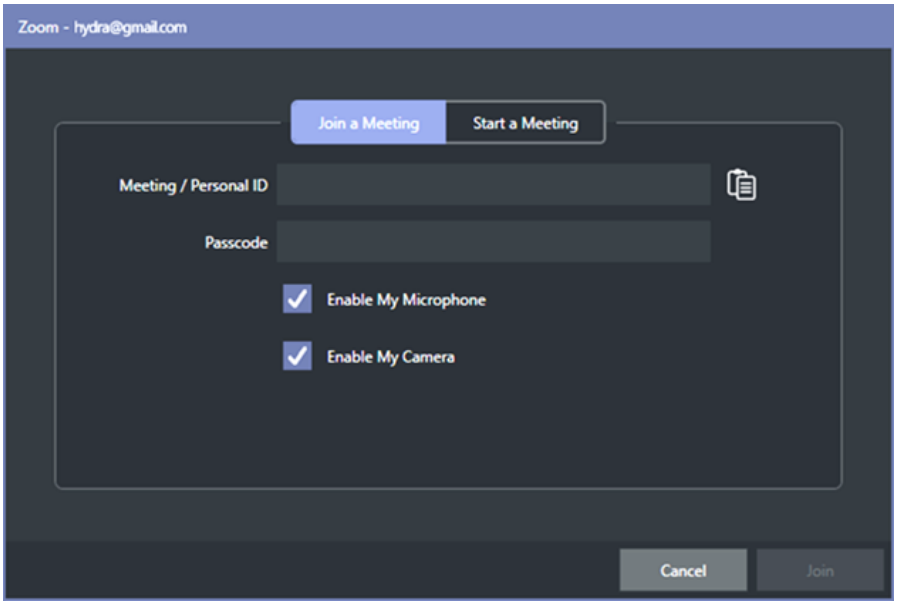


Similarly, select *Live Call Connect Audio* in Zoom's Audio menu to supply audio from TriCaster to your external Zoom callers.

4.1.4 JOIN A MEETING

Once you are logged in, a popup will appear giving you the choice to either join or start a meeting. To join a Zoom meeting:

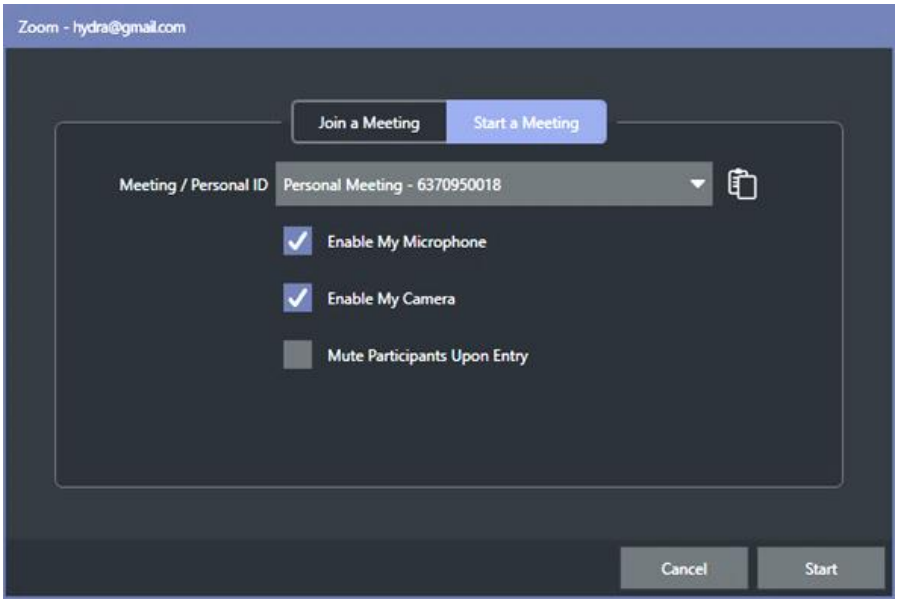
- **Enter Meeting Details**: Simply type in the *Meeting/Personal ID* along with the *Passcode*.
- **Audio and Video Settings**: You can choose to enable your microphone and camera from here.
- **Invite Others**: There is a copy/paste button next to the Meeting/Personal ID field. Use this if you want to invite others by sending the invitation link via your web browser.



After you have entered all the necessary information, click Join to enter the meeting.

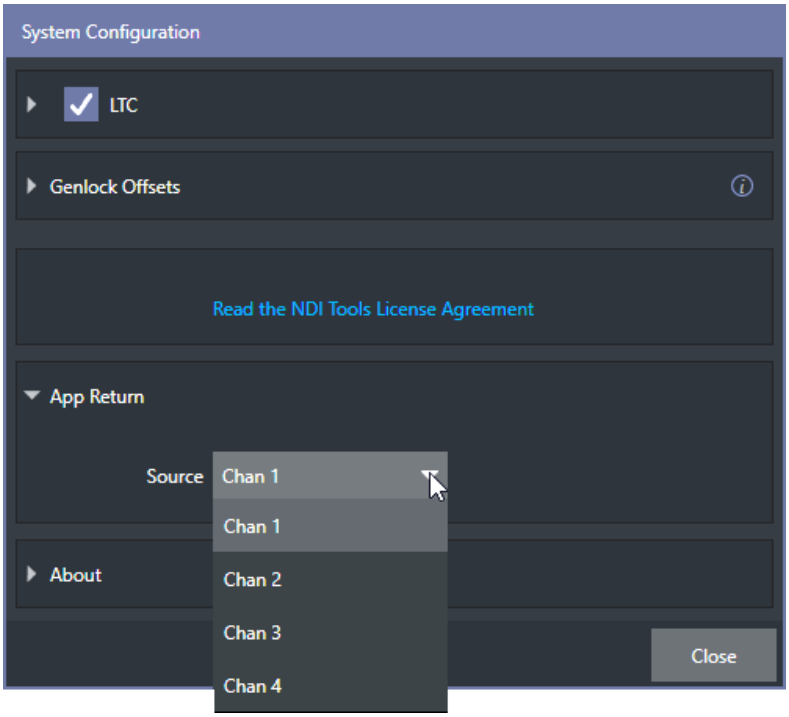
4.1.5 START A MEETING

- **Select Personal Meeting**: Choose your *Meeting/Personal ID* or use the dropdown menu to see a list of past hosted meetings (you can schedule new meetings using Meetings tools in your Zoom account's web portal page).
- **Configure Settings**: You can enable your microphone and camera, decided whether to *Mute Participants Upon Entry* and copy the meeting link to invite others



Once you have set your preferences, click **Start** to initiate your meeting

4.1.6 APP RETURN



The *App Return* feature is in the *System Configuration* pane, click the gear to the left of the *Notifications* icon in the *Titlebar*.

A crucial aspect of *App Return* is providing a "mix-minus" audio feed, particularly important for remote callers. A mix-minus feed sends all the program audio except the remote caller's own audio, back to them. This prevents echoes and other distractions that can occur when callers hear themselves in their own monitoring system.

APPENDIX A: NDI (NETWORK DEVICE INTERFACE)

Network Device Interface (NDI) technology is an open standard for live production IP workflows over Ethernet networks. NDI allows systems and devices to identify and communicate with each other, and to encode, transmit, and receive high quality, low latency, frame-accurate video, and audio over IP in real time.

NDI enabled-devices and software have the potential to greatly enhance your video production pipeline, by making video input and output available anywhere your network runs. Vizrt's live video production systems and a growing number of third party systems provide direct support for NDI, both for ingest and output. Although Viz Connect Tetra provides many other useful features, it is purpose designed primarily to turn SDI sources into NDI signals.

For more extensive details on NDI, please visit NDI Tools.

APPENDIX B: ENHANCED SUPPORT (PROTEK)

Vizrt's optional ProTek℠ service programs offer renewable (and transferable) coverage and enhanced support service features extending well beyond the standard warranty period.

Please see our Protek webpage or your local authorized Vizrt reseller for more details regarding ProTek plan options.

CREDITS

Special thanks to each member of the hard-working R&D team who made this product possible.

Libraries: This product uses the following libraries, licensed under the LGPL license (see link below). For the source, and the ability to change and recompile these components, please visit the links provided:

- FreeImage library freeimage.sourceforge.io
- LAME library lame.sourceforge.io
- FFMPEG library ffmpeg.org

For a copy of the LGPL license, please look in the folder c:\TriCaster\LGPL\