

XPression

XPression Clips Workflow User Guide

Version 11.5

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 - offer the best product quality and support
2. Make Cool Practical Technology
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Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below.

If anything at all with your Ross experience does not live up to your expectations be sure to reach out to us at solutions@rossvideo.com.



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Ross Video Code of Ethics

Any company is the sum total of the people that make things happen. At Ross, our employees are a special group. Our employees truly care about doing a great job and delivering a high quality customer experience every day. This code of ethics hangs on the wall of all Ross Video locations to guide our behavior:

1. We will always act in our customers' best interest.
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3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*

XPression Clips Workflow · User Guide

- Ross Part Number: **3500DR-016-11.5**
- Release Date: October 4, 2023.
- Software Issue: **11.5**

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Patents

Patent numbers US 7,034,886; US 7,508,455; US 7,602,446; US 7,802,802 B2; US 7,834,886; US 7,914,332; US 8,307,284; US 8,407,374 B2; US 8,499,019 B2; US 8,519,949 B2; US 8,743,292 B2; GB 2,419,119 B; GB 2,447,380 B; and other patents pending.

Notice

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Third Party Licenses

XPression INcoder makes use of FFmpeg licensed under the LGPLv2.1 and its source can be downloaded [here](#).

FFmpeg was configured with the following options:

```
---pkg-config=pkg-config --pkg-config-flags=static
--extra-version=ffmpeg-windows-build-helpers

--disable-debug --disable-w32threads --arch=x86 --target-os=mingw32
--cross-prefix=/root/src/sandbox/cross_compilers/mingw-w64-i686/bin/i686-w64-mingw32
--enable-gray --enable-libopus --enable-libsnapppy --enable-libsoxr --enable-libtheora
--enable-libvorbis --enable-libwebp --enable-libzimg --enable-libopenjpeg
--enable-libopenh264 --enable-libxml2 --enable-libdav1d --enable-cuda-llvm
--enable-libvpx --enable-nvenc --enable-nvdec --extra-libs=-lm --extra-libs=-lpthread
--extra-cflags=-DLIBTWOLAME_STATIC --extra-cflags=-DMODPLUG_STATIC
--extra-cflags=-DCACA_STATIC

--disable-amf --enable-libmfx --enable-avresample --extra-cflags='-mtune=generic'
--extra-cflags=-O3 --enable-shared --disable-static
--prefix=/root/src/sandbox/win32/ffmpeg_git_lgpl_n4.3.2_shared
```

A patch of changes to FFMPEG 4.3.2 is available in the downloaded source as xpvc_win.patch.

Warranty and Repair Policy

Ross Video Limited (Ross) warrants its XPression systems to be free from defects under normal use and service for the following time periods from the date of shipment:

- **XPression Server** — 12 months
- **XPression Software Upgrades** — 12 months free of charge
- **System and Media hard drives** — 12 months

If an item becomes defective within the warranty period Ross will repair or replace the defective item, as determined solely by Ross.

Warranty repairs will be conducted at Ross, with all shipping FOB Ross dock. If repairs are conducted at the customer site, reasonable out-of-pocket charges will apply. At the discretion of Ross, and on a temporary loan basis, plug in circuit boards or other replacement parts may be supplied free of charge while defective items undergo repair. Return packing, shipping, and special handling costs are the responsibility of the customer.

This warranty is void if products are subjected to misuse, neglect, accident, improper installation or application, or unauthorized modification.

In no event shall Ross Video Limited be liable for direct, indirect, special, incidental, or consequential damages (including loss of profit). Implied warranties, including that of merchantability and fitness for a particular purpose, are expressly limited to the duration of this warranty.

This warranty is TRANSFERABLE to subsequent owners, subject to Ross' notification of change of ownership.

Extended Warranty

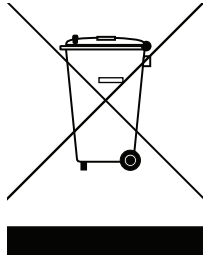
For customers that require a longer warranty period, Ross offers an extended warranty plan to extend the standard warranty period by one year increments. For more information about an extended warranty for your XPression system, contact your regional sales manager.

Environmental Information

The equipment that you purchased required the extraction and use of natural resources for its production. It may contain hazardous substances that could impact health and the environment.

To avoid the potential release of those substances into the environment and to diminish the need for the extraction of natural resources, Ross Video encourages you to use the appropriate take-back systems. These systems will reuse or recycle most of the materials from your end-of-life equipment in an environmentally friendly and health conscious manner.

The crossed-out wheeled bin symbol invites you to use these systems.



If you need more information on the collection, reuse, and recycling systems, please contact your local or regional waste administration.

You can also contact Ross Video for more information on the environmental performances of our products.

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Introduction

Pre-rolls are a thing of the past with XPression Clips, a production clip server for live production that incorporates the latest advances in IT technologies. Built on the industry-leading XPression real-time graphics platform, XPression Clips offers you instant recall times and back-to-back clip transitions from an intuitive user interface or via automation triggers from other devices like Ross Video productions switchers.

You can simultaneously ingest multiple channels of baseband video and output multiple channels of clips to air. Both NAS and SAN configurations are available for attached storage, in addition to ample local hard drive space. Database management and synchronization are possible with the Clip Store that supports user rights and roles.

You can also add XPression Clips functionality to XPression Studio's basic clip handling capabilities by adding the XPression Clips Option.

Key features of XPression Clips and the XPression Clips Option include:

- Multi-channel ingest and playout
- 1, 2, or 4 channels of baseband video ingest
- 2 or 4 channels of playout (user-definable fill/fill or fill/key configuration)
- Back-to-back transitions
- Multiple clips on the same output
- Clip Browser with searching
- Clip trimming and looping
- VDCP, AMP, PBus, and RossTalk automation protocols
- PBus Manager for intelligent clip assignment
- Clip Manager application with user rights for database management and synchronization setup
- NAS or SAN attached storage with SNS storage (Studio Network Solutions)

Streamline your production clips workflow with Ross Video's next-generation production clip servers and transcoding applications. Available in multiple configurations, XPression Clips/XPression Clips Option and the Clip Server Option for XPression Studio bring lightning-fast recall speeds, baseband video ingest, and multi-layer clip playback to the control room.

About This Guide

This user guide describes the XPression Clips workflow, its configuration, and functions.

If, at any time, you have a question pertaining to the installation, configuration, or operation of the XPression Clips tools, please contact us at the numbers listed in the section “**Contacting Technical Support**” on page 1–2. Our technical staff are always available for consultation, training, or service.

Documentation Conventions

Special text formats are used in this guide to identify parts of the user interface, text that a user must enter, or a sequence of menus and submenus that must be followed to reach a particular command.

Bold text	Bold text is used to identify a user interface element such as a dialog box, menu item, or button. For example: In the 3D Model Files section, use the Mode list to select the folder used to store 3D model files.
Courier text	Courier text is used to identify text that a user must enter. For example: Enter <code>localhost</code> when the DataLinq server is running of the same computer as XPression.
>	Menu arrows are used in procedures to identify a sequence of menu items that you must follow. For example, if a step reads " Display > Widgets ," you would click the Display menu and then click Widgets .

Getting Help

The **XPression Clips User Guide** is supplied as a print-ready PDF file. Locate the guide in the C:\Archive folder to open a guide PDF in Adobe® Reader® for viewing or printing.

Contacting Technical Support

At Ross Video, we take pride in the quality of our products, but if problems occur, help is as close as the nearest telephone.

Our 24-hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel. During business hours (eastern time), technical support personnel are available by telephone any time. After hours and on weekends, a direct emergency technical support phone line is available. If the technical support person who is on call does not answer this line immediately, a voice message can be left and the call will be returned shortly. This team of highly trained staff is available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

- **Technical Support:**
 - > 1-844-652-0645 (North America)
 - > +800 1005 0100 (International)
- **After Hours Emergency:** (+1) 613-349-0006
- **E-mail:** techsupport@rossvideo.com
- **Website:** <http://www.rossvideo.com>

XPression Clips Components and Workflow Overview

The following components of the XPression Clips workflow are discussed in this section:

- XPression Clip Store
- XPression
- XPression Media Control Gateway
- XPression INcoder
- Clips Workflow

XPression Clip Store

The XPression Clip Store is a windows service that serves as the database to hold clips within a clip workflow. The database contains pointers to the clips on disk as well as all of the metadata associated with a clip, such as the name, recall ID, in/out points, sub clip info, etc.

The XPression Clip Store can run on any physical machine, but in the basic workflow would generally run on the XPression machine itself.

The XPression Clip Store has the capability to replicate clips and metadata to other clip stores in the workflow. For example, if you have several XPression machines and run a local Clip Store on each, then those clip stores can be kept up to date through automated database/clip syncing. Syncing can also be used to create a backup Clip Store to use if the primary machine is taken offline (there is no automatic failover).

The XPression Clip Store has users and user rights assignment features to allow users to be created with permissions to perform different tasks such as trimming, deletion, sync, and administration.

XPression Clip Store Manager

The XPression Clip Store Manager is a user application that connects to the Clip Store service (on a local or remote machine). The Clip Store Manager is used to administer the users, synchronization settings, and clips.

Extensive search capabilities for browsing the clips is provided and clips can be deleted from the Clip Store Manager.

XPression

The following components are used in the Clips workflow.

If using the XPression Clips Option, the following components are accessed in the XPression Sequencer mode, with the exception of the Record Client, which can be accessed in the Layout mode as well.

Clip Browser

The Clip Browser is a window in the XPression Sequencer used for dragging and dropping clips into the Sequencer or Server Channels.

Server Channels

The Server Channels window is located in the XPression Sequencer and is used for previewing and playing out clips. Clips can also be edited from the Server Channels window.

These channels represent a server channel as on a typical video server. The virtual channels are created in the Server Channels tab of the Hardware Setup in XPression.

Clip Editor

From the Clip Browser or the Server Channels, a selected clip can be opened in the Edit Clip window for editing.

PBus Mapping

A PBus Mapping menu exists in the XPression Sequencer to provide additional capabilities to the PBus recall system. By assigning a PBus device ID to a server channel, clips from the Clip Browser can be assigned to a PBus register simply by dragging them from the Clip Browser onto a PBus register.

Record Client

Use the Record Client dialog box to record an incoming SDI video as a video file or as a still image.

Up to four streams can be recorded simultaneously, however, each stream affects overall system performance, so with four streams recording it is unlikely you will be able to playback graphics simultaneously without dropping frames. Recording to network locations (NAS/SAN) may or may not be possible depending on the bandwidth available. The number of audio channels to record can be varied between 0 and 16. Recordings are made to the XPression Video Codec avi format.

XPression Media Control Gateway

The XPression Media Control Gateway is used to receive AMP or VDCP connections to control XPression with XPression Clip Store. AMP/VDCP can be received over either TCP or Serial (RS232) connections.

For RS422 support, an external converter must be used.

One Media Control Gateway is required for each XPression machine.

This gateway connects directly to an XPression machine, but also connects to the XPression Clip Store to retrieve the entire clip list.

XPression INcoder

★ The XPression INcoder is a separate, optional component to the XPression Clips workflow. For more information, or to purchase the INcoder, contact Ross Video.

The XPression INcoder is a windows service that manages one or more watchfolders used for file based ingest of clips into the XPression Clips workflow. The INcoder performs transcoding functions to convert clips from compatible formats into XPression Codec AVI files. The same formats supported by the XPression Video Coder can be transcoded by the INcoder.

For More Information on...

- the XPression INcoder, refer to the ***XPression INcoder User Guide***.

Clips Workflow

The following diagrams illustrate examples of the XPression Clips workflow options:

- Clips Configuration with Synchronized Clip Store Databases
- Clips Workflow Using the Record Client
- Clips Workflow Using the XPression INcoder
- Clips MOS Workflow

Clips Configuration with Synchronized Clip Store Databases

The following diagram illustrates an example of the XPression Clips workflow setup using synchronized Clip Store databases in a non-MOS workflow.

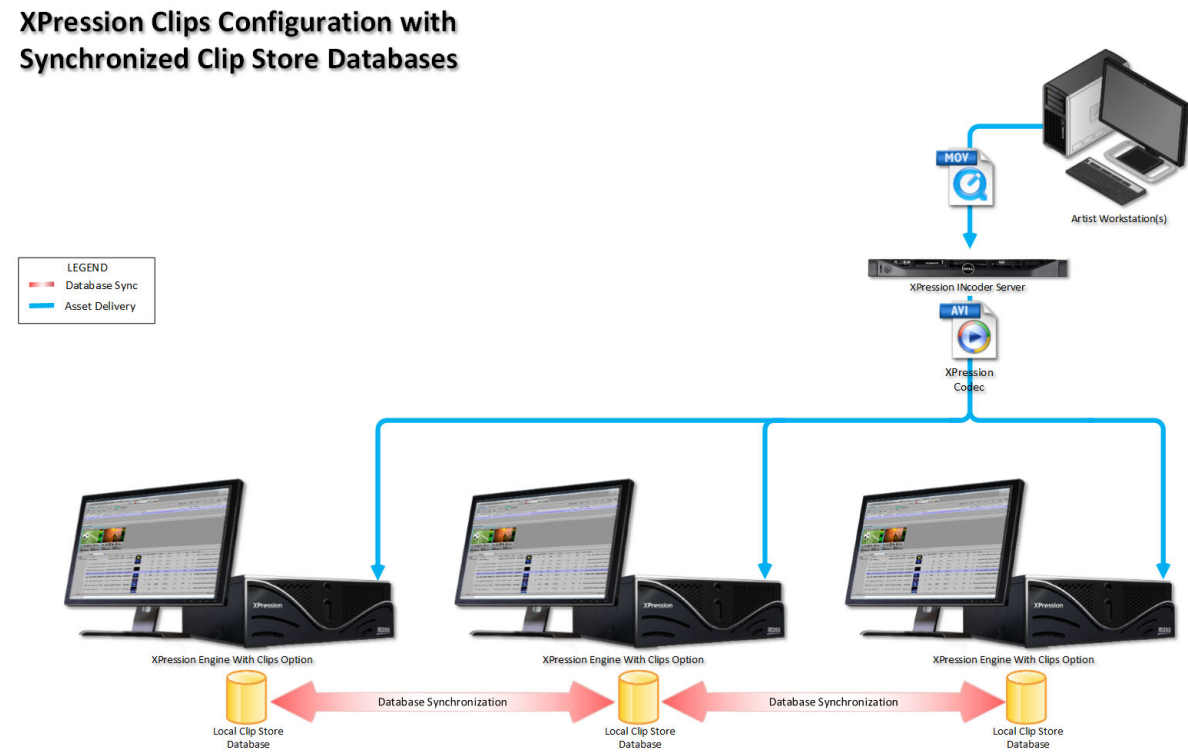
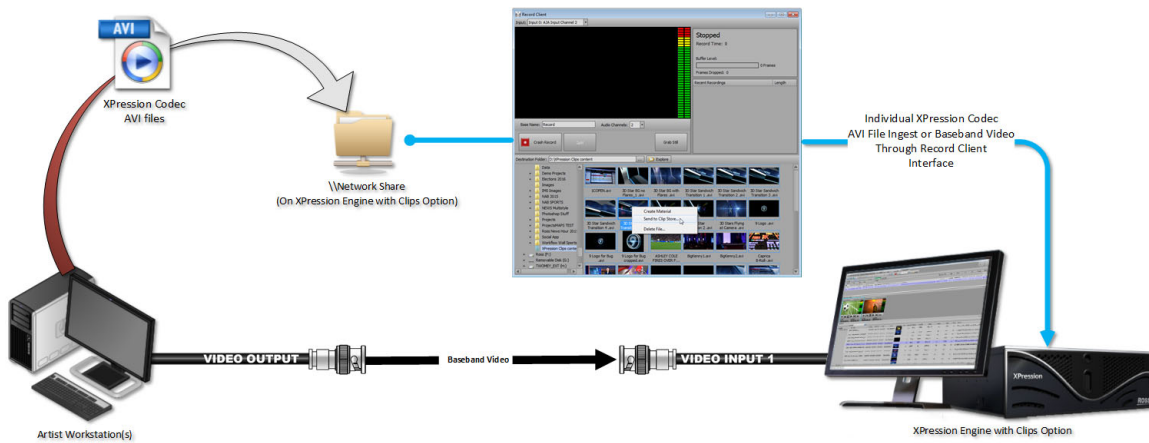


Figure 2.1 Clips Workflow Configuration when Using Multiple Workstations and Synchronized Clip Store Databases

Clips Workflow Using the Record Client

The following diagram illustrates an example of the XPression Clips workflow setup using the Record Client.

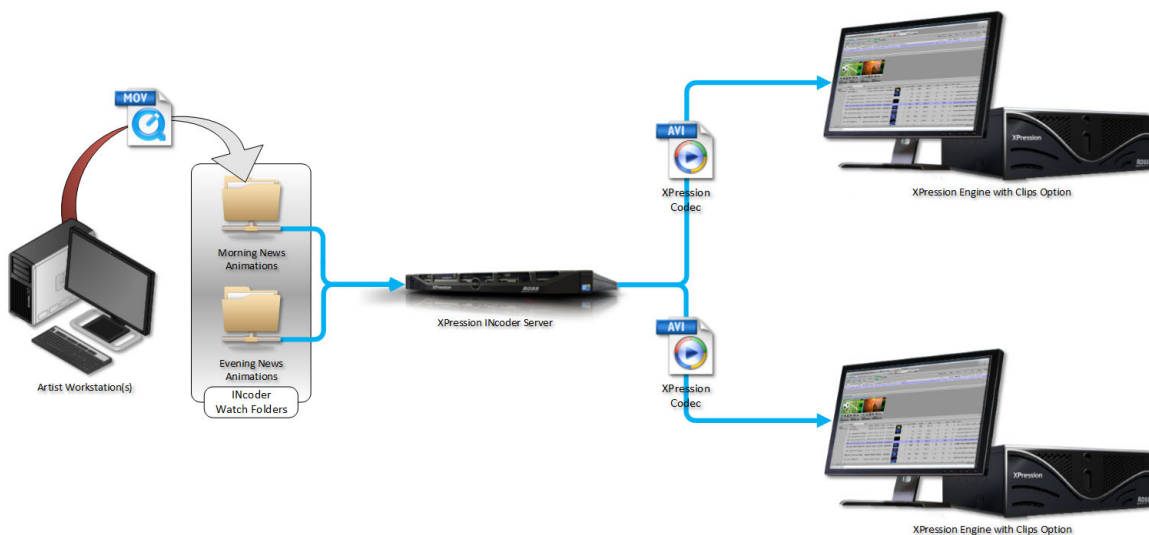


XPression Clips Configuration Example **XPression Clips** Single Engine and No INcoder Software or Hardware

Figure 2.2 Clips Workflow Configuration when Using a Single Engine and the Record Client

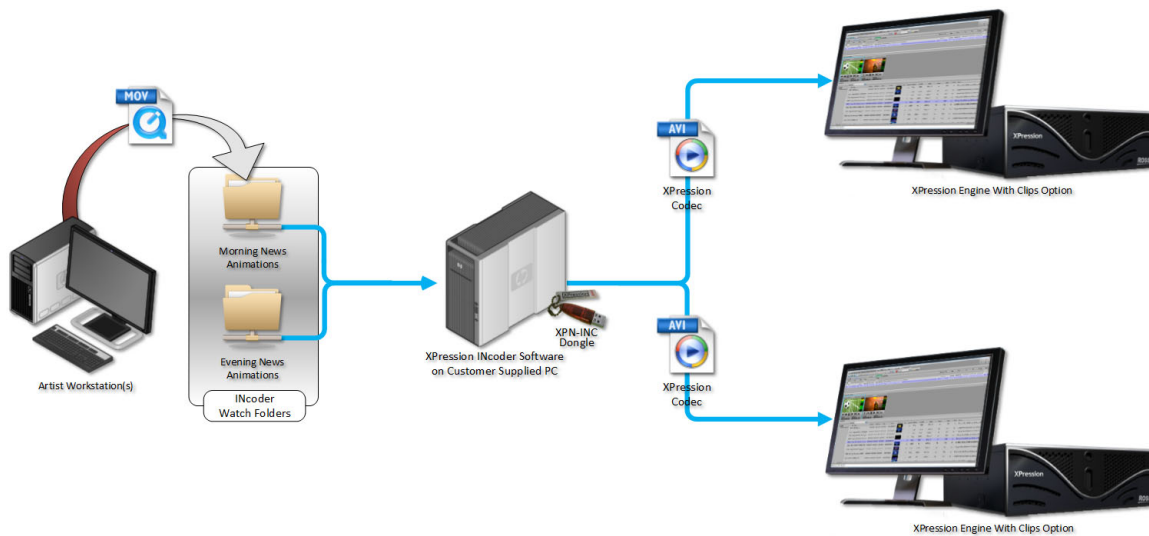
Clips Workflow Using the XPression INcoder

The following diagrams illustrate examples of the XPression Clips workflow setup using multiple engines on the XPression INcoder server and using a customer supplied PC.



XPression Clips Configuration Example **XPression Clips** Multiple Engines and an INcoder Server

Figure 2.3 Clips Workflow Configuration when Using Multiple Engines and the INcoder Server



XPression Clips Configuration Example **XPression** Multiple Engines and INcoder on a Customer Supplied PC **Clips**

Figure 2.4 Clips Workflow Configuration when Using Multiple Engines and the INcoder on a Customer Supplied PC

Clips MOS Workflow

The following diagram illustrates an example of the XPression Clips workflow setup using synchronized Clip Store databases in a MOS workflow.

XPression Clips MOS Configuration with Synchronized Clip Store Databases

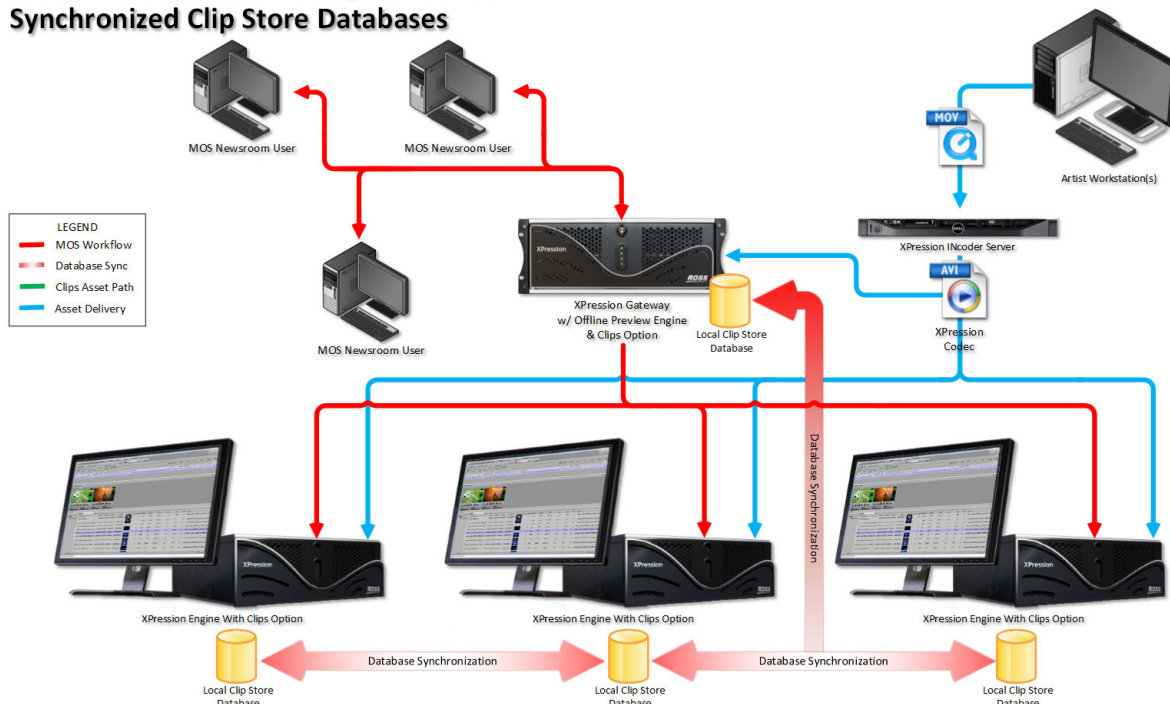


Figure 2.5 Clips Workflow Configuration when Using Multiple Workstations and Synchronized Clip Store Databases in a MOS workflow

XPression Clip Store Setup

The following topics are discussed in this section:

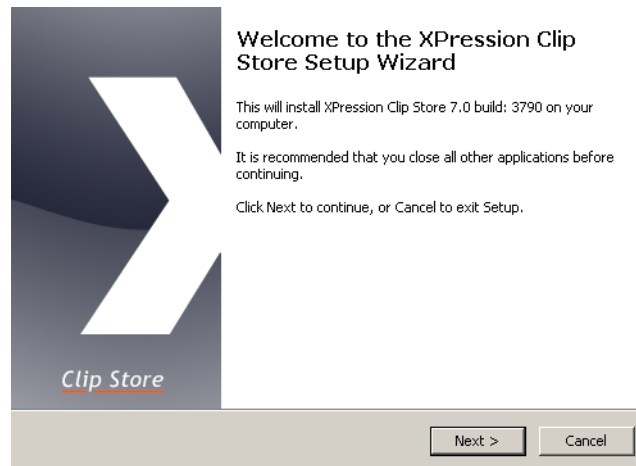
- Install the XPression Clip Store
- XPression Clip Store Manager Interface Overview
- Starting XPression Clip Store
- Starting the Clip Store Manager
- Configuring the Clip Store
- Configure User Roles
- Configure Users
- Synchronizing Multiple Clip Stores
- Viewing the Transfer Status When Syncing Servers
- Browsing and Deleting Clips
- Projects
- Wiping the Clips Database
- Configure XPression Studio, BlueBox, and Gateway for XPression Clip Store

Install the XPression Clip Store

Once XPression has been installed, use the following procedure to install the XPression Clip Store:

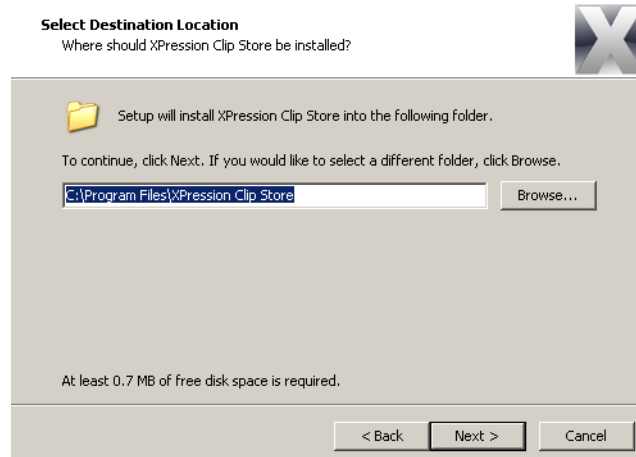
1. Locate and double-click the **xpClipStore-X.X_XXXX.exe** file.

The **Setup - XPression Clip Store** window opens.



2. Click **Next**.

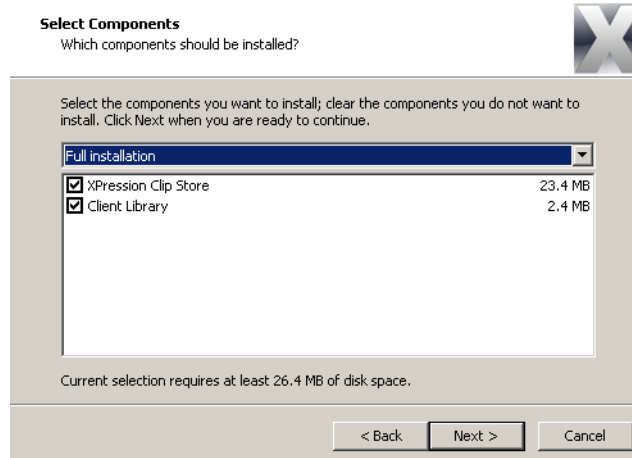
The **Select Destination Location** section opens.



3. Use the default destination folder location or click **Browse** to locate and select a different destination location.

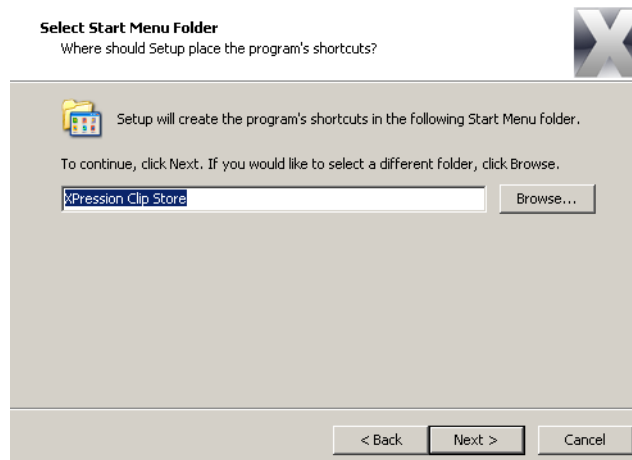
4. Click **Next**.

The **Select Components** section opens.



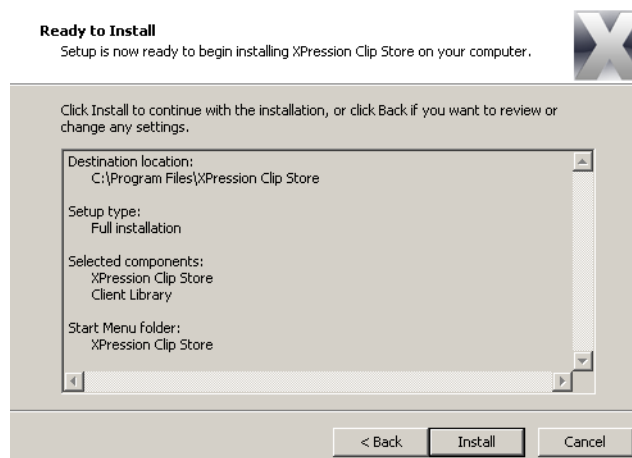
5. Click **Next**.

The **Select Start Menu Folder** section opens.



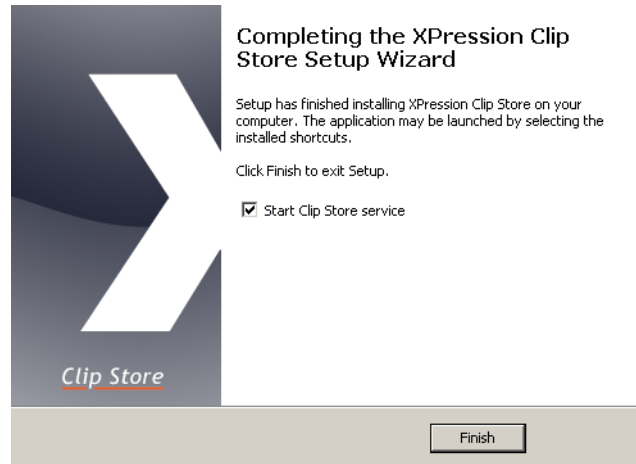
6. Use the default Start menu folder location or click **Browse** to locate and select a different Start menu location.
7. Click **Next**.

The **Ready to Install** section opens.



8. Click **Install**.

The installation begins. Once the installation is complete, the **Completing the XPression Clip Store Setup Wizard** section opens.



9. Click **Finish**.

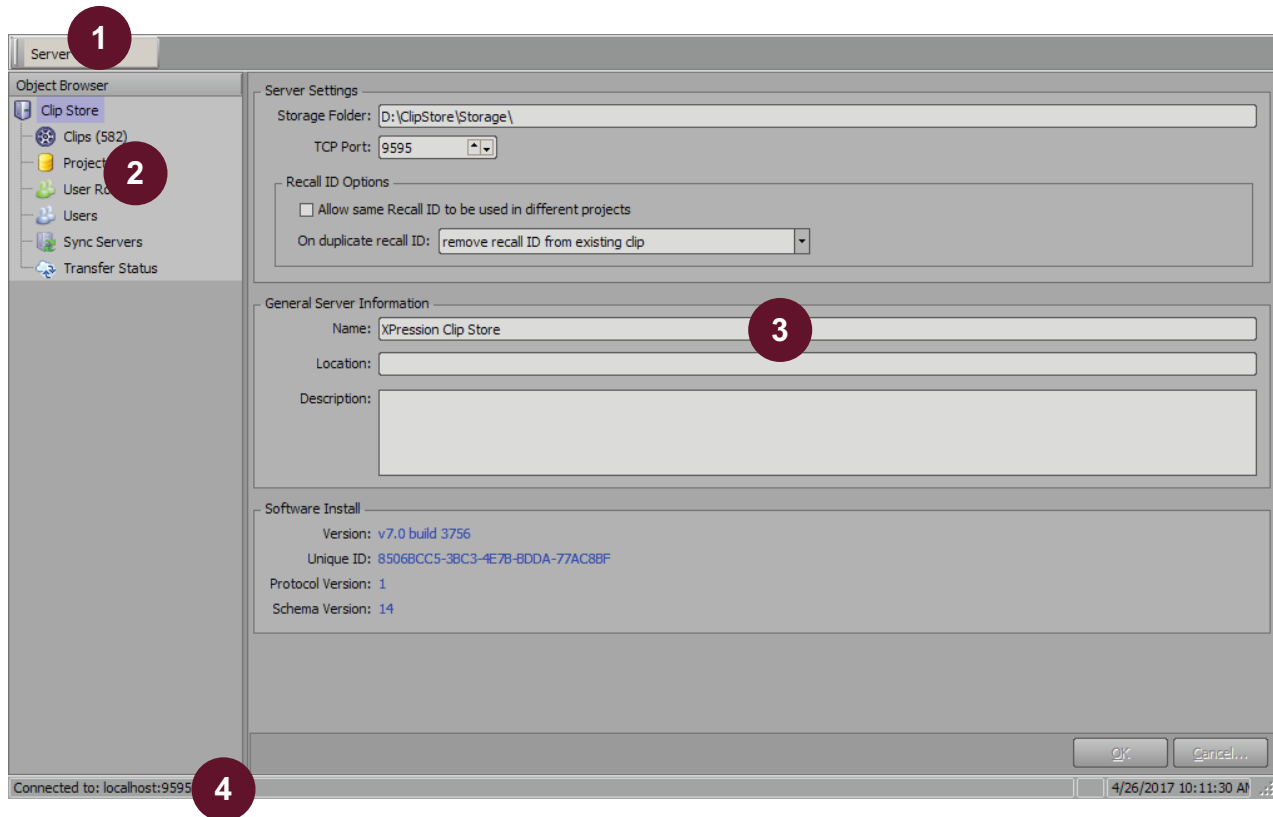
If the **Start Clip Store service** check box is left as selected by default and the installation was successful, an information box is displayed that indicates that the XPression Clip Store was successfully started.

For More Information on...

- installing XPression, refer to the **XPression Quick Start** guides.

XPression Clip Store Manager Interface Overview

The following screen capture displays the main elements of the XPression Clip Store Manager.




- | | |
|---|---|
| 1) Menu Bar — use this menu bar to access the Server menu. | 3) Main Window — use this window to configure or edit the selected item from the Object Browser. |
| 2) Object Browser — use this area to browse clips, select a project, add users, define user roles, add servers in which to sync, and view the status of transfers. | 4) Status Area — displays the current connection status of the Clip Store. |

Starting XPression Clip Store

XPression Clip Store services are automatically started after installation. However, if the option to start after install is de-selected or if the service has been stopped at any point, use the following procedure to start the Clip Store service.

Start the Clip Store

1. On the machine that has the XPression Clip Store installed, locate the **XPression Clip Store** folder using the **Start** menu.
2. Select **Start Clip Store** (.

If the Clip Store has successfully started, an information message indicates that the XPression Clip Store was successfully started.

To stop the Clip Store:

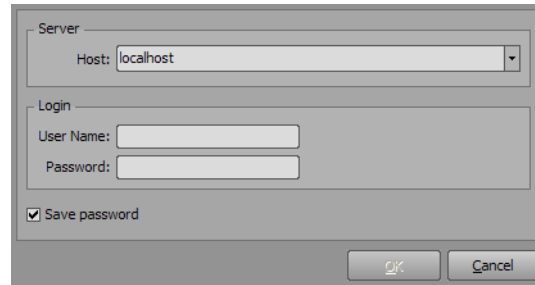
1. On the machine that has the XPression Clip Store installed, locate the **XPression Clip Store** folder using the **Start** menu.
2. Select **Stop Clip Store** (.

If the Clip Store has been successfully stopped, an information message indicates that the XPression Clip Store was successfully stopped.

Starting the Clip Store Manager

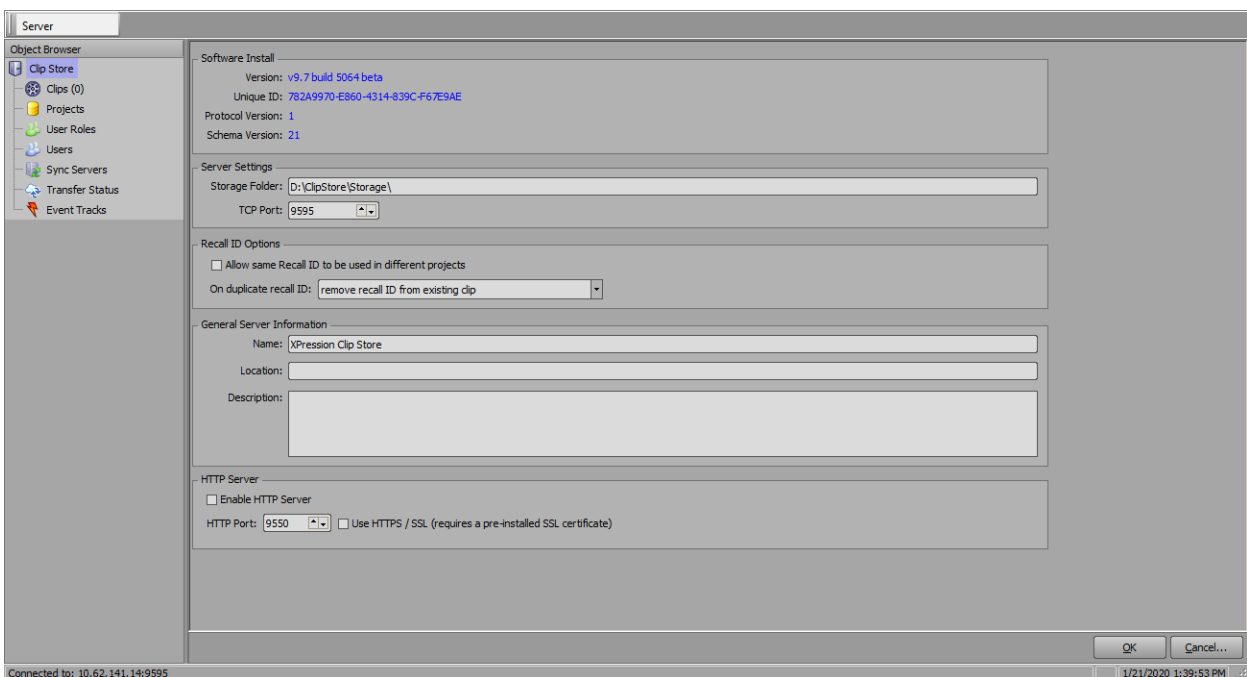
Use the XPression Clip Store Manager to connect to XPression Clip server.

1. On the machine that has the XPression Clip Store installed, locate the **XPression Clip Store** folder using the **Start** menu.
2. Locate the **XPression Clip Store** folder using the **Start** menu and select **Clip Store Manager**.
The **Connect to Clip Store server** dialog box opens.

A dialog box titled "Connect to Clip Store server" with a "Server" section containing a "Host" dropdown menu set to "localhost". Below is a "Login" section with "User Name" and "Password" text boxes, and a checked "Save password" checkbox. "OK" and "Cancel" buttons are at the bottom right.

3. In the **Server** section, use the **Host** box to enter the IP address of the Clip Store service if using remotely. If using the Clip Store service locally, select **localhost** from the list.
This is the server from which the clips will be synchronized.
4. In the **Login** section, use the **User Name** box to enter the login name of the user. The default user name is `admin`.
5. Use the **Password** box to enter the password for the user. The default password is `admin`.
Select the **Save password** check box to automatically enter the login credentials for subsequent connections to the Clip Store server.
6. Click **OK**.

The **XPression Clip Store Manager** opens.

The main window of the XPression Clip Store Manager. It features a left-hand "Object Browser" with icons for Clip Store, Clips (0), Projects, User Roles, Users, Sync Servers, Transfer Status, and Event Tracks. The main area is divided into several sections: "Software Install" (showing version v9.7 build 5064 beta and unique ID), "Server Settings" (with Storage Folder and TCP Port 9595), "Recall ID Options" (with checkboxes for recall ID usage), "General Server Information" (with fields for Name, Location, and Description), and "HTTP Server" (with an "Enable HTTP Server" checkbox and port 9550). At the bottom, it shows "Connected to: 10.62.141.14:9595" and the date/time "1/21/2020 1:39:53 PM".

Configuring the Clip Store

In the XPression Clip Store Manager, use the **Server Settings** settings section to configure the server details.

1. In the **Server Settings** section:

- a. Use the **Storage Folder** box to enter a file path for the folder where clips are stored. The default file path is `D:\ClipStore\Storage`.

If the machine does not use a D:\ media drive, the default path will be `C:\Program Files (x86)\XPression Clip Store\Storage\`.

If exporting sequencer take items as videos/images to a remote ClipStore, the storage folder of the remote ClipStore must be shared. The UNC path of the shared folder must be entered in the Storage Folder field of the ClipStore manager on the sequencer engine.

- ★ If this value is being changed after clips have already been ingested into the system, you will need to manually copy the contents of the `D:\ClipStore\Storage` to the new folder. A warning will be presented to remind you to do so:



The new path should contain three subfolders: **Clips**, **Thumbnails**, and **Flipbooks**.

The Clip Store must be restarted after changing the storage folder location.

- b. Use the **TCP Port** box to enter or select the port number for the Clip Store server connection. The default is 9595.

2. In the **Recall ID Options** section:

- a. Select the **Allow same Recall ID to be used in different projects** check box to use the same recall ID of a clip throughout different projects. If selected, the **On duplicate recall ID** list will adjust to indicate **(in same project)**.

When syncing between Clip Stores, all systems must have this option configured identically.

- b. Use the **On duplicate recall ID** list to select an option for handling incoming clips with a duplicate recall ID:
- **remove recall ID from existing clip** — remove the recall ID from the clip already stored on the server.
 - **delete existing clip when it has no subclips** — delete a duplicate clip from the server if it has had no subclips created from it.
 - **delete existing clip and subclips** — delete a duplicate clip and its subclips from the server.

3. In the **General Server Information** section:

- a. Use the **Name** box to enter a name for the Clip Store server, if necessary. The default name is `XPression Clip Store`.
- b. Use the **Location** box to enter the name of the location where the Clip Store server is located, if necessary.
- c. Use the **Description** box to enter a brief descriptor for the Clip Store server, if necessary.

4. In the **HTTP Server** section:

- a. Select the **Enable HTTP Server** check box to enable an HTTP server that provides a REST interface for retrieving clip information from the Clip Store.
- b. Use the **HTTP Port** box to enter or select the port number for the connection. The default is 9550.

- c. Select the **HTTPS / SSL** check box to use HTTPS / SSL. This requires a pre-installed SSL certificate.

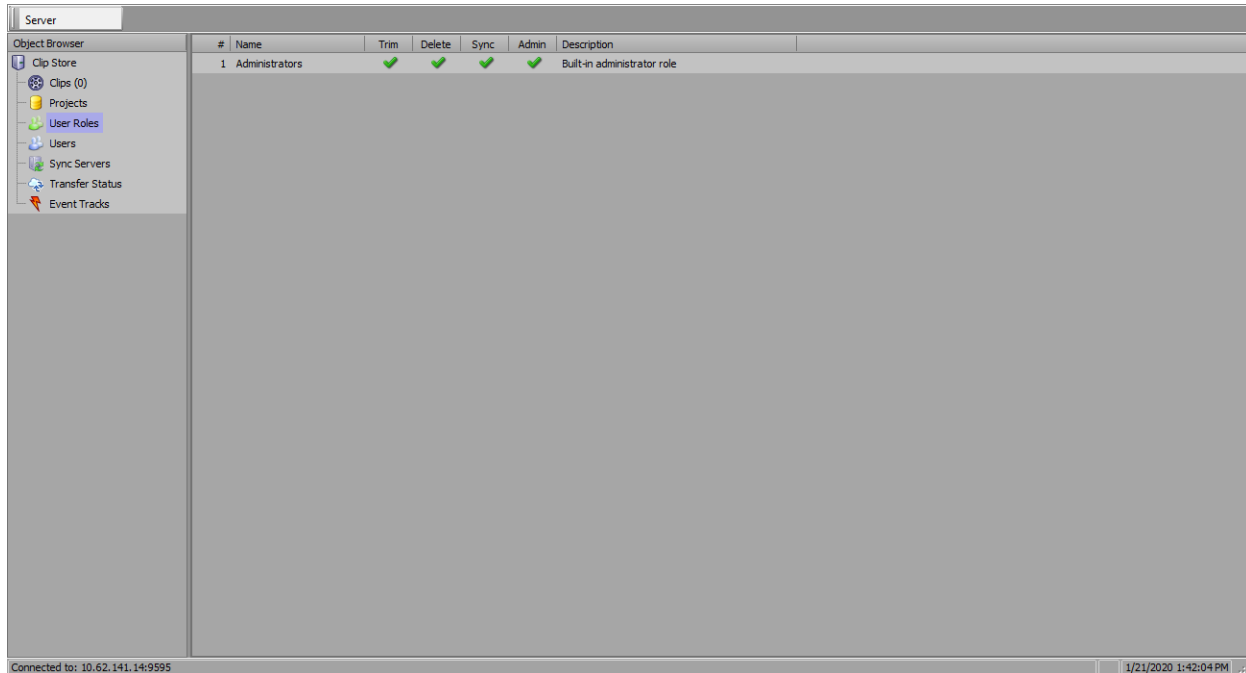
When HTTPS / SSL is enabled, the port number is fixed to 9444.

5. Click **OK** to apply the Clip Store settings.

Configure User Roles

Use the XPression Clip Store Manager to create user roles to allow and disable specific functions for specific roles that are assigned to users.

1. Connect to the **XPression Clip Store Manager**.
2. In the **Object Browser**, select **User Roles** from the **Clip Store** menu tree.
The **User Roles** section opens in the main window.



An Administrator role already exists by default.

3. Right-click inside the User Roles list and select **New** from the shortcut menu.
The **New User Role** dialog box opens.

The 'New User Role' dialog box contains the following fields and options:

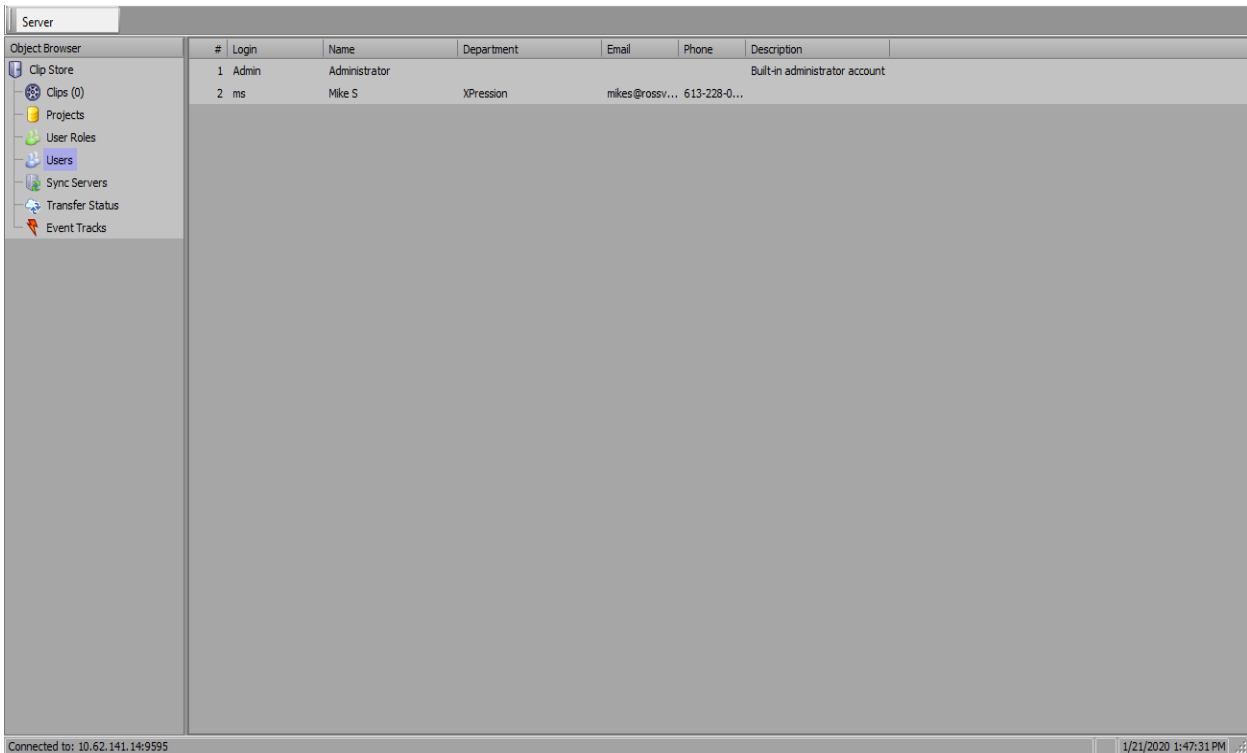
- Name:** A text input field.
- Description:** A text input field.
- Rights:** A section containing four checkboxes:
 - ☐ Trim
 - ☐ Delete
 - ☐ Sync
 - ☐ Administrator
- Buttons:** 'OK' and 'Cancel' buttons at the bottom right.

4. In the **New User Role** box:
 - a. Use the **Name** box to enter a name for the new user. For example, if a user is being given deletion rights, a user role could be given the name 'Delete'.
 - b. Use the **Description** box to enter a brief descriptor for the user, if necessary.

- c. In the **Rights** section, use the check boxes to select the rights allowed for the user role:
- **Trim** — this feature will be available in a future release.
 - **Delete** — ability to delete clips.
 - **Sync** — ability to synchronize servers.
Sync users also require delete rights if deletes are to be synchronized across Clip Stores.
 - **Administrator** — ability to access all rights.

5. Click **OK**.

The new user role is added to the User Roles list.



The screenshot shows the XPression Server interface. On the left is an 'Object Browser' pane with a tree view containing: Clip Store, Clips (0), Projects, User Roles (selected), Users, Sync Servers, Transfer Status, and Event Tracks. The main area displays a table of user roles. The table has columns: #, Login, Name, Department, Email, Phone, and Description. It contains two rows: 1. Admin, Administrator, Built-in administrator account; 2. ms, Mike S, XPression, mikes@rossv..., 613-228-0...

#	Login	Name	Department	Email	Phone	Description
1	Admin	Administrator				Built-in administrator account
2	ms	Mike S	XPression	mikes@rossv...	613-228-0...	

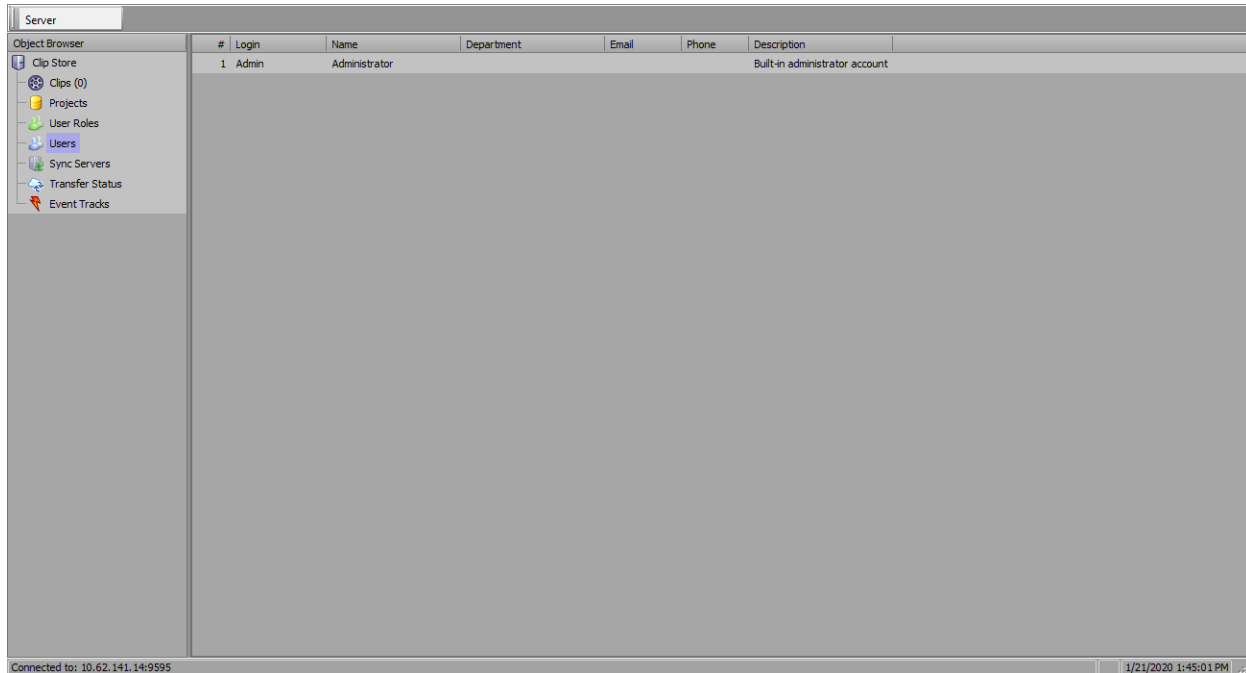
At the bottom of the window, a status bar shows 'Connected to: 10.62.141.14:9595' and a timestamp '1/21/2020 1:47:31 PM'.

Repeat steps 3 to 5 for any other new roles.

Configure Users

Use the XPression Clip Store Manager to create users to assign to specific user roles that allow and disable specific functions.

1. Connect to the **XPression Clip Store Manager**.
2. In the **Object Browser**, select **Users** from the **Clip Store** menu tree.
The **Users** section opens in the main window.



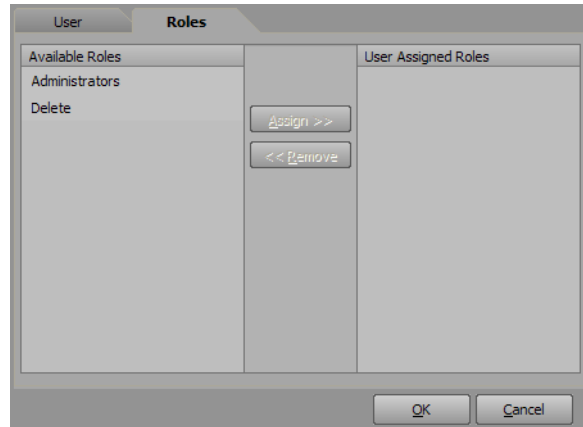
An Admin user already exists by default.

3. Right-click inside the Users list and select **New** from the shortcut menu.
The **New User** dialog box opens.

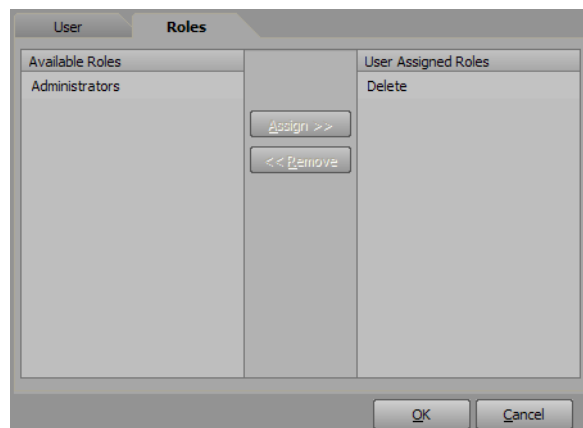
The 'New User' dialog box is shown with three tabs: 'User' (selected), 'Roles', and 'API'. It is divided into two main sections: 'Credentials' and 'Information'. The 'Credentials' section contains three text input fields: 'Login:', 'Password:', and 'Verification:'. The 'Information' section contains five text input fields: 'Name:', 'Department:', 'Email:', 'Phone:', and 'Description:'. At the bottom right of the dialog are two buttons: 'OK' and 'Cancel'.

4. Use the **User** tab of the **New User** box to do the following:
 - a. In the **Credentials** section, use the **Login** box to enter a login credential for the new user.
 - b. Use the **Password** box to enter a password for the new user.
Re-enter the password in the **Verification** box.
 - c. In the **Information** section, use the **Name** box to enter the name of the new user. A name must be entered to create a new user.

- d. Use the **Department** box to enter the name of the department of the new user, if necessary.
 - e. Use the **Email** box, enter the email address of the new user, if necessary.
 - f. Use the **Phone** box to enter the phone number of the new user, if necessary.
 - g. Use the **Description** box to enter a brief descriptor for the user, if necessary.
5. Click the **Roles** tab.
- The **Roles** tab opens.



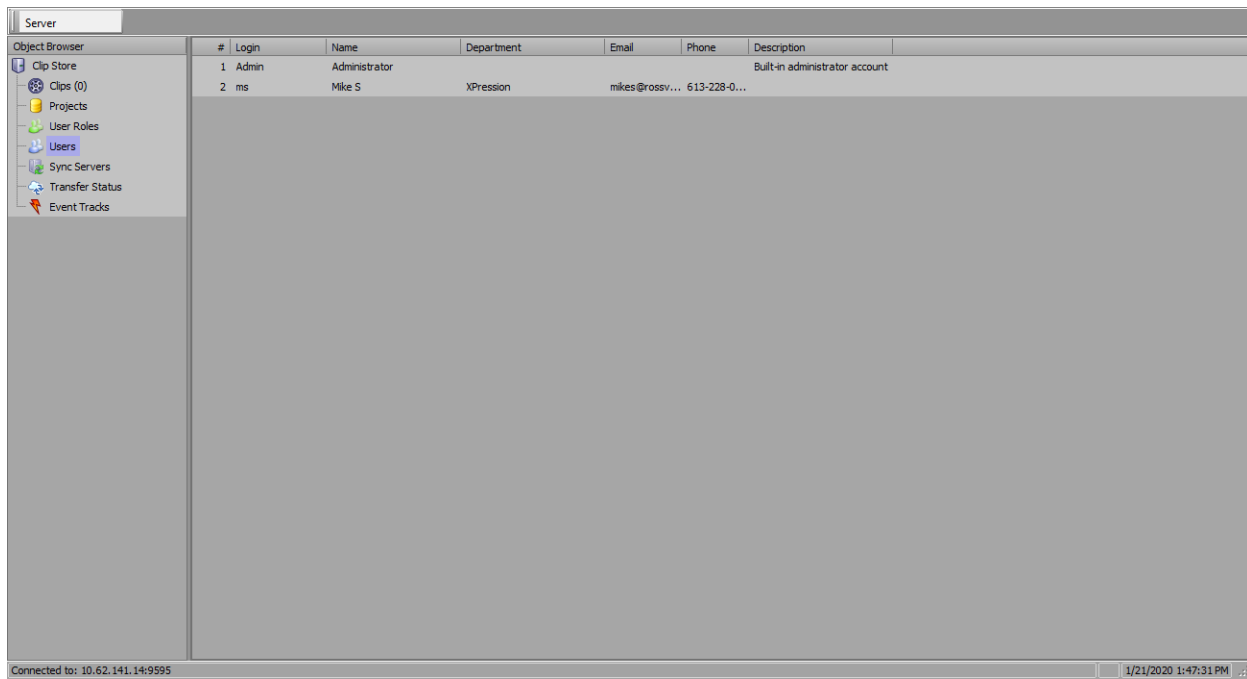
6. In the **Roles** tab, perform the following:
- a. Select a role in the **Available Roles** list.
 - b. Click **Assign**.
- The role is added to the **User Assigned Roles** list.



Repeat steps a to b for any other available roles, if necessary.

7. Click **OK**.

The new user is added to the Users list.



Repeat steps 3 to 7 to add more new users.

For More Information on...

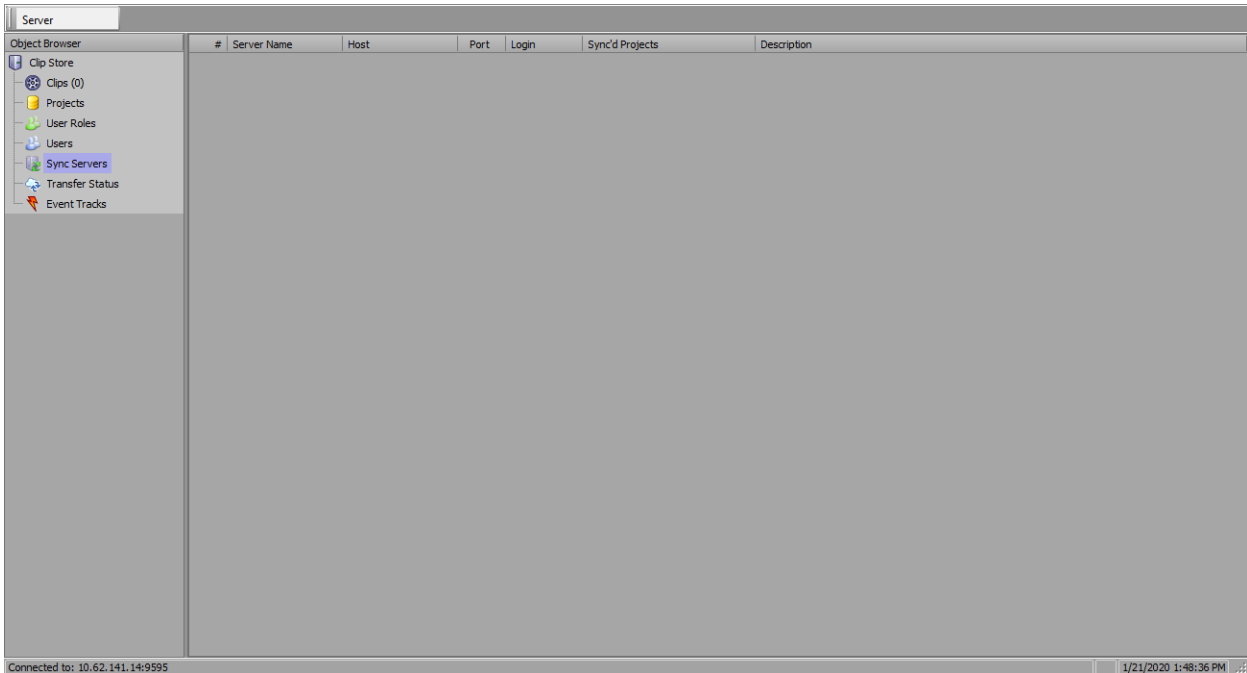
- creating user roles, refer to "**Configure User Roles**" on page 3–10.
- configuring API, refer to "**Clip Store API**" on page 8–1.

Synchronizing Multiple Clip Stores

Use the **Sync Servers** section to synchronize multiple Clip Stores. Synchronizing multiple Clip Stores will ensure that any changes and edits to a clip, or sub-clips created from a clip, will be reflected across all Clip Stores that have been synced.

1. Connect to the **XPression Clip Store Manager**.
2. In the **Object Browser**, select **Sync Servers** from the **Clip Store** menu tree.

The **Sync Servers** section opens in the main window.



3. Set up the server to which clips will be synchronized. A sync server is a server that has clips pushed to it.

- a. Right-click inside the Sync Servers list and select **New** from the shortcut menu.

The **New Sync Server** dialog box opens.

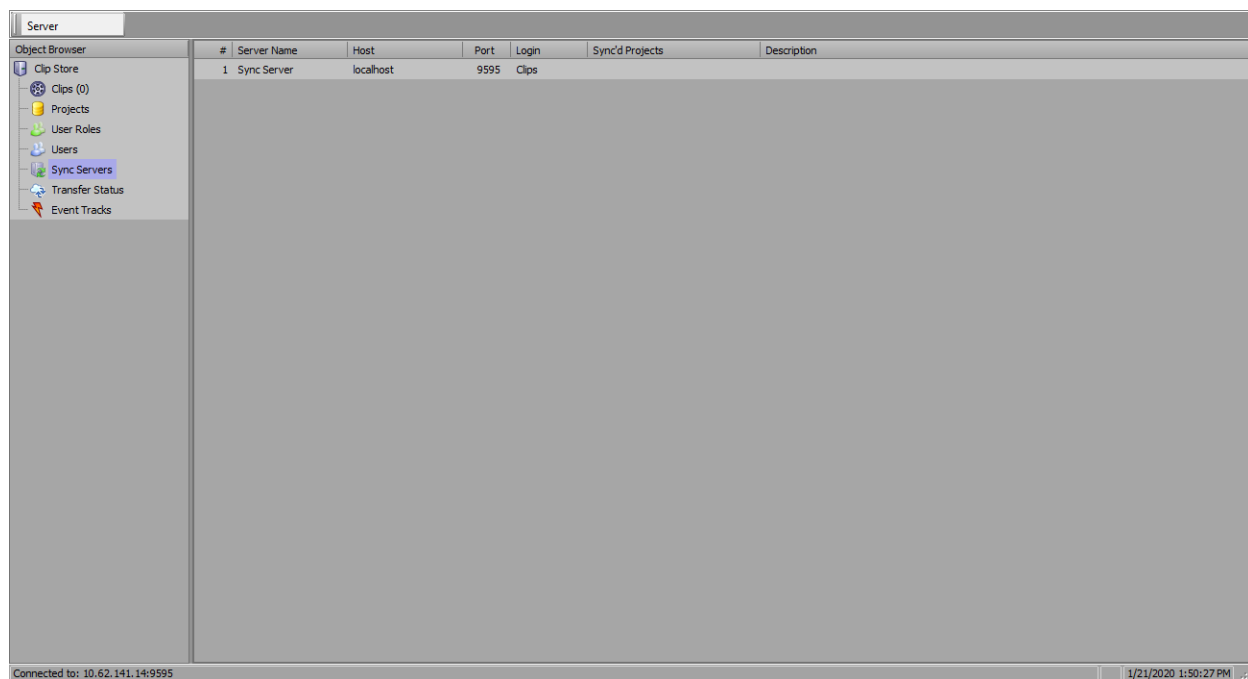
The 'New Sync Server' dialog box is shown. It has several input fields: 'Name' (containing 'Sync Server'), 'Host', 'Port' (set to '9595'), 'Login', 'Password', and 'Description'. Below these are three checkboxes: 'Enabled' (checked), 'Skip Deleted Clips' (unchecked), and 'Continue On Failure' (unchecked). There is a 'Project Filter' section with a checkbox 'Sync All Projects' (checked) and a list box containing '<unassigned>' with a checkbox next to it. At the bottom are buttons for 'Check All', 'Uncheck All', 'OK', and 'Cancel'.

- b. In the **New Sync Server** dialog box, set up the server from which the clips will be synchronized:
- **Name** — enter the name of the sync server. The default name is Sync Server.
 - **Host** — enter the IP address of the sync server.
 - **Port** — enter the port number of the sync server. The default is 9595.
 - **Login** — enter the login username for the sync server.
 - **Password** — enter the login password for the sync server.
 - **Description** — enter a brief descriptor for the sync server, if necessary.
 - **Enabled** — select this check box to activate the individual sync server. This is enabled by default.
 - **Skip Deleted Clips** — select this check box to skip deleted clips when synchronizing.
 - **Continue On Failure** — select this check box to continue clip sync after a clip fails to sync.
- c. In the **Project Filter** section, select the **Sync All Projects** check box to sync all projects to a destination Clip Store or de-select it to choose specific projects to sync to a destination Clip Store. It is selected by default.

Click the **Check All** button to select all projects in the project list. Click the **Uncheck All** button de-select all projects in the project list.

- d. Click **OK**.

The **New Sync Server** dialog box closes and the new sync server is added to the Sync Servers list.



Repeat step 3 to synchronize other servers, if necessary.

For More Information on...

- connecting to the XPression Clip Store server, refer to "**Starting the Clip Store Manager**" on page 3-7.
- viewing the transfer status when syncing servers, refer to "**Viewing the Transfer Status When Syncing Servers**" on page 3-17.

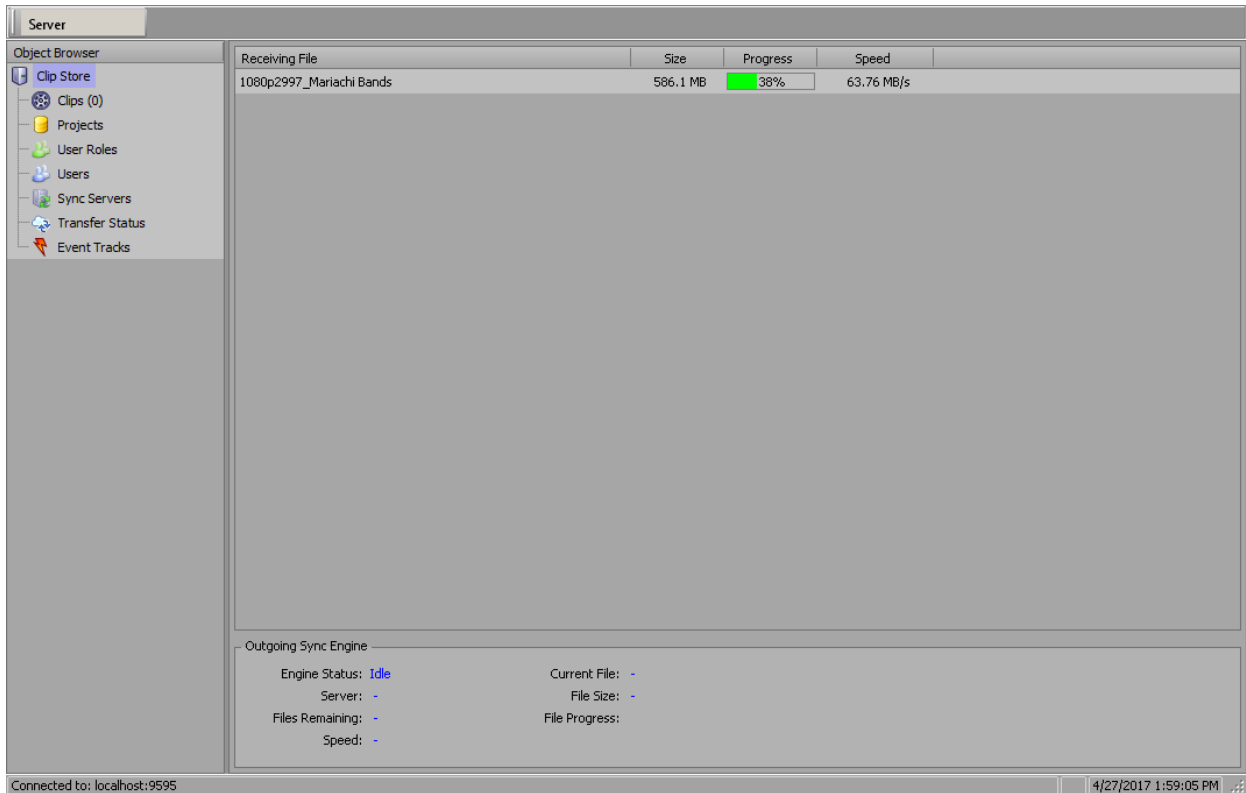
Viewing the Transfer Status When Syncing Servers

Use the **Transfer Status** section to view the current progress when synchronizing Clip Stores. Open it by selecting **Transfer Status** from the **Clip Store** menu tree in the **Object Browser**.

★ The transfer of files can take awhile depending on the amount of files.

Receiving Files On a Synced Server

When receiving files from a server, the **Receiving File** list will display the files as they are transferred:



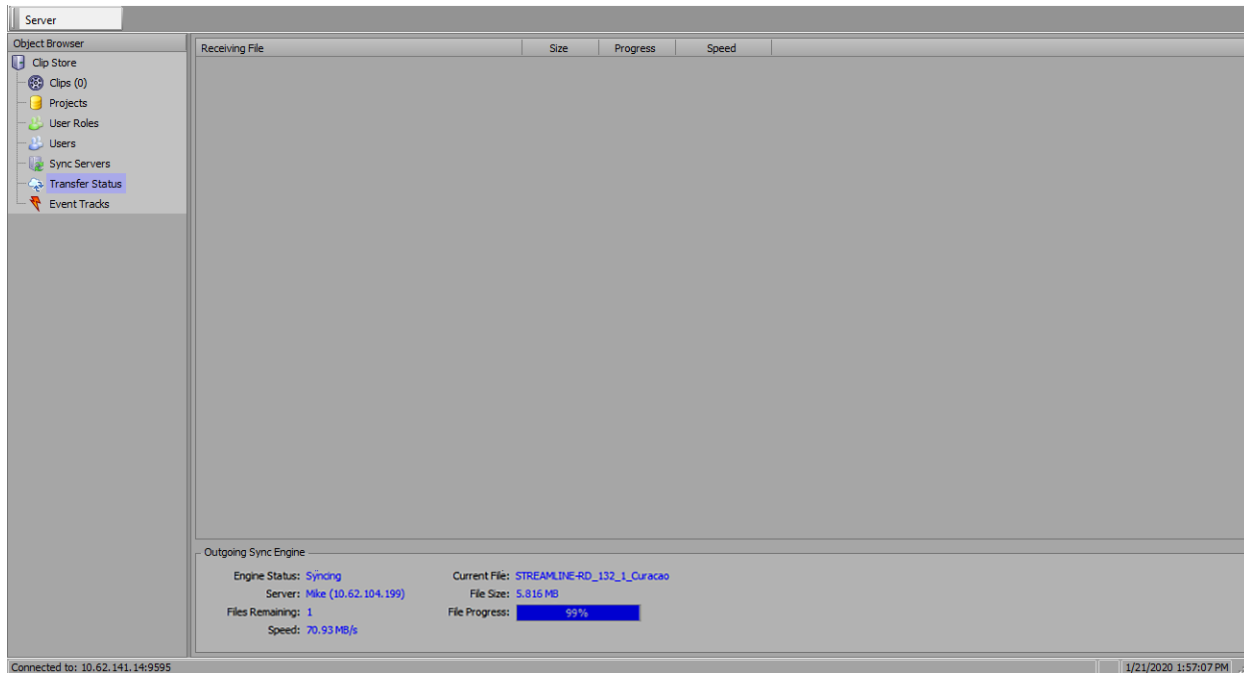
Only one file at a time is listed. The following file information is displayed:

- **Receiving File** (read-only) — displays the name of the file being received.
- **Size** (read-only) — displays the file size of the file being received.
- **Progress** (read-only) — displays a progress status bar and percentage completed for the file being received.
- **Speed** (read-only) — displays the speed of the download in MB/s.
- **Server** (read-only) — displays the IP address of files received.

During the incoming transfer, the **Outgoing Sync Engine** section will display the **Engine Status** as **Idle**.

Outgoing Files from a Clips Server

When files are being pushed to a synced server, the **Outgoing Sync Engine** section displays the outgoing file transfer progress:



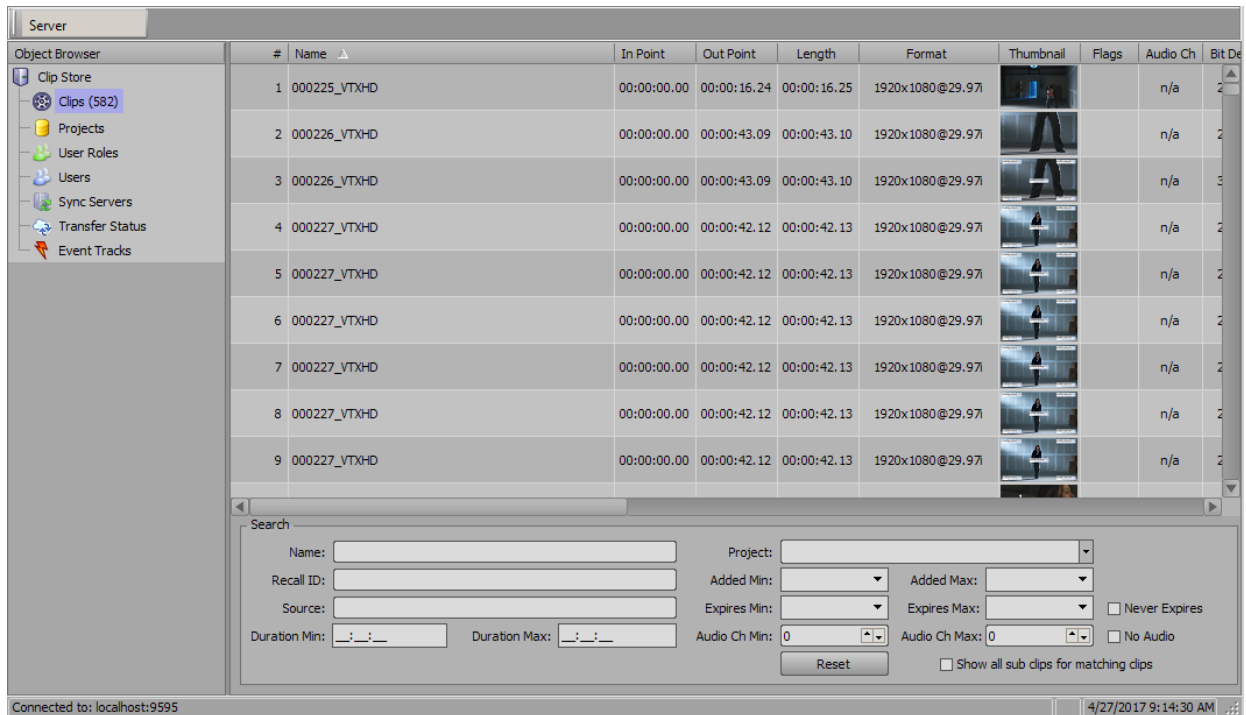
The following information is displayed:

- **Engine Status** (read-only) — displays the current status of the outgoing sync engine:
 - › **Idle** — the outgoing sync engine is not currently processing any files.
 - › **Syncing** — the outgoing sync engine is processing a file.
- **Server** (read-only) — displays the name and address of the server being synchronized.
- **Files Remaining** (read-only) — displays the remaining number of files to be synchronized.
- **Speed** (read-only) — displays the speed in MB/s of the file processing.
- **Current File** (read-only) — displays the name of the file being processed.
- **File Size** (read-only) — displays the size of the file being processed.
- **File Progress** (read-only) — displays a progress status bar and percentage completed for the file being processed.

Browsing and Deleting Clips

Use the **Clips** section to browse and delete clips from the server.

Open it by selecting **Clips** from the **Clip Store** menu tree in the **Object Browser**.



Use the **Clips** list to browse for specific clips, view the clip details, and delete clips from the server.

To delete a clip from the list, right-click a clip and select **Delete** from the shortcut menu.

Clips List

The following section describes the Clips list interface.

(read-only) — list number in the Clip Browser list.

Name (read-only) — lists the name of the clip.

In Point (read-only) — lists the drop frame timecode starting point for the clip.

Out Point (read-only) — lists the drop frame timecode ending point for the clip.

Length (read-only) — lists the drop frame timecode duration of the clip.

Format (read-only) — lists the formatting used for the clip.

Thumbnail (read-only) — provides a thumbnail image of the clip or still. Thumbnails can be enlarged by clicking and dragging the right border of the thumbnail column title. Review a flip book playout of the clip by hovering the cursor over the thumbnail. The flip book is rendered over a checkerboard pattern so that the alpha channel is visible unless the clip is full frame. Still image thumbnails display an icon (🖼️) indicating that they are still images and not clips.

Flags (read-only) — if using clips that have been transcoded by the XPression INcoder that include tags in the filename, this column lists the tags that have been parsed from the filename of the clip. The possible flags include:

- **LE** — indicates that looping has been enabled.
- **HF** — indicates that the clip will hold the last frame.
- **PM** — indicates that the clip uses premultiplied/shaped video.

Audio Ch (read-only) — lists the amount of audio channels embedded in the clip.

Bit Depth (read-only) — lists the quality of the signal quantization for the clip.

Recall ID (read-only) — lists the ID number for the clip when it is recalled.

Project (read-only) — lists the name of the project to which the clip has been added.

Added (read-only) — lists the date the clip was added to the project.

Expires (read-only) — lists the expiry date for the clip, if applicable.

Codec (read-only) — lists the codec format of the clip.

File Ext (read-only) — lists the file type of the clip.

Source (read-only) — lists the location on the server where the clips are stored.

File Size (read-only) — lists the file size of the clip in MB.

Unique ID (read-only) — lists the unique identification assigned to the clip when it was transcoded.

Alpha (read-only) — provides a thumbnail of the clip with the alpha channel visible (if the original status indicates <no info>, then re-ingest the original clip or update the thumbnail in the Edit Clip/Add Sub Clip dialog box).

First Frame TC (read-only) — lists the timecode at the point of the first frame of the clip.

Volume (read-only) — lists the volume level of the clip in decibels.

Has Proxy (read-only) — lists whether the clip includes a proxy or not.

Search

The following section describes the **Search** interface of the Clips section.

Name — use this box to enter the name of a clip to search.

Recall ID — use this box to enter a recall ID to search.

Source — use this box to enter a location to search for a clip.

Duration Min — use this box to enter a minimum duration time to search for the clip.

Duration Max — use this box to enter a maximum duration time to search for the clip.

Project — use this list to select a project to search for the clip.

Added Min — use the calendar to select a minimum date to search that the clip was added.

Added Max — use the calendar to select a maximum date to search that the clip was added.

Expires Min — use the calendar to select the minimum expiry date to search for the clip.

Expires Max — use the calendar to select the maximum expiry date to search for the clip.

Never Expires — select this check box to search for a clip with no expiry date set.

Audio Ch Min — use this box to enter or select a minimum amount of embedded audio channels to search for the clip.

Audio Ch Max — use this box to enter or select a maximum amount of embedded audio channels to search for the clip.

No Audio — select this check box to search for a clip with no embedded audio.

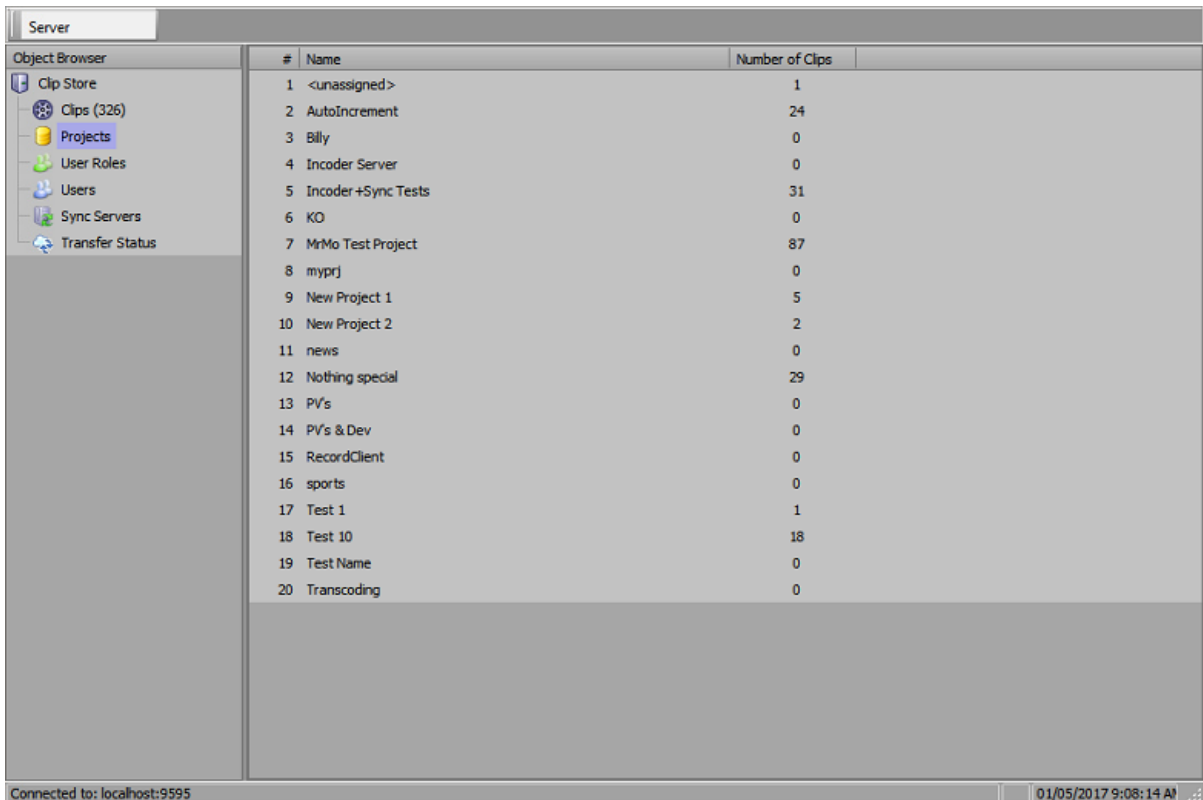
Reset — click this button to clear all the fields in the Advanced Search Options.

Show all sub clips for matching clips — select this check box to display any sub clips of a clip in the Clips list.

Projects

Use the **Projects** section to create, edit, and delete projects.

Open it by selecting **Projects** from the **Clip Store** menu tree in the **Object Browser**.



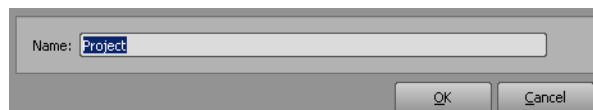
The screenshot shows the 'Object Browser' window with the 'Server' tab selected. On the left, a tree view shows 'Clip Store' expanded, with 'Projects' highlighted. The main area displays a table of projects.

#	Name	Number of Clips
1	<unassigned>	1
2	AutoIncrement	24
3	Billy	0
4	Incoder Server	0
5	Incoder+Sync Tests	31
6	KO	0
7	MrMo Test Project	87
8	myprj	0
9	New Project 1	5
10	New Project 2	2
11	news	0
12	Nothing special	29
13	PV's	0
14	PV's & Dev	0
15	RecordClient	0
16	sports	0
17	Test 1	1
18	Test 10	18
19	Test Name	0
20	Transcoding	0

At the bottom of the window, it says 'Connected to: localhost:9595' and the date/time is '01/05/2017 9:08:14 AM'.

To create a new project:

1. Right-click inside the Projects list and select **New Project** from the shortcut menu.
The **New Project** dialog box opens.



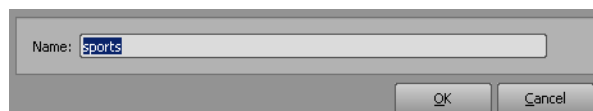
A dialog box titled 'New Project' with a text field labeled 'Name:' containing the word 'Project'. There are 'OK' and 'Cancel' buttons at the bottom right.

2. Use the **Name** box to enter a name for the new project.
3. Click **OK**.

The new project is added to the Projects list.

To edit a project:

1. Right-click inside the Projects list and select **Edit Project** from the shortcut menu.
The **Edit Project** dialog box opens.

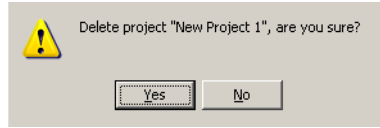


A dialog box titled 'Edit Project' with a text field labeled 'Name:' containing the word 'sports'. There are 'OK' and 'Cancel' buttons at the bottom right.

2. Use the **Name** box to edit the name of the project.
3. Click **OK**.
The edited project name is updated in the Projects list.

To delete a project:

1. Right-click inside the Projects list and select **Delete Project** from the shortcut menu.
A warning prompt opens.



2. Click **Yes**.
The project is deleted from the Projects list.

Projects List

The following section describes the Projects interface.

(read-only) — list number in the Projects list.

Name (read-only) — lists the name of the project.

Number of Clips — displays the number of clips in the project.

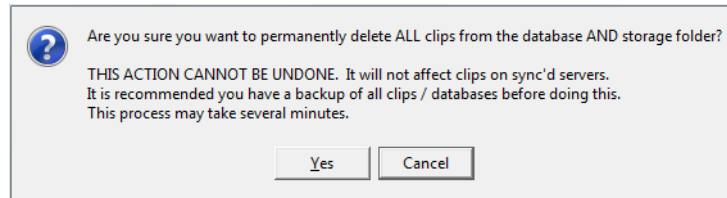
Wiping the Clips Database

If the clips database needs to be deleted, there is an option in the Clip Store Manager to permanently wipe the clips database.

To permanently wipe the clips database:

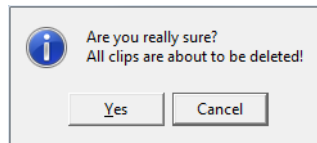
1. Connect to the **XPression Clip Store Manager**.
2. Select **Server > Advanced > Wipe clips and database**.

A confirmation prompt opens.



3. Click **Yes**.

A notification about the deletion opens.



4. Click **Yes**.

The Clips database is wiped.

Configure XPression Studio, BlueBox, and Gateway for XPression Clip Store

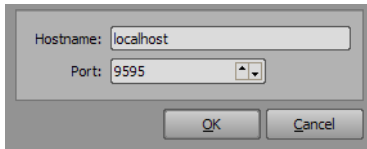
Once XPression Clip Store has been configured using the Clip Store Manager, depending on the workflow, the following need to be set up for use with the Clip Store:

- XPression Studio
- XPression BlueBox
- XPression Gateway

XPression Studio

1. Open **XPression**.
2. In XPression, click **Edit > Clip Store Setup**.


The **Clip Store Setup** dialog box opens.



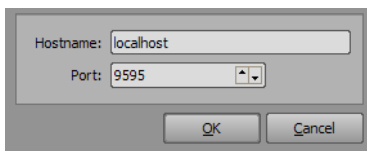
3. Use the **Hostname** box to enter the IP address of the Clip Store service if using remotely. If using the Clip Store service locally, use **localhost** (default).
4. Use the **Port** box to enter or select the port number for the Clip Store server connection. The default is 9595.
5. Click **OK**.

XPression is now connected to the Clip Store service.

XPression BlueBox

1. Start the **XPression BlueBox Service** if not already started.
2. In the Windows toolbar, right-click the **XPression BlueBox** icon () and select **Clip Store Setup** from the menu.

The **Clip Store Setup** dialog box opens.



3. Use the **Hostname** box to enter the IP address of the Clip Store service if using remotely. If using the Clip Store service locally, use **localhost** (default).
4. Use the **Port** box to enter or select the port number for the Clip Store server connection. The default is 9595.
5. Click **OK**.

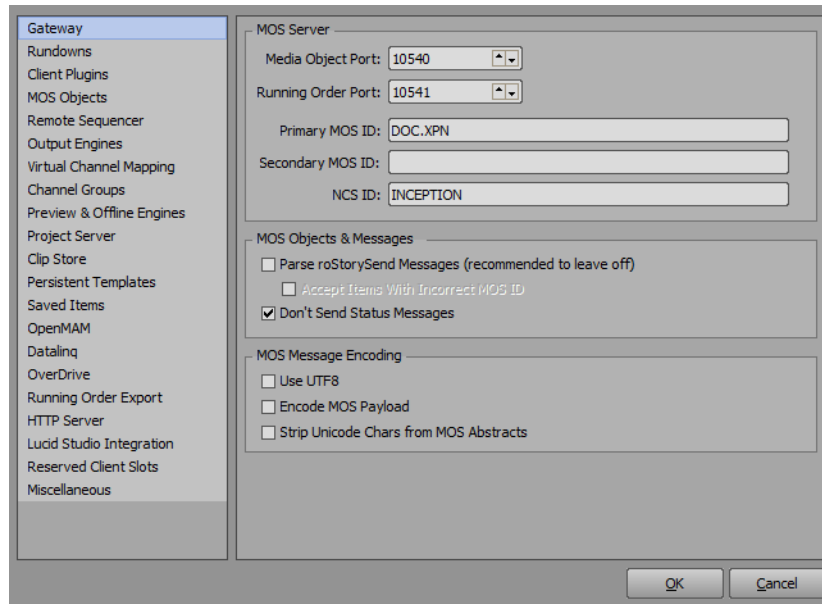
XPression is now connected to the Clip Store service.

XPression Gateway

With a Clip Store configured on the XPression Gateway, the XPression MOS Plugin offers the ability to browse, preview, and select clips as MOS items to include in an NRCS running order. It integrates with the XPression output and preview engines and the Remote Sequencer.

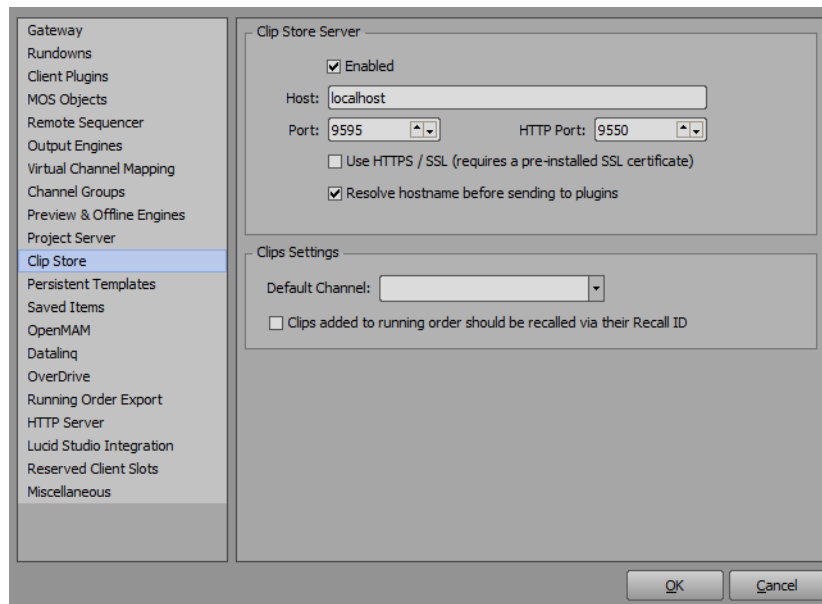
1. Open the **XPression Gateway**.
2. In the XPression Gateway, click **Gateway > Settings**.

The **XPression Gateway - Settings** dialog box opens.



3. Click **Clip Store** to configure the Clip Store Server and settings to use XPression Clips in the MOS workflow.

The **Clip Store** configuration area opens.



4. In the **Clip Store Server** section, select the **Enabled** check box to use the Clip Store Server in the MOS workflow.
5. Use the **Host** box to enter the IP address of the Clip Store Server.
6. Use the **Port** box to enter or select the port number for the Clip Store Server.

7. Select the **Use HTTPS / SSL** check box to enable the use of HTTPS/SSL in the HTTP Server configuration. Selecting this option requires a pre-installed SSL certificate.
8. Select the **Resolve hostname before sending to plugins** check box to resolve the ClipStore hostname to an IP before being provided to the client plugins.
9. In the **Clips Settings** section, use the **Default Channel** list to select the default engine and channel to which the clips will be assigned.

XPression Media Control Gateway

This section contains the following topics:

- XPression Media Control Gateway Overview
- Install the XPression Media Control Gateway
- Media Control Gateway Interface Overview
- Opening the XPression Media Control Gateway Settings Dialog Box
- Configuring the General Settings
- Configuring the AMP Settings
- Supported AMP Commands
- Configuring the VDCP Settings
- Supported VDCP Commands

XPression Media Control Gateway Overview

The XPression Media Control Gateway can be used for cueing and playback of clips and subclips from a Clip Store and for cueing and playback of take items from the XPression Sequencer.

The AMP/VDCP channels correspond to the server channels in XPression. The format for the naming of the clips/take items can be configured in the **XPression Media Control Gateway - Settings** dialog box. This format must ensure that every item is uniquely identified – duplicates will not be reported in the list of items retrieved by the remote device.

Clip and subclip formats support the following tags:

- %NAME%
- %FILENAME%
- %ID%
- %GUID%

The take item format supports the %ID% tag. Widths can be specified with a colon. For example %NAME:35% to limit the name to 35 characters, or %ID:4% to use a 4-digit ID padded with 0s.

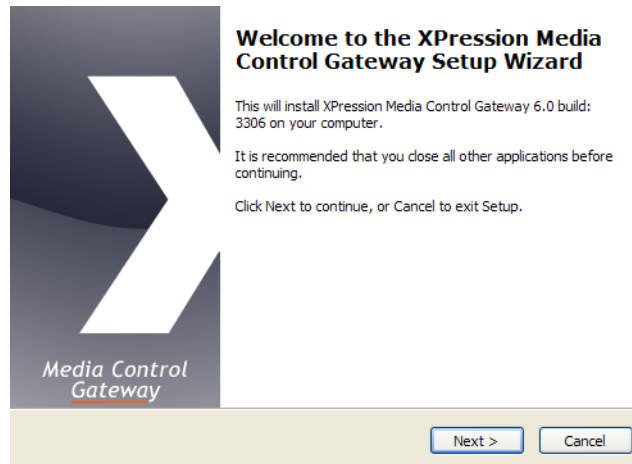
VDCP/AMP support basic item cueing, as well as cueing with specific in and out points. Playback support includes jog, shuttle, and variable speed playback. VDCP/AMP also support recording of clips, which will be directly added to the XPression Clip Store upon a successful record.

The AMP protocol also supports retrieving thumbnails of the clips (when supported by the remote device).

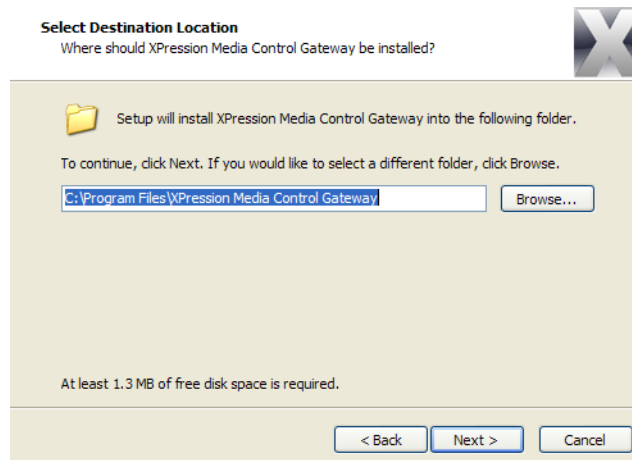
- ★ Deleting and renaming items in the Clip Store or the XPression Sequencer is not supported by the gateway.

Install the XPression Media Control Gateway

1. Locate and double-click the **xpMediaControlGateway-X.X_XXXX.exe** file.
The **Setup - XPression Media Control Gateway** window opens.



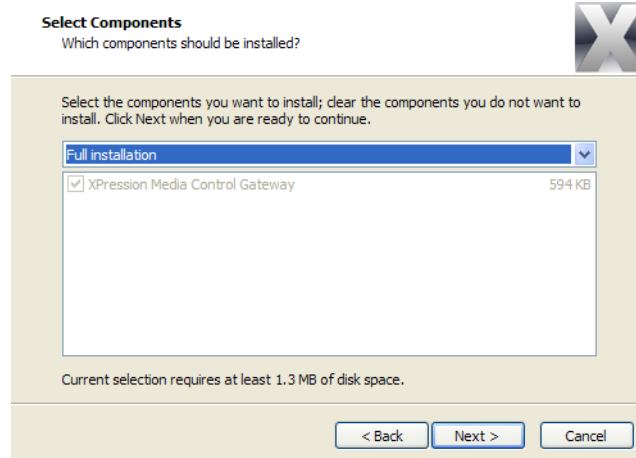
2. Click **Next**.
The **Select Destination Location** section opens.



3. Use the default destination folder location or click **Browse** to locate and select a different destination location.

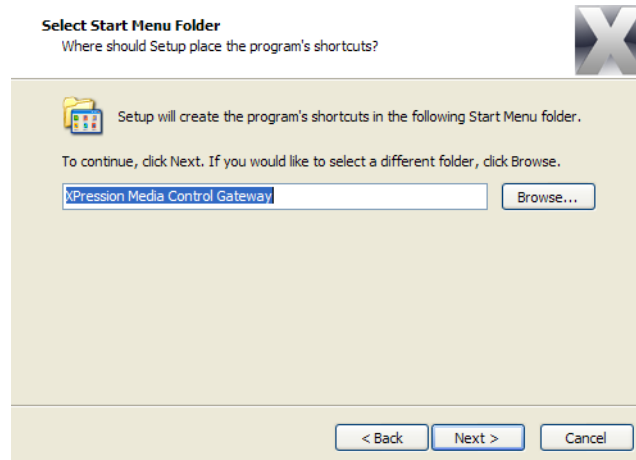
4. Click **Next**.

The **Select Components** section opens.



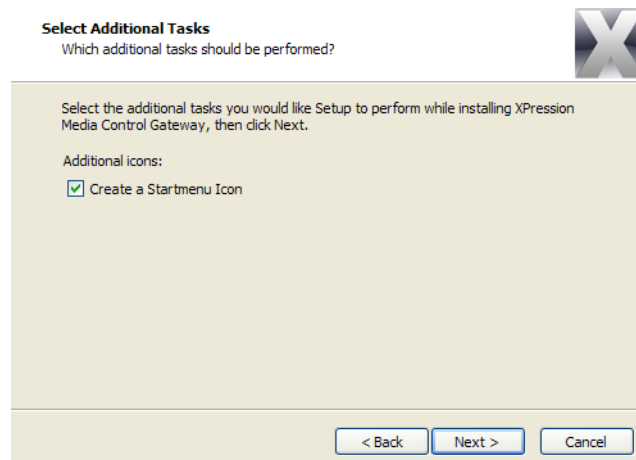
5. Click **Next**.

The **Select Start Menu Folder** section opens.

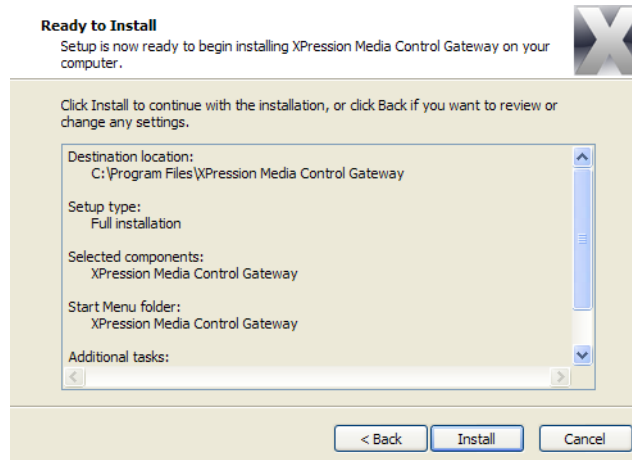


6. Use the default Start menu folder location or click **Browse** to locate and select a different Start menu location.
7. Click **Next**.

The **Select Additional Tasks** section opens.



8. Use the default additional tasks configuration or de-select the **Create a Startmenu Icon** check box (the default setting is as selected).
 9. Click **Next**.
- The **Ready to Install** section opens.



10. Click **Install**.

The installation begins.

Once the installation is complete, the **Completing the XPression Media Control Gateway Setup Wizard** section opens.

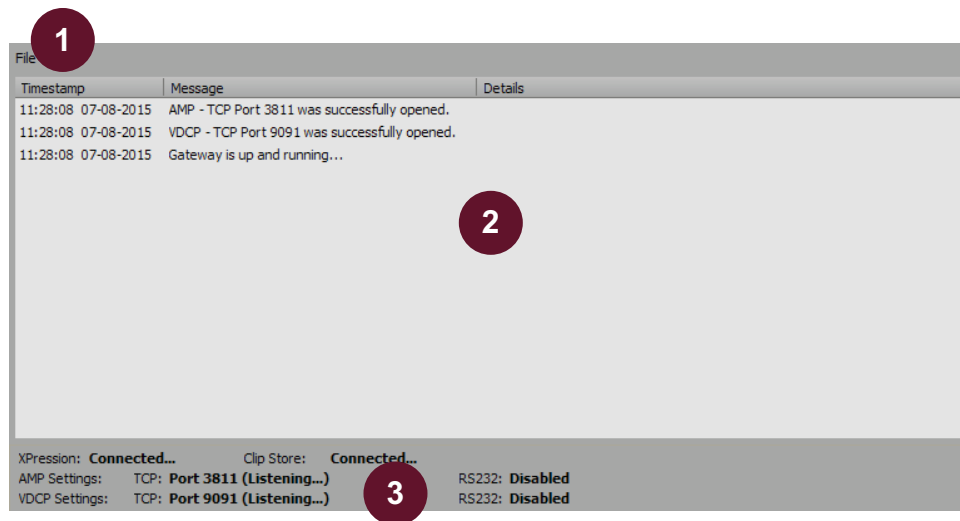


11. Click **Finish**.

If the **Run XPression Media Control Gateway** check box is left as selected by default, the XPression Media Control Gateway launches.

Media Control Gateway Interface Overview

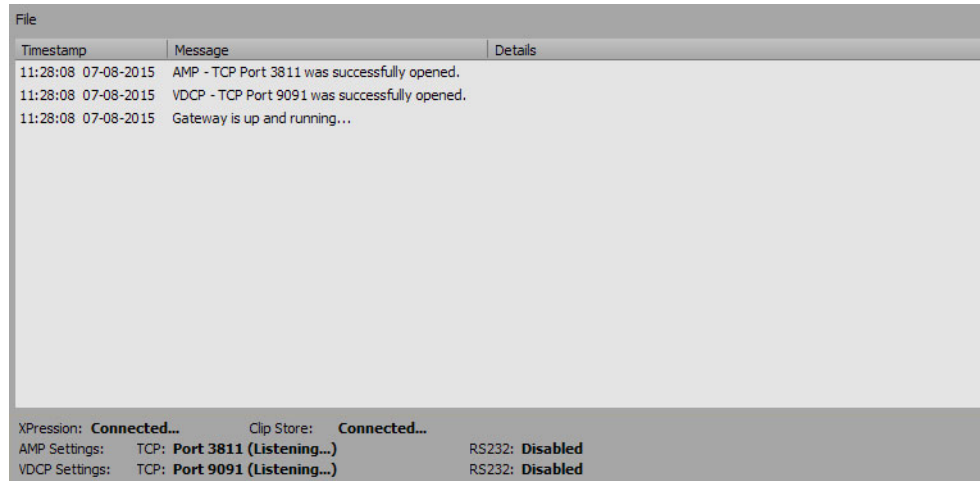
The following screen capture displays the main elements of the Media Control Gateway interface.



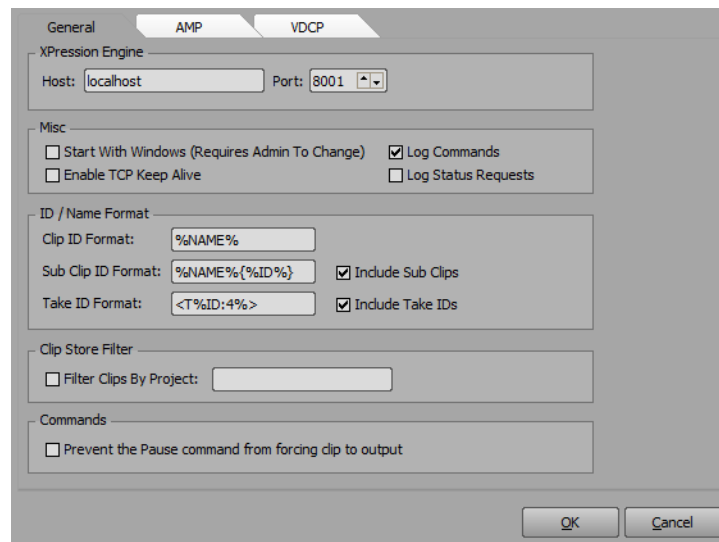
- 1) **File Menu** — use this list to access the Media Control Gateway settings or shutdown the gateway.
- 2) **Log** — displays the activity of the Media Control Gateway.
- 3) **Connections** — displays the connections and their respective status.

Opening the XPression Media Control Gateway Settings Dialog Box

1. Launch the XPression Media Control Gateway.
The **XPression Media Control Gateway** opens.



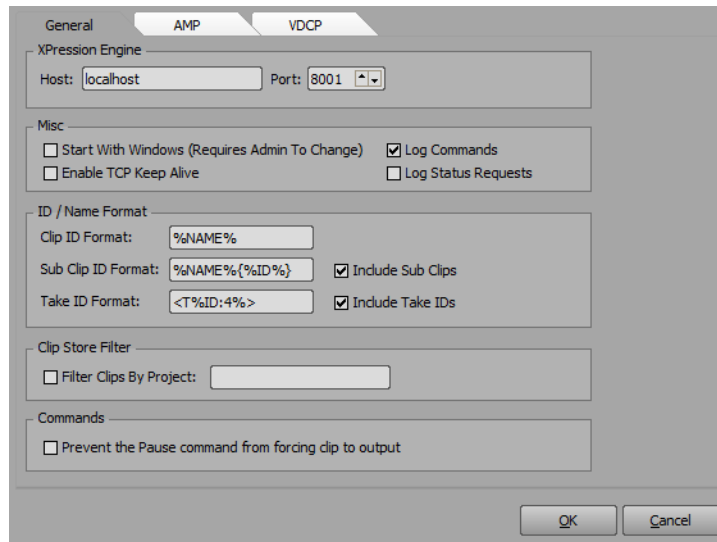
2. Click **File > Settings**.
The **XPression Media Control Gateway - Settings** dialog box opens.



Configuring the General Settings

1. In the **XPression Media Control Gateway**, click **File > Settings**.

The **XPression Media Control Gateway - Settings** dialog box opens.



2. In the **General** tab, configure the following settings as necessary:
 - a. In the **XPression Engine** section, use the **Host** box to enter the IP address of the XPression machine to which the gateway is to connect. Or, enter `localhost` to connect the gateway to the local XPression machine. The default setting is `localhost`.
 - b. Use the **Port** box to enter or select the port number of the XPression machine. The default is 8001.
 - c. In the **Misc** section, configure the following settings as necessary:
 - **Start With Windows** — select this check box to start the gateway when Windows launches.
 - **Log Commands** — select this check box to log the commands in the gateway.
 - **Enable TCP Keep Alive** — select this check box to prevent the TCP connection from breaking during periods of inactivity.
 - **Log Status Requests** — select this check box to log the status requests in the gateway.
 - d. In the **ID / Name Format** section, use the **Clip ID Format** box to enter the format for the naming of the clips in the gateway.
 - e. Use the **Sub Clip ID Format** box to enter the format for the naming of the subclips in the gateway.
Select the **Include Sub Clips** check box to include subclips in the clip list. This is enabled by default.
 - f. Use the **Take ID Format** box to enter the format for the naming of take IDs in the gateway.
Select the **Include Take IDs** check box to include take IDs from the XPression sequencer in the clip list. This is enabled by default.
 - g. In the **Clip Store Filter** section, select the **Filter Clips By Project** check box to only retrieve clips from a specified project. Enter a project name in the text box from which to retrieve clips.
 - h. In the **Commands** section, select the **Prevent the Pause command from forcing clip to output** check box to prevent the clip from going to output when pause commands are received from a device.
3. Click **OK**.

The **XPression Media Control Gateway - Settings** dialog box closes.

★ When this check box is selected, the **Cue video clips directly to framebuffer** check box in the **Options** tab of the **Server Channels** must not be selected for this preference to function.

Configuring the AMP Settings

1. In the **XPression Media Control Gateway**, click **File > Settings**.

The **XPression Media Control Gateway - Settings** dialog box opens.

The screenshot shows the 'General' tab of the 'XPression Media Control Gateway - Settings' dialog box. The 'XPression Engine' section has 'Host' set to 'localhost' and 'Port' set to '8001'. The 'Misc' section has checkboxes for 'Start With Windows (Requires Admin To Change)', 'Enable TCP Keep Alive', 'Log Commands' (checked), and 'Log Status Requests'. The 'ID / Name Format' section has 'Clip ID Format' set to '%NAME%', 'Sub Clip ID Format' set to '%NAME%(%ID%)' (with 'Include Sub Clips' checked), and 'Take ID Format' set to '<T%ID:4%>' (with 'Include Take IDs' checked). The 'Clip Store Filter' section has a checkbox for 'Filter Clips By Project'. The 'Commands' section has a checkbox for 'Prevent the Pause command from forcing clip to output'. 'OK' and 'Cancel' buttons are at the bottom right.

2. Click the **AMP** tab.

The **AMP** tab opens.

The screenshot shows the 'AMP' tab of the 'XPression Media Control Gateway - Settings' dialog box. The 'AMP over TCP/IP' section has 'Server Port' set to '3811' and a checkbox for 'Accept CMDS commands with incomplete last byte'. The 'AMP over RS232' section has a table with columns: Port, Baudrate, Data Bits, Parity, Stop Bits, Flow Control, Enabled, and Channel. Below the table are 'Add...' and 'Delete...' buttons. The 'AMP Recording' section has 'Video Channel' and 'Record Input' buttons, 'Add...' and 'Delete...' buttons, a checkbox for 'Allow RECORD without CUE', and a 'Clip Name' field set to 'Record_%DATETIME%'. 'OK' and 'Cancel' buttons are at the bottom right.

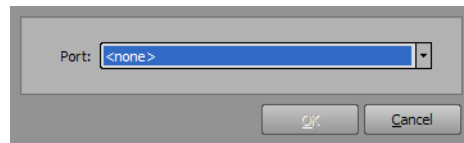
3. Configure the AMP connection settings as required:

AMP Over TCP/IP

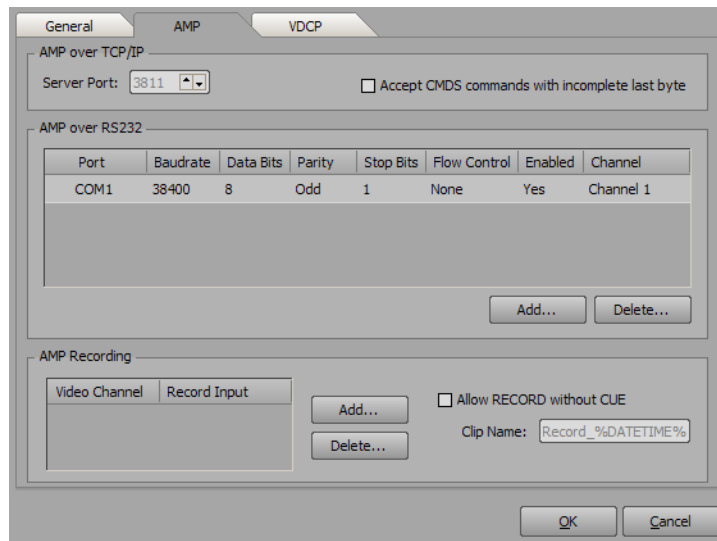
- a. In the **AMP over TCP/IP** section, the **Server Port** box displays the port number for the TCP/IP server connection. The default is 3811 and is not user-configurable.
- b. Select the **Accept AMP CMDS commands with incomplete last byte** to accept CMDS commands with an incomplete last ASCII byte.

AMP Over RS232

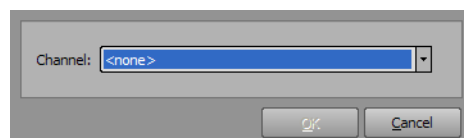
- a. In the **AMP over RS232** section, click **Add** to add a port for the RS232 connection.
The **Select RS232 Port** dialog box opens.



- b. Use the **Port** list to select a **COM** port for the connection.
- c. Click **OK**.
The COM port is added to the AMP over RS232 connections list.

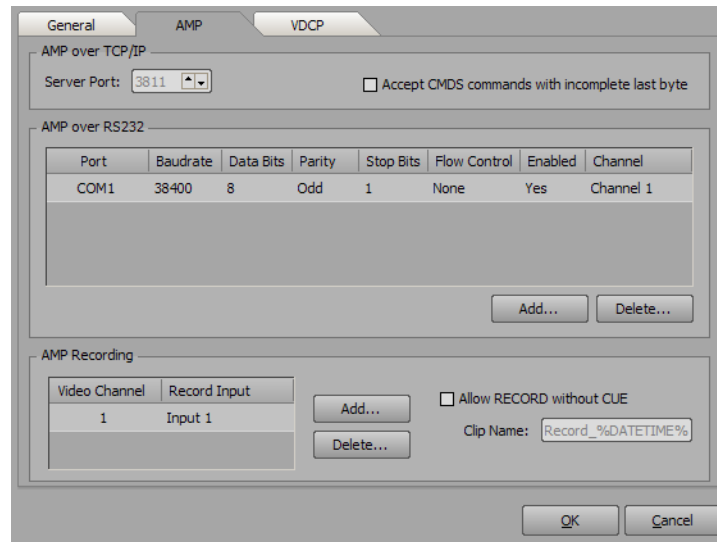


- d. Configure the connection settings if necessary:
 - **Port** — use the list to select a different COM port if necessary.
 - **Baudrate** — use the list to select a communication speed for GPI signals.
 - **Data Bits** — use the list to select the number of bits used to represent one character of data for GPI signals.
 - **Parity** — use the list to select the method used to check for lost data in a GPI signal.
 - **Stop Bits** — use the list to select the number of bits used to indicate the end of a byte in a GPI signal.
 - **Flow Control** — use the list to select the data transmission rate controller for a GPI signal.
 - **Enabled** — use the check box to select whether the AMP over RS232 connection is enabled or not.
 - **Channel** — use the list to select a server channel for playout.
When using TCP/IP, the channel corresponding to the server channel in XPression is specified by the remote device when establishing a connection. However, when using RS232, there is no such provision in the protocol, so the server channel needs to be specified.
4. In the **AMP Recording** section, click **Add** to select a source input if using AMP recording with the Record Client.
The **Select Video Channel #** dialog box opens.



- a. Use the **Channel** list to select a server channel to use for the AMP session.
- b. Click **OK**.

The server channel is added to the AMP Recording list.



- c. Use the **Record Input** list to select an input for recording functionality. The default is Input 1.

When the AMP connection is configured to control a certain server channel, if this channel is associated with an input, then the AMP session will have playback control on the server channel and record control on the input. If the channel is not mapped to an input, then the AMP session will only have playback control.

Successful recordings are automatically added to the Clip Store.

- d. Select the **Allow RECORD without CUE** check box to crash record from AMP when the RECORD command is received without the CUE command.

Use the **Clip Name** box to enter the name of the clip to crash record using the RECORD without CUE function.

5. Click **OK**.

The **XPression Media Control Gateway - Settings** dialog box closes.

Supported AMP Commands

Cueing and playback control on output ports of clips in Clip Store and take items in the Sequencer is supported, as well as recording on input ports. Clip management, such as renaming, deleting, or modifying clips, is not supported. Delayed commands are also not supported. The option to send a list of clips to certain commands (e.g. IN PRESET) is not supported.

The following AMP commands are supported by the XPression Media Control Gateway:

- STOP
- PLAY
- RECORD
- EJECT
- FAST FORWARD
- JOG FORWARD/REVERSE
- VARIABLE FORWARD/REVERSE
- SHUTTLE FORWARD/REVERSE
- REWIND
- CUE UP WITH DATA
- IN PRESET
- OUT PRESET
- STATUS SENSE
- CURRENT TIME SENSE
- RECORD CUE UP WITH DATA
- GET THUMBNAIL
- LIST FIRST ID
- LIST NEXT ID
- ID LOADED REQUEST
- ID DURATION REQUEST
- SET RECORD DURATION
- ID START TIME REQUEST
- ID COUNT REQUEST
- DEVICE NAME REQUEST

Configuring the VDCP Settings

1. In the **XPression Media Control Gateway**, click **File > Settings**.

The **XPression Media Control Gateway - Settings** dialog box opens.

The screenshot shows the 'General' tab of the 'XPression Media Control Gateway - Settings' dialog box. The 'XPression Engine' section has 'Host' set to 'localhost' and 'Port' set to '8001'. The 'Misc' section has 'Start With Windows (Requires Admin To Change)' and 'Enable TCP Keep Alive' unchecked, and 'Log Commands' and 'Log Status Requests' checked. The 'ID / Name Format' section has 'Clip ID Format' set to '%NAME%', 'Sub Clip ID Format' set to '%NAME%(%ID%)', and 'Take ID Format' set to '<T%ID:4%>'. The 'Include Sub Clips' and 'Include Take IDs' checkboxes are checked. The 'Clip Store Filter' section has 'Filter Clips By Project:' unchecked. The 'Commands' section has 'Prevent the Pause command from forcing clip to output' unchecked. The 'OK' and 'Cancel' buttons are at the bottom right.

2. Click the **VDCP** tab.

The **VDCP** tab opens.

The screenshot shows the 'VDCP' tab of the 'XPression Media Control Gateway - Settings' dialog box. The 'VDCP over TCP/IP' section has 'Server Port' set to '9091'. The 'VDCP over RS232' section has a table with columns: Port, Baudrate, Data Bits, Parity, Stop Bits, Flow Control, and Enabled. The table is empty. There are 'Add...' and 'Delete...' buttons below the table. The 'VDCP Extensions' section has 'Loop commands (On: 0xF1 / Off: 0xF2)' and 'Clear CUE/INIT when CUE/INIT DONE is set' unchecked. The 'OK' and 'Cancel' buttons are at the bottom right.

3. Configure the VDCP connection settings as required:

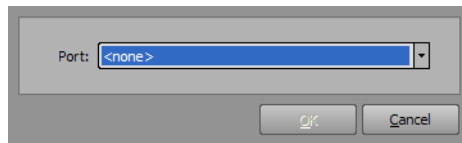
VDCP Over TCP/IP

- a. In the **VDCP over TCP/IP** section, use the **Server Port** box to enter or select the port number for the TCP/IP server connection. The default is 9091.
- b. Select the **Loop commands** check box to use a VDCP extension to turn looping on (0x1X 0xF1) and off (0x1X 0xF2). This option is disabled by default.
- c. Select the **CUE/INIT when CUE/INIT DONE is set** check box only if the VDCP controller does not support having both the CUE/INIT and CUE/INIT DONE flags asserted simultaneously (playback or record). This option is disabled by default.

VDCP Over RS232

- a. In the **VDCP over RS232** section, click **Add** to add a port for the RS232 connection.

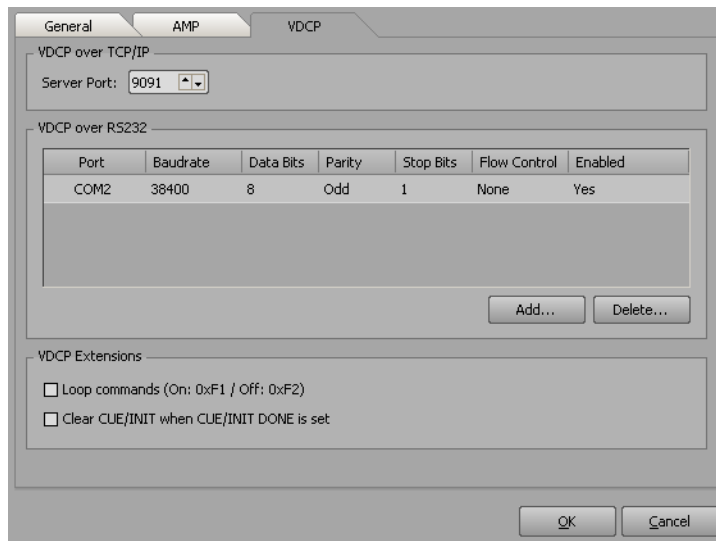
The **Select RS232 Port** dialog box opens.



- b. Use the **Port** list to select a **COM** port for the connection.

- c. Click **OK**.

The COM port is added to the VDCP over RS232 connections list.



- d. Configure the connection settings if necessary:

- **Port** — use the list to select a different COM port if necessary.
- **Baudrate** — use the list to select a communication speed for GPI signals.
- **Data Bits** — use the list to select the number of bits used to represent one character of data for GPI signals.
- **Parity** — use the list to select the method used to check for lost data in a GPI signal.
- **Stop Bits** — use the list to select the number of bits used to indicate the end of a byte in a GPI signal.
- **Flow Control** — use the list to select the data transmission rate controller for a GPI signal.
- **Enabled** — use the check box to select whether the VDCP over RS232 connection is enabled or not.

- e. Select the **Loop commands** check box to use a VDCP extension to turn looping on (0x1X 0xF1) and off (0x1X 0xF2). This option is disabled by default.

- f. Select the **CUE/INIT when CUE/INIT DONE is set** check box to only if the VDCP controller does not support having both the CUE/INIT and CUE/INIT DONE flags asserted simultaneously (playback or record). This option is disabled by default.

4. Click **OK**.

The **XPression Media Control Gateway - Settings** dialog box closes.

Supported VDCP Commands

Cueing and playback control on output ports of clips in Clip Store and take items in the Sequencer is supported, as well as recording on input ports. Clip management, such as renaming, deleting, or modifying clips, is not supported. Also, timeline and macro commands are not supported.

The following VDCP commands are supported by the XPression Media Control Gateway:

Immediate commands:

- STOP
- PLAY
- RECORD
- STILL
- CONTINUE
- STEP
- JOG
- VAR PLAY

Preset commands:

- CLOSE PORT
- SELECT PORT
- PLAY CUE
- PLAY CUE WITH DATA
- RECORD INIT

Sense commands:

- PORT STATUS
- OPEN PORT
- ID LIST
- ID ADDED LIST
- ID DELETED LIST
- NEXT
- ACTIVE ID REQUEST
- POSITION REQUEST
- ID SIZE REQUEST
- ID REQUEST
- DEVICE TYPE REQUEST

XPression INcoder

- ★ The XPression INcoder is a separate, optional component to the XPression Clips workflow. If the INcoder has not been purchased, use the Record Client feature in XPression to transcode clips. For more information, or to purchase the INcoder, contact Ross Video.

The following topics are discussed in this section:

- XPression INcoder Overview
- INcoder User Interface Overview
- Configuring the XPression INcoder
- XPression INcoder Tasks

XPression INcoder Overview

The XPression INcoder is a windows service that manages one or more watchfolders used for file based ingest of clips into the XPression Clips workflow. The INcoder performs transcoding functions to convert clips from compatible formats into XPression Codec AVI files. The same formats supported by the XPression Video Coder can be transcoded by the INcoder. Still images can be exported to the Clip Store in their native format.

After clips have been dropped into a watchfolder, an email based notification system can alert configured users to status events such as failures or successful transcodings.

The XPression INcoder Manager is used for managing and configuring the INcoder service. The INcoder Manager can run on the INcoder machine or connect to a remote INcoder.

INcoder Terminology

There are several pieces of terminology to understand in the INcoder Manager necessary for configuring it.

- **Source** — a source represents a watchfolder where clips can be placed to be transcoded. The watchfolder can exist on a local or accessible network drive.
- **Project** — an abstract concept used for grouping clips. A watchfolder should be assigned a project. Examples of projects could be: news, sports, weather, etc. Separate watchfolders could be assigned for each project so that clips dropped into a particular folder on disk will be assigned the correct project which can later be used for searching or clerical tasks. Each project can have separate lists of users to notify.
- **Target** — a target represents the destination to which the transcoded clip should be sent. In the case of XPression Clips, the target would be an XPression Clip Store. After a successful transcode the clip will be sent to all of the targets assigned to the processor.
- **Processor** — a processor represents a collection of targets. Each source (watchfolder) must be assigned a processor. After transcoding, all targets in the processor will receive the final clip.

For More Information on...

- the XPression INcoder, refer to the ***XPression INcoder User Guide***.

INcoder User Interface Overview

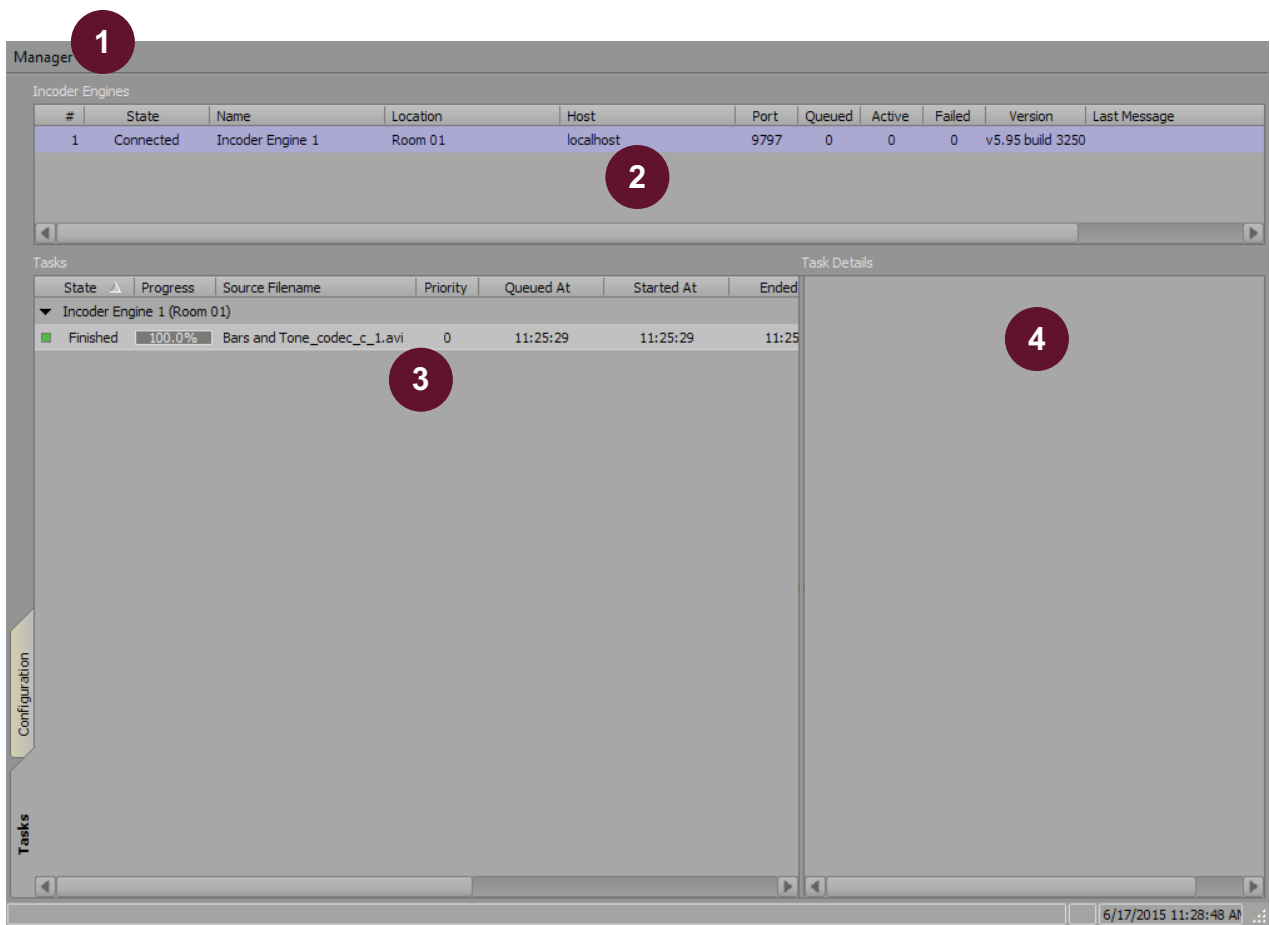
This section provides a user interface overview for the XPression INcoder Manager interface.

The following user interfaces are discussed in this section:

- The XPression INcoder - Tasks Tab
- The XPression INcoder - Configuration Tab

The XPression INcoder - Tasks Tab

The following screen capture displays the main elements of the **Tasks** tab in the XPression INcoder Manager.



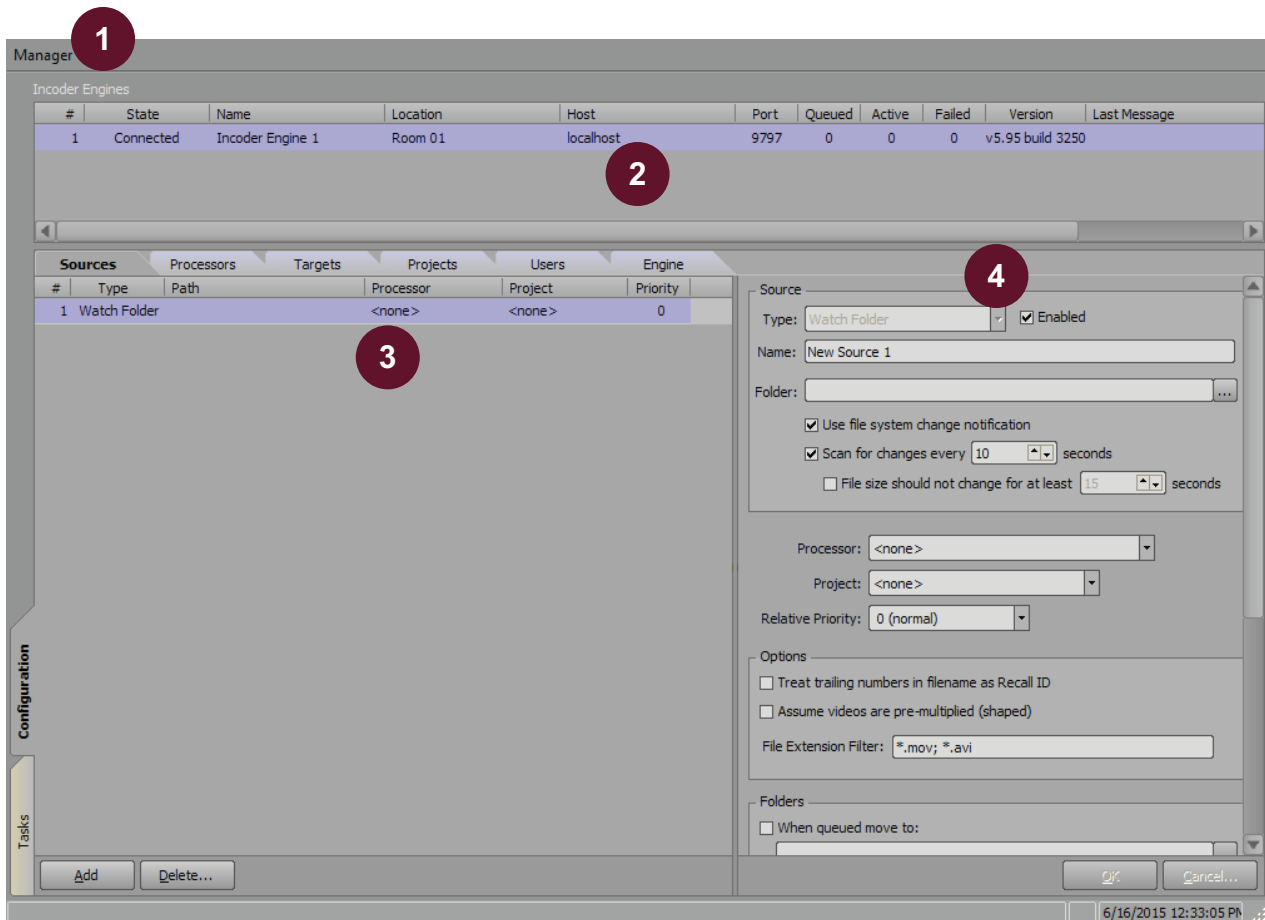
- 1) **Menu Bar** — use the Manager menu to exit the XPression INcoder.

2) **Incoder Engines** — displays the configured engines for the XPression INcoder along with their state and details.
- 3) **Tasks** — lists the clips that are transcoded and transcoding for specific INcoder engines, as well as the details about the transcoding.

4) **Task Details** — feature currently not implemented.

The XPression INcoder - Configuration Tab

The following screen capture displays the main elements of the Configuration tab in the XPression INcoder Manager.



- 1) **Menu Bar** — use the Manager menu to exit the XPression INcoder.
- 2) **Incoder Engines** — displays the configured engines for the XPression INcoder along with their state and details.
- 3) **Configuration Tabs** — use the configuration tabs to configure the INcoder engines, users, projects, targets, processors, and sources.
- 4) **Configuration Area** — use the configuration area to configure the settings and details for the selected configuration tab.

Configuring the XPression INcoder

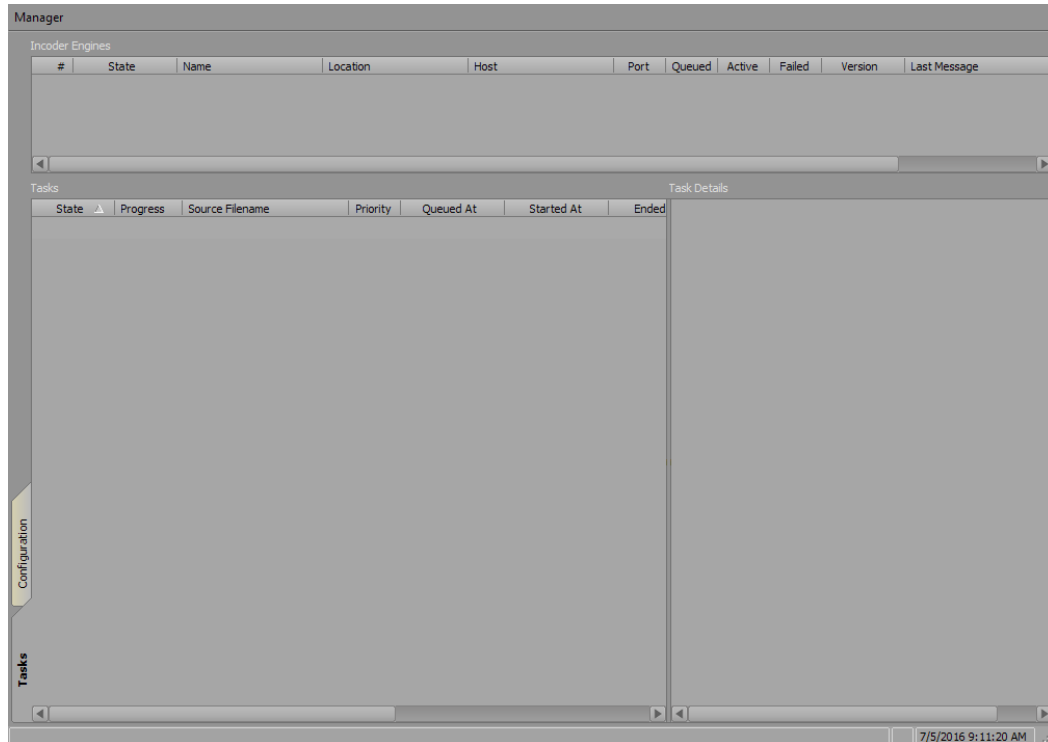
Use the **XPression INcoder Manager** to configure the XPression INcoder for use with XPression Clips.

1. On the machine that has the XPression INcoder installed, locate the **XPression INcoder** folder using the **Start** menu.
2. Select **Start INcoder** (🚀) if the INcoder has not been started.

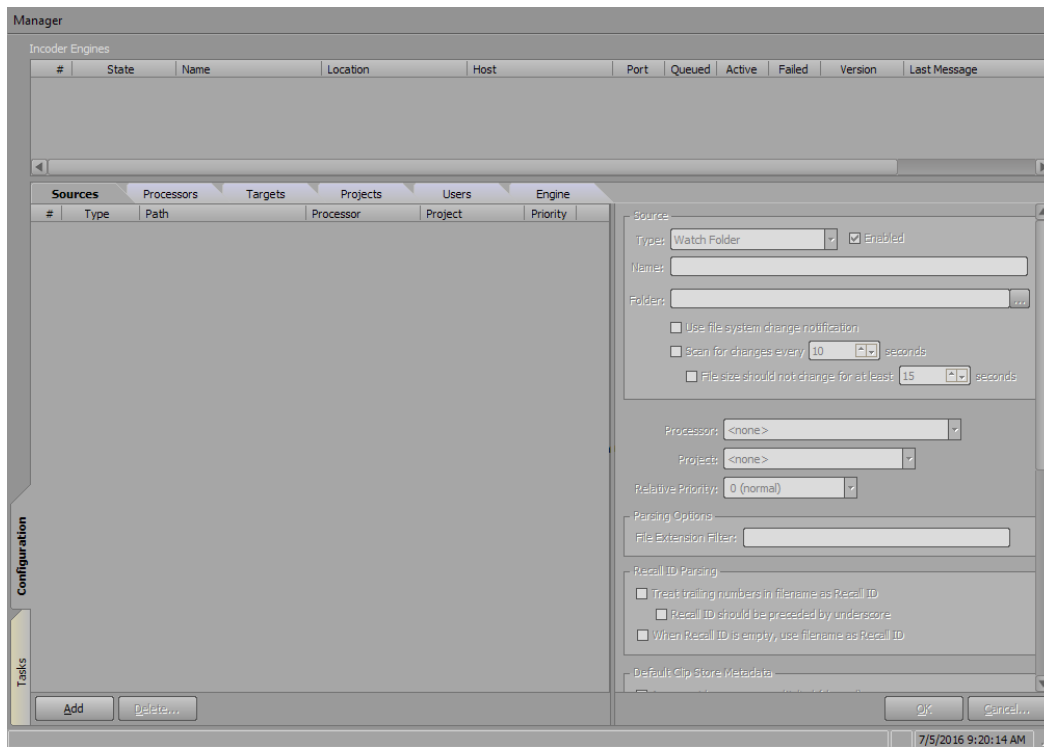
If the INcoder has successfully started, an information message indicates that the XPression INcoder was successfully started.

3. Locate the **XPression INcoder** folder using the **Start** menu and select **INcoder Manager**.

The **XPression INcoder Manager** opens.



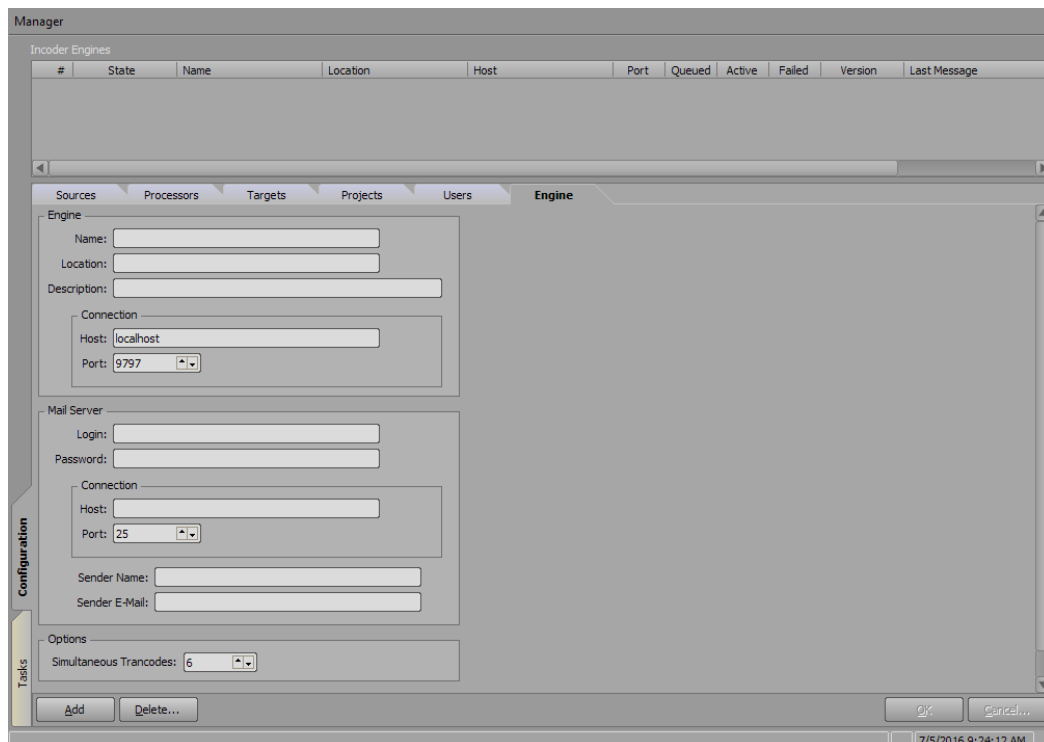
4. Click the **Configuration** tab.
The **Configuration** tab opens.



5. Configure the configuration tabs from right to left:

Engine

- a. Click the **Engine** tab.
The **Engine** tab opens.



- b. Click **Add**.

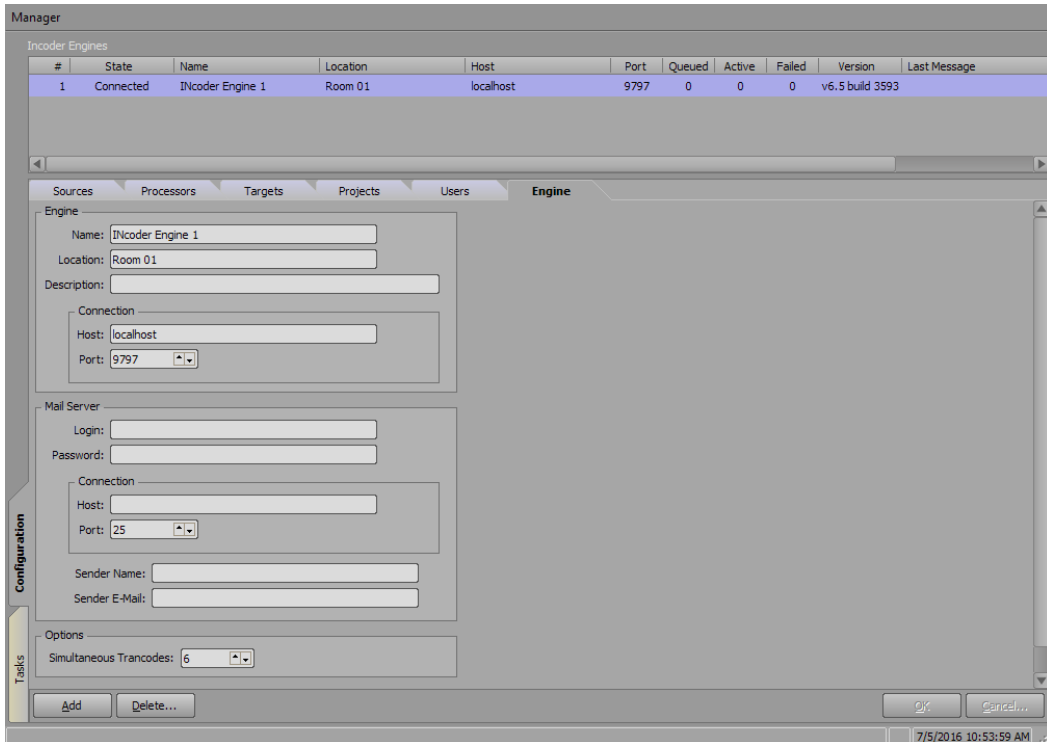
An engine is added to the **Incoder Engines** list.

The screenshot shows the 'Manager' application window. At the top, there is a table titled 'Incoder Engines' with columns: #, State, Name, Location, Host, Port, Queued, Active, Failed, Version, and Last Message. The first row is highlighted in blue and contains the values: 1, ---, Incoder Engine 1, ---, ---, 9797, 0, 0, 0, ---, ---. Below the table is a tabbed interface with tabs for Sources, Processors, Targets, Projects, Users, and Engine. The 'Engine' tab is selected. On the left side of the 'Engine' tab, there is a vertical sidebar with 'Configuration' and 'Tasks' sections. The 'Configuration' section contains several input fields: 'Name' (Incoder Engine 1), 'Location' (empty), 'Description' (empty), 'Connection' (Host: empty, Port: 9797), 'Mail Server' (Login: empty, Password: empty, Connection: Host: empty, Port: 1), 'Sender Name' (empty), 'Sender E-Mail' (empty), and 'Options' (Simultaneous Transcodes: 1). At the bottom of the 'Configuration' section are 'Add' and 'Delete...' buttons. The 'Tasks' section is currently empty. At the bottom right of the window are 'OK' and 'Cancel...' buttons. The status bar at the bottom right shows the date and time: 7/5/2016 10:47:00 AM.

- c. In the **Engine** section, use the **Name** box to enter a name for the INcoder engine, if necessary. The default name is Incoder Engine 1.
- d. Use the **Location** box to enter the name of the location where the INcoder engine is located, if necessary.
- e. Use the **Description** box to enter a brief descriptor for the INcoder engine, if necessary.
- f. In the Engine **Connection** section, use the **Host** box to enter the IP address of the INcoder service if using remotely. If using the INcoder service locally, enter `localhost`.
- g. Use the **Port** box to enter or select the port number for the INcoder service connection. The default is 9797.
- h. In the **Mail Server** section, use the **Login** box to enter the user ID for access to the mail server.
- i. Use the **Password** box to enter the password for the login user name.
- ★ Consult your system administrator if you are uncertain of the login credentials.
- j. In the Mail Server **Connection** section, use the **Host** box to enter the IP address of the mail server.
- k. Use the **Port** box to enter or select the port number for the mail server connection. The default is 25.
- l. Use the **Sender Name** box to enter a name for the sender of notifications regarding the status of INcoder tasks.
- m. Use the **Sender E-Mail** box to enter the email address of the originator of the status information.

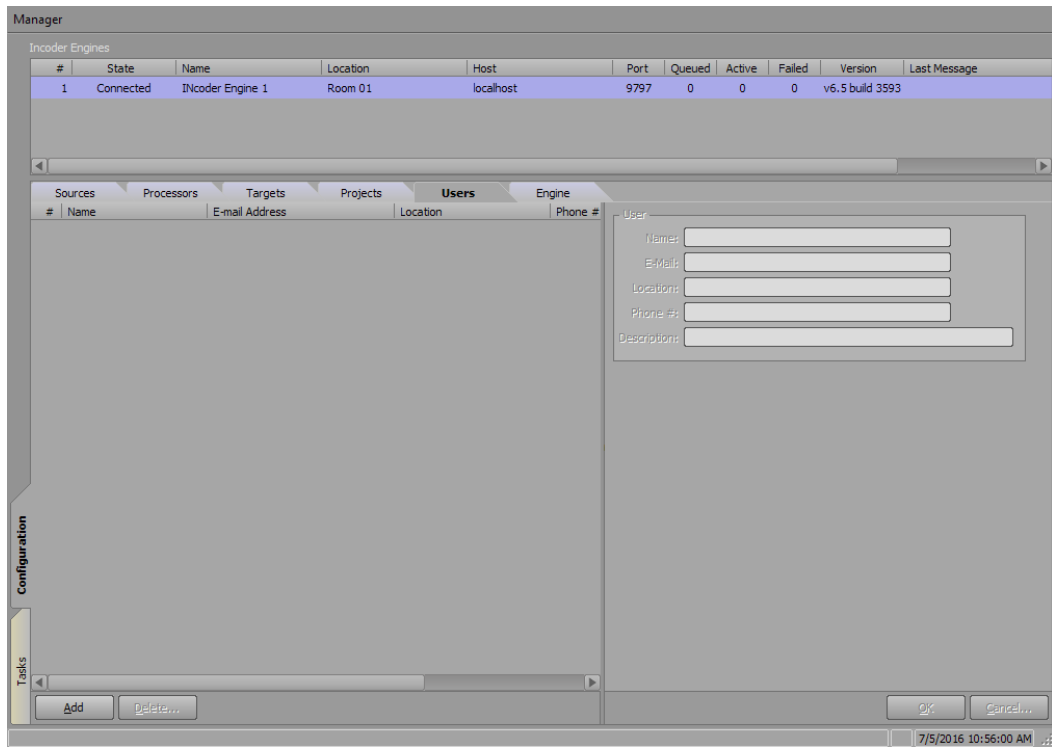
- n. In the **Options** section, use the **Simultaneous Transcodes** box to enter or select an amount of video files that can be transcoded by the INcoder simultaneously. Any videos beyond this amount will be queued until other video files have been transcoded.
- ★ Currently, a maximum of eight simultaneous transcodes is available. However, the number of simultaneous transcodes should not be set higher than the number of CPU cores available on the machine.
- o. Click **OK** to apply the settings.

The engine settings are updated in the **Incoder Engines** list. If the connection is successful, the **State** will display as **Connected**.

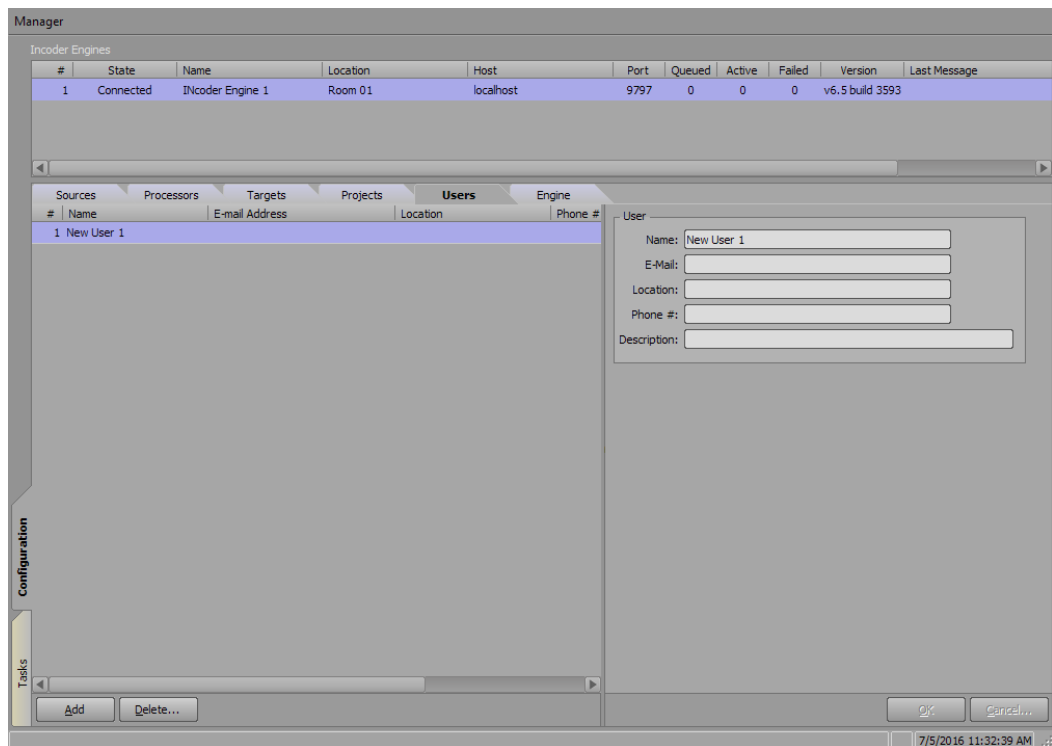


Users

- a. Click the **Users** tab.
The **Users** tab opens.



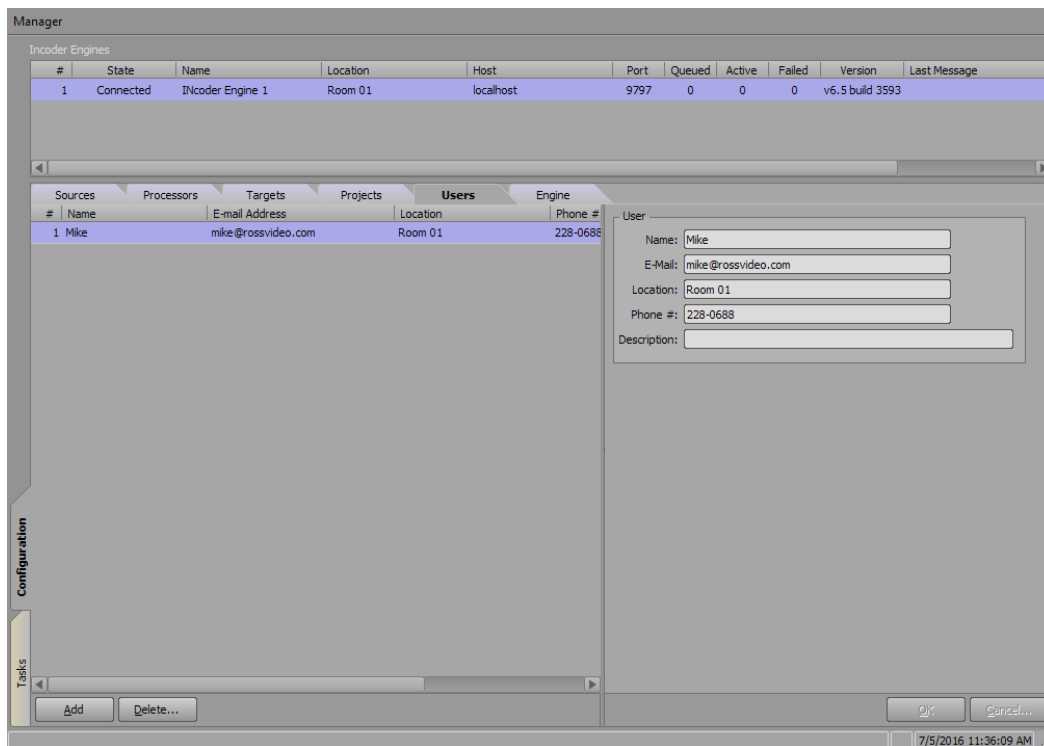
- b. Click **Add**.
A new user is added to the users list.



- c. In the **User** section, use the **Name** box to enter a name for the user. The default is New User 1.

- d. Use the **E-Mail** box to enter the email address of the user that is to receive notifications about the INcoder statuses.
- e. Use the **Location** box to enter a location of the user, server, etc. For example, Room 01 or a rack room name.
- f. Use the **Phone #** box to enter the phone number of the user.
- g. Use the **Description** box to enter a brief descriptor for the user, such as their title or position, etc.
- h. Click **OK**.

The user details are added to the user in the user list.

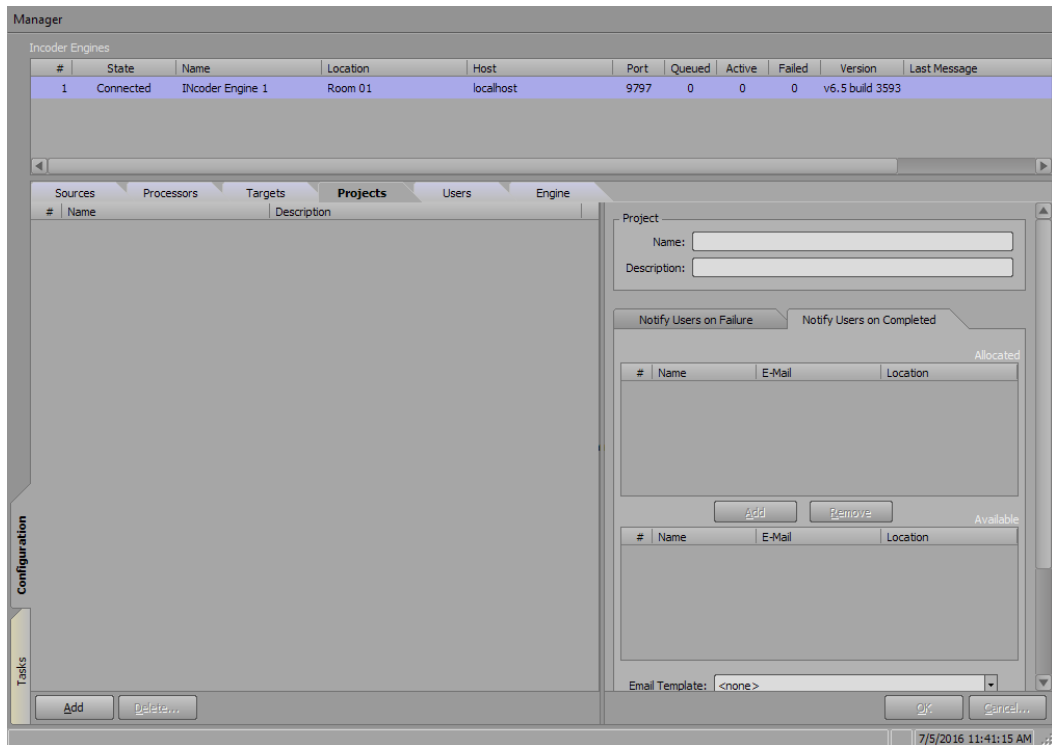


Repeat steps b to h for as many users as necessary.

Projects

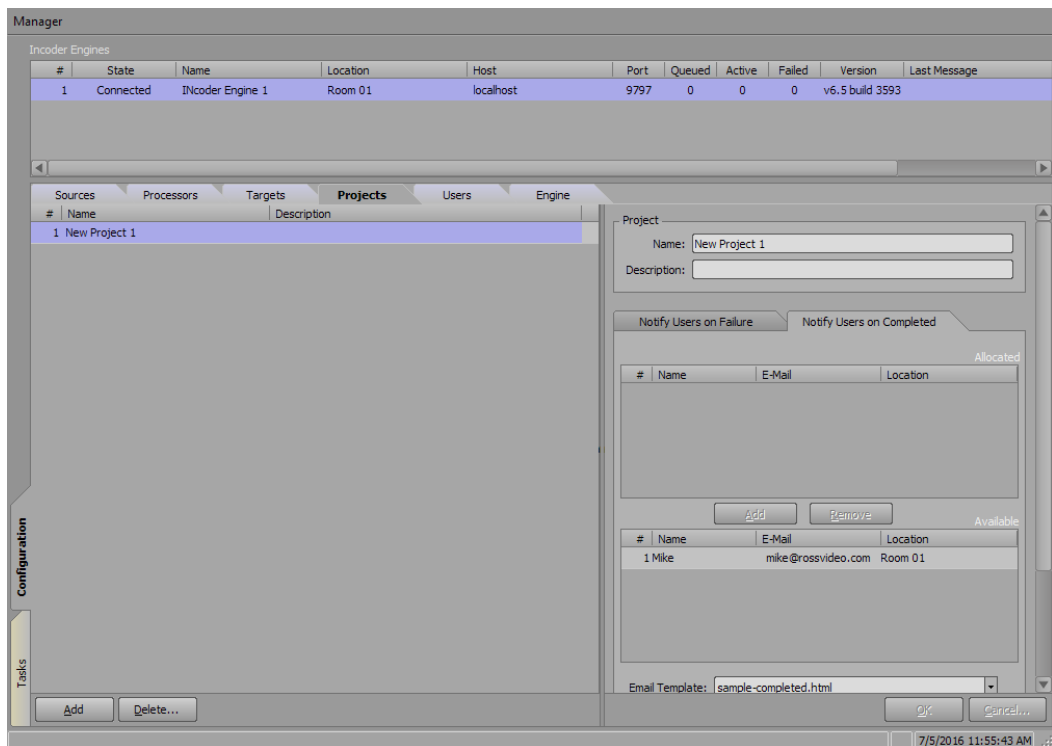
- a. Click the **Projects** tab.

The **Projects** tab opens. Projects act as a filter for which users have access to certain clips.



- b. Click **Add**.

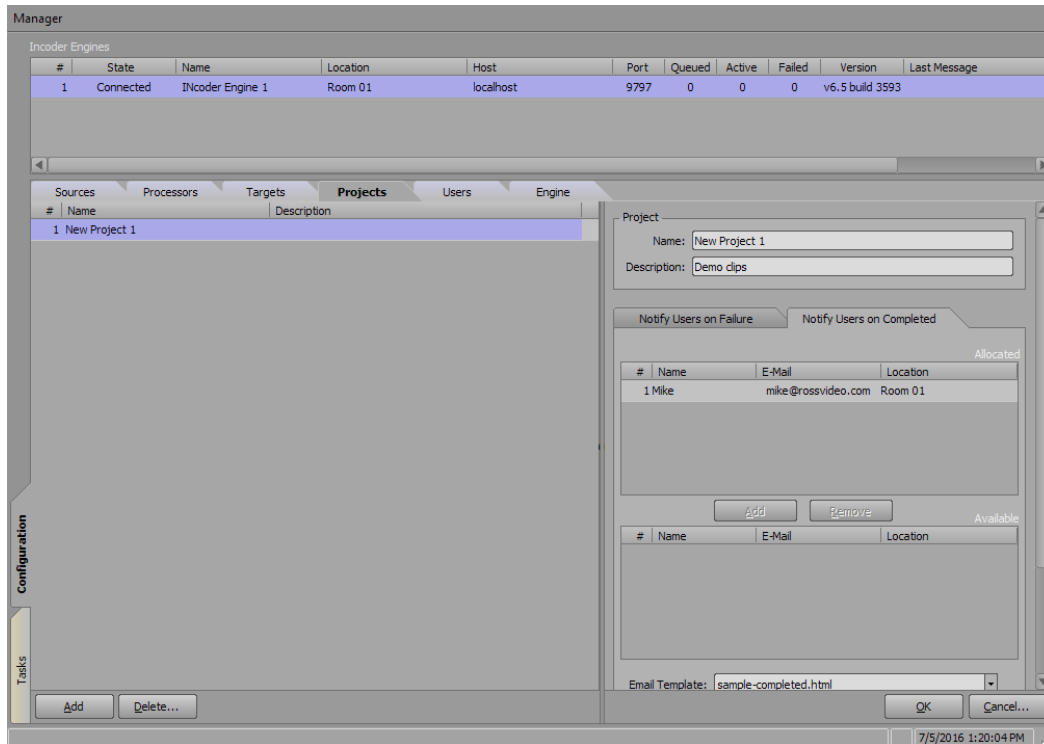
A new project is added to the project list.



- c. In the **Project** section, use the **Name** box to enter a project name. The default name is New Project 01.

- d. Use the **Description** box to enter a brief descriptor for the project.
- e. In the **Notify Users on Completed** tab, select a user from the **Available** users list and click **Add**.

The user is added to the **Allocated** users list.

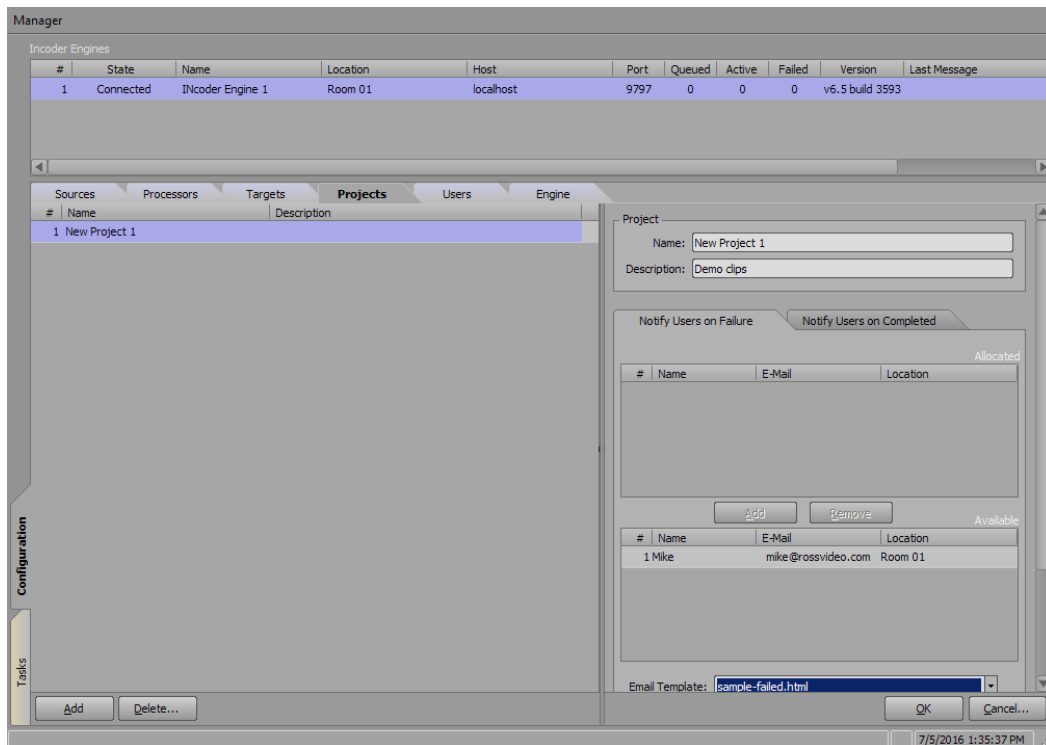


- f. Use the **Email Template** list to select the template that will be used for the outgoing status email. The options are:
 - **<none>** — select this option to use no template and receive no email notifications.
 - **sample-completed.html** — select this option to use the sample-completed HTML template for the notification.
 - **sample-failed.html** — select this option to use the sample-failed HTML template for the notification. This is the default option.
- g. Configure the batch notification settings as necessary:
 - **Notify in batch every** — select this check box to notify users of multiple successful transcodes in bulk within a specified time interval. Use the minutes box to enter or select a time interval in minutes for the notifications.
 - **Notify in batch when project queue empties** — select this check box to notify users of multiple successful transcodes once the queue of videos being transcoded in the INcoder **Tasks** list is empty. Use the **Batch limit** box to enter or select a limit on the amount of ingested files that are included in the batch for the notification.

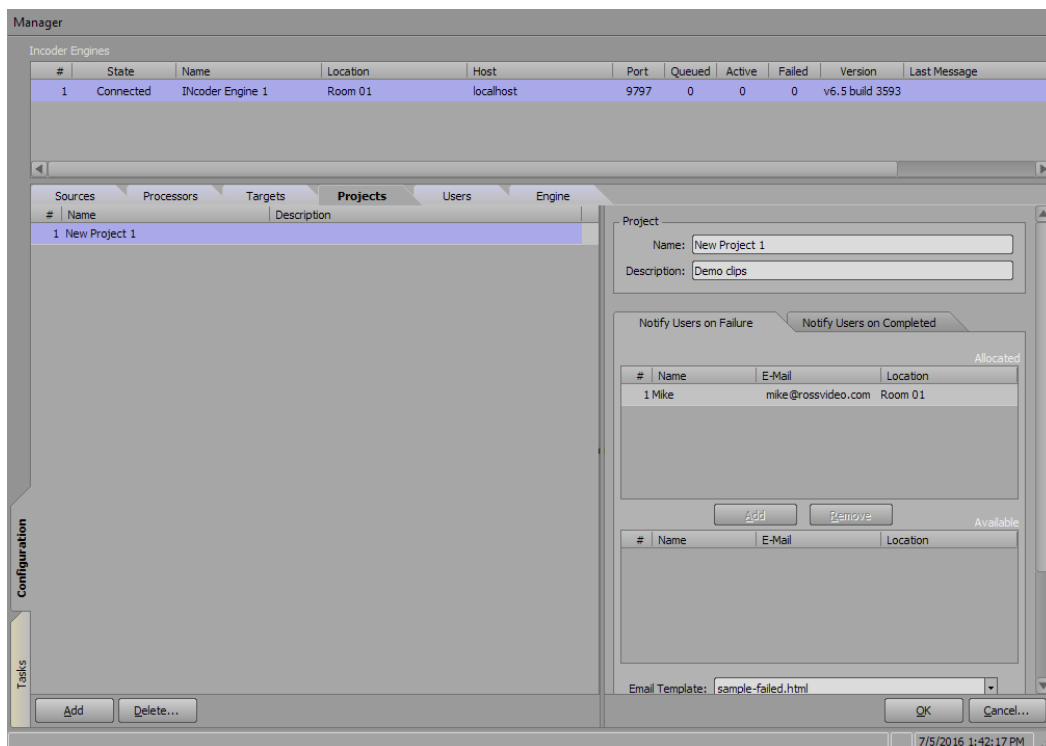
If both of the batch notification options are selected, the queue notification option will still occur even if it occurs before the batch notification time interval.

Custom templates can be added to the **EmailTemplates** folder in the **XPression INcoder** folder in the **Program Files** folder. The custom templates will then be available in the **Email Template** menu.

- h. Click the **Notify Users on Failure** tab.
The **Notify Users on Failure** tab opens.

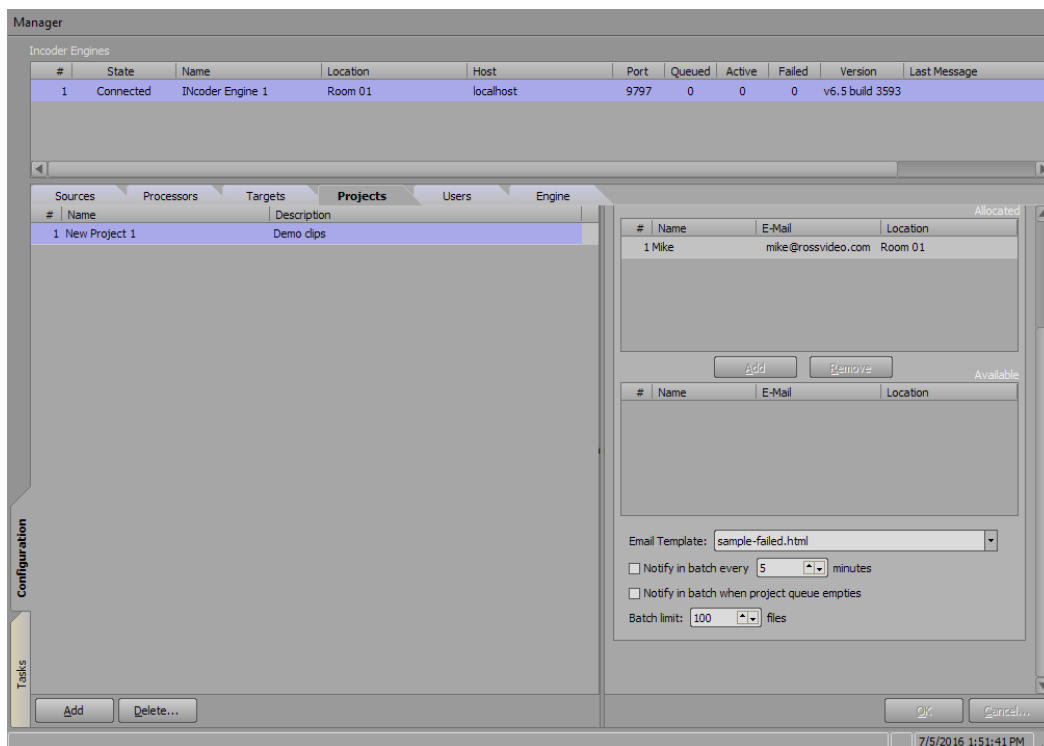


- i. Select a user from the **Available** users list and click **Add**.
The user is added to the **Allocated** users list.



- j. Use the **Email Template** list to select the template that will be used for the outgoing status email. The options are:
- **<none>** — select this option to use no template and receive no email notifications.
 - **sample-completed.html** — select this option to use the sample-completed HTML template for the notification. This is the default option.
 - **sample-failed.html** — select this option to use the sample-failed HTML template for the notification.
- k. Configure the batch notification settings as necessary:
- **Notify in batch every** — select this check box to notify users of multiple successful transcodes in bulk within a specified time interval. Use the minutes box to enter or select a time interval in minutes for the notifications.
 - **Notify in batch when project queue empties** — select this check box to notify users of multiple successful transcodes once the queue of videos being transcoded in the INcoder **Tasks** list is empty. Use the **Batch limit** box to enter or select a limit on the amount of ingested files that are included in the batch for the notification.
- If both of the batch notification options are selected, the queue notification option will still occur even if it occurs before the batch notification time interval. Fail notifications are sent individually.
- Custom templates can be added to the **EmailTemplates** folder in the **XPression INcoder** folder in the **Program Files** folder. The custom templates will then be available in the **Email Template** menu.
- l. Click **OK**.

The project user settings are applied and the project info in the project list is updated.

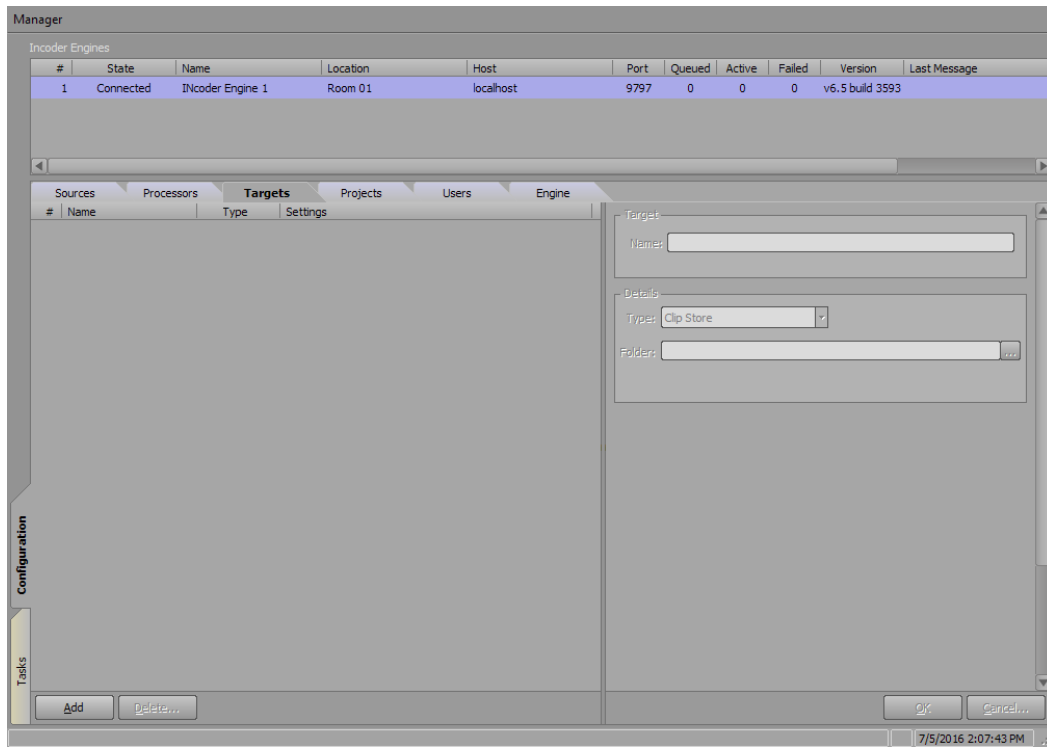


Repeat steps b to l for as many projects as necessary.

Targets

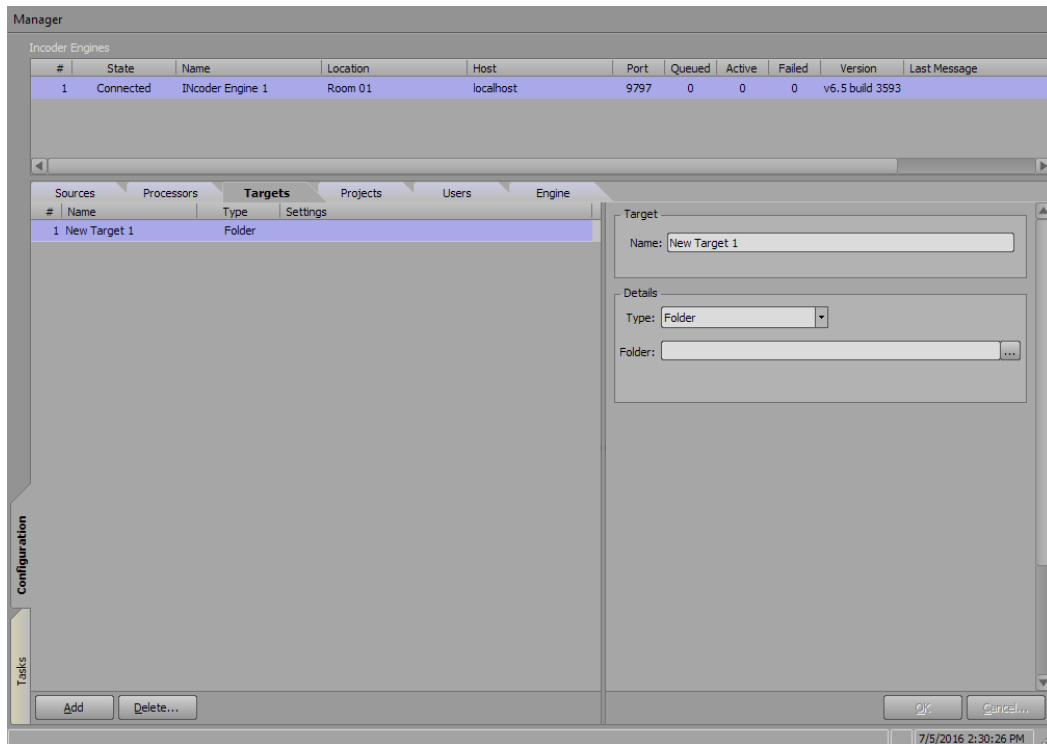
- a. Click the **Targets** tab.

The **Targets** tab opens. Use the Targets tab to configure destinations for the clips.



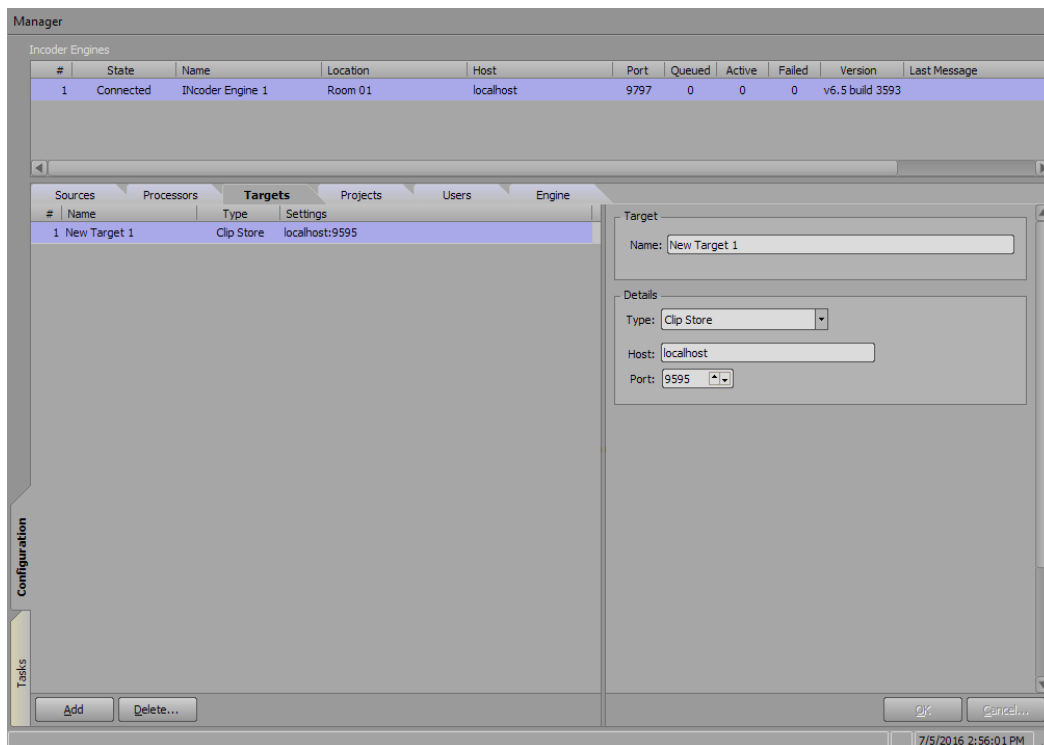
- b. Click **Add**.

A new target is added to the targets list.



- c. In the **Target** section, use the **Name** box to enter a name for the target. The default is New Target 1.

- d. In the **Details** section, use the **Type** list to select **Clip Store** in order to send encoded clips from the watch folder to the XPression Clip Store Manager.
- Use the **Host** box to enter an IP address for the Clip Store Manager location or use **localhost** (default) if the Clip Store Manager is on the same machine as the INcoder.
- Use the **Port** box to enter or select the port number for the Clip Store Manager location. The default is 9595.
- For information about using the Folder type option, refer to the ***XPression INcoder User Guide***.
- e. Click **OK**.
- The settings are added to the target in the targets list.

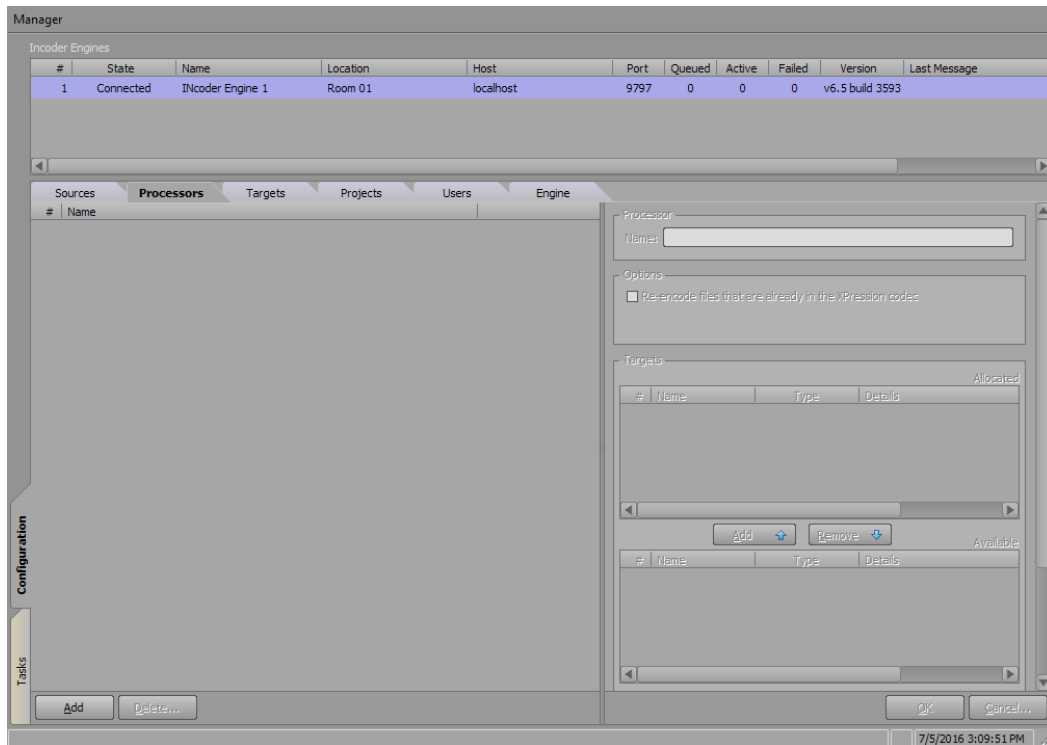


Repeat steps b to e for as many targets as necessary.

Processors

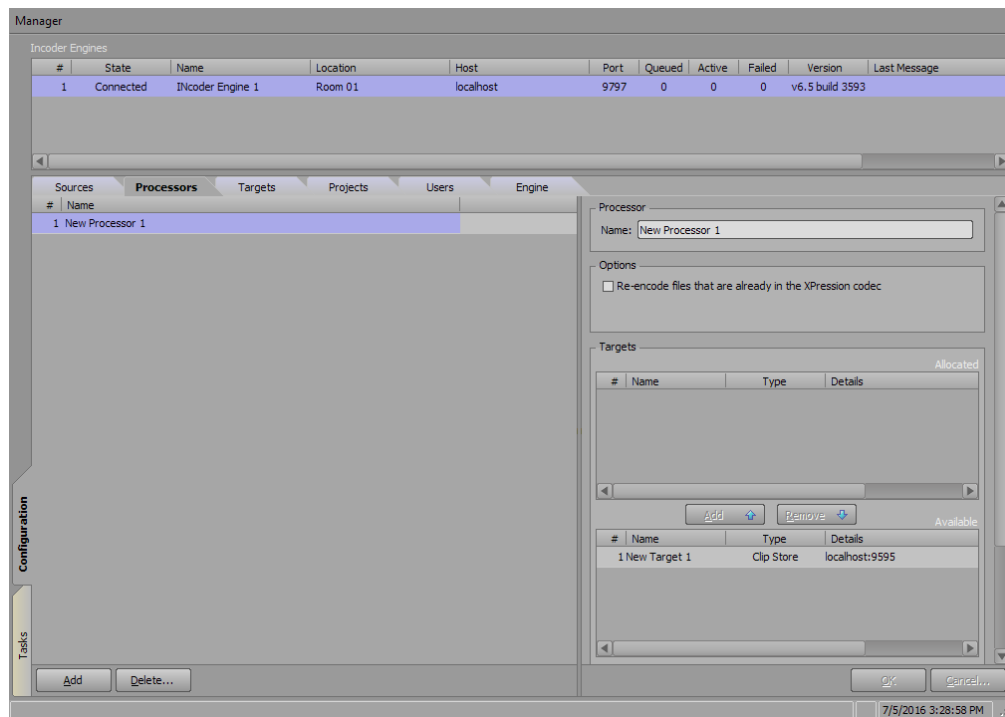
- a. Click the **Processors** tab.

The **Processors** tab opens. Use processors to delegate the targets that are used for a source.



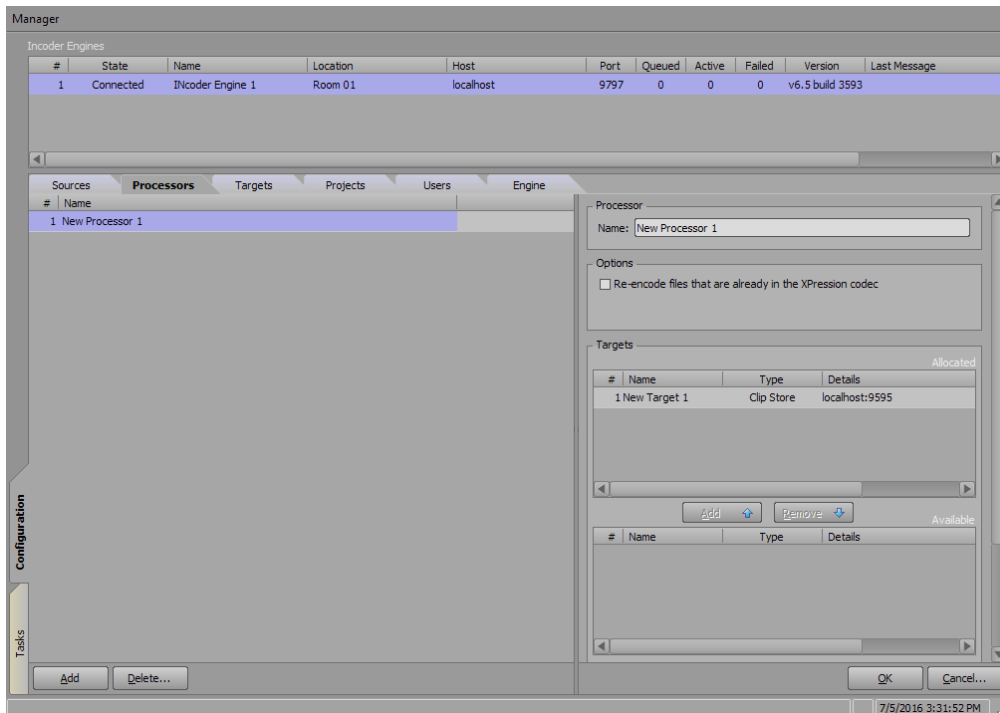
- b. Click **Add**.

A new processor is added to the processors list.



- c. In the **Processor** section, use the **Name** box to enter a name for the processor. The default is New Processor 1.

- d. In the **Options** section, select the **Re-encode files that are already in the XPression codec** check box to force XPression codec files to be re-encoded.
- e. In the **Targets** section, select a target from the **Available** targets list and click **Add**.
The target is added to **Allocated** targets list. Repeat this step for as many targets as necessary.

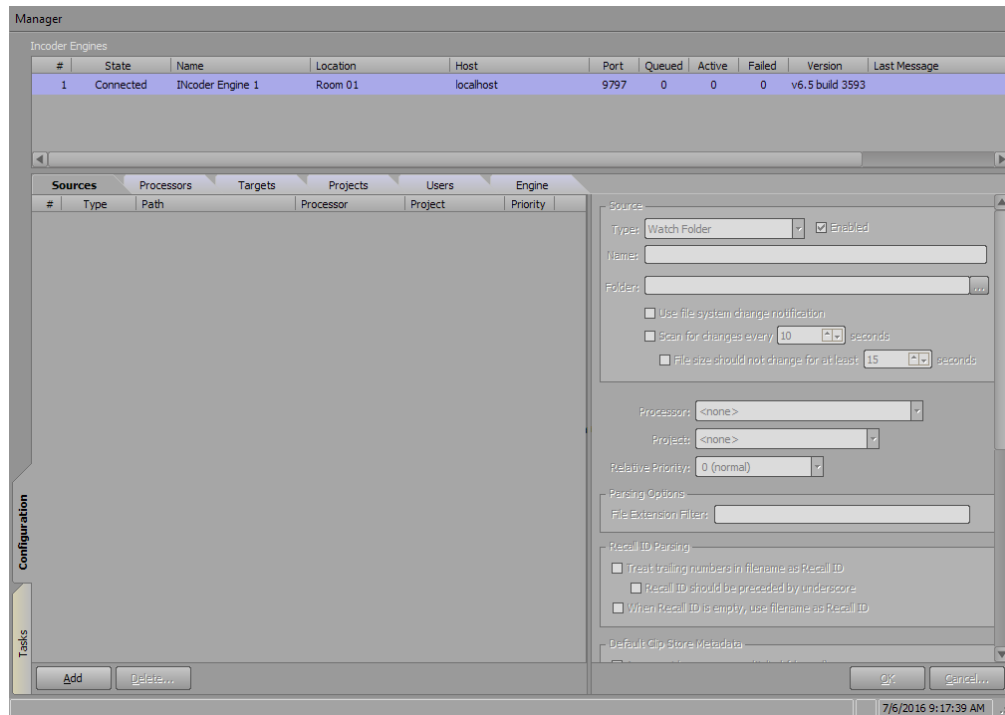


- f. Click **OK** to add the processor and its target settings.
Repeat steps b to f for as many processors as necessary.

Sources

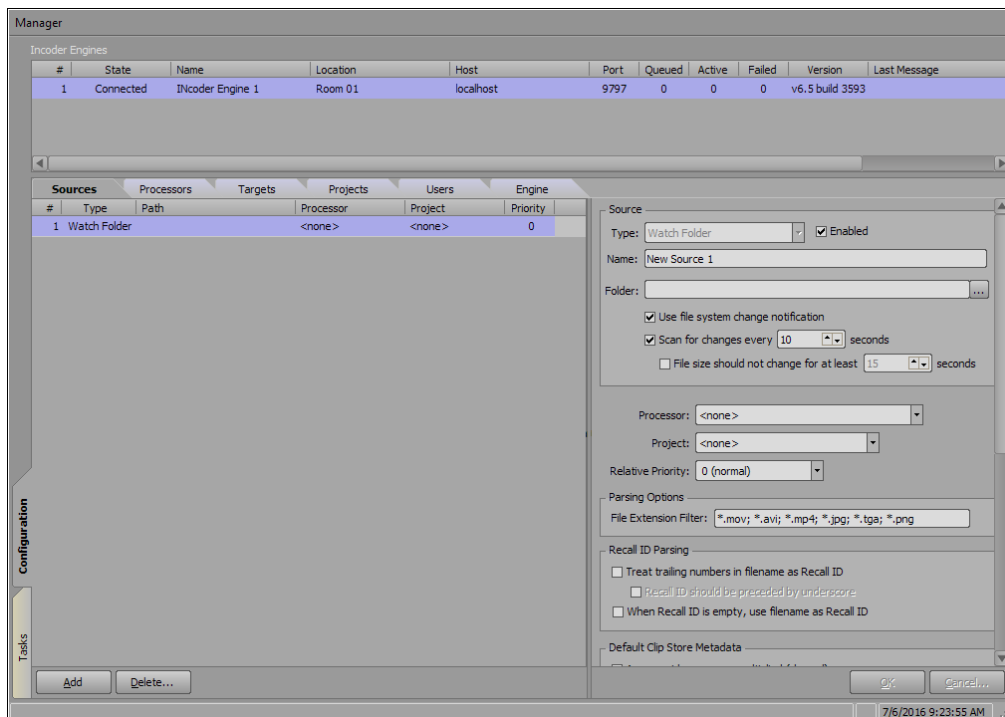
- a. Click the **Sources** tab.

The **Sources** tab opens. Use this tab to add watch folders and assign processors to them.



- b. Click **Add**.

A new source is added to the source list.



- c. In the **Source** section, use the **Type** list to select a source type. The only currently available option is **Watch Folder**. Watch folders are where clips are added for encoding.
- Select the **Enabled** check box to use the selected source in the source list.

- d. Use the **Name** box to enter a name for the source. The default is New Source 1.
- e. Use the **Folder** box to enter a file path to a folder or click **Browse (...)** to select a folder where the INcoder will look for files to encode and send to the target.
- f. Configure the following options as necessary:
 - **Use file system change notification** — select this check box to have any file changes to the source folders reflected in the INcoder immediately.
 - **Scan for changes every** — use this box to enter or select an amount of time in **seconds** that the INcoder scans the source for any changes.
 - **File size should not change for at least** — enter or select an amount in **seconds** for the INcoder to wait before the encoding of a file begins. This is helpful with larger files where transferring might take a little longer.
- g. Use the **Processor** list to assign a processor to the selected source. The processor dictates the target of the selected source.
- h. Use the **Project** list to assign a project to receive status notifications regarding clips in the selected source.
- i. Use the **Relative Priority** list to assign a priority level to the source folder. The order of priority ranges from **-5 (low)** to **0 (normal)** to **+5 (high)**. The default is 0. This is helpful if you have multiple sources, some of which are of a higher priority than others. Files from the higher priority sources will transcode before files from lower priority sources.
- j. In the **Parsing Options** section, use the **File Extension Filter** box to enter file extensions accepted for transcoding by the INcoder. All file extensions need to be listed with an asterisk (*) in front of the file extension and a semi-colon (;) between different file types.

Any file extension currently not listed here is not supported by the INcoder. The INcoder currently supports MOV, AVI, JPG, PNG, TGA, and TIF files. Any other file type not listed is immediately blocked.
- k. In the **Recall ID Parsing** section, configure the following file options as necessary:
 - **Treat trailing numbers in filename as Recall ID** — select this check box to use any numbers between the filename text and the file extension as recall IDs.

If selected, select the **Recall ID should be preceded by underscore** check box to only use trailing numbers in a filename as recall IDs if the numbers are preceded by an underscore.
 - **When Recall ID is empty, use filename as Recall ID** — select this check box to use the filename to populate the recall ID field if no other recall ID has been explicitly set.
- l. In the **Default Clip Store Metadata** section, configure the following metadata options for the folder as necessary:
 - **Assume videos are pre-multiplied (shaped)** — select this check box to assume that the videos multiply/shape the fill signal color information by the luminance information in the key signal.
 - **Set Looping Attribute** — select this check box to enable looped playback on the videos.
 - **Set "Hold Last Frame" Attribute** — select this check box to hold the video on the last frame when playout has completed. This is also used to keep still images that are one frame in size on screen.
 - **Default Frame Rate** — use the list to select a frame rate for the video files in the folder.

★ The following tags are parsed from the filenames of files dropped into the watch folder:

- {GP} — Recall ID
- {HF} — Hold Last Frame
- {ID} — Recall ID
- {LE} — Loop Enabled
- {LFF} — Lower Field First
- {NA} — Name
- {PM} — Premultiplied/Shaped video
- {UFF} — Upper Field First

For example, a filename of {NA}Snowstorm{GP}1000{LE}{PM}.mov will be given a name of Snowstorm, a recall ID of 1000, and will be set to looped playback with shaped video.

If any of the **Assume videos are pre-multiplied (shaped)**, **Set Looping Attribute**, or **Set "Hold Last Frame" Attribute** check boxes have been selected and you want to turn off those settings for a particular file, a "FALSE" string needs to be added to the tag in the filename. For example, {LE}FALSE.

m. In the **Folders** section, configure folder destinations as necessary for the clips depending on their status. In the file path box, enter a file path to a folder or click **Browse (...)** to select a folder for the selected folder option.

- **When queued move to** — select this check box to move transcoding files to a selected folder when they are queued.
- **On failure move to** — select this check box to move files to the selected folder if the transcoding has failed.
- **On cancelled move to** — select this check box to move transcoding files that have been cancelled to the selected folder.
- **On completion** — select this check box and choose one of the following options for the files:
 - › **Move** — select this option to select a folder to move the files to upon completion of transcoding.
 - › **Delete** — select this option to delete the files after transcoding is complete.
- **Folder for temporary file processing** — select this check box to temporarily move the files to the selected folder while transcoding.

★ If no folder check boxes are selected and no destination folders assigned, default folders will be created for these options.

6. Click **OK**.

Repeat steps 5 to 6 for as many INcoder engines as necessary.

For More Information on...

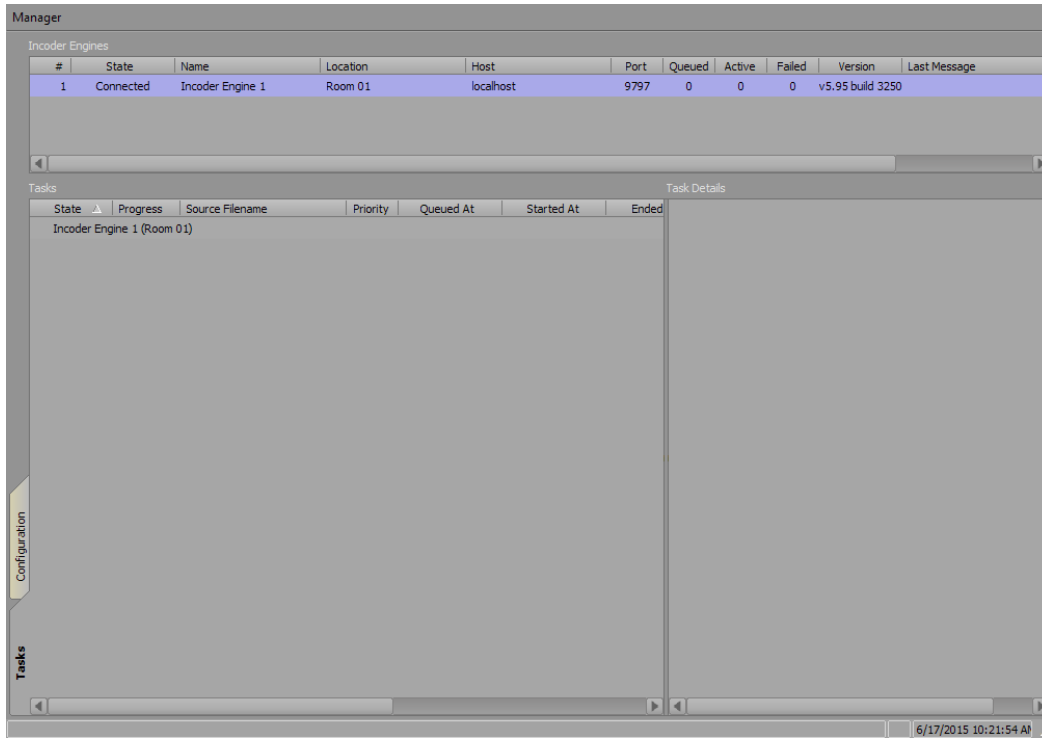
- the XPression INcoder, including stopping the INcoder service, refer to the **XPression INcoder User Guide**.

XPression INcoder Tasks

Use the XPression INcoder Manager to view the INcoder tasks.

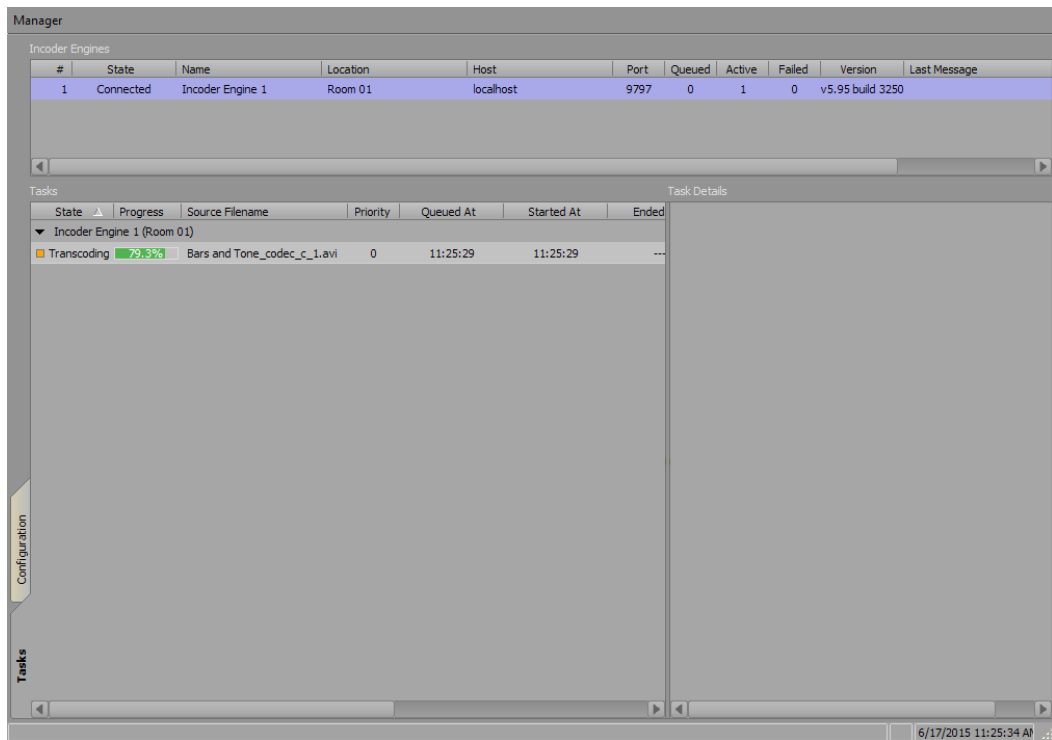
1. On the machine that has the XPression INcoder installed, locate the **XPression INcoder** folder using the **Start** menu.
2. Select **INcoder Manager**.

The **XPression INcoder Manager** opens on the **Tasks** tab.

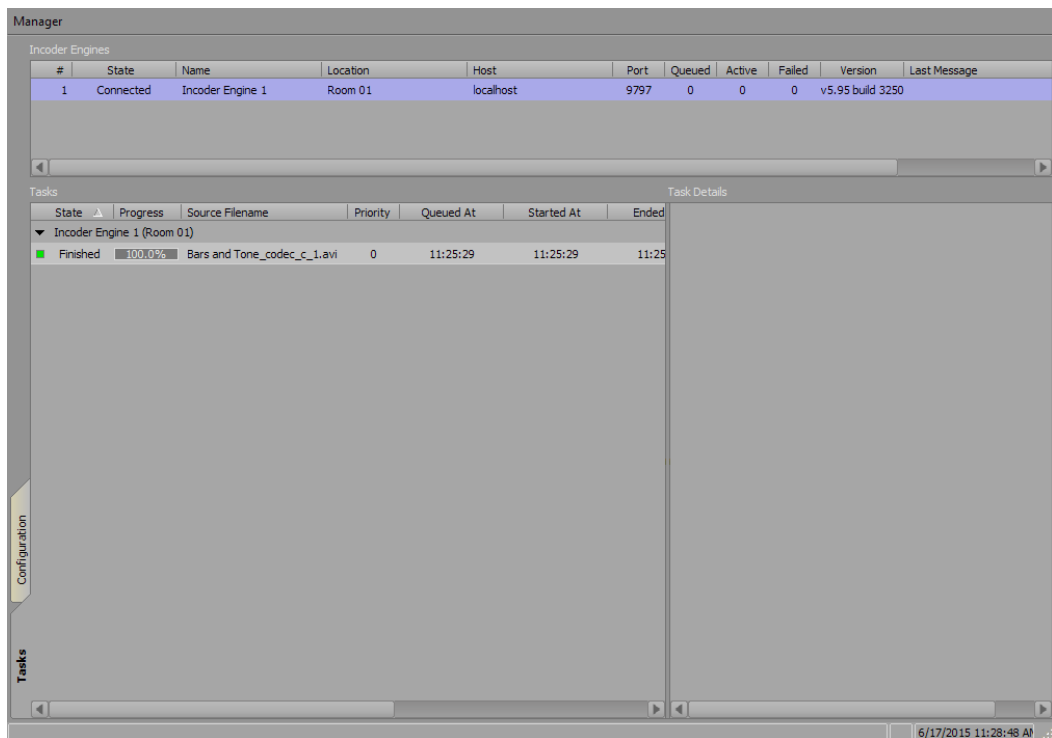


3. Add a video to the source folder.


The video appears in the **Tasks** list and the **State** is listed as **Transcoding**.




Once the video has finished transcoding, the **State** lists as **Finished** and the **Progress** displays at **100.0%**.



If the INcoder shows no tasks in the **Tasks** list once a video is added to the source folder, verify that the video type is supported. If the video type is supported, stop and then restart the INcoder:

- a. Select **Stop INcoder** () from the Windows **Start** menu.

If the INcoder was successfully stopped, an information message indicates that the XPression INcoder was successfully stopped.

- b. Select **Start INcoder** () from the Windows **Start** menu.

If the INcoder has successfully started, an information message indicates that the XPression INcoder was successfully started.

Task List Shortcut Menu - INcoder Engine

Right-click on an INcoder engine in the **Tasks** list to access the INcoder engine shortcut menu:

- **Remove > Completed** — select this to remove completed clips from the Tasks list for the selected engine.
- **Remove > Failed** — select this to remove failed clips from the Tasks list for the selected engine.
- **Remove > Cancelled** — select this to remove cancelled clips from the Tasks list for the selected engine.

Task List Shortcut Menu - Video

Right-click on a transcoded video in the **Tasks** list to access the video shortcut menu:

- **Set Priority** — select this to set a priority level for the selected clip. The order of priority ranges from **-5 (Lowest)** to **0 (Normal)** to **+5 (High)**. The default is 0.
- **Remove** — select this to remove the selected clip from the Tasks list.
- **Cancel** — select this to cancel an in-progress transcoding of a clip.

Using XPression Clips

The following topics are discussed in this section:

- Set Up Server Channels
- XPression Clips Playback Overview
- Clip Browser Interface Overview
- Using the Clip Browser
- Server Channels Interface Overview
- Using the Server Channels
- Edit Clip/Add Sub Clip
- Updating the Thumbnail in the Clip Browser
- Creating a 4-Point Loop
- Creating a 3-Point Loop
- Send a Video or Image to Clip Store Using the Record Client
- Preset Event Tracks

Set Up Server Channels

The Server Channels are used for previewing and playing out clips.

Before using the Server Channels, they must be configured in the XPression Hardware Setup. Once outputs have been configured in XPression, use the following procedure to set up the server channels.

A virtual channel should be assigned a real physical output onto which the clip will be played. It is these virtual channels that the AMP/VDCP Media Control Gateway is controlling.

This section contains the following information:

- Adding a Server Channel
- Adding a Preview Output to a Server Channel

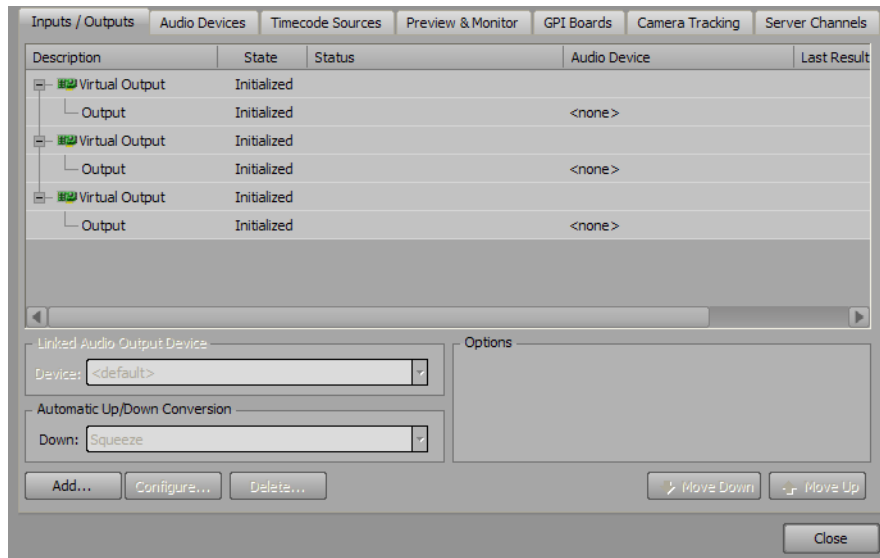
For More Information on...

- configuring outputs, refer to the **XPression User Guide** or Help file.

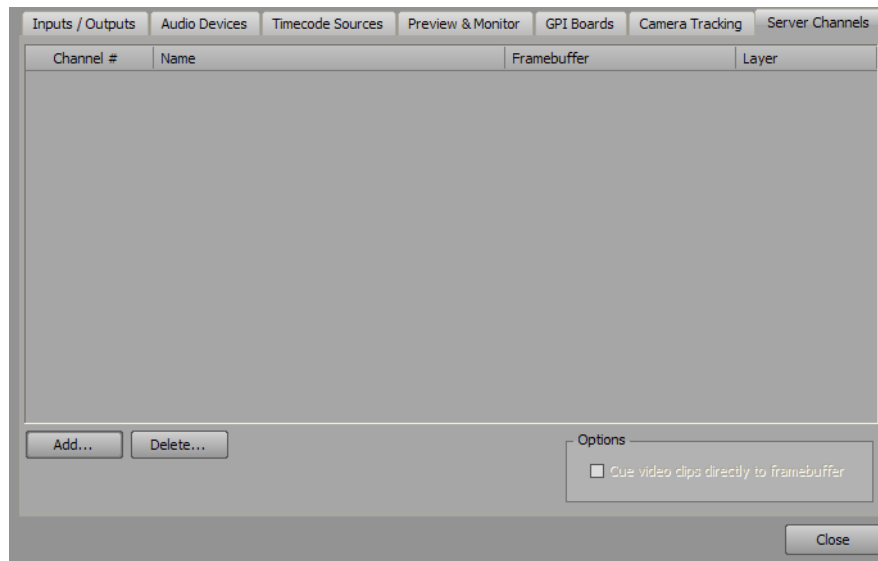
Adding a Server Channel

1. In XPression, click **Edit** > **Hardware Setup**.

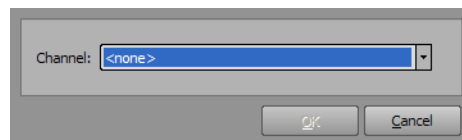
The **Hardware Setup** dialog box opens.



2. Click the **Server Channels** tab.
The **Server Channels** tab opens.

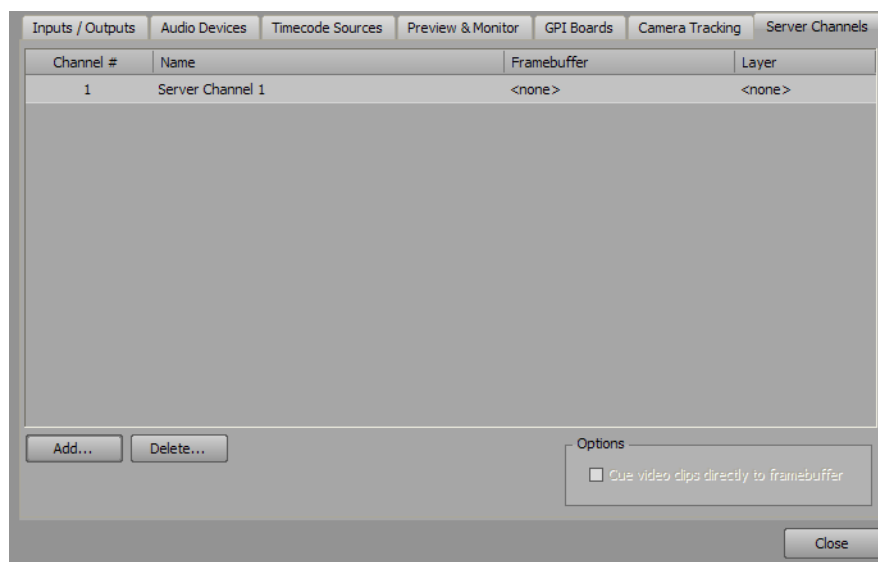


3. Click **Add** to add a server channel.
The **Select Server Channel #** dialog box opens.



4. Use the **Channel** list to select a server channel number.
5. Click **OK**.

The server channel is added to the list.

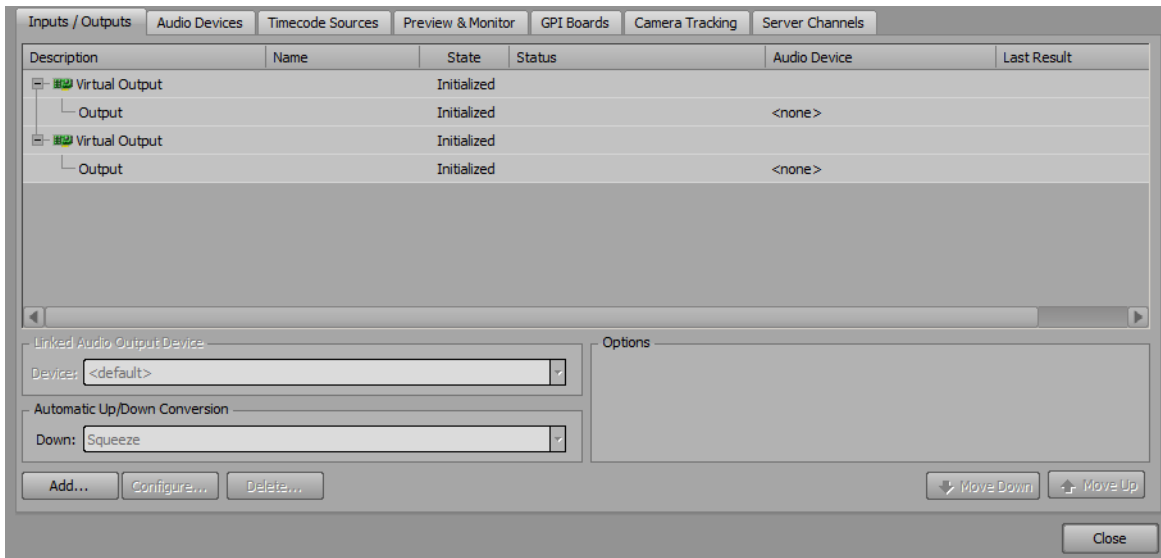


6. Configure the following as necessary:
 - In the **Name** column, enter a name for the server channel. The default is Server Channel #.
 - In the **Framebuffer** column, use the list to select an output framebuffer for the server channel.
 - In the **Layer** column, use the list to select a layer for rendering. The default is 0 (middle).
 - In the **Server Channel # Options** section, select the **Cue video clips directly to framebuffer** check box to cue clips to air immediately when dropped on a server channel from the Clip Browser.
7. Repeat steps 3 to 6 to add more server channels as necessary.
8. Click **Close**.
The **Hardware Setup** dialog box closes.

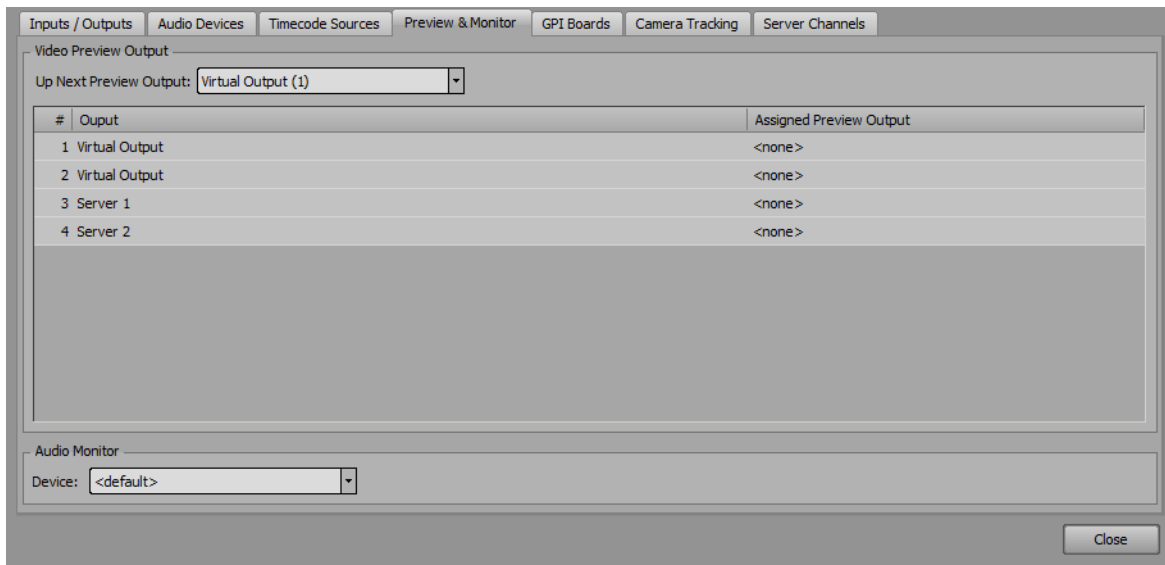
Adding a Preview Output to a Server Channel

Once a server channel has been created, it can be assigned a dedicated framebuffer as a preview channel in the Preview & Monitor tab of the Hardware Setup. Real outputs can also be used as framebuffers.

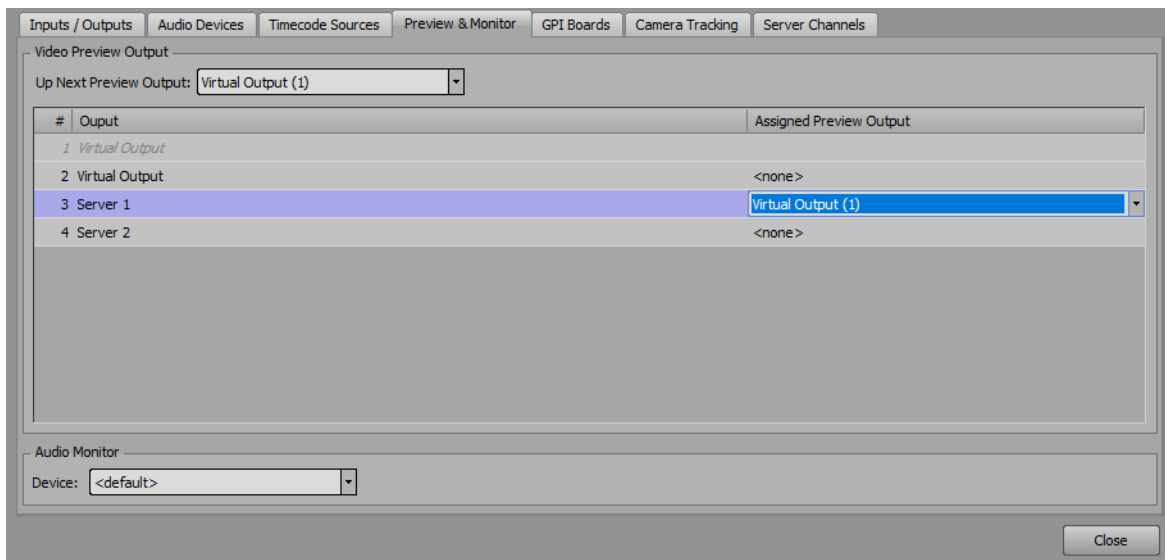
1. In XPression, click **Edit > Hardware Setup**.
The **Hardware Setup** dialog box opens.



2. Click the **Preview & Monitor** tab.
The **Preview & Monitor** tab opens.



3. Click inside the **Assigned Preview Output** column of a server channel in the Output list and use the Assigned Preview Output list to select a framebuffer as the individual preview output.
The selected framebuffer is assigned as the preview output of the selected server channel.



For More Information on...

- creating a server channel, refer to “**Adding a Server Channel**” on page 6–2.

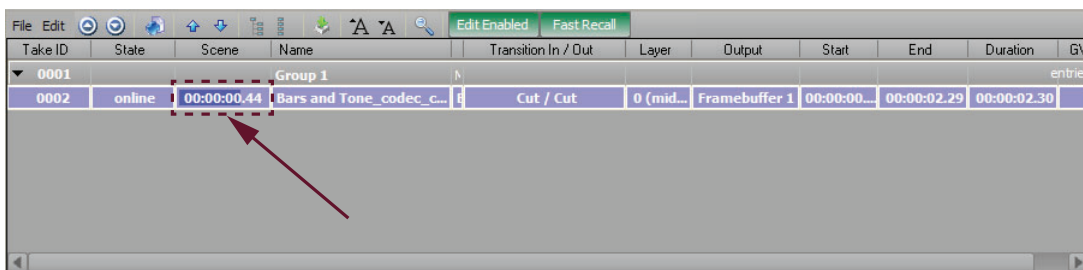
XPression Clips Playback Overview

Clip playback within XPression can be performed in many ways. The most basic is to open the Clip Browser in the Sequencer and drag clips from the Clip Browser and drop them into the Sequencer. This creates a take item which can be assigned an output framebuffer and layer, or server channel and layer, and then played back as a regular take item or placed into a Cued state using the number pad period key [**Num pad .**].

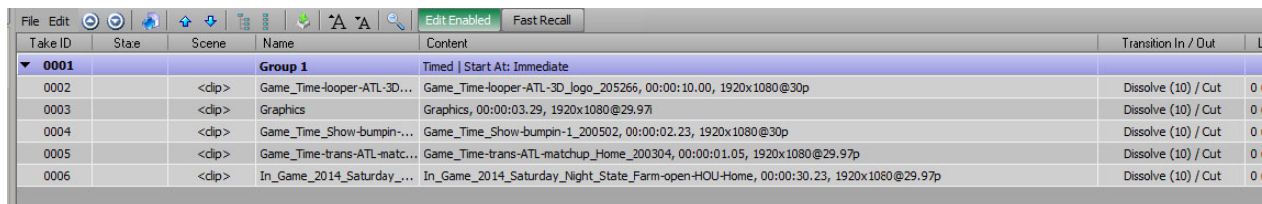
Regular XPression graphics can be rendered as a clip which will be sent directly to the Clip Store. By right-clicking on a take item in the Sequencer and selecting **Export Take Item to Video**, the Export to Video dialog box will open and provide the option to render take items into clips transferred to the clip store.

The number of clips that can be played back simultaneously falls under the same performance limitations as normal XPression scenes with clips (e.g. play back will be dependent on current generation hardware).

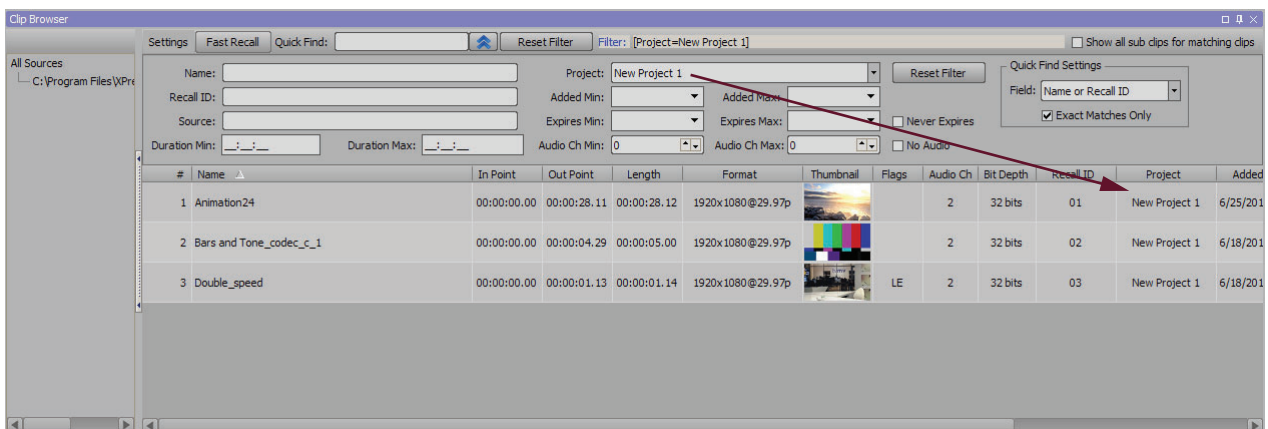
While playing back, a timer counts down the remaining time in the clip and a time bar indicates the playback amount completed:



Many clips can be dragged into a timed sequence group for a pseudo-playlist capability. Dissolves can even be set on the take items for transitions between the playlist items:

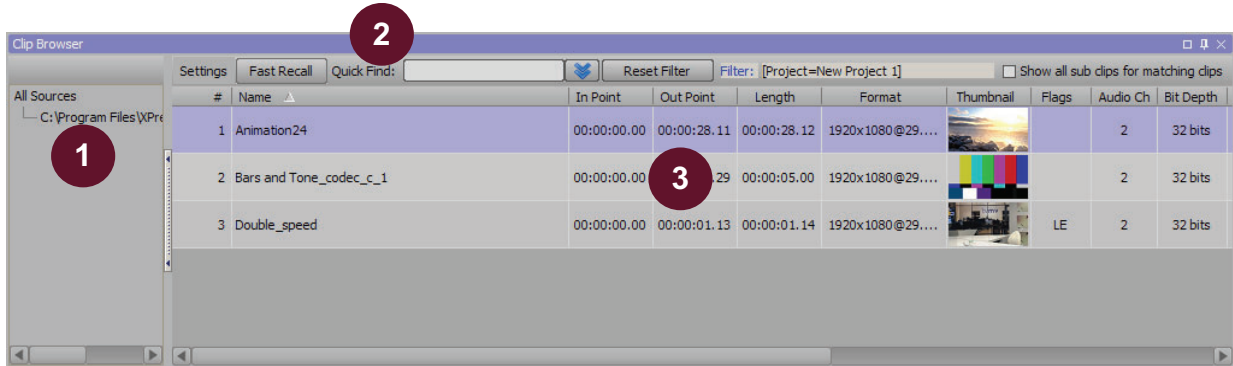


Clips within the Clip Browser can be sorted and filtered using the options in the Advanced Search Options. In the example image below they were filtered by Project Name:



Clip Browser Interface Overview

The following screen capture displays the main elements of the Clip Browser interface.



- 1) **Sources** — use this area to view and select clip sources.
- 2) **Quick Find/Search Area** — use this area to search for clips. It can be expanded for advanced search options.
- 3) **Clips List** — use this list to view the clips and their multiple properties, cue the clips to the server channels, edit clips, and add sub clips.

Using the Clip Browser

The Clip Browser is used for dragging and dropping clips onto Server Channels or into the Sequencer as take items that can then be cued or played out on server channels (instead of a framebuffer). When dragging a clip into the Sequencer, the take ID assigned uses the recall ID or the next higher available number. The Clip Browser also allows for editing of clips.

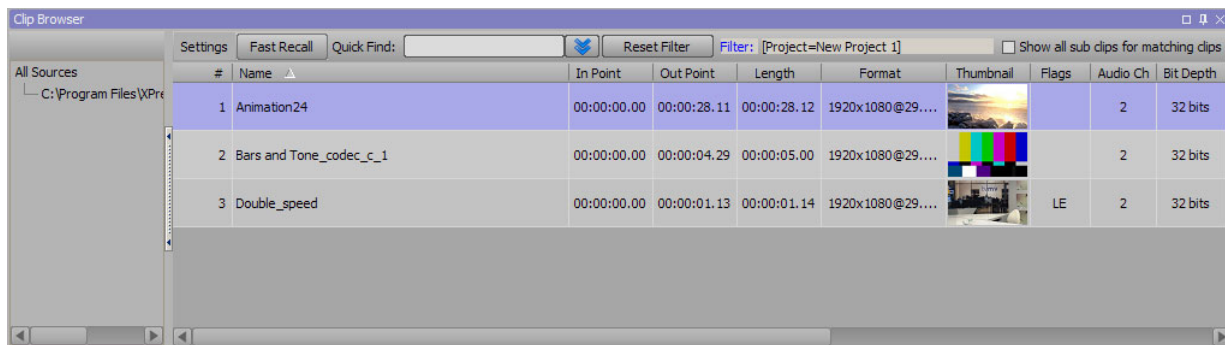
If clips have been sent to the Clip Browser from the Record Client, or if clips have been transcoded by the INcoder into the Watch Folder, clips will automatically load into the Clip Browser.

Opening the Clip Browser

If using the Clips Option for XPression, use the following procedure to access the Clip Browser.

1. In **XPression**, open the **Sequencer** layout.
2. In the **Menu** bar, click **Display > Clip Browser**.

The **Clip Browser** window opens.



Clip Browser Interface

The following section describes the Clip Browser window interface.

All Sources — lists the Clip Store sources.

Settings — use this list to select the following options:

- **Increase Font Size** (⌂) — select this to increase the font size of the Clip Browser list.
- **Decrease Font Size** (⌂) — select this to decrease the font size of the Clip Browser list.
- **Timecode > Use Source Timecode for In/Out points** — select this to display the In/Out points relative to the timecode of the original source clip.
- **Show Thumbnail Overlays** — select this to overlay an icon on thumbnails of single frame clips in the Clip Browser to indicate that they are stills.
- **Reset Columns to Default** — select this to revert the Clip Browser columns to the default display settings.

Fast Recall — click this button to enable or disable fast recall through the keyboard number pad (the button is green when turned on). The number pad Scroll Lock key can also be used to control fast recall.

Quick Find — use this box to enter keywords to search for clips listed in the Clip Browser.

Show/Hide advanced search options (⌂/⌂) — click this button to show or hide the Advanced Search Options in the Clip Browser.

Reset Filter — click this button to clear any entries in the fields of the Advanced Search Options.

Filter (read-only) — displays the project selected in the Advanced Search Options.

Show all sub clips for matching clips — select this check box to display any sub clips of a clip in the Clip Browser list.

(read-only) — list number in the Clip Browser list.

Name (read-only) — lists the name of the clip.

In Point (read-only) — lists the drop frame timecode starting point for the clip.

Out Point (read-only) — lists the drop frame timecode ending point for the clip or still.

Length (read-only) — lists the drop frame timecode duration of the clip or still.

Format (read-only) — lists the formatting used for the clip.

Thumbnail (read-only) — provides a thumbnail image of the clip or still. Thumbnails can be enlarged by clicking and dragging the right border of the thumbnail column title. Review a flip book layout of the clip by hovering the cursor over the thumbnail. The flip book is rendered over a checkerboard pattern so that the alpha channel is visible unless the clip is full frame. Still image thumbnails display an icon (🖼️) indicating that they are still images and not clips.

Flags (read-only) — if using clips that have been transcoded by the XPression INcoder that include tags in the filename, this column lists the tags that have been parsed from the filename of the clip. The possible flags include:

- **LE** — indicates that looping has been enabled.
- **HF** — indicates that the clip will hold the last frame.
- **PM** — indicates that the clip uses premultiplied/shaped video.

Audio Ch (read-only) — lists the amount of audio channels embedded in the clip.

Bit Depth (read-only) — lists the quality of the signal quantization for the clip.

Recall ID (read-only) — lists the ID number for the clip when it is recalled.

Project (read-only) — lists the name of the project to which the clip has been added.

Added (read-only) — lists the date the clip was added to the project.

Expires (read-only) — lists the expiry date for the clip, if applicable.

Codec (read-only) — lists the codec format of the clip.

File Ext (read-only) — lists the file type of the clip.

Alpha (read-only) — provides a thumbnail of the clip with the alpha channel visible (requires the original clip to be re-ingested or the thumbnail needs to be updated in the **Edit Clip/Add Sub Clip** dialog box if the original status indicates **<no info>**).

First Frame TC (read-only) — lists the timecode at the point of the first frame of the clip.

Volume (read-only) — lists the volume level of the clip in decibels.

Advanced Search Options

Name — use this box to enter the name of a clip to search.

Recall ID — use this box to enter a recall ID to search.

Source — use this box to enter a location to search for a clip.

ID Min — use this box to enter or select a minimum clip ID number to search.

ID Max — use this box to enter or select a maximum clip ID number to search.

Duration Min — use this box to enter a minimum duration time to search for the clip.

Duration Max — use this box to enter a maximum duration time to search for the clip.

Project — use this list to select a project to search for the clip.

Added Min — use the calendar to select a minimum date to search that the clip was added.

Added Max — use the calendar to select a maximum date to search that the clip was added.

Expires Min — use the calendar to select the minimum expiry date to search for the clip.

Expires Max — use the calendar to select the maximum expiry date to search for the clip.

Never Expires — select this check box to search for a clip with no expiry date set.

Audio Ch Min — use this box to enter or select a minimum amount of embedded audio channels to search for the clip.

Audio Ch Max — use this box to enter or select a maximum amount of embedded audio channels to search for the clip.

No Audio — select this check box to search for a clip with no embedded audio.

Reset Filter — click this button to clear all the fields in the Advanced Search Options.

Clip Browser Shortcut Menu

Right-click on a clip in the Clip Browser to access the Clip Browser shortcut menu.

Cue on Server Channel — select this to add the selected clip to the active (focused) server channel.

Edit — select this to open the **Edit Clip** dialog box and edit the settings of the selected clip.

Add Sub Clip — select this option to open the **Add Sub Clip** dialog box and create a sub clip from the selected clip.

Set Recall ID — set the recall ID of a selected clip or a range of selected clips in the Clip Browser using the **Set Recall ID** dialog box. Use the Set Recall ID dialog box to enter a recall ID to assign to a selected clip or the starting recall ID for the range of selected clips. Using the keyboard shortcut **Ctrl + R** also opens the Set Recall ID dialog box.

Adjust Loop / Hold Last > Enable Looping — enable looping for a clip or a range of selected clips.

Adjust Loop / Hold Last > Disable Looping — disable looping for the clip or a range of selected clips if looping is enabled.

Adjust Loop / Hold Last > Enable Hold Last Frame — hold the last frame of the clip or a range of selected clips when playout ends. Do not select this function if taking the clip(s) offline automatically using an out transition.

Adjust Loop / Hold Last > Disable Hold Last Frame — disable holding the last frame of the clip or a range of selected clips when playout ends if holding the last frame is already enabled.

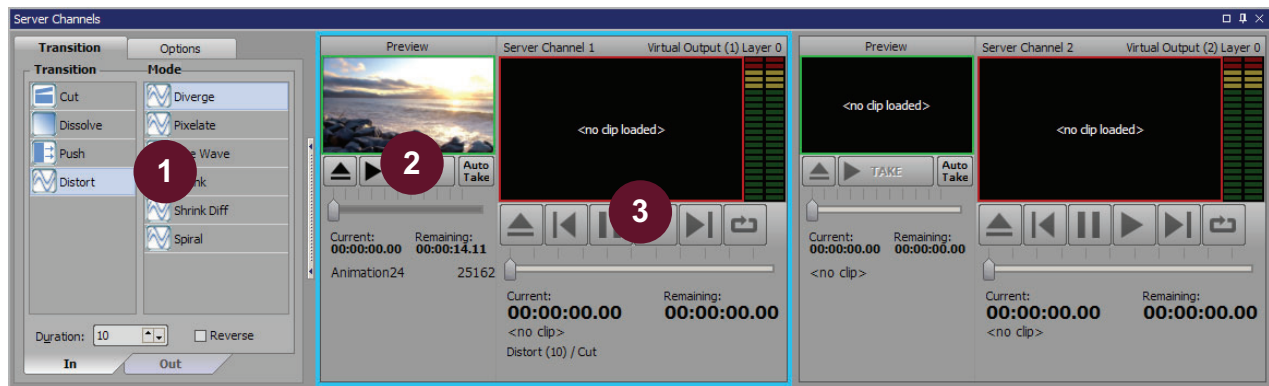
Add to Sequencer — add selected clip or range of clips to the Sequencer.

For More Information on...

- the Edit Clip dialog box and Add Sub Clip dialog box, refer to “**Edit Clip/Add Sub Clip**” on page 6–17.

Server Channels Interface Overview

The following screen capture displays the main elements of the Server Channels interface.



- 1) **Transitions / Options** — use this section to set the in and out transitions for the clip in the active server channel and configure the options for the active server channel.
- 2) **Preview** — use this window to preview a clip before playout.
- 3) **Server Channel** — use this window to view the loaded clip and audio monitors and use the playout controls to play, pause, skip forward, skip backward, loop, eject or move the position of the clip.

Using the Server Channels

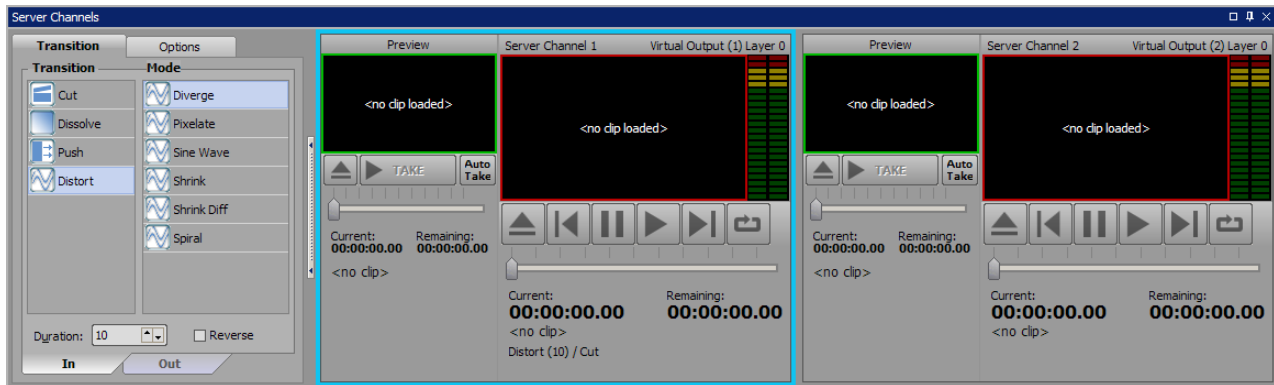
The Server Channels are used in the XPression Sequencer for previewing and playing out clips. The Server Channels also allow for editing of clips.

Opening the Server Channels

If using the Clips Option for XPression, use the following procedure to access the Server Channels.

1. In **XPression**, open the **Sequencer** layout.
2. In the **Menu** bar, click **Display > Server Channels**.

The **Server Channels** window opens.

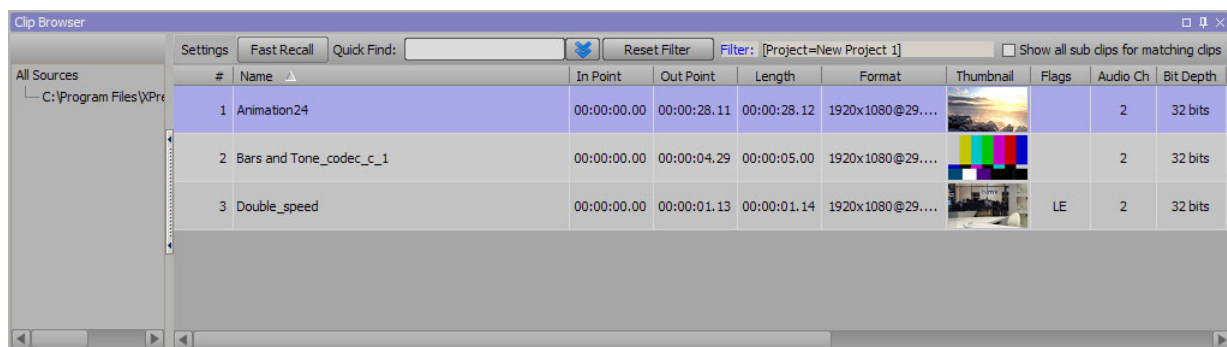


Loading a Clip in the Server Channels

★ For clips to load in the Server Channels window, server channels must be configured in the **Server Channels** tab of the XPression **Hardware Setup**.

1. In the **Sequencer**, use the **Menu** bar to select **Display > Clip Browser**.

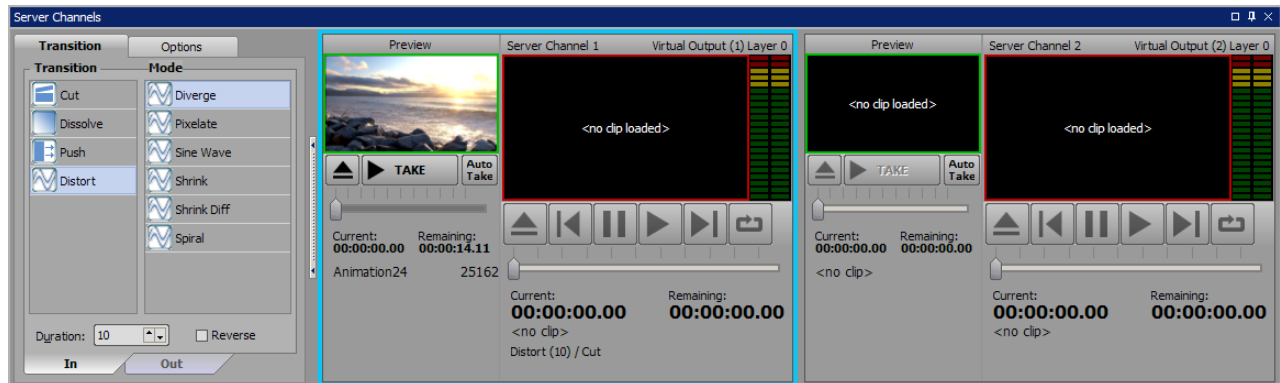
The **Clip Browser** window opens.



If clips have been sent to the Clip Browser from the Record Client, or if clips have been transcoded by the INcoder into the Watch Folder, clips will automatically load into the Clip Browser.

2. Drag and drop a clip from the Clip Browser onto a **Server Channel** in the Server Channels window.

The clip is added to the **Preview** channel for the **Server Channel** (or directly to the **Server Channel** if the preview has been disabled in the options).



The clip will be loaded to its pre-configured in point.

If loaded in the Preview, click **Take** to play the clip on air on the Server Channel. While a clip is on air, clips can be cued on the Preview channel while still allowing the on air clip to be controlled and have its timecode and countdown visible.

Server Channel playback controls are provided or the space bar can be used to pause and start playback.

A realtime proxy of the clip is shown as it plays in the server channel along with audio meters and a time remaining counter.

Take items or timed groups in the Sequencer can also be dragged onto a server channel for playback. To preserve the original server channel assignment of a take item, press and hold **Ctrl** while dragging and dropping from the Sequencer to a server channel.

- ★ Clips can also be loaded to a channel by double clicking them in the Clip Browser. They will be loaded onto the currently active server channel, as shown by a cyan outline around the channel. Once a clip is loaded to a server channel, it can be dragged and dropped from one server channel to another as a duplicate. The active channel can be changed by double clicking any other server channel.

Clips can also be dragged and dropped directly from Windows Explorer for situations where the clip is not loaded into the Clip Store (or there is no Clip Store present).

For More Information on...

- setting up server channels and virtual outputs, refer to "**Set Up Server Channels**" on page 6–2.
- sending clips from the Record Client to the Clip Browser, refer to "**Send a Video or Image to Clip Store Using the Record Client**" on page 6–27.
- configuring a Watch Folder for the INcoder, refer to "**Configuring the XPression INcoder**" on page 5–5.

Server Channels Interface

The following section describes the Server Channels interface.

Transition tab

Use this tab to select and configure the in and out transition for the clip in the selected Server Channel.

Transition

Use the **In** and **Out** tabs to select an in and out transition for the clip.

- **Cut** — select this to use an instantaneous transition to and from the clip.
- **Dissolve** — select this to use a gradual transition where a clip dissolves in or out.
- **Push** — select this to use a sliding transition where the clip pushes in or out.
- **Distort** — select this to use a transition where a clip is warped in or out.

Mode

Use this section to configure the Dissolve, Push, and Distort transition mode.

- **Dissolve**
 - › **Fade** — select this transition to fade in to, or out from, the clip.
 - › **Over Black** — select this transition to fade in or out from black.
 - › **Additive** — select this transition to gradually add light to the clip when transitioning in or out.
 - › **Saturate** — select this transition to saturate the clip when transitioning in or out.
 - › **Desaturate** — select this to transition to desaturate the clip when transitioning in or out.
 - › **Invert** — select this transition to invert the clip when transitioning in or out.
- **Push**
 - › **Right To Left** — select this transition to push from right to left.
 - › **Left To Right** — select this transition to push from left to right.
 - › **Top To Bottom** — select this transition to push from top to bottom.
 - › **Bottom To Top** — select this transition to push from bottom to top.
 - › **Bottom Right** — select this transition to push to the bottom right.
 - › **Top Right** — select this transition to push to the top right.
 - › **Bottom Left** — select this transition to push to the bottom left.
 - › **Top Left** — select this transition to push to the top left.
- **Distort**
 - › **Diverge** — select this transition to use multiple splits in the image in the clip.
 - › **Pixelate** — select this transition to pixelate the clip.
 - › **Sine Wave** — select this transition to apply a sine wave pattern to the clip.
 - › **Shrink** — select this transition to expand the clip from a shrunken image.
 - › **Shrink Diff** — select this transition to expand the clip from a shrunken image.
 - › **Spiral** — select this transition to spin the clip.
 - › **Duration** — use this box to enter or select the duration of the transition in number of frames.
 - › **Reverse** — check this box to reverse the selected transition.

Options tab

Use this tab to configure various options for the server channels.

Global Options

- **Display Size** — use this list to select a display size for the server channels. The options are:
 - > **Small**
 - > **Large (default)**

Channel Options

- **Cue video clips directly to framebuffer** — select this check box to cue clips to air immediately when dropped on a server channel from the Clip Browser or Sequencer. This disables the preview channel for the selected server channel.
- **Show Slate when cued** — select this check box to display the clip name and duration when the clip is cued.
- **Use preview channel** — select this check box to display a preview channel for the selected server channel.
- **Use source clip timecode** — select this check box to display the timecode from the original source clip when the original clip is a .MOV file with a timecode track.
- **VITC Output** — use this list to output VITC timecode with a clip on the selected server channel. The options are:
 - > **None** — do not use VITC timecode.
 - > **Timecode** — use the timecode of the clip.
 - > **Remaining** — use a countdown timer.
- **Pause Mode** — use this list to select to display the frame or field when the clip on the selected server channel is paused. The options are:
 - > **<auto>** — select this to automatically select the pause mode for a clip. Progressive formats will automatically select a frame and interlaced formats will automatically select a field.
 - > **Frame** — select this to use a frame on pause.
 - > **Upper Field** — select this to use the upper field on pause.
 - > **Lower Field** — select this to use the lower field on pause.

Preview

The following section describes the Server Channels preview controls.

Preview (read-only) — displays the image thumbnail for the loaded clip.



Eject — click this button to remove a loaded clip from the preview channel.



Take — click this button to take the clip on air over the server channel and remove it from the preview channel.



Auto Take — select this button to automatically take a clip cued on the preview channel when the on air clip has finished playing. This button is green when the auto take function is on.

Scrub Bar — click and hold on the marker to drag it forward or backward along the time bar to move the clip position to a particular location.

Current (read-only) — displays the elapsed time of the clip.

Remaining (read-only) — displays the time remaining in the clip.

Clip Name (read-only) — displays the name of the clip loaded in the preview channel.

Recall ID (read-only) — displays the recall ID of the clip loaded in the preview channel.

Server Channels

Server Channel X (read-only) — displays the output configured for the server channel, the selected layer, the image thumbnail for the loaded clip, and an audio meter.



Eject — click this button to remove a loaded clip from the server channel.



Back — click this button to return to the beginning of the clip.



Pause — click this button to pause the clip.



Play — click this button to play out the clip.



Forward — click this button to reach the end of the clip.



Loop — click this button to continuously play the clip. When this button is green, the loop function is turned on. Clicking it again will turn off the loop function.

Scrub Bar — click and hold on the marker to drag it forward or backward along the time bar to move the clip position to a particular location.

Current (read-only) — displays the elapsed time of the clip.

Remaining (read-only) — displays the time remaining in the clip.

Clip Name (read-only) — displays the name of the clip loaded in the server channel.

Recall ID (read-only) — displays the recall ID of the clip loaded in the server channel.

Transition (read-only) — displays the transition applied to the server channel.

Server Channels Shortcut Menu

Right-click on a clip in the Server Channels to access the Server Channels shortcut menu.

Adjust Clip Volume — select this to open the Adjust Clip Volume dialog box and adjust the volume of the clip in decibels. Adjusting the volume of a clip on a server channel will adjust the volume of the clip in the ClipStore.

Edit Clip — select this to open the Edit Clip dialog box and edit the settings of the selected clip.

For More Information on...

- the Edit Clip dialog box, refer to “**Edit Clip/Add Sub Clip**” on page 6–17.

Edit Clip/Add Sub Clip

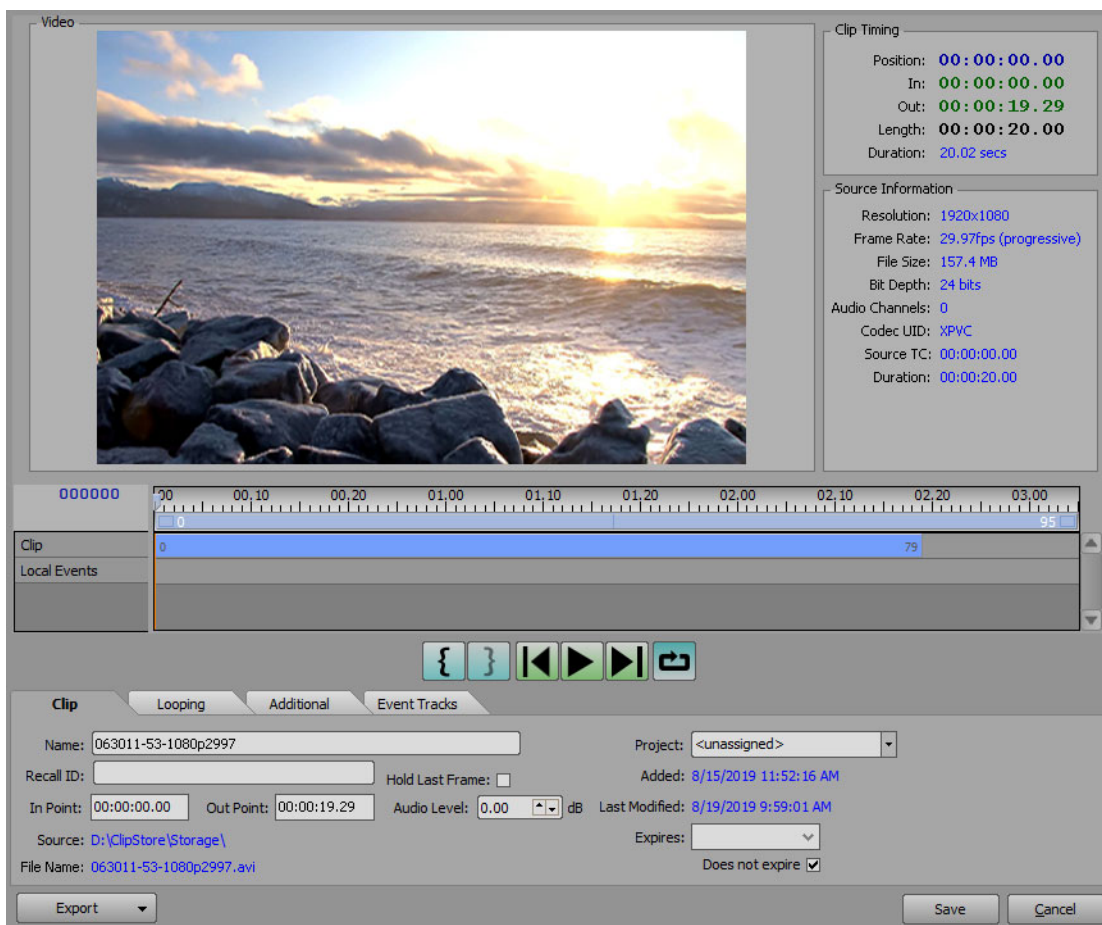
Use the Edit Clip and Add Sub Clip dialog boxes to configure metadata for a clip. The Add Sub Clip dialog box has the same interface as the Edit Clip dialog box but is used to create a trimmed clip from an existing clip. A video can have multiple subclips defined within it, each with distinctive in/out points. Loading a subclip for playout is identical to loading a normal clip.

- The **Edit Clip** dialog box can be accessed from the Clip Browser window and Server Channels window.
- The **Add Sub Clip** dialog box can only be accessed from the Clip Browser window.

For More Information on...

- opening the Edit Clip window and the Add Sub Clip window from the Clip Browser, refer to “**Clip Browser Shortcut Menu**” on page 6–10.
- opening the Edit Clip window from the Server Channels, refer to “**Server Channels Shortcut Menu**” on page 6–16.

Edit Clip/Add Sub Clip Interface



Video

This section displays the clip that has been selected for editing or creating a sub clip. The clip is rendered over a checkerboard pattern so that the alpha channel is visible unless the clip is full frame.

Use the timeline marker to select a specific frame in the timeline.

The video can be scrubbed using the timeline bar; or using common NLE shortcuts like H,J,K to play/rewind at different speeds.

During scrubbing audio can be heard by configuring an Audio Monitor device in the Hardware Setup.

- Right-click inside the **Clip**, **Local Events**, or **Event Track** timeline to access the shortcut menu.

★ Event Track timelines are available if global event tracks have been configured in the Clip Store Manager and added as a processor in the INcoder. They will appear in the timeline as named in the Clip Store Manager. They can be assigned as local events by selecting **Preset Event Track > Copy Events to Local Event Track** from the shortcut menu.

Looping > Set Loop Start — select this option to select the current position of the timeline marker as the start of the video loop.

Looping > Set Loop End — select this option to select the current position of the timeline marker as the end of the video loop.

Looping > Reset Loop — select this to clear the loop settings.

Clear In Point — select this clear a configured start time for the clip.

Clear Out Point — select this clear a configured end time for the clip.

Clear In and Out Points — select this clear the configured start and end times for the clip.


Update Clip Thumbnail — select this option to update the thumbnail for the clip to reflect any edits or to use a specific frame as the thumbnail in the Clip Browser.


Add Event > Rosstalk Event — select this option to directly add a RossTalk event onto the clip timeline.


Add Event > Scene Director Trigger — select this option to directly add a Scene Director trigger event onto the clip timeline.


Rename Event — select this option to rename a selected RossTalk or Scene Director trigger event on the clip timeline.


Delete Event — select this option to delete a selected RossTalk or Scene Director trigger event on the clip timeline.


 **Set In Point** — click this button to set the start time of the clip where the timeline marker has been positioned. Keyboard shortcut 'I' can be used to mark an in point.

 **Set Out Point** — click this button to set the end time of the clip where the timeline marker has been positioned. Keyboard shortcut 'O' can be used to mark an out point.

 **Move current position to in point** — click this button to return to the in point of the clip.

 **Start play back** — click this button to play back the clip.

 **Move current position to end point** — click this button to reach the end of the clip.

 **Loop** — click this button to loop the playback of the clip. Click it a second time to turn off looped playback.

For More Information on...

- looping, refer to "**Looping Tab**" on page 6–19.

Clip Timing (read-only)

Position — indicates the position of the timeline marker in the timeline for the clip.

In — displays the in point for the clip.

Out — displays the displays the out point for the clip.

Length — displays the total duration of the clip in frames.

Duration — displays the time length of the clip.

Source Information (read-only)

Resolution — displays the video format of the source clip.

Frame Rate — displays the frame rate of the source clip.

File Size — displays the file size of the source clip.

Bit Depth — displays the quality of the signal quantization of the source clip.

Audio Channels — displays the amount of embedded audio channels used in the source clip.

Codec UID — displays the type of encoding used for the source clip.

Source TC — displays the timecode of the source clip.

Duration — displays the total duration in frames of the source clip.

Clip Tab

Name — use this box to enter or edit a name for the clip.

Recall ID — use this box to enter an ID number for the clip when it is recalled.

Hold Last Frame — select this check box to hold the last frame of the clip when playout ends. Do not select this check box if taking the clip offline automatically using an out transition.

★ Holding the last frame can be also enabled/disabled in the Clip Browser by right-clicking on the clip and selecting **Adjust Loop / Hold Last > Enable Hold Last Frame** or **Disable Hold Last Frame** from the shortcut menu.

In Point — use this box to enter a starting point for the clip.

Out Point — use this box to enter an ending point for the clip.

Audio Level — use this box to enter or select a volume level for the clip in decibels. Changing the audio level in the Edit Clip dialog box while clip is on air will not affect clip audio on a Server Channel. However, it will be applied to the audio monitor if an audio monitor is configured in the Hardware Setup.

Source (read-only) — lists the location where the clip is stored.

File Name (read-only) — lists the name and file extension of the clip.

Project — use this list to select a project for the clip.

Added (read-only) — lists the date the clip was added to the clip store.

Last Modified (read-only) — lists the date the clip was last edited.

Expires — use the calendar to select an expiry date for the clip, if necessary.

Does not expire — select this check box to use no expiry date for the clip.

Looping Tab

Enable Looping — select this check box to enable looping for the clip.

★ Looping can be also enabled/disabled in the Clip Browser by right-clicking on the clip and selecting **Adjust Loop / Hold Last > Enable Looping** or **Disable Looping** from the shortcut menu.

Multi-Point — if looping has been enabled, select this check box to enable the multi-point loop settings.

Multi-Point Loop Settings


Use the multi-point loops to create free running 4-point and 3-point loops:


- 4-point loops use a frame in point, a loop section of start and end frames, and a frame out point.
- 3-point loops use a loop section of start and end frames with either a frame in point the same as the loop start frame or a frame out point the same as the loop end frame.


Loop Start — use this box to enter a starting frame for the loop within the clip time.

Loop End — use this box to enter an end frame for the loop within the clip time.

Loop Count — use this box to enter or select an amount of playbacks the clip will loop before stopping. Use 0 for infinite looping.

 **Mark** — click this button to set the start time or end time of the loop at the position of the timeline marker.

 **Goto Start** — click this button to skip to the start of the loop.

 **Goto End** — click this button to skip to the end of the loop.

For More Information on...

- creating a 4-point loop, refer to “**Creating a 4-Point Loop**” on page 6–23.
- creating a 3-point loop, refer to “**Creating a 3-Point Loop**” on page 6–25.

Additional

Original File Name (read-only) — displays the original name of the file as uploaded.

Premultiplied / Shaped — select this check box to multiply/shape the fill signal color information by the luminance information in the key signal.

Event Tracks

Event tracks are configured in the Clip Store Manager, added as processors in the INcoder, and then available to use when editing clips from the Clip Browser. The Event Tracks tab provides a list of available global event tracks.

Assigned Event Tracks — lists the event tracks assigned to the clip.

Available Event Tracks — lists the available event tracks that can be assigned to the clip.

Add Track — select an available event track and click this button to assign it to the clip.

Remove Track — select an assigned event track and click this button to remove it from the clip.

Other

Export — use this list to select one of the following options for exporting a clip:

To Video — open the Export to Video dialog box to save the clip as an AVI or MOV video file. XPression encoded AVI video files can also be sent directly to the Clip Store.

Still to Disk — open a save dialog to save a still as a Targa (.TGA), Targa (RLE Compressed) (.TGA), Portable Network Graphic (.PNG), or JPEG (.JPG) format image file.

Still to Clipstore — open the Send to Clip Store dialog box to send a still to the Clip Store database to be used within the Clips workflow.

Interlaced Settings > Frame Based — select this to capture the image file without deinterlacing. This setting only works best for scenes with minimal motion.

Interlaced Settings > Field (line doubled) — select this to capture the image file with each line doubled. For example, it will replace field two with a duplicate of field one.

Interlaced Settings > Field (line interpolated) — select this to capture the image file by interpolating between odd lines to form even lines.

Save — click this button to save the edited clip or sub clip.

Cancel — click this button to exit the dialog box without saving any changes.

For More Information on...

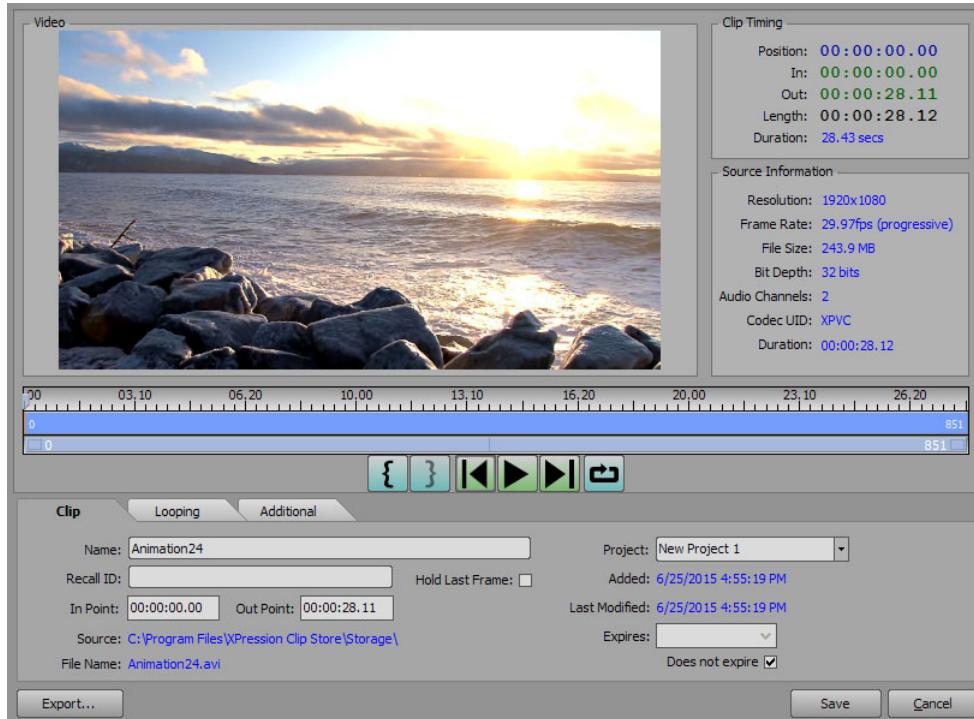
- the Export to Video dialog box, refer to the XPression Help file.

Updating the Thumbnail in the Clip Browser

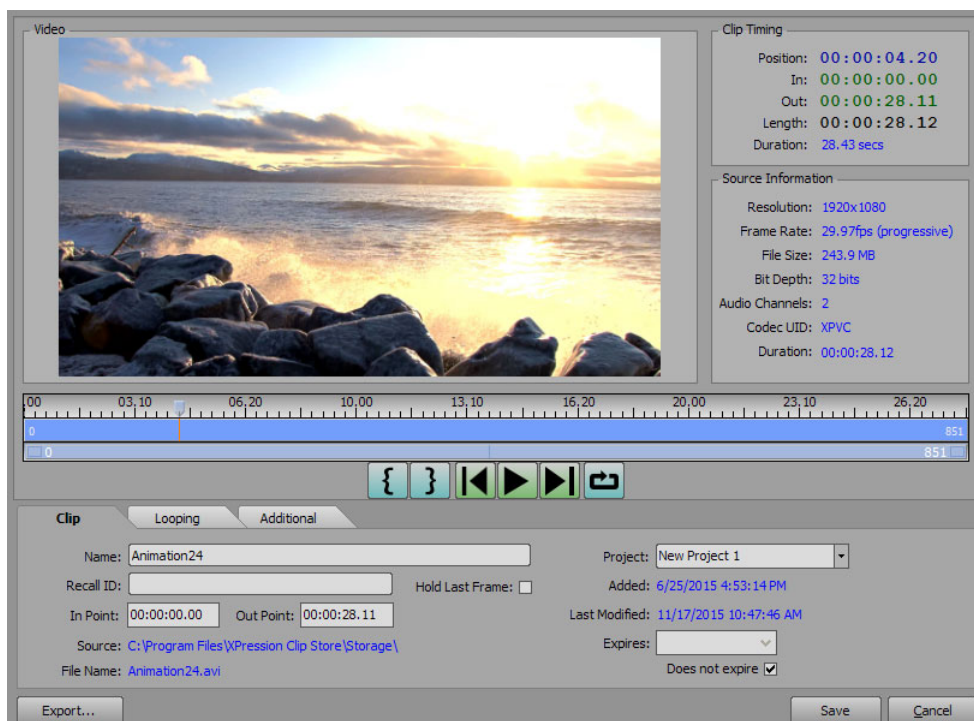
Update the thumbnail in the Clip Browser to provide a more representative or preferred image to illustrate the content of the clip.

1. In the **Clip Browser**, right-click on a clip and select **Edit Clip** or **Add Sub Clip**.

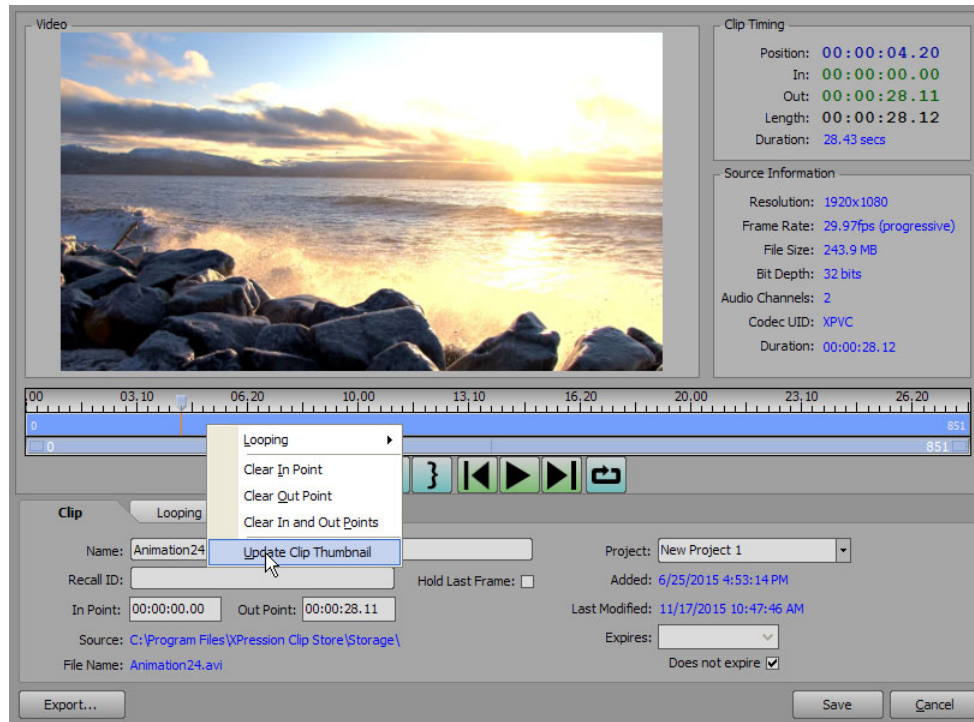
The **Edit Clip / Add Sub Clip** dialog box opens.



2. In the **Edit Clip** or **Add Sub Clip** dialog box, move the timeline marker to a desired frame in the timeline.



3. Right-click inside the timeline and select **Update Clip Thumbnail** from the shortcut menu.



4. Click **Save**.

The thumbnail for the clip is updated in the Clip Browser.

The screenshot shows the XPression Clip Browser window. It has a search bar with 'Fast Recall' and 'Quick Find' buttons, and a 'Reset Filter' button. There's a checkbox for 'Show all sub clips for matching clips'. Below is a table with columns: #, Name, In Point, Out Point, Length, Format, Thumbnail, Flags, Audio Ch, and Bit Depth. The table contains three rows of clip data.

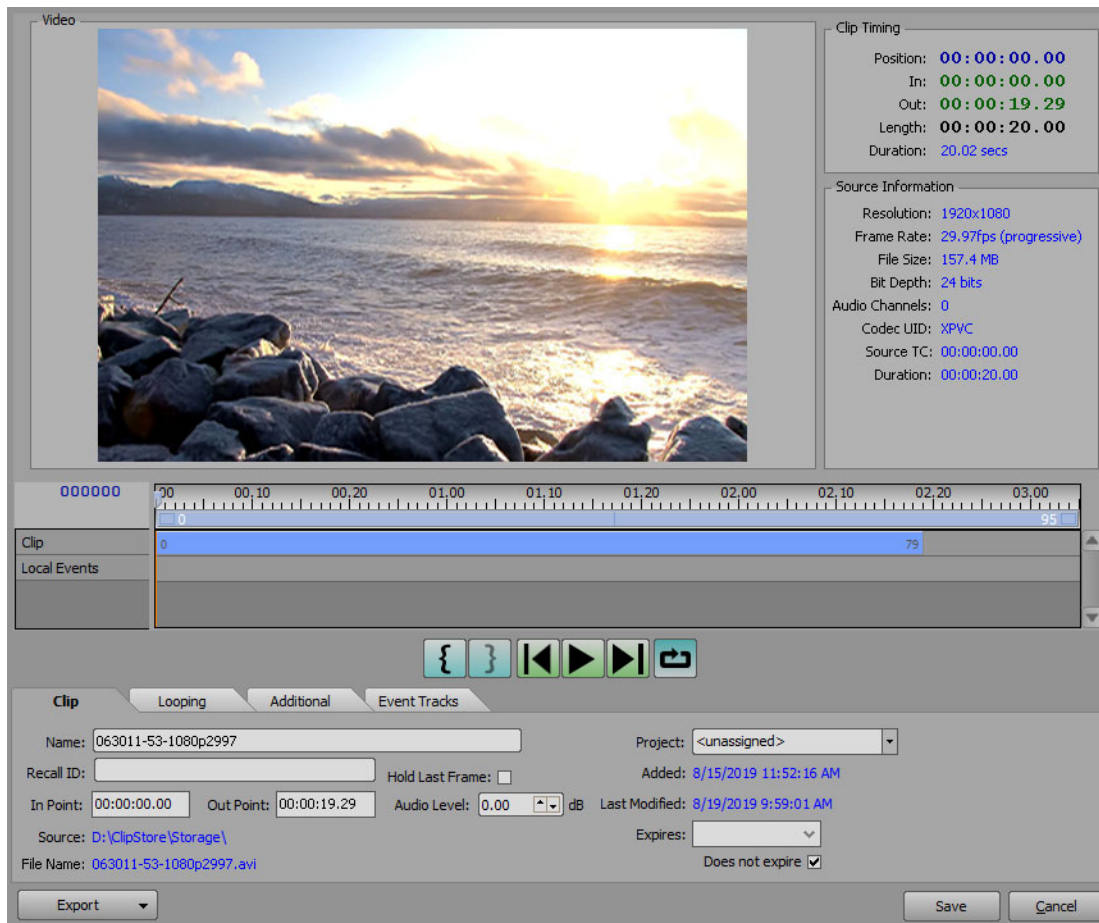
#	Name	In Point	Out Point	Length	Format	Thumbnail	Flags	Audio Ch	Bit Depth
1	Animation24	00:00:00.00	00:00:28.11	00:00:28.12	1920x1080@29.97p			2	32 bits
2	Bars and Tone_codec_c_1	00:00:00.00	00:00:04.29	00:00:05.00	1920x1080@29.97p			2	32 bits
3	Double_speed	00:00:00.00	00:00:01.13	00:00:01.14	1920x1080@29.97p			2	32 bits

Creating a 4-Point Loop

4-point loops use a frame in point, a loop section of start and end frames, and a frame out point.

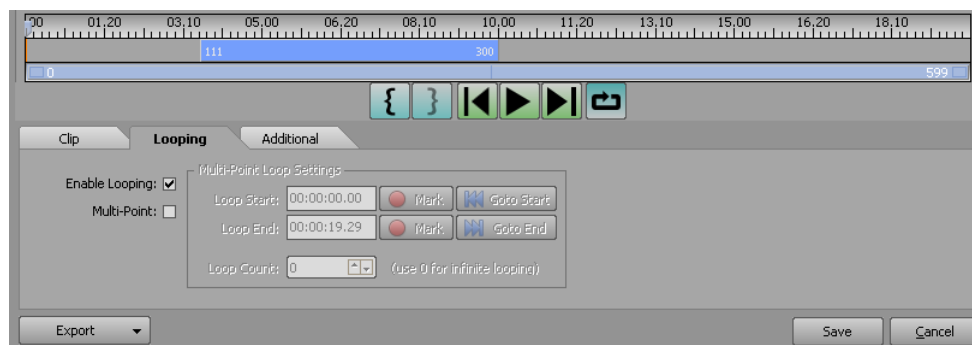
1. In the **Edit Clip / Add Sub Clip** dialog box, click the **Clip** tab.

The **Clip** tab opens.



2. In the **In Point** box, enter a frame in point.
3. In the **Out Point** box, enter a frame out point.
4. Click the **Looping** tab.




The **Looping** tab opens.



5. In the **Looping** tab, select the **Enable Looping** check box.
6. Select the **Multi-Point** check box.

7. In the **Multi-Point Loop Settings** section:
 - a. Use the **Loop Start** box to enter a frame start for the loop.
 - b. Use the **Loop End** box to enter a frame stop for the loop.
 - c. Use the **Loop Count** to enter or select a number of times to playout the loop.
8. Click **Save**.

The edited clip is updated in the **Clip Browser**.

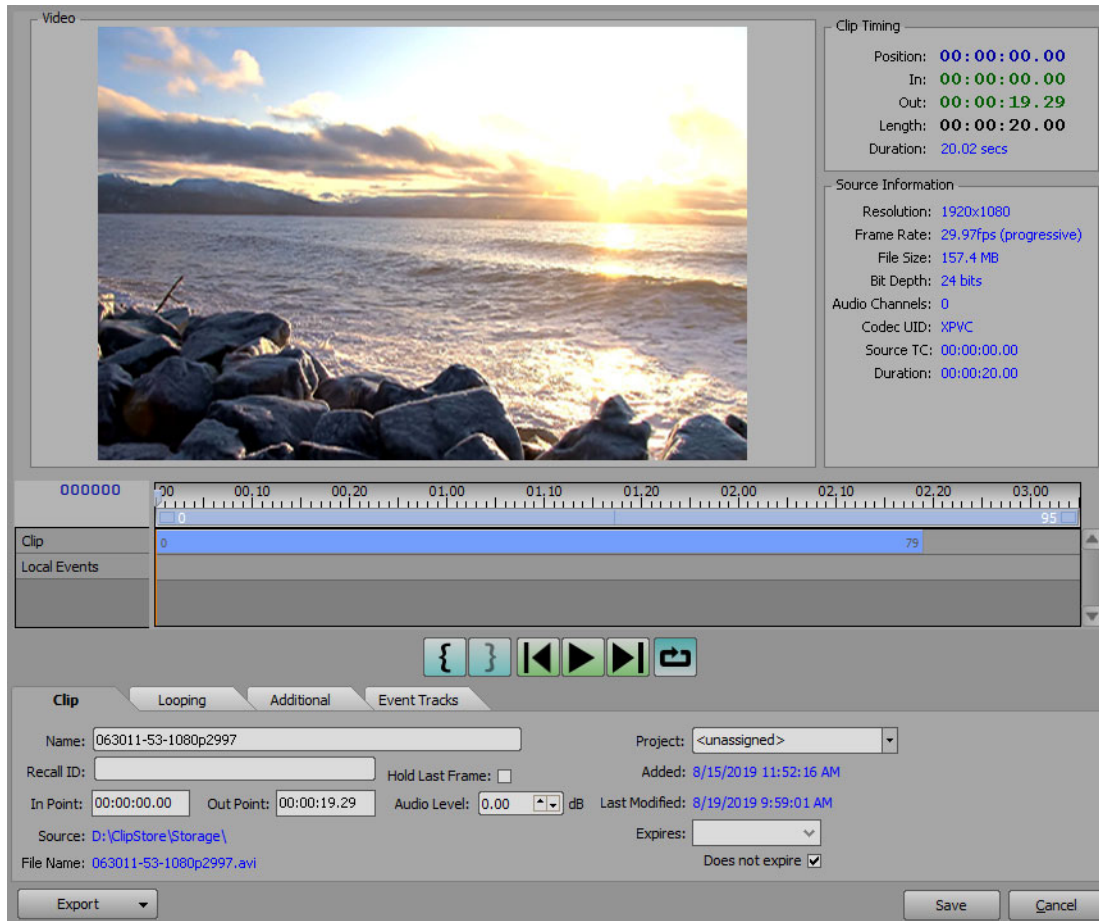
Clip Browser										
Fast Recall		Quick Find: <input type="text"/>		Reset Filter		<input type="checkbox"/> Show all sub clips for matching clips				
#	Name	In Point	Out Point	Length	Format	Thumbnail	Flags	Audio Ch	Bit Depth	
1	063011-53-1080p2997	00:00:03.10	00:00:10.00	00:00:06.21	1920x1080@29.97p		LE	2	32 bits	
2	Bars and Tone_codec_c_1	00:00:00.00	00:00:04.29	00:00:05.00	1920x1080@29.97p			2	32 bits	
3	Double_speed	00:00:00.00	00:00:01.13	00:00:01.14	1920x1080@29.97p			2	32 bits	

Creating a 3-Point Loop

3-point loops use a loop section of start and end frames with either a frame in point the same as the loop start frame or a frame out point the same as the loop end frame.

1. In the **Edit Clip / Add Sub Clip** dialog box, click the **Clip** tab.

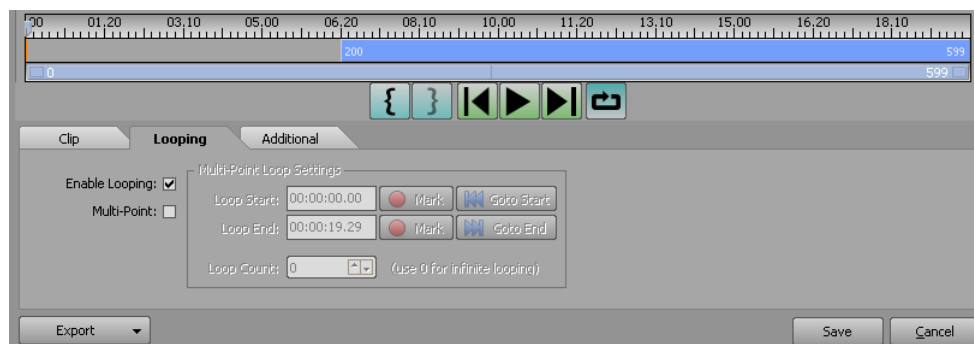
The **Clip** tab opens.



2. In the **Clip** tab, enter a frame in point in the **In Point** box or enter a frame out point in the **Out Point** box.

3. Click the **Looping** tab.

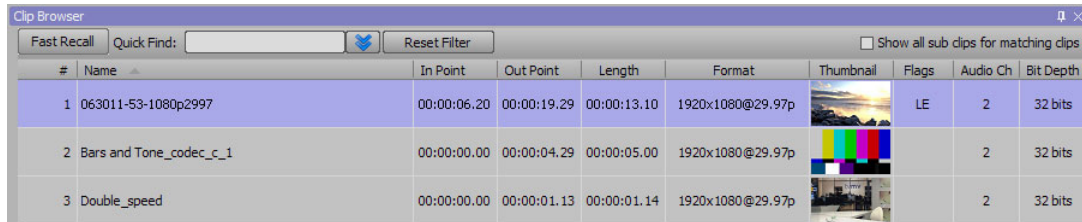
The **Looping** tab opens.






4. In the **Looping** tab, select the **Enable Looping** check box.
5. Select the **Multi-Point** check box.

6. In the **Multi-Point Loop Settings** section:
 - a. Use the **Loop Start** box to enter a frame start for the loop.
 - b. Use the **Loop End** box to enter a frame stop for the loop.
 - c. Use the **Loop Count** to enter or select a number of times to playout the loop. Use 0 for infinite looping.
7. Click **Save**.

The edited clip is updated in the **Clip Browser**.



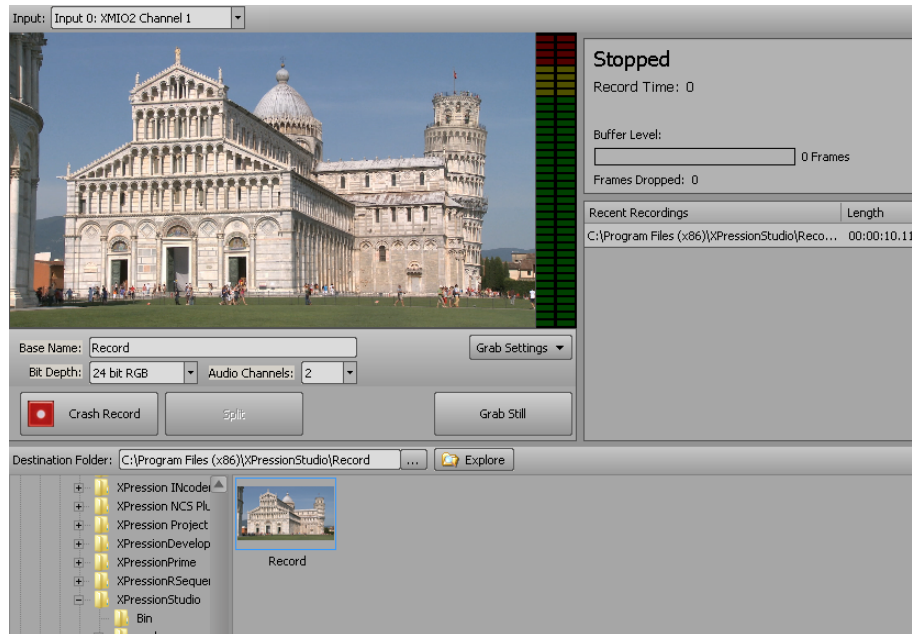
The screenshot shows the 'Clip Browser' window with a search bar and a table of clips. The table has columns for #, Name, In Point, Out Point, Length, Format, Thumbnail, Flags, Audio Ch, and Bit Depth. Three clips are listed: '063011-53-1080p2997', 'Bars and Tone_codec_c_1', and 'Double_speed'.

#	Name	In Point	Out Point	Length	Format	Thumbnail	Flags	Audio Ch	Bit Depth
1	063011-53-1080p2997	00:00:06.20	00:00:19.29	00:00:13.10	1920x1080@29.97p		LE	2	32 bits
2	Bars and Tone_codec_c_1	00:00:00.00	00:00:04.29	00:00:05.00	1920x1080@29.97p			2	32 bits
3	Double_speed	00:00:00.00	00:00:01.13	00:00:01.14	1920x1080@29.97p			2	32 bits

Send a Video or Image to Clip Store Using the Record Client

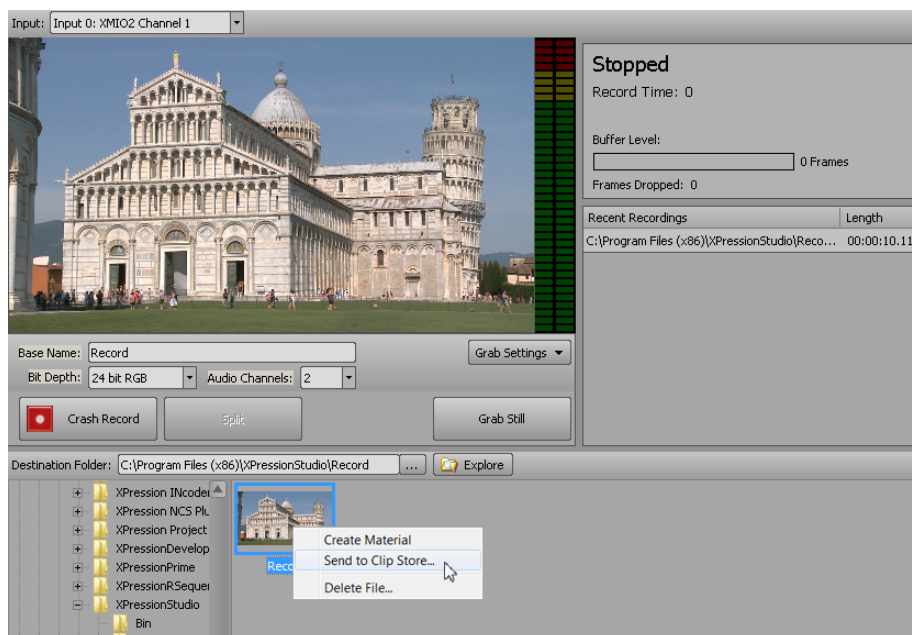
Once a recording or image has been completed in the Record Client, it can be sent to the Clip Store database to be used within the Clip workflow.

1. Create a video or image in the **Record Client**.



2. Right-click on a video or image thumbnail and select **Send to Clip Store** from the shortcut menu. Multiple videos and images can be selected by using **Shift + click** or holding **Ctrl** and clicking on individual videos and images.

★ Only XPression codec clips should be sent to the Clip Store.



The **Send to Clip Store** dialog box opens.

The dialog box is titled "Send to Clip Store". At the top, the status is "Connected to Clip Store" and the progress bar is at 0%. The "Source Info" section shows: Source File: C:\Program Files (x86)\XPressionStudio\Record\Record.avi, Video Size: 1920x1080, Audio: 2, Interlaced: Y, Frame rate: 29.97 fps, and Duration: 310 Frames. The "Destination" section has empty fields for GUID and Dest File. The "Metadata" section has a Name field with "Record", an empty Recall ID field, a Project dropdown menu, and three checkboxes: "Looping" (unchecked), "Premultiplied (Shaped)" (checked), and "Hold Last Frame" (unchecked). At the bottom right are "Transfer Clip" and "Close" buttons.

3. In the **Metadata** section, configure the following items:

- **Name** — enter a new name for the video or image in Clip Store, if necessary.
- **Recall ID** — enter an identifier to recall the video or image from an external device.
- **Project** — use this list to select any existing projects from Clip Store or enter a new project name for the video or image. New projects are automatically added to the Clip Store.
- **Looping** — select this check box to infinitely replay the video each time it reaches the end.
- **Hold Last Frame** — select this check box to freeze the video on the last frame after playing.
- **Premultiplied (Shaped)** — select this check box to multiply/shape the fill signal color information by the luminance information in the key signal.

4. Click **Transfer Clip**.

The video or image file is transferred to the Clip Store. Once the transfer has successfully completed, the **Status** is listed as **Import Complete**, the Progress bar is at **100%**, and **Destination** details are listed.

The dialog box now shows "Status: Import complete." and the progress bar is at 100%. The "Source Info" section remains the same. The "Destination" section now shows GUID: EDBBF757-8F0A-490F-847C-4AFE5CBA2EBB and Dest File: C:\Program Files (x86)\XPression Studio\Store\Clips\E\Record-EDBBF757-8F0A-490F-847C-4AFE5CBA2EBB.avi. The "Metadata" section shows the Name field with "Record", Recall ID field with "001", Project dropdown menu with "Italy", and the same checkboxes as before. The "Transfer Clip" button is now disabled.

For More Information on...

- using the Record Client, refer to the ***XPression User Guide*** or Help file.

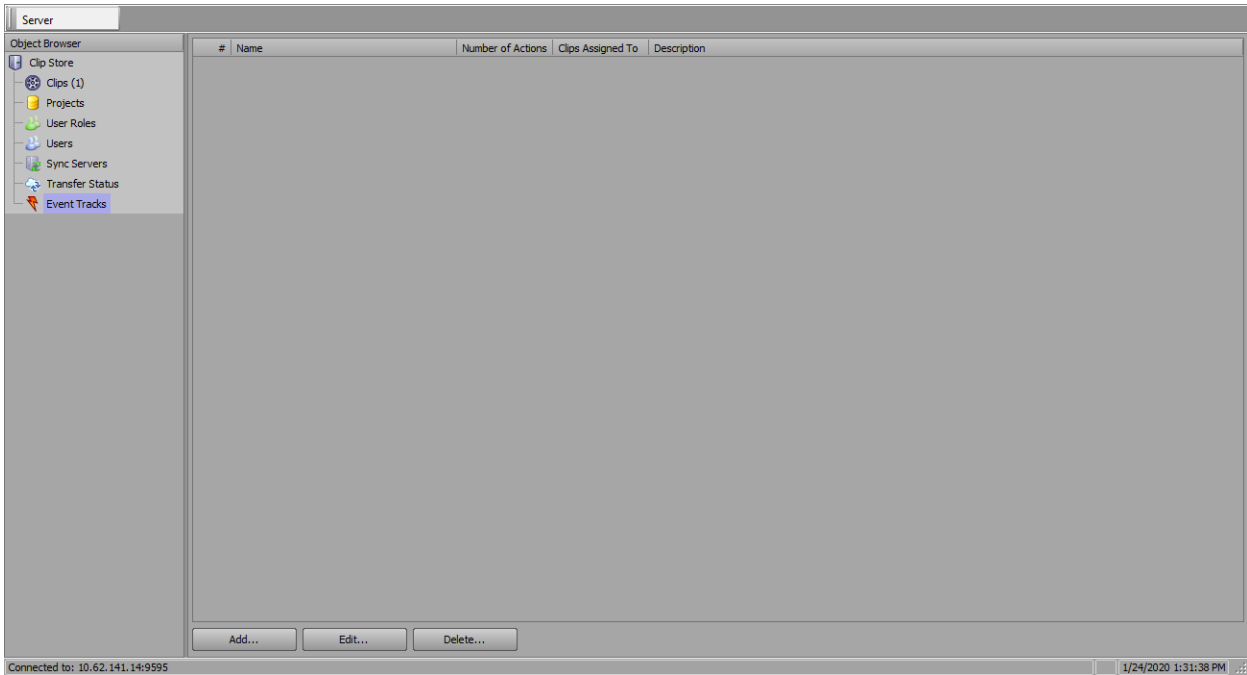
Preset Event Tracks

The Clip Store Manager has the ability to create preset events tracks with RossTalk and Scene Director trigger events which can be assigned to clips in the clip editor.

Step 1: Configure the Events in the Clip Store Manager

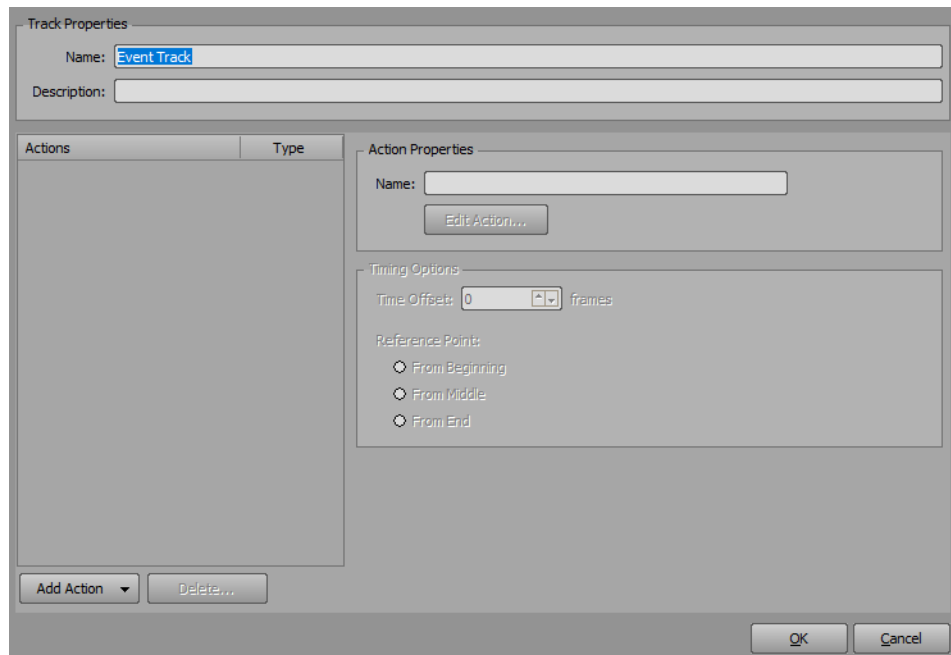
1. Open the **XPression Clip Store Manager**.
2. In the **Object Browser**, select **Event Tracks** from the **Clip Store** menu tree.

The **Event Tracks** section opens in the main window.



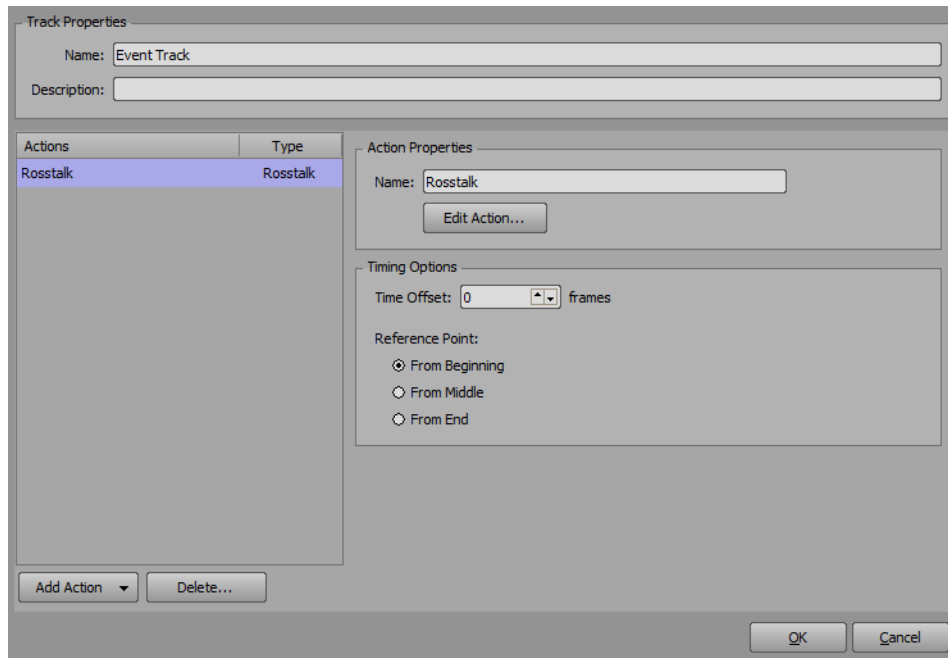
3. Click **Add** to add an event track.

The **New Event Track** dialog box opens.



4. In the **Track Properties** section:
 - Use the **Name** box to enter a name for the event track.
 - Use the **Description** box to enter a brief description for the event track if necessary.
5. Click **Add Action** and select one of the following as an action for the event:
 - **Rosstalk Event**
 - **SceneDirector Trigger**

The selected action is added to the **Actions** list.



6. In the **Action Properties** section, use the **Name** box to enter a name for the action.
7. Click **Edit Action** to configure the properties of the action.
 - If a Rosstalk action was selected, then the **Rosstalk Event Properties** dialog box opens.
 - If a SceneDirector Trigger action was selected, then the **Trigger Event Properties** dialog box opens.

Configure the selected action:

Rosstalk Event



- a. In the **Properties** section, use the **GPI Board** list to select the GPI board to use for the Rosstalk message.
- b. Use the **Rosstalk Msg** list to select the Rosstalk message to use for the event. For more information on individual Rosstalk commands, refer to the **GPI On XPression** app note.

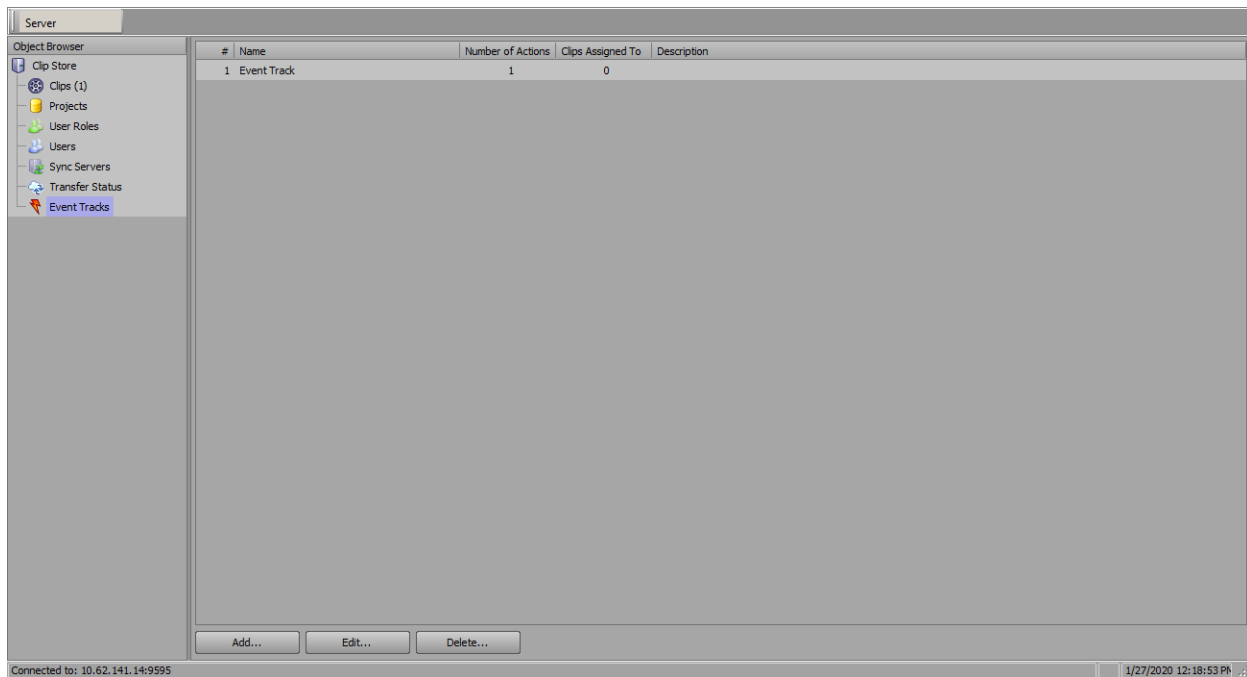
- c. Select one of the **Execute when activated from play direction** options:
 - **Left & Right** — select this option to execute the event when the play direction of the track is moving left or right.
 - **Left** — select this option to execute the event when the play direction of the track is moving left only.
 - **Right** — select this option to execute the event when the play direction of the track is moving right only.

Trigger Event

- ★ The **Trigger in this scene only** check box is not supported with event tracks.
- a. In the **Properties** section, use the **Scene Name** box to enter the name of the scene with the Scene Director to trigger in other on-air scenes. The wildcard character (*) is supported.
 - b. Use the **Scene Director** box to enter the name of the Scene Director to trigger from the selected scene(s).
 - c. Select an **Action** for the Scene Director when triggered:
 - **Play** — playout the tracks in the Scene Director.
 - **Play Reverse** — playout the tracks in the Scene Director in reverse.
 - **Pause** — pause the tracks in the Scene Director.
 - **Stop** — stop the tracks in the Scene Director.
 - **Play Range** — select this to set a play range in frames for the playout. Use the boxes to enter or select the play range in frames.
 - d. Use the **Framebuffer** list to select the framebuffer on which the scene will be triggered.
 - e. Select one of the **Execute when activated from play direction** options:
 - **Left & Right** — select this option to trigger the Scene Director when the play direction of the track is moving forward or in reverse.
 - **Left** — select this option to trigger the Scene Director when the play direction of the track is moving forward only.
 - **Right** — select this option to trigger the Scene Director when the play direction of the track is moving in reverse only.
8. Click **OK**.
The **RossTalk Event Properties** or **Trigger Event Properties** dialog box closes.
 9. In the **Timing Options** section, use the **Time Offset** box to enter or select a number of frames to offset the event and select a **Reference Point** for the offset:
 - **From Beginning** — apply the time offset from the beginning of a clip.
 - **From Middle** — apply the time offset from the middle of a clip.
 - **From End** — apply the time offset from the end of a clip.

10. Click **OK**.

The **New Event Track** dialog box closes and the event is added to the Event Track list.



Step 2: Assign the Event Track to a Processor in the INcoder

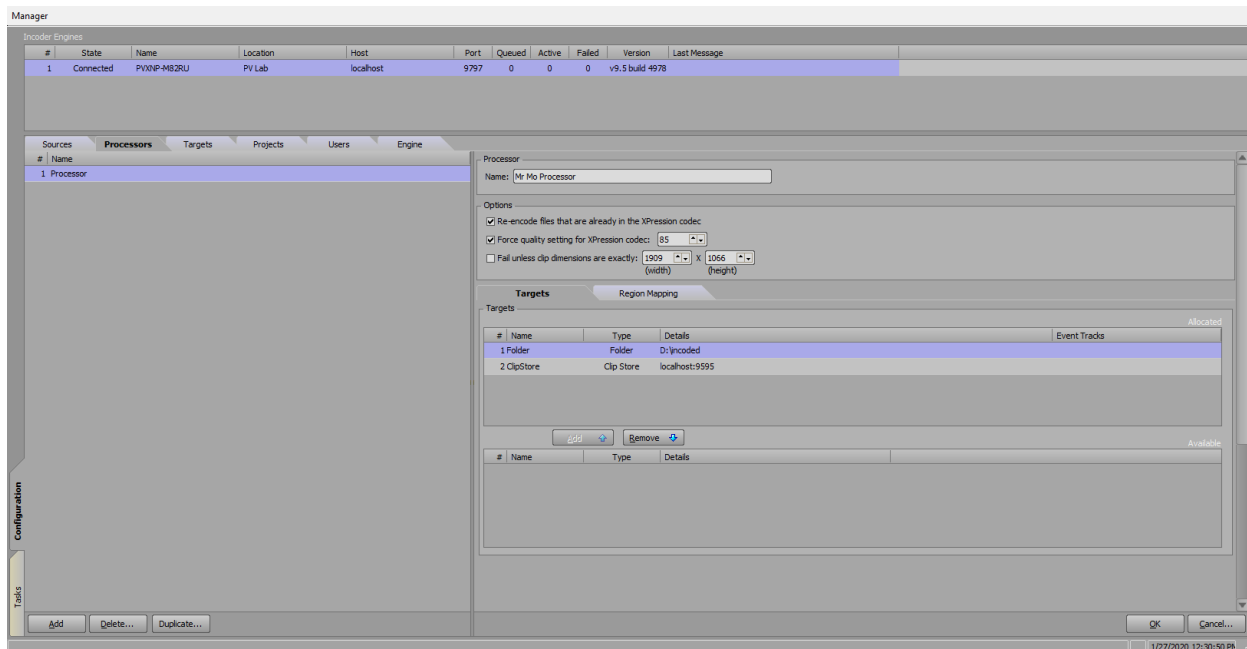
★ INcoder must be configured and connected to the Clip Store before proceeding with this procedure. For more information on configuring INcoder, refer to the ***XPression INcoder User Guide***.

1. In **XPression INcoder**, click the **Configuration** tab.

The **Configuration** section opens.

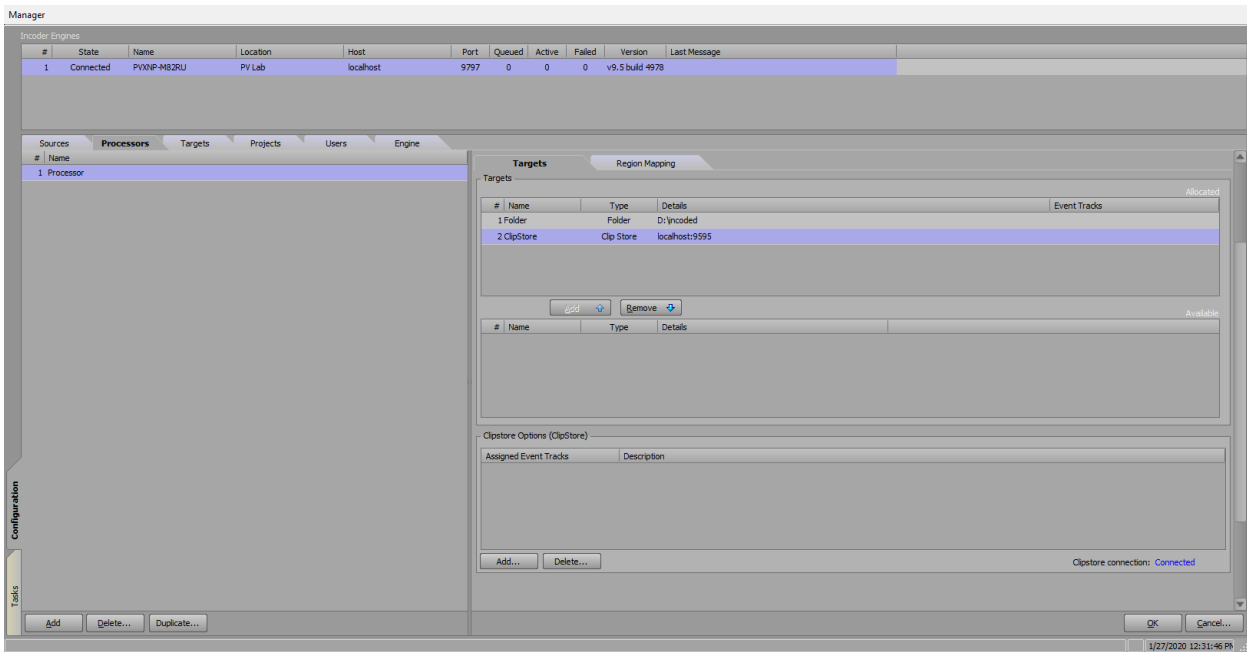
2. In the **Configuration** section, click the **Processors** tab.

The **Processors** tab opens.

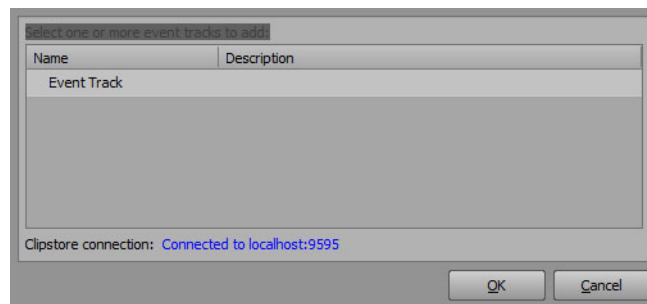


3. Select a processor from the **Processors** list.
4. In the **Targets** section of the selected processor, select the Clip Store that includes the configured event track(s).

The **Clipstore Options (ClipStore)** section is displayed.

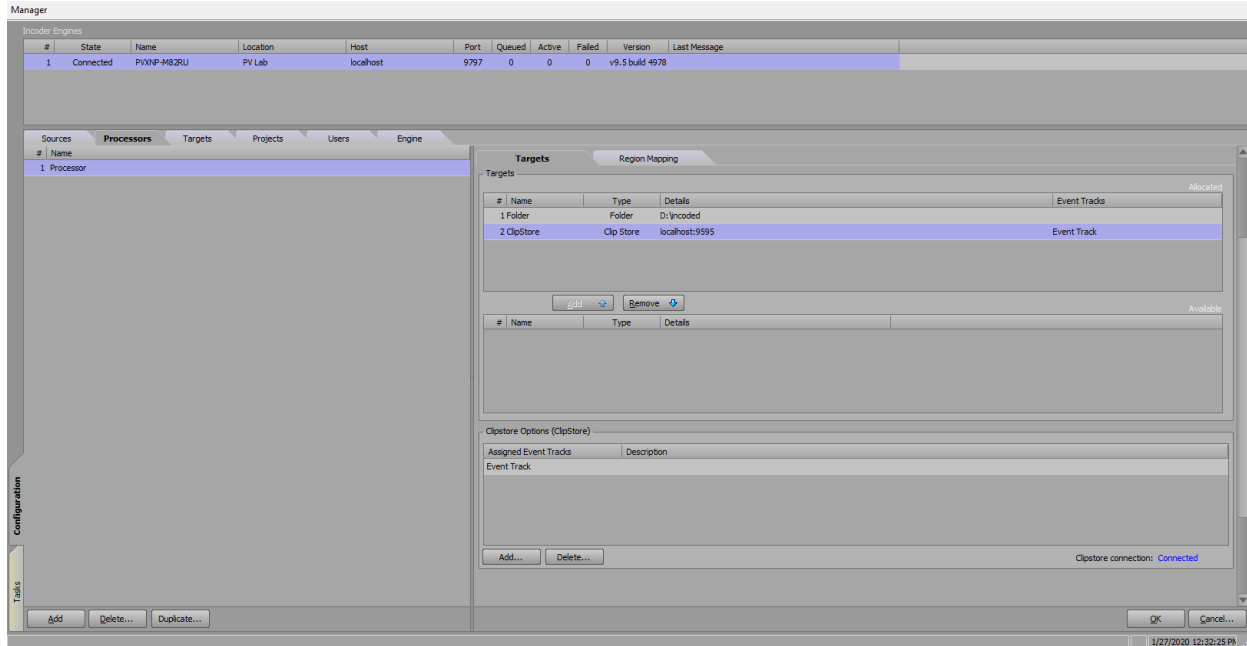


5. In the **Clipstore Options (ClipStore)** section, click **Add**.
The **Add Event Tracks** dialog box opens.



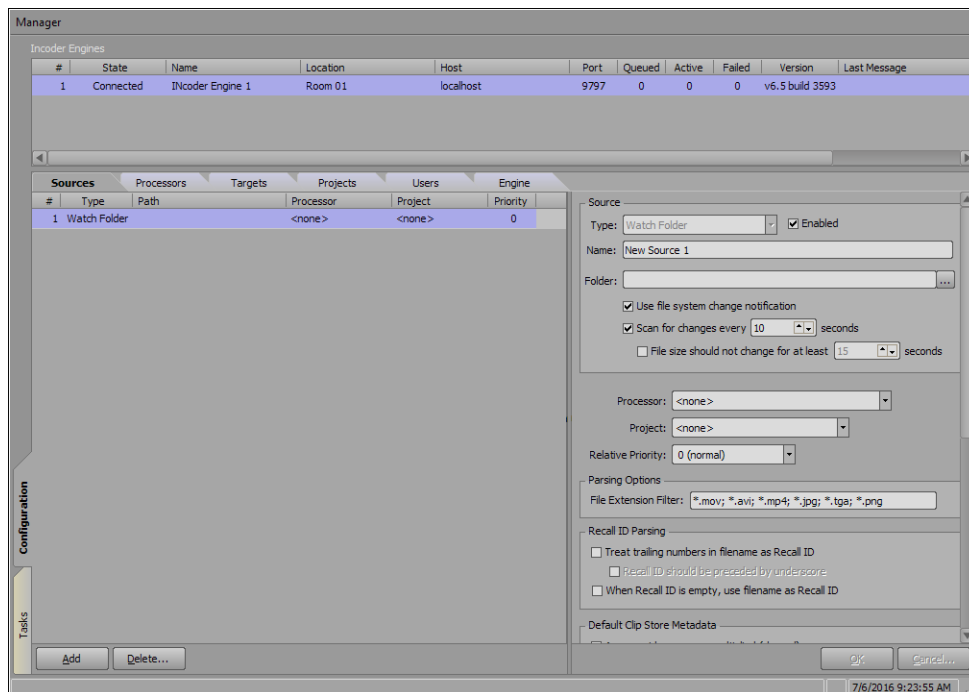
6. Select an event track from the list and click **OK**.

The selected event track is added to the **Assigned Event Tracks** list in the **Clipstore Options (ClipStore)** section.



7. Click the **Sources** tab.

The **Sources** tab opens.

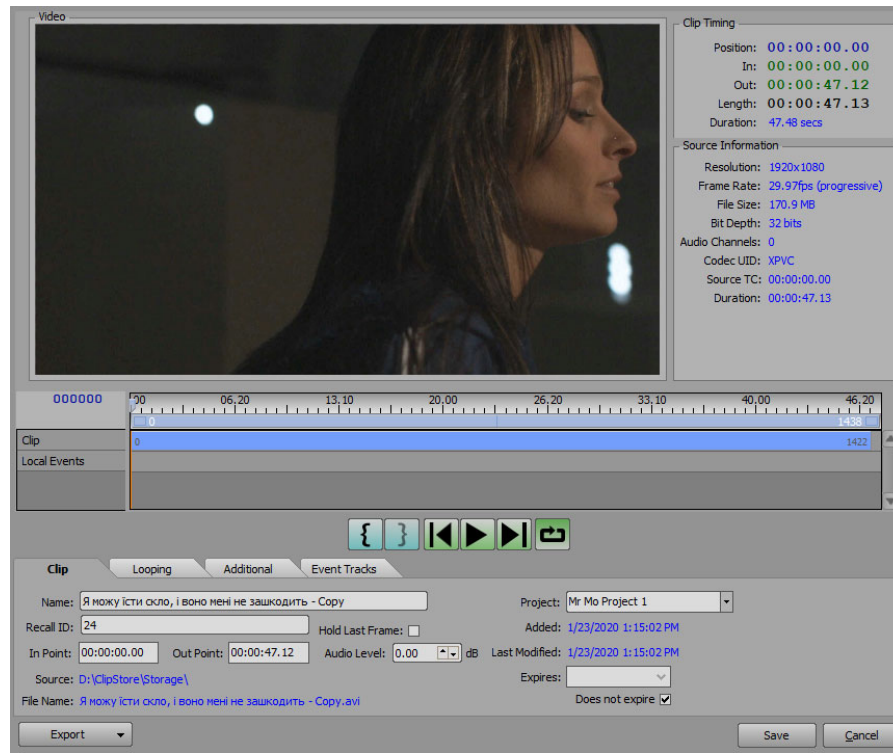


8. Select a source from the **Sources** list.
9. Use the **Processors** list to select the processor that contains the assigned event track(s).
10. Click **OK**.

Step 3: Add an Event Track to a Clip

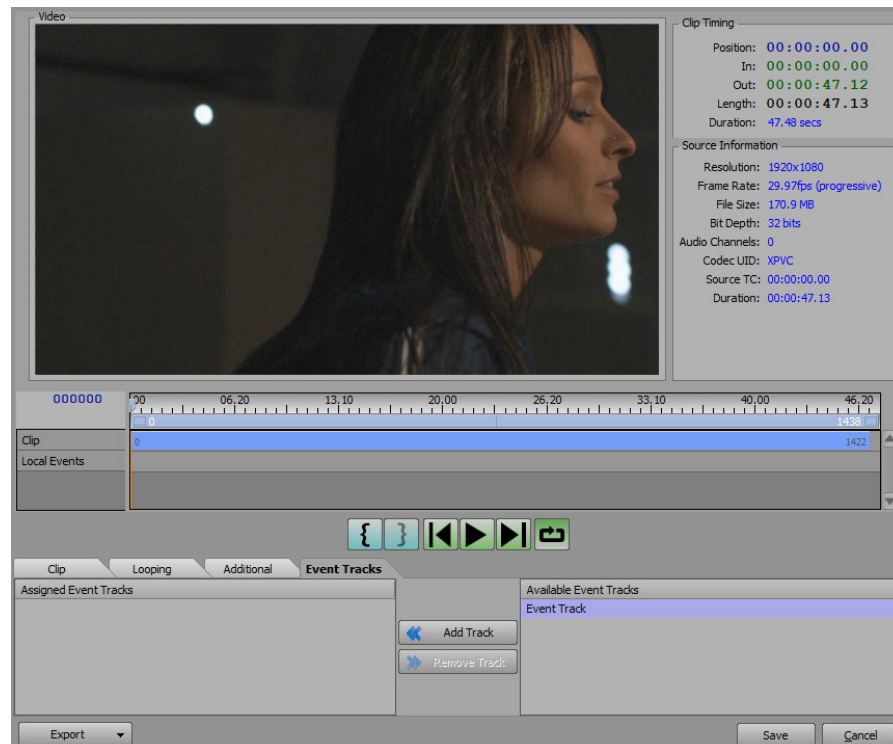
1. In the **Clip Browser** (or a **Server Channel**) in XPression, right-click on a clip and select **Edit** from the shortcut menu (or press **F8**).

The **Edit Clip** dialog box opens.



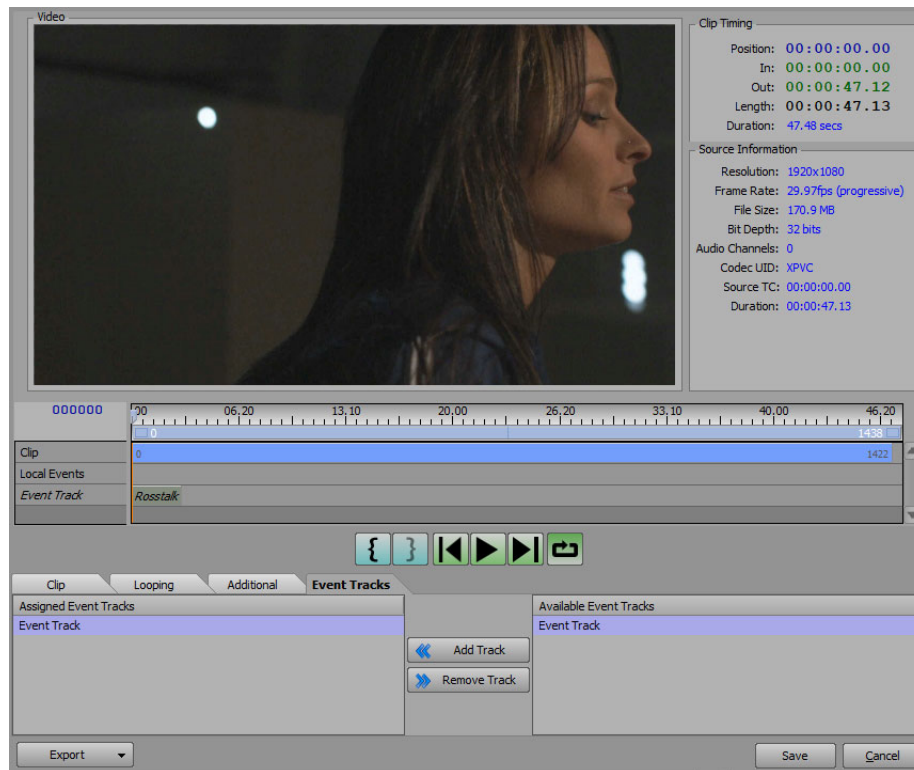
2. Click the **Event Tracks** tab.

The **Event Tracks** tab opens.



3. In the **Event Tracks** tab, select an event track from the **Available Event Tracks** list and click **Add Track**.

The event track is added to the **Assigned Event Tracks** list and appears as an event track in the clip timeline.



Event tracks can be unassigned by selecting the event track in the **Assigned Event Tracks** list and clicking **Remove Track**.

An event track in the clip timeline can be assigned to the clip as a local, editable event by right-clicking on the event in the Event Track timeline and selecting **Preset Event Track > Copy Events to Local Event Track**. A prompt will give the option to keep the original event track or delete it from the timeline. The event will appear in the Local Events timeline once added. The original event track can be added back to the clip anytime by reassigning it through the **Event Tracks** tab.

PBus

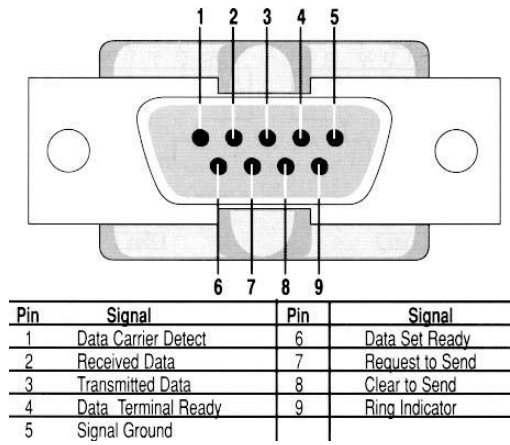
The following topics are discussed in this section:

- PBus Overview
- Configuring PBus and PBus Recalls
- PBus Triggers
- PBus LEARN Commands
- PBus Mapping
- Using PBus from a Switcher to Recall Items
- Using PBus for XPression Clips

PBus Overview

PBus (Peripheral Bus) is an industry standard protocol designed to allow production switchers to communicate with external devices. Most large production switchers have some capability of sending PBus commands to a device.

XPression supports PBus over standard RS232 or TCP/UDP sockets.



The chassis of some turnkey XPression systems might not include a standard RS232 port. However, it is possible to use an RS232-USB adaptor.

If the production switcher has an RS422 serial port, then you will require an RS232-RS422 adaptor. This adaptor will require its own power supply. Generally, the adaptors that are port-powered will not function for these purposes.

- ★ On an XPression Bluebox system, a limited subset of PBus functionality is available. PBus commands can be used to trigger take items that have been pre-built in an XPression sequence using either XPression Designer or Studio. It is not possible to customize the PBus registers actions using Bluebox. Each register number corresponds to a specific take item number and can not be changed. It is not possible to load the PBM or PBMS PBus mapping files on Bluebox.

Configuring PBus and PBus Recalls

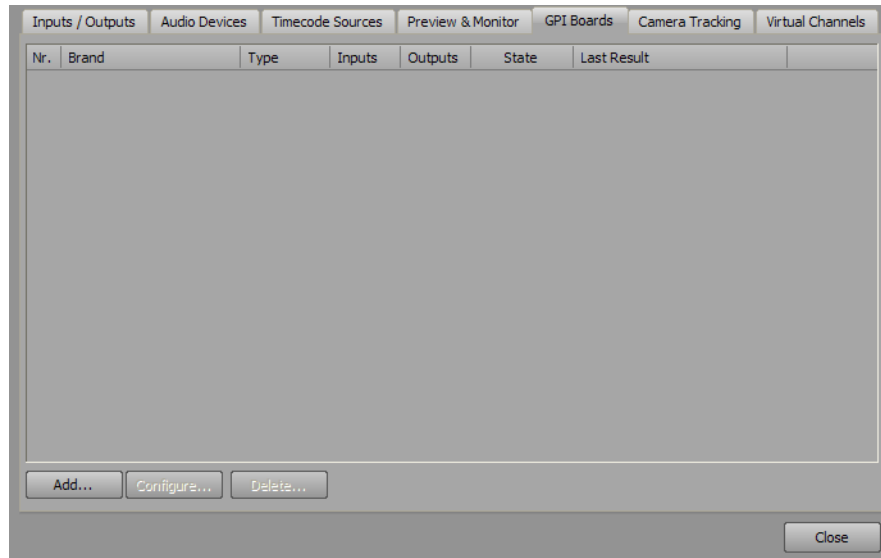
Use the Hardware Setup to configure XPression to accept PBus commands. PBus is an industry standard protocol designed to allow production switchers to communicate with external devices.

To enable XPression to accept PBus commands:

1. In **XPression**, click **Edit > Hardware Setup**.

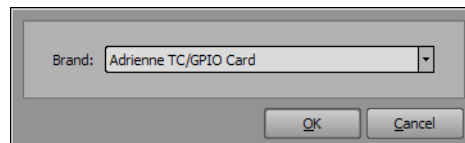
The **Hardware Setup** dialog box opens.

2. Click the **GPI Boards** tab.



3. Click **Add**.

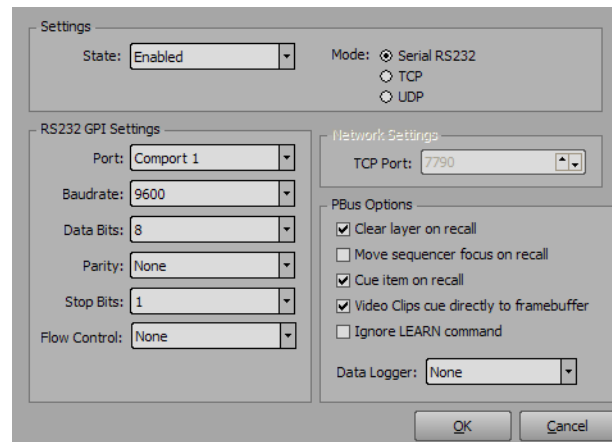
The **Add New GPI Board** dialog box opens.



4. Use the **Brand** list to select **PBus**.

5. Click **OK**.

The **PBus Setup** dialog box opens.



6. In the **Settings** section, select **Enabled** from the **State** list. Select **Disabled** to turn off PBus.

7. Select a **Mode** for PBus:

- **Serial RS232** — select to use RS232 to send PBus signals to XPression.
- **TCP** — select to use TCP/IP to send PBus signals to XPression.
- **UDP** — select to use UDP sockets to send PBus signals to XPression.

8. Configure the selected mode:

RS232 GPI Settings

- a. Use the **Port** list to select the Communication port that receives the signals.
- b. Use the **Baudrate** list to select the communication speed for the signals.
- c. Use the **Data Bits** list to select the number of bits used to represent one character of data for the signals.
- d. Use the **Parity** list to select the method used to check for lost data in a signal.
- e. Use the **Stop Bits** list to select the number of bits used to indicate the end of a byte in a signal.
- f. Use the **Flow Control** list to select the data transmission rate controller for a signal.

The flow control can be set to **Hardware** or **None**, but it must be set the same in both XPression and the transmitting device.

TCP & UDP

- a. In the **Network Settings** section, use the **TCP Port/UDP Port** box to enter or select the communication port that receives the signals.

9. In the **PBus Options** section, configure the PBus recall options.

XPression normally does not perform any action when a PBus recall command is issued. Instead, it stores the recall ID to be used later when a PBus trigger command is issued.

Configure the following PBus recall options:

- **Clear layer on recall** — when this option is selected and a PBus recall command is received, XPression will look to see which channel and layer that the take item being recalled has been assigned. It will then immediately clear that layer and channel. However, the take item will not be read to air until such time as a PBus Trigger command is received to put the item on air. This configuration option is recommended to be enabled in situations where XPression might be used to play back clips/graphics and to ensure that as soon the recall command is issued, any previous graphic that might have been left over on the layer will be removed.
- **Move sequencer focus on recall** — this configuration option can be selected to move the sequencer focus to the item that is being recalled. This can be useful as a means of generating a preview output that will show a rendered frame from the item that will be put on air when the PBus trigger command is received.
- **Cue item on recall** — selecting this option will place the take item into a cued state when the recall command is received. This is useful when using video clips which might take a few frames to cue.
- **Video Clips cue directly to framebuffer** — selecting this option will cause the video clips from the Clip Store that are assigned to a PBus register to cue directly onto the hardware output of XPression in a paused state. When the play command is received, they will begin playing.
- **Ignore LEARN command** — selecting this option will ignore the LEARN command. LEARN stores the clip currently loaded into a server channel into the PBus register list when the LEARN command is received.

10. Use the **Data Logger** list to select an encoding scheme for the data log. The options are:

- **None** — select this option to use no data logging.
- **ASCII** — select this option to use ASCII encoding for the data log.
- **HEX** — select this option to use HEX file formatting for the data log.
- **Both** — select this option to use both ASCII encoding and HEX file formatting for the data log.

11. Click **OK**.

The PBus interface is displayed in the **GPI Board** list.

12. Click **Close**.

The **Hardware Setup** dialog box closes.

13. Click **OK**.

The **PBus Setup** dialog box closes and the new PBus interface is added to the GPI Boards table.

For More Information on...

- configuring and working with GPIs, refer to the ***GPI White Paper*** available from Ross Video.

PBus Triggers

XPression supports many PBus Trigger commands.

- **Trigger 0 – Play Item**

★ This trigger can be overridden in the PBus mapping.

Trigger 0 is normally used to play a take item to air. However, this can be overridden to perform other actions on a per-register basis. These actions can be configured in the PBus mapping menu.

- **Trigger 1 – Take Sequence Item Off-Air**

Trigger 1 is used to take an item off air (assuming it was already on air). The item taken off air will be the take item that was previously recalled using a PBus recall command.

- **Trigger 2 – Execute GPI**

Trigger 2 is used to emulate a standard GPI input. In the XPression Keyboard/GPI Mapping, various actions can be configured to be executed on a GPI input being triggered. It is possible to trigger up to 99 different GPIs through PBus. The GPI number that will be triggered is the number that was previously recalled using a PBus recall command.

- **Trigger 3 – Clear Framebuffer**

Trigger 3 will clear the framebuffer assigned to the device in the PBus channel configuration. If the channel is set to **<default>**, this trigger will clear Channel 1.

- **Trigger 4 – Clear Framebuffer Channel 2**

Trigger 4 will clear the framebuffer assigned to the device in the PBus channel configuration. If the channel is set to **<default>**, this trigger will clear Channel 2.

- **Trigger 5 – Read Current Sequence Item to Air**

Trigger 5 will take the currently selected sequence item from the sequencer to air. It ignores the PBus recall command and uses whichever item currently has focus in the XPression sequencer.

- **Trigger 6 – Resume Channel**

Trigger 6 will resume all paused graphics currently on the framebuffer assigned to the device in the PBus Channel Configuration. If the framebuffer is set to **<default>**, this will resume Channel 1.

- **Trigger 7 – Resume Channel**

Trigger 7 will resume all paused graphics currently on the framebuffer assigned to the device in the PBus Channel Configuration. If the framebuffer is set to **<default>**, this will resume Channel 2.

- **Trigger 8 – Resume Take Item**

Trigger 8 will resume a single paused take item. The take item will be the item previously recalled by a PBus recall command.

- **Trigger 10 – Bank 0**

Trigger 10 will change the last recall command into an ID in the 0-99 range (refer to the Bank 1 command below for more details).

- **Trigger 11 – Bank 1**

Trigger 11 is used to allow switchers that can only send PBus recall commands up to 99 to be able to recall take items with values of between 100 and 199.

This "bank 1" command will add 100 to the last recalled item using a PBus recall command. For example; to recall take ID 135 and put it on air, a switcher could send:

- > Recall 035
- > Trigger 11 (changes the 035 into 135)
- > Trigger 0

It is not necessary to switch back to bank 0 after sending a bank 1 command. XPression will automatically revert to bank 0 for the next PBus recall command.

- **Trigger 12 – Bank 2**

Changes the last PBus recall command into an ID in the 200-299 range.

PBus LEARN Commands

When a PBus LEARN command is received from a remote device, XPression will look to the configured server channel for the PBus device, and if there is a clip currently cued on that server channel it will assign that clip into the PBus register.

There is an option **Ignore LEARN command** in the **PBus Setup** dialog box in the **Hardware Setup**. This option is useful if you are manually assigning clips to PBus registers and you do not want to change/overwrite them when storing memories on the production switcher. Most production switchers automatically send the PBus LEARN command when storing the memory.

For More Information on...

- the PBus LEARN command, refer to the appropriate switcher documentation.

PBus Mapping

A PBus Mapping menu exists in XPression to provide additional capabilities to the PBus recall system.

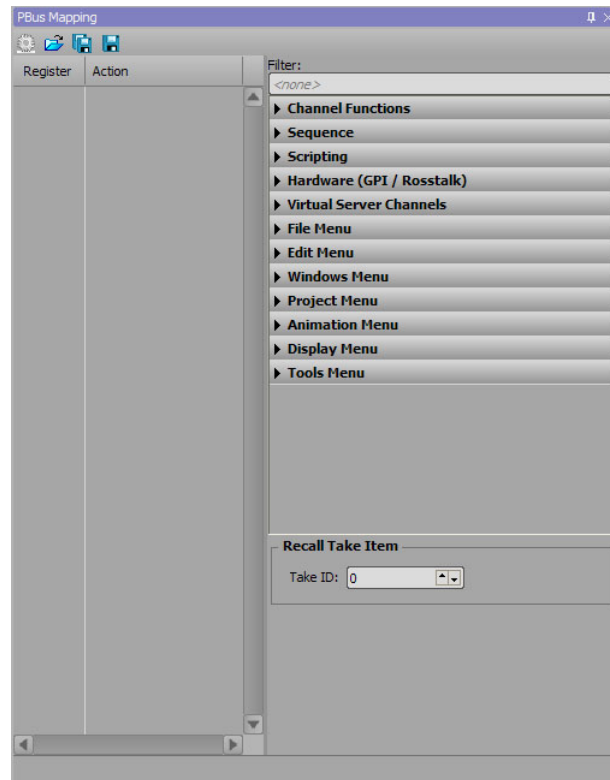
Configuring PBus Mapping

Use the PBus Device Configuration dialog box to configure the Device IDs and channels.

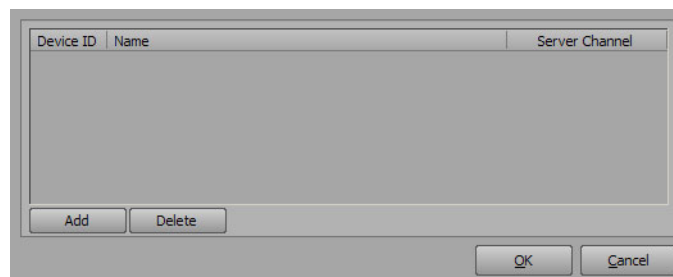
To configure PBus Mapping:

1. In **XPression**, open the **Sequencer**.
2. Click **Display > PBus Mapping**.

The **PBus Mapping** window opens.

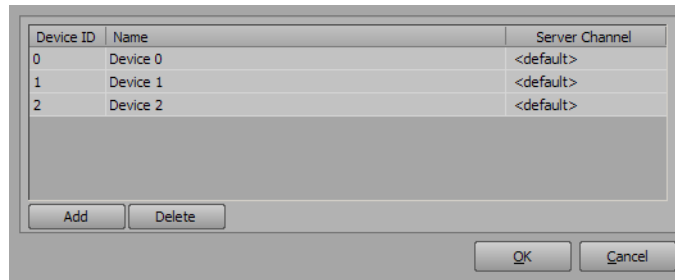


3. Click the **Setup Device Configuration** (⚙️) icon.
The **PBus Device Configuration** dialog box opens.



4. Click **Add** to add a **Device ID**.

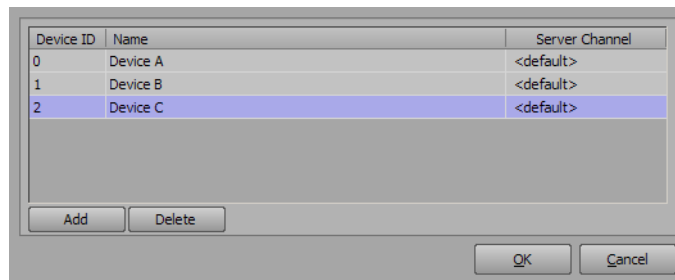
A device ID is added to the PBus Device Configuration list. At least one Device ID must be added. The Device ID is the ID number that will be sent in PBus messages transmitted from the production switcher.



Device ID	Name	Server Channel
0	Device 0	<default>
1	Device 1	<default>
2	Device 2	<default>

Add Delete OK Cancel

5. Click inside the **Device ID** column of the ID and enter or select an ID number.
PBus Device IDs must be between 0 and 23.
6. Click inside the **Name** column of the ID and enter a name to refer to the Device ID. For example, Device A.

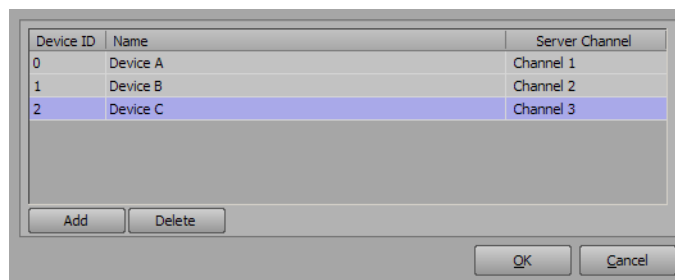


Device ID	Name	Server Channel
0	Device A	<default>
1	Device B	<default>
2	Device C	<default>

Add Delete OK Cancel

7. Click inside the **Server Channel** column of the ID and use the list to select a specific output framebuffer or use the **<default>** framebuffer.

If the framebuffer is set to anything other than <default> when a PBus recall command is received for a specific Device ID, then the item will be played on the selected framebuffer. If <default> is selected, then the item will be played on the framebuffer for which the original take item was configured. When a clip from the Clip Store is assigned to a register and **<default>** was selected for the Server Channel, the first device configured will use Server Channel 1, the next will use Server Channel 2, etc.



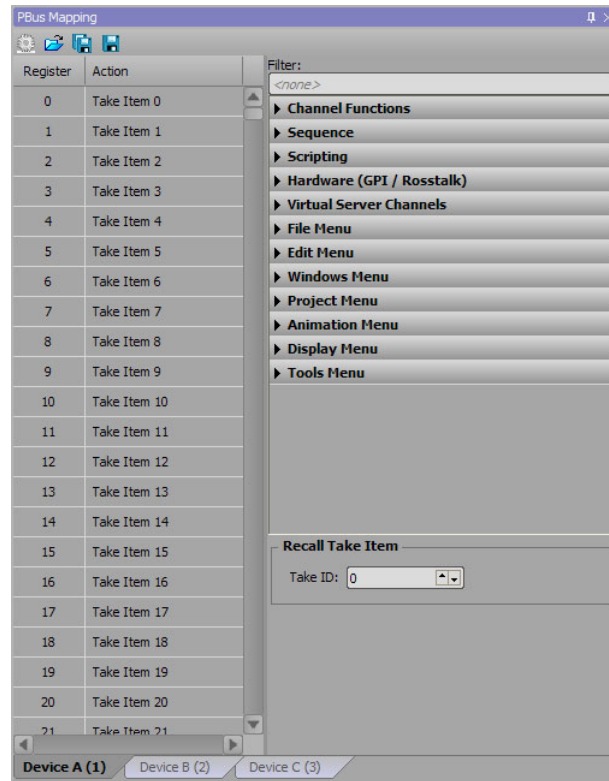
Device ID	Name	Server Channel
0	Device A	Channel 1
1	Device B	Channel 2
2	Device C	Channel 3

Add Delete OK Cancel

If XPression does not have the Clip Server option, then the Server Channel configuration column will be missing and all take items will be cued to the channel assigned to them through the Sequencer.

8. Click **OK**.

The Device IDs are added as tabs at the bottom of the PBus Mapping window under the assigned device names. If there are no tabs added, then a Device ID was not added to the PBus Device Configuration list.



Assigning an Action to a PBus Register

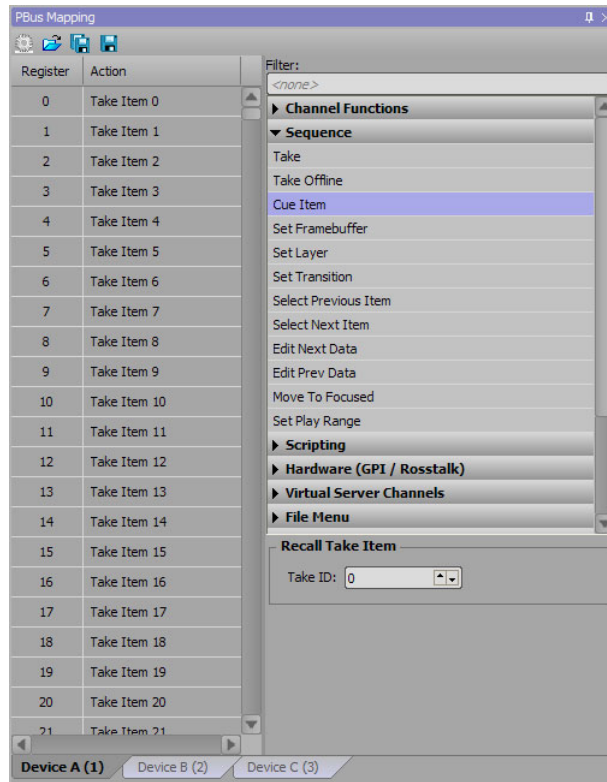
Each Device has a list of 4095 registers which can be recalled through PBus.

★ Some switchers can only support the first 99 registers.

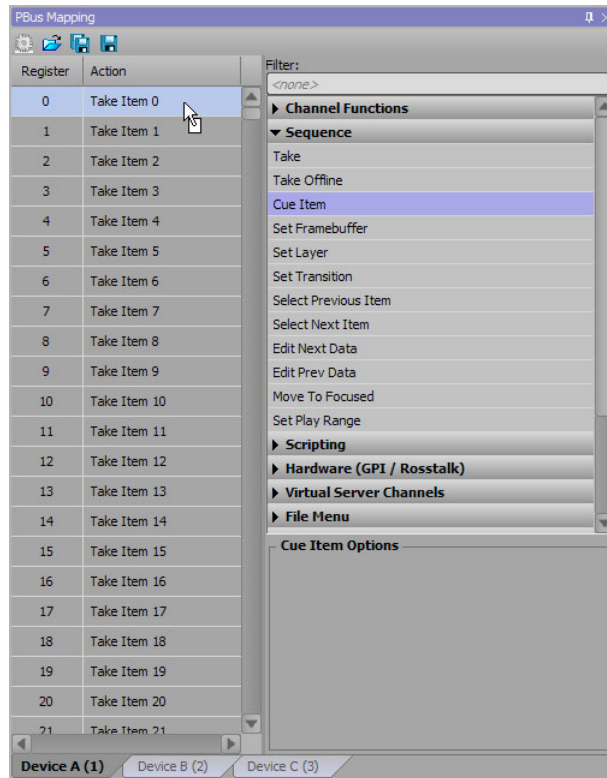
Each PBus register can be assigned an action that will be executed after the register is recalled and Trigger 0 is received. The default action for each register is to play the corresponding Take Item with the same number as the PBus register.

To assign an action to a PBus register:

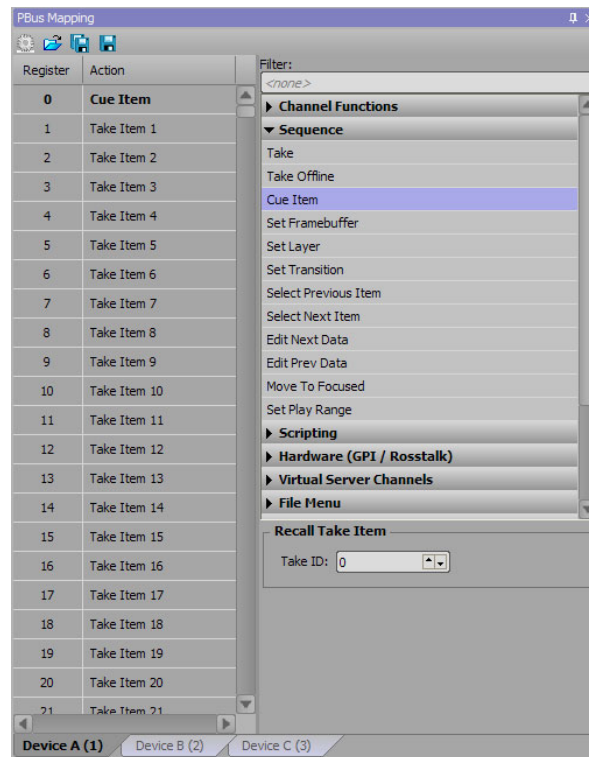
1. In the **PBus Mapping** window, select a function from the actions list to the right of the devices.



2. Drag and drop the action onto a register.



The action is added to the register.




Remapping a PBus Register

To remap a PBus register to play a different take item, the take item can be dragged and dropped from the sequencer onto the register in the PBus Mapping window or you can enter or select a different take ID using the **Take ID** box in the **Recall Take Item** section of the PBus Mapping window.

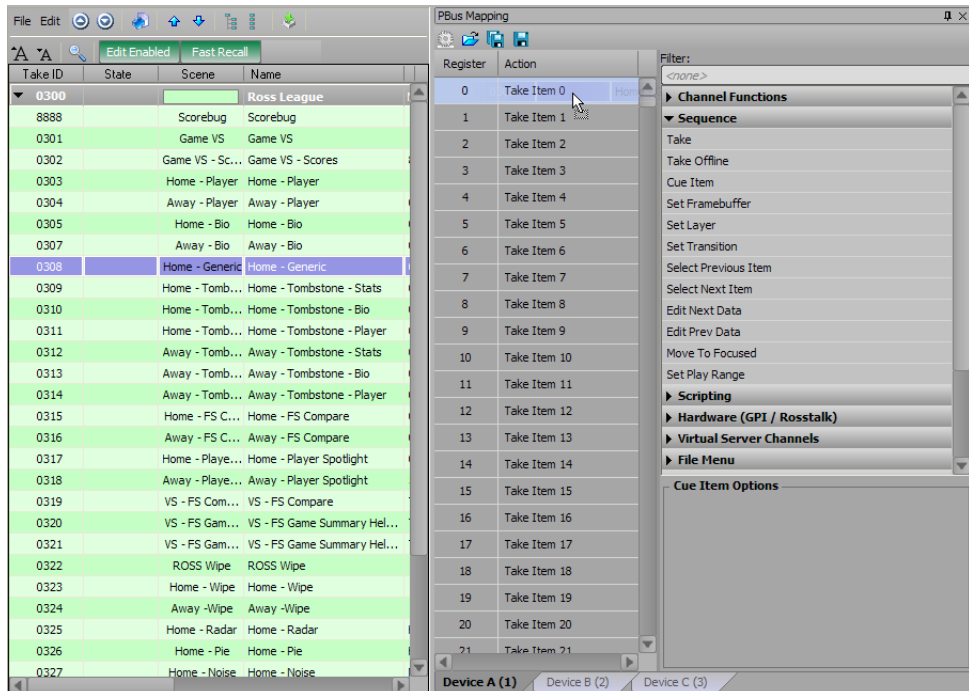
To remap a PBus register using drag and drop:

1. In the **Sequencer**, select a take item from the **Take ID** list.

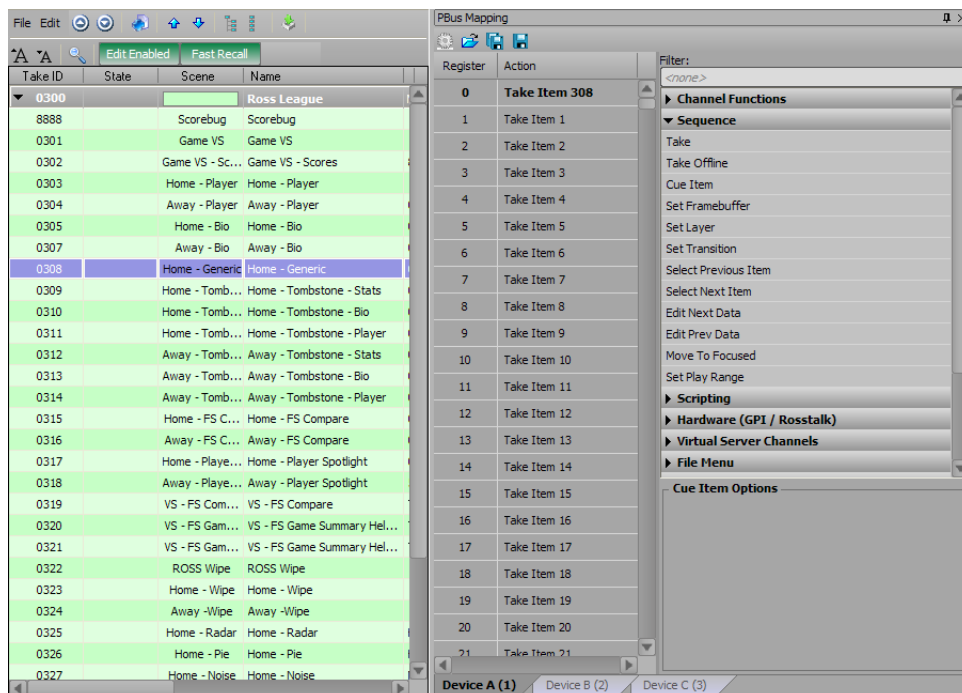


Take ID	State	Scene	Name	Transition In / Out	Layer	Output	Start	End	Duration	GV
0300			Ross League							
8888		Scorebug	Scorebug	Cut / Cut	10	Framebuffer 1	00:00:00.00	00:00:02.00	00:00:02.00	
0301		Game VS	Game VS	Cut / Dissolve (10)	20	Framebuffer 1	00:00:00.00	00:00:06.20	00:00:06.20	
0302		Game VS - Sc...	Game VS - Scores	8 Cut / Dissolve (10)	20	Framebuffer 1	00:00:00.00	00:00:06.20	00:00:06.20	
0303		Home - Player	Home - Player	1 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0304		Away - Player	Away - Player	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0305		Home - Bio	Home - Bio	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0307		Away - Bio	Away - Bio	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0308		Home - Generic	Home - Generic	4 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0309		Home - Tomb...	Home - Tombstone - Stats	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0310		Home - Tomb...	Home - Tombstone - Bio	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0311		Home - Tomb...	Home - Tombstone - Player	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0312		Away - Tomb...	Away - Tombstone - Stats	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0313		Away - Tomb...	Away - Tombstone - Bio	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0314		Away - Tomb...	Away - Tombstone - Player	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:03.01	00:00:03.01	
0315		Home - FS C...	Home - FS Compare	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:02.21	00:00:02.21	
0316		Away - FS C...	Away - FS Compare	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:02.21	00:00:02.21	
0317		Home - Playe...	Home - Player Spotlight	0 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:02.21	00:00:02.21	
0318		Away - Playe...	Away - Player Spotlight	5 Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:02.21	00:00:02.21	
0319		VS - FS Com...	VS - FS Compare	T Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:02.21	00:00:02.21	
0320		VS - FS Gam...	VS - FS Game Summary Hel...	T Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:02.21	00:00:02.21	
0321		VS - FS Gam...	VS - FS Game Summary Hel...	T Dissolve (5) / Dissolve (5)	0 (middle)	Framebuffer 1	00:00:00.00	00:00:02.21	00:00:02.21	
0322		ROSS Wipe	ROSS Wipe	Cut / Cut	10	Framebuffer 1	00:00:00.00	00:00:06.20	00:00:06.20	
0323		Home - Wipe	Home - Wipe	Cut / Cut	10	Framebuffer 1	00:00:00.00	00:00:06.20	00:00:06.20	
0324		Away -Wipe	Away -Wipe	Cut / Cut	10	Framebuffer 1	00:00:00.00	00:00:06.20	00:00:06.20	
0325		Home - Radar	Home - Radar	H Dissolve (5) / Cut	0 (middle)	Framebuffer 1	00:00:00.00	00:00:20.00	00:00:20.00	
0326		Home - Pie	Home - Pie	H Dissolve (5) / Cut	0 (middle)	Framebuffer 1	00:00:00.00	00:00:20.01	00:00:20.01	
0327		Home - Noise	Home - Noise	H Cut / Cut	0 (middle)	Framebuffer 1	00:00:00.00	00:00:06.20	00:00:06.20	
0330		Home - Loud	Home - Loud	G Cut / Cut	0 (middle)	Framebuffer 1	00:00:00.00	00:00:06.20	00:00:06.20	

2. Drag and drop the take item onto a register.

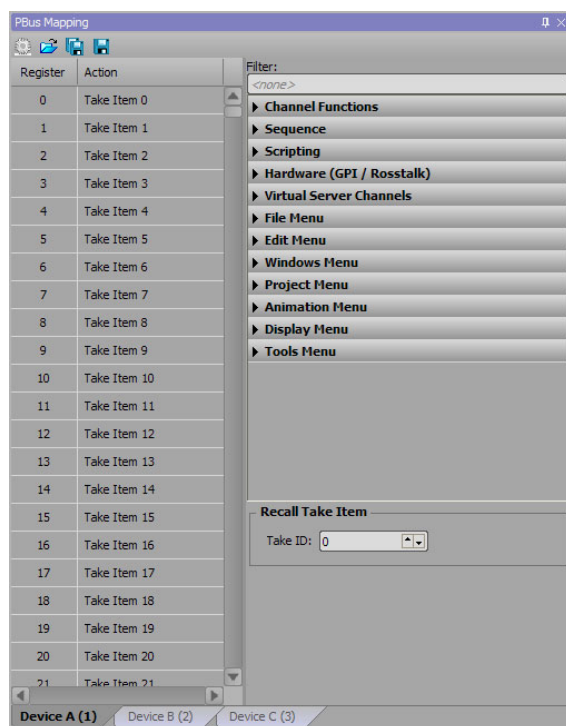


The take item is added to the register.

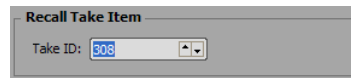


To remap a register using the Take ID box:

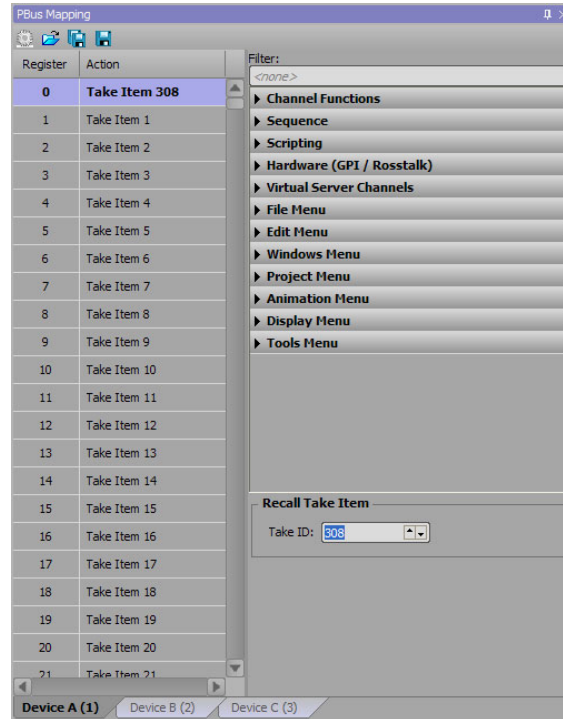
1. In the **PBUS Mapping** window, select a register number from the devices to the left of the actions list.



2. In the **Recall Take Item** section, use the **Take ID** box to enter or select a take item to add to the selected register.




The take item is added to the selected PBus register.





Loading and Saving Maps

PBus maps are not loaded and saved with XPression projects. They are loaded and saved to disk as .pbm or .pbms files using the PBus Mapping window. The .pbm file extension is used for a single PBus map and the .pbms file extension is used for multiple PBus maps.

Use the following PBus Mapping window toolbar icons to load and save PBus maps:

Load () – click this button to open a file browser to select a PBus map or multiple PBus maps to load.

Save All () – click this button to save multiple PBus maps to disk.

Save () – click this button to save a single PBus map to disk.

Using PBus from a Switcher to Recall Items

- ★ Consult the switcher documentation for a complete description of how to use PBus with your particular manufacturer/model. This section is only intended to provide some background information and tips.

Normally switchers will send a PBus recall command when an EMEM is recalled. The following procedure is an example using take item 0005.

To recall and play a specific take item from XPression:

1. In **XPression**, use the **Sequencer** to create a take item and give it an ID of 0005.
2. Create an EMEM/Memory on the switcher and store it as **EMEM 5**.
3. Within **EMEM 5**, ensure that you have enabled the sending of PBus commands.
4. Within the timeline for **EMEM 5**, issue a PBus Trigger 0 command.

When **EMEM 5** is recalled, it will send a PBus recall 5 command to XPression. This command will not yet do anything (unless the configuration options discussed in the **Configuring PBus and PBus Recalls** section are enabled).

When the timeline is run, the switcher will send a PBus Trigger 0 command. At this time, XPression will then put take item #5 on the output channel/layer previously assigned to that item in the sequencer.

- ★ There may be several frames of delay between issuing the Trigger 0 command and when the video for the item appears on the SDI output of XPression. This is normal and should be accounted for inside of the timeline on the switcher. For example, you will need a delay between the issuing of trigger 0 and when the keyer containing the XPression is keyed onto the PGM output.

To recall different take items, the timeline on the switcher can be copied into different switcher registers.

Using PBus for XPression Clips

Firstly, the PBus configuration must be set to assign a PBus device ID to a specific server channel. This controls the server channel onto which PBus commands to a device will load the clip. Valid device IDs are from 0 to 23.

By default, every PBus register (0 to 4095) will cue/play the corresponding take item with that ID number. However, clips from the Clip Browser can be assigned to a PBus register simply by dragging them from the Clip Browser onto a PBus register. Alternatively, various actions (same ones accessible in the keyboard mapping menu) can be assigned to a PBus register by dragging them from the action list on the right to a PBus register. This is useful for assigning scripts or actions like Take Next/Clear Channel, etc. to a PBus register. Right-click on a register with a clip and select **Find Clip in Clip Browser** to find a clip or select a different clip in the Clip Browser.

A PBus register map can be saved to disk to a file using the .PBM extension, or maps for all devices can be saved to a .PBMS file. Maps can be loaded from these PBM files or from a specific format of XML file. When using the XML file import, it will assign clips to PBus registers using their recall ID from the clip database.

Using PBus for XPression Clips with Recall IDs

The PBus map contains a column named **Recall ID**.



Register	Action	Recall ID
0	Take Item 0	
1	Take Item 1	
2	Take Item 2	
3	Take Item 3	
4	Take Item 4	
5	Take Item 5	
6	Take Item 6	
7	Take Item 7	
8	Take Item 8	
9	Take Item 9	
10	Take Item 10	
11	Take Item 11	
12	Take Item 12	
13	Take Item 13	
14	Take Item 14	
15	Take Item 15	
16	Take Item 16	
17	Take Item 17	
18	Take Item 18	
19	Take Item 19	
20	Take Item 20	
21	Take Item 21	

If a clip in the Clip Store exists with that recall ID, it will be assigned to that PBus register. A clip's recall ID can also be entered into the column to assign it to the respective register. The PBus register will always recall the clip with that specific recall ID, so if a new clip is ingested with a matching recall ID, the PBus register will recall the new clip instead. If the clip is manually edited and the recall ID is changed or removed, the PBus register will no longer recall that clip.

A similar behavior exists when dragging a clip with a recall ID into the PBus register; meaning that the PBus register is bound to a specific recall ID and not to a specific clip. Holding **Ctrl-Shift** and dragging a clip onto a PBus register will link the clip with the PBus register, and it will not be replaced regardless of a clip with a duplicate recall ID being ingested.

For More Information on...

- PBus, refer to the **XPression User Guide** or Help file.

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