



Workflow Client User Guide

Version 2020



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2. Make Cool Practical Technology
 - develop great products that customers love

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.



David Ross
CEO, Ross Video
dross@rossvideo.com

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.
2. We will do our best to understand our customers' requirements.
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.)*

Workflow Client User Guide

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Patents

Patent numbers 4,205,346; 5,115,314; 5,280,346; 5,561,404; 7,034,886; 7,508,455; 7,602,446; 7,834,886; 7,914,332; 8307284, 2039277; 1237518; 1127289 and other patents pending.

Warranty and Repair Policy

Ross Video Limited (Ross) warrants its Streamline Server systems to be free from defects under normal use and service a time period of 15 months from the date of shipment:

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

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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

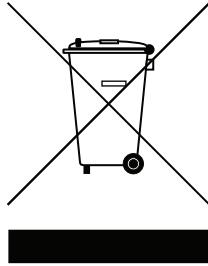
For customers that require a longer warranty period, Ross offers an extended warranty plan to extend the standard warranty period by one year increments. For more information about an extended warranty for your Streamline Server system, contact your regional sales manager.

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.

Use of Hazardous Substances in Electrical and Electronic Products (China RoHS)

Ross Video Limited has reviewed all components and processes for compliance to:

“Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products” also known as China RoHS.

The “Environmentally Friendly Use Period” (EFUP) and Hazardous Substance Tables have been established for all products. We are currently updating all of our Product Manuals.

The Hazardous substances tables are available on our website at:

<http://www.rossvideo.com/about-ross/company-profile/green-practices/china-rohs.html>

电器电子产品中有害物质的使用

Ross Video Limited 按照以下的标准对所有组件和流程进行了审查：

“电器电子产品有害物质限制使用管理办法” 也被称为中国RoHS。

所有产品都具有“环保使用期限”（EFUP）和有害物质表。目前，我们正在更新我们所有的产品手册。

有害物质表在我们的网站：

<http://www.rossvideo.com/about-ross/company-profile/green-practices/china-rohs.html>

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Contents

Introduction	1
A Word of Thanks	1-1
About This Guide	1-2
Documentation Conventions	1-2
Interface Elements	1-2
User Entered Text	1-2
Referenced Guides	1-3
Menu Sequences	1-3
Important Instructions	1-3
Contacting Technical Support	1-3
Workflow Suite Overview	2
Application Overview	2-2
Cross Platform	2-2
Shortcut Keys	2-3
Basic Concepts	3
File-based Video in the Workflow Client	3-2
Proxy Files	3-2
About Metadata	3-2
Permissions	3-3
Workflow Client User Interface	4
Opening the Workflow Client	4-2
Workflow Client Modules	4-2
Common Features	4-3
Automatic Saving	4-3
Adding and Deleting Items from Lists	4-3

Content Navigator 5

The User Interface	5-2
Thumbnail and List Views	5-3
Multiple Content Navigator Windows	5-4
Clips, Components, and Materials/Files	5-4
Clips	5-5
Sub Clips	5-5
Placeholders	5-5
Bins	5-5
Adding a Standard Bin	5-7
Adding a Smart Bin	5-8
Special Flags	5-10
Database Optimization	5-11
Smart Bin Set Up	5-11
Query Bin	5-11
Sorting Assets	5-11
Filter and Find Content	5-11
Filters	5-11
Find	5-12
Search for Other Objects	5-13
Advanced Find	5-13
Special Flags	5-15
Example Query	5-16
Saving Queries	5-17
Query Forms	5-18

Tools 6

Triggering Actions	6-2
Editing Metadata	6-2
Viewing Markers	6-2
Formatting Selections	6-2
Editing Properties	6-3

Working with Clips

7

Viewing Clips	7-2
The Clip Window User Interface	7-2
Clip Name	7-3
Clip Window Tabs	7-3
Clip Trim List	7-3
Video Player	7-4
Audio Metering and Monitoring	7-5
Extended Options	7-5
Overlay	7-5
Video Display	7-6
Source	7-6
Timecode Source	7-6
Marking Regions in Clips	7-6
Marking Buttons	7-6
Video Player Controls	7-7
Timecode Field	7-7
Moving Through a Clip	7-8
Timecode (TC) and Duration Metadata	7-8
Subclips	7-8
New Subclip Options	7-9
Changing the Duration of an Existing Subclip	7-10
Trimming the Master Clip	7-10
Additional Functions	7-11
Actions	7-11
Open in Finder/Explorer	7-11
Poster Frame	7-11
Markers	7-11
Marker Bar	7-11
Marker Thumbnails	7-11
User Markers	7-11
Anchor Markers	7-12
Percentage Markers	7-12
Time Markers	7-13
Marker Metadata	7-13
Metadata	7-13
Property Form Menu	7-13
Metadata Properties	7-14
Changing Metadata	7-14
Check Boxes	7-14
Date Metadata	7-15
Clip Window Tabs	7-15
Components and Materials	7-15
Search In Clip	7-15
Projects	7-15

Content Browser

8

The User Interface	8-2
--------------------------	-----

Ingesting Clips

9

Ingest Options	9-2
Live & Tape	9-3
Destination Bin	9-4
Create New Tape	9-4
Format Menu	9-4
VTR Transport Control	9-4
Add Spot	9-4
Clear Data for Spot	9-4
Timecode and Progress Indicators	9-4
Source Selection	9-5
Destination Selection	9-5
Maximum Duration/Open Ended	9-5
Absolute Start Selection	9-5
Prepare Recording	9-6
Record	9-6
Stop	9-6
Abort	9-6
Redo	9-6
Review/Actions	9-6
Monitor Source and Other Monitor Source Selection	9-7
Mode Selection	9-7
Multi	9-7
Video Monitor	9-7
Timecode Counter	9-7
Source Menu	9-8
Destination Menu	9-8
Prepare All	9-8
Start All	9-8
Stop All	9-8
Review All	9-8
Mark All	9-8
Action	9-8
Ingest Buttons	9-9
Prepare Recording	9-9
Record	9-9
Stop	9-9
Abort	9-9
Redo	9-9
Marker	9-9
Actions	9-9
Review	9-9
Maximum Duration	9-9
Absolute Start Selection	9-10
Ingest Metadata Form	9-10
Bins	9-10
Multi Ingest Window Resizing	9-10
Adding Markers During Ingest	9-10
Placeholder Ingest	9-11
Extending an Ingest	9-11
Scheduled Ingest Events	9-12
Creating a New Ingest Event	9-13
Editing an Event	9-14
Deleting an Event	9-14
Ingest Status and Options	9-15

Ingest Monitor	10
The User Interface	10-2
Live Assist Monitor	11
Opening the Live Assist module	11-2
Rundown Mode	11-3
Channel Preview and Control	11-3
Clip	11-3
Playback Mode	11-4
Sync Mode	11-4
Force Cue	11-4
Playlist Control Section	11-4
Toolbar	11-5
Content Navigator	11-5
Rundown	11-5
Clip List	11-5
Player	11-6
View Mode Selector	11-6
Shotbox Mode	11-7
Roll-Over Window	11-8
Logger	12
Opening the Logger Module	12-2
Logger Window User Interface	12-3
Recorder Section	12-3
Source Menu	12-4
Maximum Duration	12-4
Record Button	12-4
Marker Control	12-4
Player/Review Section	12-4
Marker Section	12-5
Logger Section	12-5
Clip, Subclip, and Marker Section	12-5
Keyboard Shortcuts	13
Keyboard Shortcut Setup	13-2
Workflow Client Color Scheme	14
Customizing a Color Scheme	14-2
Selecting a Preset Color Scheme	14-3

Introduction

A Word of Thanks

Thank you for choosing Ross Video Workflow Client as your media asset management solution.

We are committed to providing you with the highest level of customer satisfaction possible. If, for any reason, you have questions or comments, please call Ross Video at +1-613-652-4886 or send us an e-mail at techsupport@rossvideo.com.

We hope that you visit our website www.rossvideo.com to stay up to date with ongoing software releases, join our customer forum and learn more about the complete range of Ross Video products.

Note that software maintenance and extended warranties are available for your system to protect and extend the life of your investment. Our sales team is more than happy to provide further information on the plans available. Members of our sales team will promptly response to e-mails sent to: solutions@rossvideo.com.

Again, thank you for your purchase of a Workflow Client media asset management solution from Ross Video. We are confident of your future pleasure with your choice.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Mike Kljucarcic', with a long horizontal flourish extending to the right.

Mike Kljucarcic
Product Manager - Media IO and Tria
Mike Kljucarcic

About This Guide

The Workflow Client User Guide serves as an in-depth guide to the Workflow Client from Primestream Corporation and covers all concepts creative staff needs to know in order to use the Workflow Suite software. With the information contained here, users can work with greater confidence, more efficiently and creatively.

This guide intended as a comprehensive reference manual to answer FAQ's related to daily use in the most common news and sports production workflows. As with any user guide of this kind, and especially with a software as powerful and configurable as Workflow Client, it is certainly possible that it does not answer every question.

★ The Workflow Client User Guide is intended for the sole use of authorized and licensed users of the Primestream Workflow Suite.

This guide contains the following chapters that cover the use of the Workflow Client:

1. **Introduction** — summarizes the guide and provides important terms, and conventions.
2. **Workflow Suite Overview** — summarizes the structure of the Workflow Suite.
3. **Basic Concepts** — summarizes the basic Workflow Suite concepts.
4. **Workflow Client User Interface** — provides an overview of the Workflow Client user Interface.
5. **Content Navigator** — describes how to find and organize media using the Content Navigator.
6. **Tools** — describes how to user Workflow Client tools to trigger actions, manage metadata, view markers, format selections, and manage object properties.
7. **Working with Clips** — describes how to access the clips stored in your MAM.
8. **Content Browser** — describes how to use the Content Browser.
9. **Ingesting Clips** — describes how to attach files to assets and manage the attached files.
10. **Ingest Monitor** — describes how to monitor ingest processes.
11. **Live Assist Monitor** — describes how to play media from the Workflow Suite out on air
12. **Logger** — describes how to create markers and subclips within a user-friendly interface.
13. **Keyboard Shortcuts** — describes how to setup keyboard shortcuts to quickly execute Workflow Client module commands.
14. **Workflow Client Color Scheme** — describes how to customize the user interface color scheme of the Workflow Client.

If you have questions pertaining to the operation of Workflow Client, please contact us at the numbers listed in the section ““**Contacting Technical Support**” on page 1–3”. Our technical staff is 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 sub-menus that must be followed to reach a particular command.

Interface Elements

Bold text is used to identify a user interface element such as a dialog box, menu item, or button. For example:

In the **Assets panel**, click **Delete**.

User Entered Text

Courier text is used to identify text that a user must enter. For example:

In the **Language** box, enter **English**.

Referenced Guides

Italic text is used to identify the titles of referenced guides, manuals, or documents. For example:

For more information, refer to the section “**Managing Large Projects**” in the *Workflow Client User Guide*.

Menu Sequences

Menu arrows are used in procedures to identify a sequence of menu items that you must follow. For example, if a step reads “**File > Save As**,” you would click the **File** menu and then click **Save As**.

Important Instructions

Star icons are used to identify important instructions or features. For example:

- ★ After upgrading Workflow Client software, you must obtain feature licenses from Ross Video Technical Support before users can access Workflow Client features.

Contacting Technical Support

Technical Support is staffed by a team of experienced specialists ready to assist you with any question or technical issue.

Ross Video has technical support specialists strategically located around the globe to ensure a prompt response to technical inquiries. Our primary technical support center is located in Ottawa, Ontario, Canada. In addition, we have offices in The United Kingdom (London), Australia (Sydney), and Singapore with satellite locations in New York City, The Netherlands, and China. As we expand our presence globally, we are constantly evaluating other key locations to have a local technical support specialist in order to better service our customers.

North America

Our North America center located in Ottawa, Ontario, Canada and is open Monday to Friday 8:30 a.m. to 6:00 p.m. EST, with 24/7/365 on-call service after hours.

Our telephone number is: +1-613-686-1557

Toll free within North America: +1 844-652-0645

EMEA

Our EMEA center is open Monday to Friday 8:30 a.m. to 5:00 p.m. GMT. After hours support is provided by our North America location.

Our telephone number is: +44 (0)1189502446

International toll free: +800 3540 3545

If the local support specialist is not available, your call will be transferred automatically to our North America center.

Australia

Our Sydney, Australia office is located in Alexandria, NSW.

Our local support telephone number is: 1300 007 677

If the local support specialist is not available, your call will be transferred automatically to our North America center.

Online

E-mail: techsupport@rossvideo.com

Website: open a support request using the link <http://www.rossvideo.com/support/tech-support.html> to open a support request.

Workflow Suite Overview

The Workflow Suite is at the core of the Primestream media operations automation platform. The suite is a world class Media Asset Management tool-set, complete with following components:

- live, tape, and file-based ingest
- unlimited descriptive metadata logging and multi-field search
- real-time proxy generation
- low-resolution editing
- craft edit integration
- workflow management

This chapter discusses the following topics:

- Application Overview
- Cross Platform

Application Overview

The complete Workflow Suite consists of the applications with their respective functionalities as shown in **Figure 2.1**. These individual applications, their functionality and configuration are described in their respective guides.

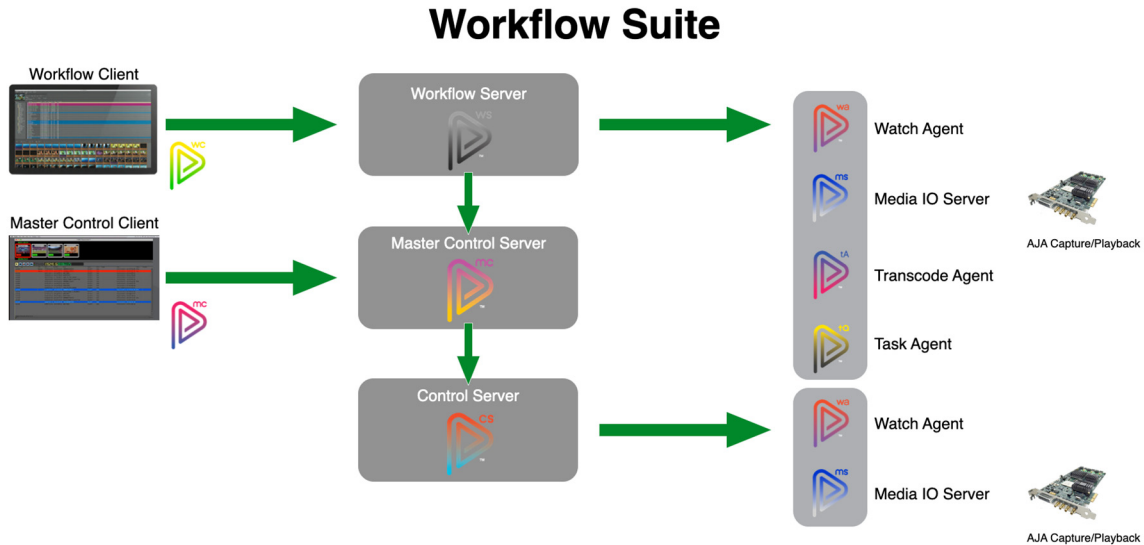


Figure 2.1 Applications in the Workflow Suite

Cross Platform

The Workflow Suite and all its applications are fully cross-platform, facilities are free to mix and match the different applications on either macOS or Windows operating systems. The features and interfaces are nearly identical whether the facility is using the macOS or Windows version. Most screen images in this document are taken from the application running on a Windows system.

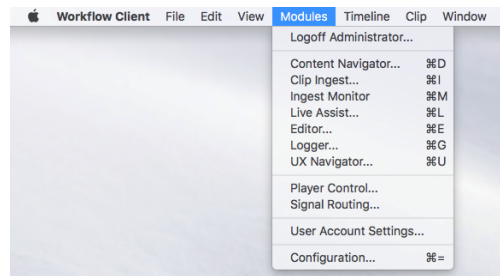


Figure 2.2 macOS Menu

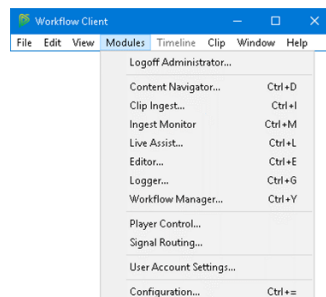


Figure 2.3 Windows Menu

Shortcut Keys

The shortcut key combinations you use in the Workflow Suite applications depend on the operating system your computer uses. Based on your operating system, enter shortcut key combinations as follows:

- **Mac OS** — use the **Cmd** key to enter shortcuts.
- **Windows** — use the **Ctrl** key to enter shortcuts.

Basic Concepts

The Workflow Suite is based on a file-based workflow using proxy files and metadata to which permissions control access.

This chapter discusses the following topics:

- File-based Video in the Workflow Client
- Proxy Files
- About Metadata
- Permissions

File-based Video in the Workflow Client

The Workflow Client is an application that provides a file-based video workflow in a broadcast and Production environment, where fast turnaround of Content is of the highest essence. Ingest, whether it is from tape, live feeds, file based media or other sources, results in a file on the storage recorded in a unified format (codec, framerate).

Proxy Files

From any of those material files, Workflow Client will create a low-resolution copy of the media called the “proxy”. The proxy copy substitutes the high-resolution original to avoid network congestion and enable a multitude of users to access the same content. Proxy versions are perfect in situations where the availability of content is more important than perfect visual quality, such as browsing, searching or using the Workflow Client Editors.

The original, high-resolution material remains in the storage until it’s needed during craft editing or for playout on air.

About Metadata

A characteristic of Workflow Client file-based workflows is the concept of metadata. Metadata is simply the descriptive information about the assets, in this case mainly clips, projects, subclips and markers.

Metadata may include (but is not limited to) the following information:

- Automatically assigned data (for example: file size, duration, location on disk)
- Data provided by producers, writers, editors, and operators (for example: as slug name, description, video source, characteristics, genre)
- Data relationships (which clips are part of which Projects, which in and out points are marked on a clip)

Metadata is important as it describes assets, this data can be used as a basis to find and use assets that meet certain criteria. Metadata modifications can be used to trigger automations.

★ An asset is only as valuable as its descriptive metadata is!

Permissions

Throughout the application and this document, users may be confronted with options to set permissions on objects, bins and more. **Figure 3.1** shows a typical example, in this particular case to set permissions to a specific bin.

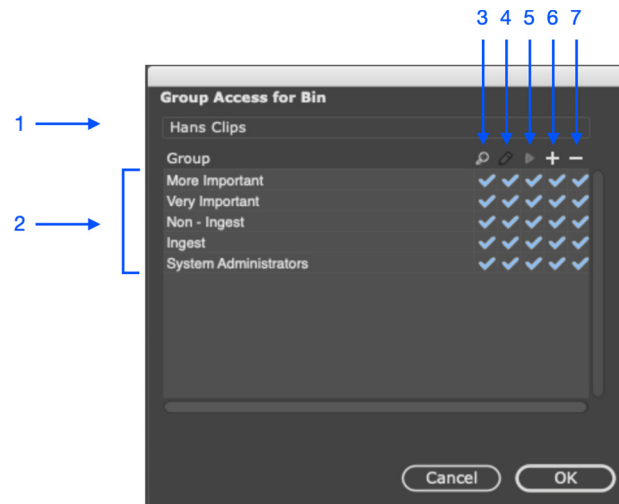


Figure 3.1 Example Permissions for a Bin

- | | |
|--------------------------------|---|
| 1) Object Name | 5) System Modification of Objects Control |
| 2) Group List | 6) Add Object Control |
| 3) Object Visibility Control | 7) Delete Object Control |
| 4) Object Modification Control | |

Workflow Client User Interface

The Workflow Client provides access to the modules that enable users to acquire, browse, log, edit, play-out, and archive their content.

This chapter discusses the following topics:

- Opening the Workflow Client
- Common Features

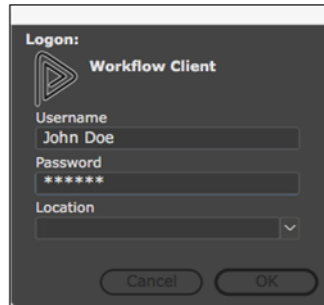
Opening the Workflow Client

Before you can acquire, browse, log, edit, play-out, and archive your content you must open the Workflow Client and log in to the client with your username and password.

To open the Workflow Client

1. Depending on the operating system of your computer, open the **Workflow Client** from the desktop of your computer as follows:
 - **macOS** — click the **Workflow Client** icon in the dock.
 - **Windows** — double-click the **Workflow Client** shortcut on the desktop.

The **Logon** dialog box opens.



2. In the **Logon** dialog box, enter your Workflow Client login credentials in the **Username** and **Password** boxes. Usernames and passwords may be different from the login staff uses to access other computers.
3. If different locations have been specified during the configuration of the system, use the Location list to select a location.

Selecting a location is especially designed to define the locations of resources, such as Video Tape Recorders (VTRs).
4. Click **OK**.

Xchange opens.

Workflow Client Modules

Once a user logs on, there may be just a menu bar and no windows. To access a tool, a user needs to select it from the Workflow Client menu. The options available only include the tools that have been set up and licensed and that an individual user has access to, which can be:

- Content Navigator
- Clip Ingest
- Ingest Monitor
- Live Assist
- Editor
- Logger
- Content Browser

Based on permissions and licenses of the facility's installation, this list of available tools may be smaller.

Common Features

The items described in this section are features that work similarly across all modules.

Automatic Saving

Most work in Workflow Client is automatically saved in realtime. If a user makes an edit, enters data in a field, or, if answers a question in a dialog and hit “**OK**,” these changes are instantly saved.

Occasionally Workflow Client will prompt users, asking if changes should be saved. This is only limited to modifications that are significant to the data or the assets.

A notable feature of Workflow Client is that when information is changed on the client, it automatically refreshes this information on all clients. Other users won’t need to refresh or reload after an update or change of the information.

Adding and Deleting Items from Lists

To add or delete items from a list that is editable, users should use the buttons in the lower right of the window panel immediately beneath the scroll bar.

Click the + or – to add a new item or remove a selected one.

- ★ Both the + or – buttons will not always be shown since some lists may enable users to remove but not add, as with lists of clips, and some may not enable either action.

Content Navigator

The Content Navigator is the primary tool used to find and organize media. All users will have access to it, and it will often be used by itself or as an embedded component of other tools. The Logger and Live Assist tools use the Content Navigator.

This chapter discusses the following topics:

- The User Interface
- Thumbnail and List Views
- Multiple Content Navigator Windows
- Clips, Components, and Materials/Files
- Bins
- Database Optimization
- Sorting Assets
- Filter and Find Content
- Advanced Find
- Saving Queries
- Query Forms

The User Interface

The Content Navigator window contains eight main sections (**Figure 5.1**). The tabs displayed in the top section depends on the permissions set for the user. When disabled on purpose, the Find field option or the Formatting and Properties buttons are grayed out at the top of the Content Navigator window.

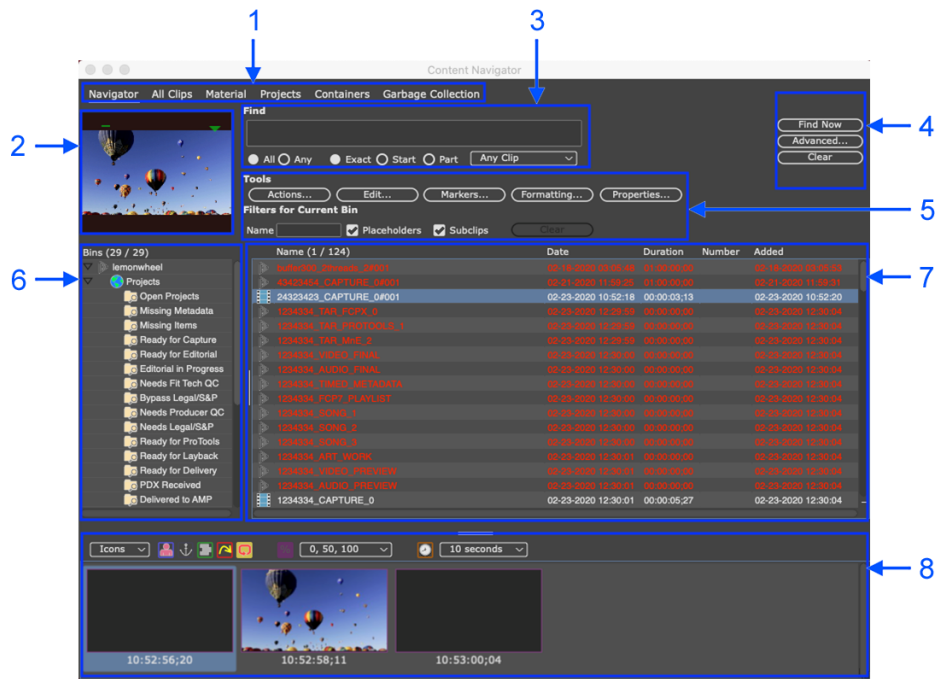


Figure 5.1 Content Navigator Sections

- | | |
|----------------------------------|-------------------------------|
| 1) Tabs | 5) Action Toolbar and Filters |
| 2) Monitor | 6) Bins and Smart Bins |
| 3) Find Field and Search Options | 7) Selected Bin Contents |
| 4) Search Options | 8) Marker Thumbnails |

The Monitor and the Marker panel can be enabled or disabled from the View menu (**Figure 5.2**).

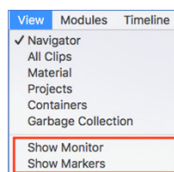


Figure 5.2 View Menu

Throughout the Content Navigator, users will see a horizontal and/or vertical dividers. Users can drag these dividers to make the panes larger or smaller (**Figure 5.3**).

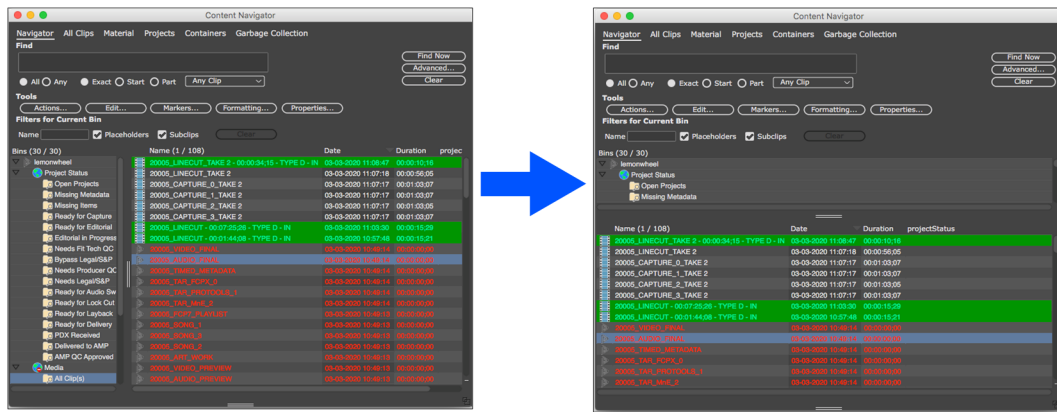


Figure 5.3 Divider Customization

Thumbnail and List Views

The Content Navigator will let users choose between 3 different ways to present clips, the classic List view, a plain Icons view and an Icons and Text view (**Figure 5.4**).

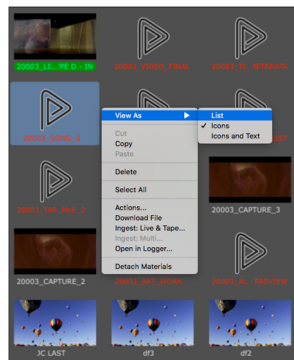


Figure 5.4 View Selection

When opening the Icons or Icons and Text view for the first time, it may take a moment for the thumbnails to become visible, as they are being created and cached on the Server.

The thumbnails will be displayed faster after initial creation on later sessions.

By using the below slider, located at the bottom of the Content Navigator screen, users may increase or decrease the thumbnail size (**Figure 5.5**).



Figure 5.5 Size Slider

When choosing Icons and Text view, the metadata columns normally visible in the List view will be added to the Clip Name.

Assets that can not have a thumbnail preview will be displayed with a default Icon, appropriate for the Asset.

Placeholders will show up with the Primestream logo in a gray color.

Multiple Content Navigator Windows

It is possible to have multiple Content Navigator windows open, and to select each of them for different bins. Users can always move items between the different windows by dragging and dropping (**Figure 5.6**).

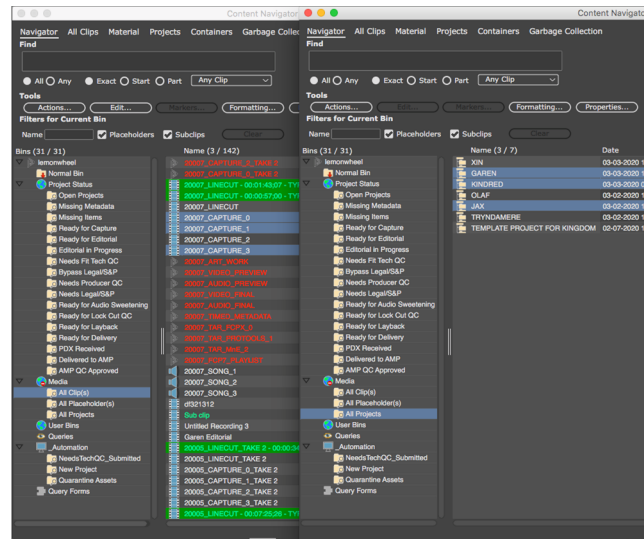


Figure 5.6 Multiple Content Navigator Windows

Clips, Components, and Materials/Files

Before we go into the different assets that can be observed within the Content Navigator, it is important to understand how Clips and Files are related in the system. The below diagram describes the relationship between Clips, Components, and Materials/Files (**Figure 5.7**).

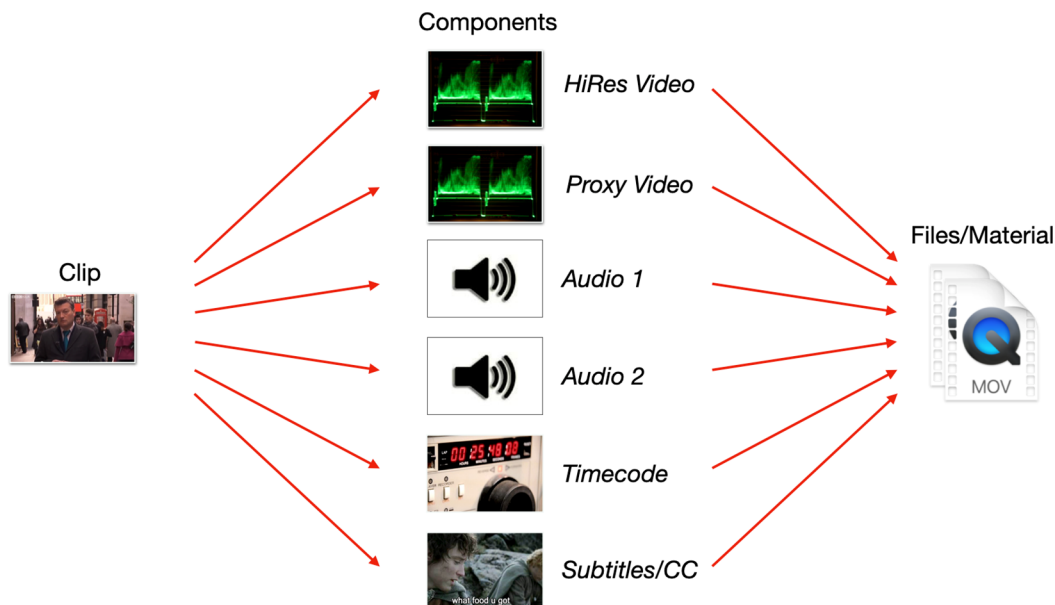




Figure 5.7 Relationship Between Clips, Components, and Materials/Files

A clip, as seen within the MAM, is just a record in the Database of the Workflow Suite. A Clip can contain multiple components, in the above example there are multiple components linked to the clip. These components now point to one or more files (materials) that can be found on the actual storage. Some components are in one file (e.g. Hires Video, Audio and Timecode), whereas additional components may be stored in additional files (e.g. Proxy Video, Closed Caption). Whenever a clip is opened inside the MAM, the application will do a look-up in the components table of that clip, and then opens the appropriate files and will present the contents to the user.

Clips

Clips  are referencing components and materials on the actual storage. A clip may be hours long if it is an entire program, a couple of minutes if it is an interview or sound bites, or a few seconds for some B-roll.

Sub Clips


Sub clips  are portions of a master clip that are defined by “modified in and out points” that simply points back to the original material, without creating new media. A single clip may have many subclips. Effectively made subclips enable users to easily find and use sound bites, cutaways, and different angles contained in the full-length clips that are relevant to their workflow.

Subclips appear in the panel as green text and are displayed only when the Subclips check box is selected

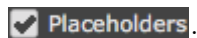


★ Users should consult their system administrator about the meaning of the colors used on their system.

Placeholders

Placeholders  are clips that have no media yet, a database entry. They can already be seen in the Content Navigator and metadata can be added.

Placeholders appear in the panel as red text and are displayed only when the Placeholders check box is selected



Once a Placeholder clip gets media attached to it, it turns into a regular clip.

Bins

When opening the Content Navigator, users will initially see a list of bins along the left side. Bins are virtual folders, which can contain various asset types:

- Clips
- Subclips
- Projects
- Placeholder
- Clips
- Markers
- Sub bins

The pictures (**Figure 5.8** and **Figure 5.7**)shown here will not reflect the exact bin structure in every facility, since each Workflow Suite installation is unique and configured specifically to that facility’s workflow.

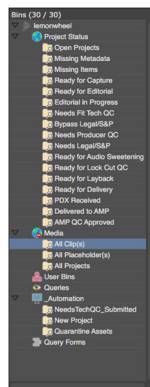


Figure 5.8 Example Bins Structure

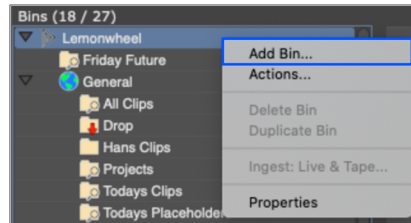
Adding a Standard Bin

Standard bins are used to manually create asset collections by dragging and dropping objects into the bin. Automation can also move objects into standard bins.

To create a standard bin

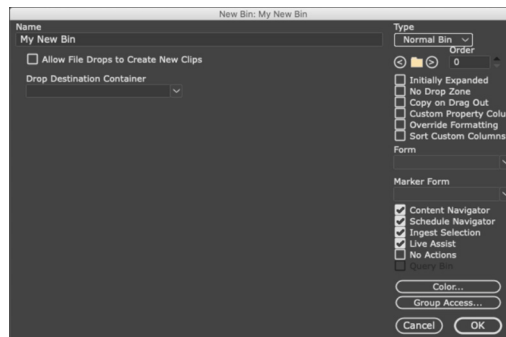
1. Right-click in the **Bins** section or the **Root** bin.

The **Bin** menu opens



2. Use the **Bin** menu to select **Add Bin**.

The **New Bin** dialog box opens



3. In the **Name** box, enter a name for the bin.
4. Use the **Type** list to select **Normal Bin**.
5. Select the **Allow File Drops to Create New Clips** check box if you want to create new clips for files dropped in this bin.
6. Use the **Drop Destination Container** list to select the destination container for files dropped in this bin.
7. Click the < and > arrows to select an icon for the bin.
8. In the **Order** box, enter or select a numeric value to override the alphabetical sorting order for the bin. A value of 0 indicates no numeric sorting.
9. Select the **Initially Expanded** check box to automatically expand this bin when it contains sub bins.
10. Select the **No Drop Zone** check box to disable the ability to drop objects on the bin. You should select this check box for bins used as a Header bins.
11. Select the **Copy on Drag Out** check box if you want to copy objects dragged out of this bin instead of moving the selected object out of the bin.
12. Select the **Custom Property Column** check box to enable adding custom columns in **List View**.
13. Select the **Override Formatting** check box to discard any object formatting.
14. Select the **Sort Custom Columns** check box to make custom columns sortable.
15. Use the **Form** list to select the form to automatically open when you open an object from the bin.
16. Use the **Marker Form** list to select the Marker form to automatically open when you open an object from the bin.

17. Select the **Content Navigator** check box to make the bin visible in **Content Navigator**.
18. Select the **Schedule Navigator** check box to make the bin visible in **Schedule Navigator**.
19. Select the **Ingest Selection** check box to make the bin visible in the **Live, Tape, and, Multi Ingest** modules.
20. Select the **Live Assist** check box to make the bin visible in the **Live Assist** module.
21. Select the **No Actions** check box to prevent actions from being triggered on this bin.
22. Click **Color** to select a user-defined icon color for the bin icon.
23. Click **Group Access** to set bin permissions for groups that have access to the bin.
24. Click **OK** to save the bin.

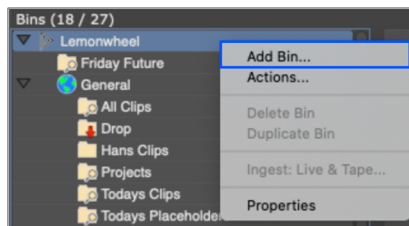
Adding a Smart Bin

The contents inside a smart bin can change dynamically based on pre-configured filtering of specified metadata. Since smart bins are queries on the database and are dynamically updated, they represent a great way to automatically organize content and make it available for immediate use.

To create a smart bin

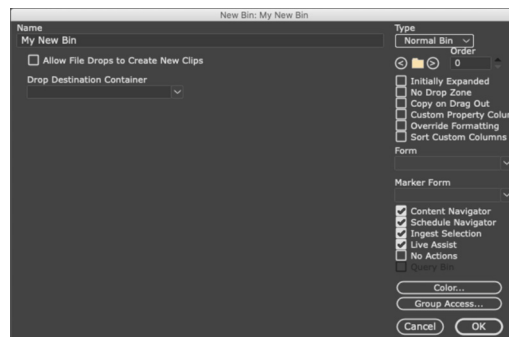
1. Right-click in the **Bins** section or the **Root** bin.

The **Bin** menu opens



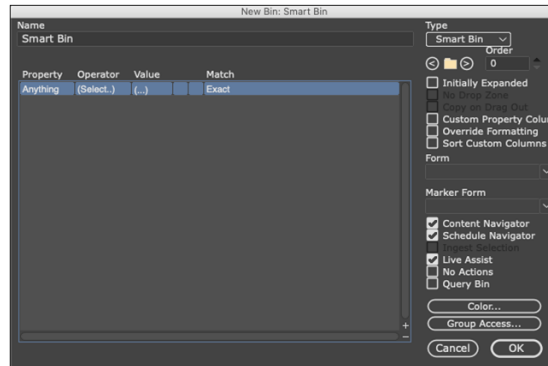
2. Use the **Bin** menu to select **Add Bin**.

The **New Bin** dialog box opens



3. In the **Name** box, enter a name for the bin.
4. Use the **Type** list to select **Smart Bin**.

- At the bottom of the **Filter** list, click + to add a content filter to the smart bin. The **Filter** list displays the new filter.



- Set up the filter to select the objects that you want to store in the bin. A filter contains the following components:
 - Property** — the property to search in.
 - Operator** — the way the value will be matched.
 - Value** — the name, date, or string to match.
 - Match** — how the value should match the search result.
- Configure your smart bin using the same options used to configure a standard bin. Refer to steps 5 to 23 in the procedure “**To create a standard bin**” on page 5–7.
- Click **OK** to save the bin.

Common Operators

When you click in the Operator column of a filter, a menu opens displaying the following operators:

- Is** — matches the value exactly.
- Is Not** — does not match the value.
- Contains Any Of** — contains some parts of the value.
- Contains All Of** — contains exactly every part of the value.
- Does Not Contain** — does not contain the value.
- Is Empty** — the selected property is empty.
- Is Not Empty** — the selected property is not empty.

Match Options

When you click in the Match column of a filter, a menu opens displaying the following operators:

- Exact** — return only results that match exactly the search argument or arguments.
- Start** — start of the argument.
- Part** — part of the argument, which will return more results.

When using the Date property, you can use the following additional options to filter out assets based on their creation date:

- **Absolute** — select a specific time and a day.
- **Relative** — select a specific relative amount of days
- **Days Ago** — enter 1-31 for the amount of days ago.
- **Weeks Ago** — enter 1-52 for the amount of weeks ago.
- **Months Ago** — enter 1-12 for the amount of months ago.
- **Day of Week** —select a day of the week from a day picker.
- **Days Month** — select a specific day of the month (1-31).

Table 5.1 Property Types

Property	Operator	Value	Description
Kind	is	clip, project, etc.	Filters for the type of the object users want to search on.
Date	is, is not, more than, x less than, between, is empty, is not empty	X	Absolute = specific day Relative = days before/ahead Days/weeks/months ago Day of the week Day of the month = X day of every month.
Duration	is, is not, more than, less than, between, is empty, is not empty	X	X = X days or XX:XX:XX:XX time
Flags	are		on = is the object off = not the object

★ The Duration property doesn't use the Match option. Users have to enter the exact duration in the duration window.

Special Flags

Commonly used search filters include the following flags (**Figure 5.10**):

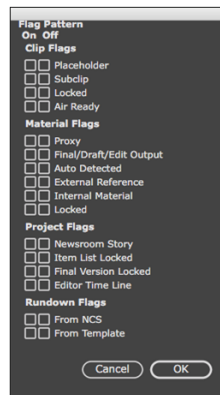


Figure 5.10 Available Flags

By selecting the On or Off check box for an item, the result will either include or exclude assets/objects with or without these flags set.

Database Optimization

When handling millions of different data fields, enabling searching for metadata from numerous different clients, there are a few “rules” that will keep the database performance optimal.

Smart Bin Set Up

It is important to understand how searching and filtering works within a database, so when setting up the smart bin, a user already optimizes it for better database performance. It is important to always include the Kind filter option to filter out the Type of object that should be filtered. Furthermore, a user should be aware that using Contains Any Of, Contains All Of, or Does Not Contain operators puts more load on the search engine than using the Is or Is Not operators. The same goes for using the Part value instead of the Start or Exact values.



Query Bin

In order to maintain a good search performance, it is advised to set smart bins without dynamic content (for example, a smart bin with clips from yesterday or last week) to behave as a Query bin. This can be achieved by selecting the Query Bin check box in the New Bin: Smart Bin dialog box.

Whenever the smart bin is opened by a user, the contents will be refreshed and the filters are applied once. As long as the smart bin is selected there will not be any further refresh, unless there are major Database events like the deletion of objects. In order to refresh the contents of a Query Bin, the user will have to step out of this bin and reselect it.

Sorting Assets

Click on the Column Section on top of the Content Navigator window to sort the selected column. Depending on the current sort order, the order will toggle between ascending and descending. The sort arrow displayed to the right of the column name indicates the current sorting order for the column as follows:

-  — ascending sort order.
-  — descending sort order.

Filter and Find Content

There are two main ways of finding media: Filters and Find.

Filters

Filters for Current Bin (**Figure 5.11**) on the Content Navigator window provides a quick way to narrow down the list of clips displayed. It only shows matches from the currently selected bin.

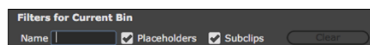


Figure 5.11 Filters for Current Bin

Users can narrow the items displayed by adjusting the following items:

- **Name** — text to filter on. This will return partial matches as if the user typed wild cards like: *cars*.
- **Placeholders** — displays placeholders in red.
- **Subclips** — display subclips in green.

If a user clears the Placeholders or Subclips check boxes, the description Name and/or Subclips will turn red and there will be a red box around this section to call attention to the fact she/he has narrowed down the results (**Figure 5.12**). This way the user is reminded she/he is looking at a filtered result list.

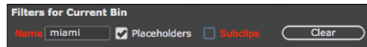


Figure 5.12 Cleared Subclips Check Box

★ The filters display results only for the bin that is currently selected.

Since filters persist even if a new bin is selected, users can easily enter a keyword once, and select different bins to search, like just today's bin, then yesterday's bin, and so on.

If a clip can not be found, most probably the user forgot to clear the filter. To call attention to the fact that there is still a filter set, a red border around the filter section is displayed (**Figure 5.13**).

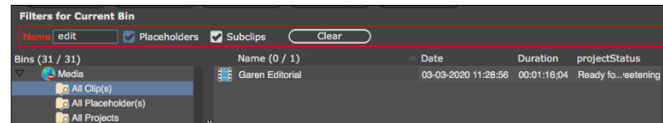


Figure 5.13 Filter Still Set

When a user clicks Clear the filter goes back to the default state.

Find

Find (**Figure 5.14**), at the top of the Content Navigator window, enables users to find media registered in Workflow Client. Filters only affect the currently selected bin.

★ If the Find field is not available, it may have been disabled by the system administrator.

Find will search for the query through all metadata properties. The user should enter text relevant to what she/he is searching on (for example, slug name).

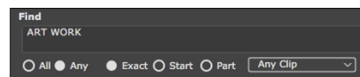


Figure 5.14 Find Section

- **All** — search for clips with All the word or words entered in the Find box.
Selecting the All option and entering “Ross Video” in the Find box will only search for “Ross Video”.
- **Any** — search for clips with Any word or words in the Find Box.
Selecting the Any option and entering “Ross Video” in the Find box will search for “Ross” and for “Video”.
- **Exact** — search for clips with the Exact words in the Find box.
Selecting the Exact option and entering “click” in the Find box will find “click” but not “double-click”.
- **Start** — search for clips that start with the word or words entered in the Find box.
- **Part** — search for clips that have part of the word or words entered in the Find box.

Search for Other Objects

Users can use the Object list in the Find section to select the type of object they want to find. Clips, Projects, and Markers are the most commonly searched for objects. The most commonly used objects are clips, projects and markers. You can search for the following objects:

- Video
- Audio
- Text
- Prompter Script
- Graphic
- Still Image
- Any Clip
- Project
- Rundown
- Marker
- Time Line
- Material

After defining your basic query you can click any of the following options to control your query:

- **Find Now** — submit the query.
- **Advanced** — access additional options to build a more complex search.
- **Clear** — clear the Find box and reset search options to default values.

Depending on the setting of the Workflow Client, results will display in a pop-up window or in the same window. If a pop-up window opens, the matches are displayed including red placeholders and green subclips. Users will be able to sort, select, hide/show placeholders, hide/show subclips and open them.

- ★ Users can also see the original query, displayed with more detail than before, as a table of Property, Operator, Value, and Match Settings. Users can adjust these criteria and create new ones with by clicking + in the lower right panel, as explained in the next chapter.

With the query result open, users can choose to save the query by using File menu to select Save. Saved queries are stored in the Queries bin so they can be reused at a later date.

- ★ If users do not see the Queries bin, they should consult the system administrator.

If results are displayed in the same window, users can only sort these here. Select and open the clips shown. Sort by clicking on one of the table headers. The sort arrow displayed to the right of the column name indicates the current sorting order for the column as follows:

- ▲ — ascending sort order.
- ▼ — descending sort order.

Advanced Find

With the Basic Find option the system searches through all the indexed metadata fields. The Advanced Find option enables users to set which particular metadata fields to search (**Figure 5.15**).

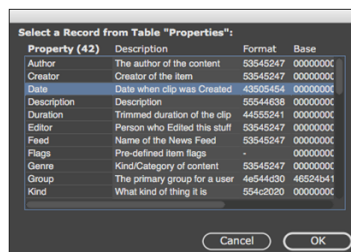


Figure 5.15 Advanced Find Properties

The most commonly used properties in an Advance Find are as follows:

- Date
- Description
- Duration
- Flags
- Kind
- Name
- Number
- Package Type

Depending on the workflows of the Workflow Suite in the facility, the Properties window can show a lot more properties.

To run an advanced find

1. In the top right corner of the **Content Navigator** window, click **Advanced**.

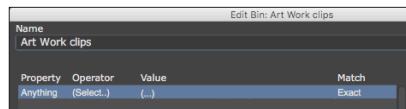
The **Advance Find** window opens.

2. In the **Name** box, enter a name for the query.

Naming a query makes it easy to find for future use. Saved queries can be found in the **Queries** smart bin. If you do not see the **Queries** smart bin, consult your system administrator.

3. At the bottom of the **Filter** list, click + to add a new filter to the query.

Create a new filter for each metadata field that needs to be searched for the query.



4. Set up the each filter to select the objects that you want to find. A filter contains the following components:
 - **Property** — the property to search in.
 - **Operator** — the way the value will be matched.
 - **Value** — the name, date, or string to match.
 - **Match** — how the value should match the search result.

Common Operators

When you click in the Operator column of a filter, a menu opens displaying the following operators:

- **Is** — matches the value exactly.
- **Is Not** — does not match the value.
- **Contains Any Of** — contains some parts of the value.
- **Contains All Of** — contains exactly every part of the value.
- **Does Not Contain** — does not contain the value.
- **Is Empty** — the selected property is empty.
- **Is Not Empty** — the selected property is not empty.

The available operators may differ depending on the selected Property.

Match Options

When you click in the Match column of a filter, a menu opens displaying the following operators:

- **Exact** — return only results that match exactly the search argument or arguments.
- **Start** — start of the argument.
- **Part** — part of the argument, which will return more results.

When using the Date property, you can use the following additional options to filter out assets based on their creation date:

- **Absolute** — select a specific time and a day.
- **Relative** — select a specific relative amount of days
- **Days Ago** — enter 1-31 for the amount of days ago.
- **Weeks Ago** — enter 1-52 for the amount of weeks ago.
- **Months Ago** — enter 1-12 for the amount of months ago.
- **Day of Week** —select a day of the week from a day picker.
- **Days Month** — select a specific day of the month (1-31).

Table 5.2 Property Types

Property	Operator	Value	Description
Kind	is	clip, project, etc.	Filters for the type of the object users want to search on.
Date	is, is not, more than, x less than, between, is empty, is not empty	X	Absolute = specific day Relative = days before/ahead Days/weeks/months ago Day of the week Day of the month = X day of every month.
Duration	is, is not, more than, less than, between, is empty, is not empty	X	X = X days or XX:XX:XX:XX time
Flags	are		on = is the object off = not the object

★ The Duration property doesn't use the Match option. Users have to enter the exact duration in the duration window.

Special Flags

Commonly used search filters include the following flags (**Figure 5.16**):

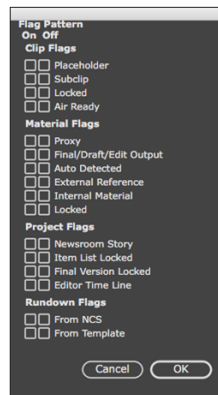


Figure 5.16 Available Flags

By selecting the On or Off check box for an item, the result will either include or exclude assets/objects with or without these flags set.

Example Query

The following example query will search for clips from yesterday that are shorter than three minutes.

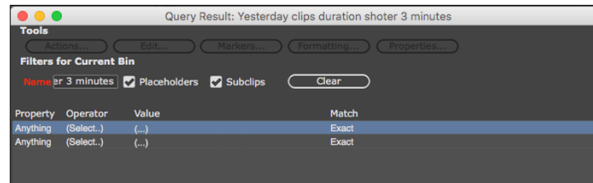
To create the example query

1. In the top right corner of the **Content Navigator** window, click **Advanced**.

The **Advance Find** window opens.

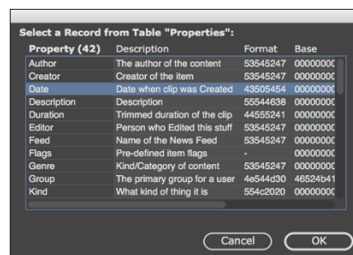
2. In the **Name** box, enter **Yesterday clips duration shorter 3 minutes**.
3. At the bottom of the **Filter** list, click + twice to add two new filters to the query.

The first filter will find the clips from yesterday and the second filter will find clips with a duration shorter than three minutes.



4. Click in the **Properties** column of the first filter.

The **Properties** dialog box opens.



5. Select the **Date** property.

6. Click **OK**.

The **Properties** dialog box closes.

7. Click in the **Operator** column of the first filter.
8. Use the **Operator** list to select **Is**.
9. In the **Value** column, enter **1**.
10. Click in the **Match** column of the first filter.
11. Use the **Match** list to select **Days Ago**.

The first filter that finds clips from yesterday is now complete.

Property	Operator	Value	Match
Date	is	1	Days ago
Anything	(Select.)	(...)	Exact

To find clips from today you would enter **0** in the **Value** column and select **Days Ago** from the **Match** column. You can enter negative numbers in the **Value** column to search for placeholder clips or projects in the future.

12. Click in the **Properties** column of the second filter.

The **Properties** dialog box opens.

13. Select the **Duration** property.

14. Click **OK**.

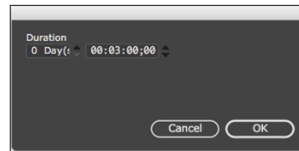
The **Properties** dialog box closes.

15. Click in the **Operator** column of the second filter.

16. Use the **Operator** list to select **Less Than**.

17. Click in the **Value** column of the second filter.

The **Duration** dialog box opens.



18. Set a duration of 0 Day(s) 00:30:00;00.

19. Click **OK**.

The **Duration** dialog box closes. The second filter that finds clips that are less than three minutes long is now complete.

Property	Operator	Value	Match
Date	Is	1	Days ago
Duration	Less Than	00:03:00:00	

Here are some more query examples that you may find useful:

- Clip name that contains the word “episode”

Property	Operator	Value	Match
Name	Contains Any Of	episode	Part

- Clips from last Monday

Property	Operator	Value	Match
Date	Less Than	1	Weeks ago

- Sub clips

Property	Operator	Value	Match
Flags	Are	Clip: Not sub-clip	

- Sub clips from today with a duration between five and ten minutes

Property	Operator	Value	Match
Flags	Are	Clip: Not sub-clip	
Duration	Between	00:05:00;02 and 00:10:00;00	
Date	Is	0	Days ago

Saving Queries

Every advanced search query can be saved for future use. When you do not want to save a query, just close the Results window after you finish viewing the query results.

You should save any query that you might want to reuse at a later date. It is good practice to use descriptive names for saved queries.

To save a query

1. Create a new query
2. Run your new query.

The **Results** window opens to display the results of your query.

3. In the **Results** window, use the File menu to select Save.

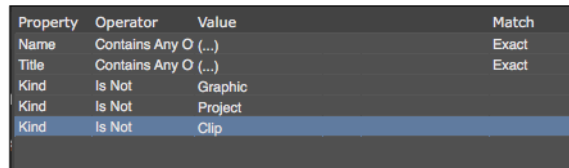
Saved queries are stored in the **Queries** bin so they can be reused at a later date.

★ If you do not see the **Queries** bin, consult the system administrator.

4. To change the filters of a query, right-click the query to edit and select **Change properties**.
5. To delete a query from the system, right-click the query to delete and select **Delete bin**.

Query Forms

Query forms (**Figure 5.17**) are per-defined searches that enable minor changes to be made by a user. The system administrator sets up query forms to enable users to search through certain metadata fields without the need to set up a complete search.



Property	Operator	Value	Match
Name	Contains Any <input type="radio"/> (...)		Exact
Title	Contains Any <input type="radio"/> (...)		Exact
Kind	Is Not	Graphic	
Kind	Is Not	Project	
Kind	Is Not	Clip	

Figure 5.17 Example Query Forms

The example query form list (**Figure 5.17**) does not reflect the query forms available at every facility. Users should consult their system administrator for a list of query form available on their system.

Tools

The Workflow Client contains tools to trigger actions, manage metadata, view markers, format selections, and manage object properties.

This chapter discusses the following topics:

- Triggering Actions
- Editing Metadata
- Viewing Markers
- Formatting Selections
- Editing Properties

Triggering Actions

The earlier mentioned actions in Workflow Client are workflow automations that can be triggered on one or multiple clips. The Actions button in the bottom left corner of the clip window enables users to trigger a workflow automation on a specific clip that is currently being watched.

★ The availability of the Properties and Formatting button depends on the permission of the logged in user.

To trigger actions

1. Select one or more clips on which to run an action.

Actions can be started by selecting clips in the **Content Navigator** or from a **Clip** window using that opened clip as the starting point of the action. Without selecting clips, none of the buttons will work.

2. In the **Content Navigator** view, click **Actions** in the **Actions** bar. You can also use the **Context** menu to select **Actions**.

After clicking **Actions**, a window opens listing the available actions available for users in the facility. The listed actions are specific for each individual facility and are outside the scope of this manual.

3. The **Delay until Absolute Time** box option enables users to start the action at a certain day and time. Complete the following steps to set a start date and time for an action:

- a. Select **Delay until Absolute Time** box.
- b. Click **OK**.
- c. Select the date and time to run the action.
- d. Click **OK**.

Workflow Client will execute the action at the selected date and time.

Editing Metadata

Clicking Edit after making a selection opens a Clip window listing the selected clips. You can use Edit to browse, view, or change clip metadata. Double-click a clip name to load the video.

Viewing Markers

Clicking Markers after selecting a clip opens the Marker panel listing the markers in the selected clip. You can only select one clip for which to view markers. The Marker panel will be empty if the selected clip does not contain any markers.

Formatting Selections

Clicking Formatting enables users to change the font style and background color for the selection. Select Auto to change both options settings back to default values.

★ Users should consult their system administrator if this button is grayed out and they do not have permission to use it.

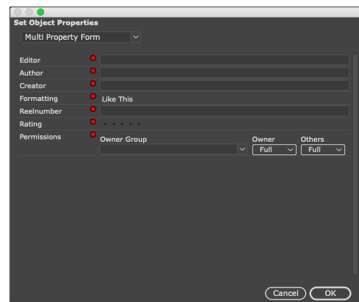
Editing Properties

The Properties option is only available to users with the appropriate permissions. Clicking Properties after making a selection opens the Multi Property form in the Set Object Properties dialog box. The displayed metadata properties can be changed for the selected clips.

To edit metadata properties

1. Select one or more clips for which to edit metadata.
2. Click **Properties**.

The **Multi Property** form opens in the **Set Object Properties** dialog box.



The metadata properties displayed in the **Multi Property** form are specific for every facility.

3. Edit the metadata values as required.
4. Click **OK**.

The updated metadata values are save to all of the selected clips.

5. If possible, use the **Form** list to select another property form with witch to batch change metadata.

Working with Clips

In the Content Navigator the Bins and Clip window enable access to the clips stored in your MAM.

This chapter discusses the following topics:

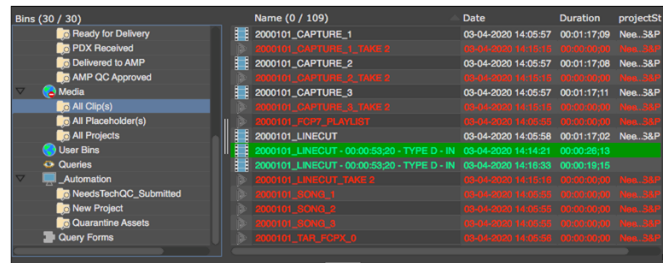
- Viewing Clips
- The Clip Window User Interface
- Extended Options
- Marking Regions in Clips
- Subclips
- Additional Functions
- Markers
- Metadata
- Clip Window Tabs
- Components and Materials
- Search In Clip
- Projects

Viewing Clips

In the Content Navigator clips are stored in Bins and viewed using the Player in the Clip window.

To view a clip

1. Open the **Content Navigator**.
2. Use **Bins** section to navigate to a bin.
3. Use the filters in the **Filter** section or the **Find** option to locate the clip to view.



Clips may show up with a different color background. Color coding is workflow specific, which is outside the scope of this manual to explain the custom color scheme.

4. Double-click to the clip to view.

The **Clip** window opens displaying the selected clip in the **Video Player**.

The Clip Window User Interface

The Clip window contains five main sections (**Figure 7.1**). The tabs displayed in the top section depends on the permissions set for the user.

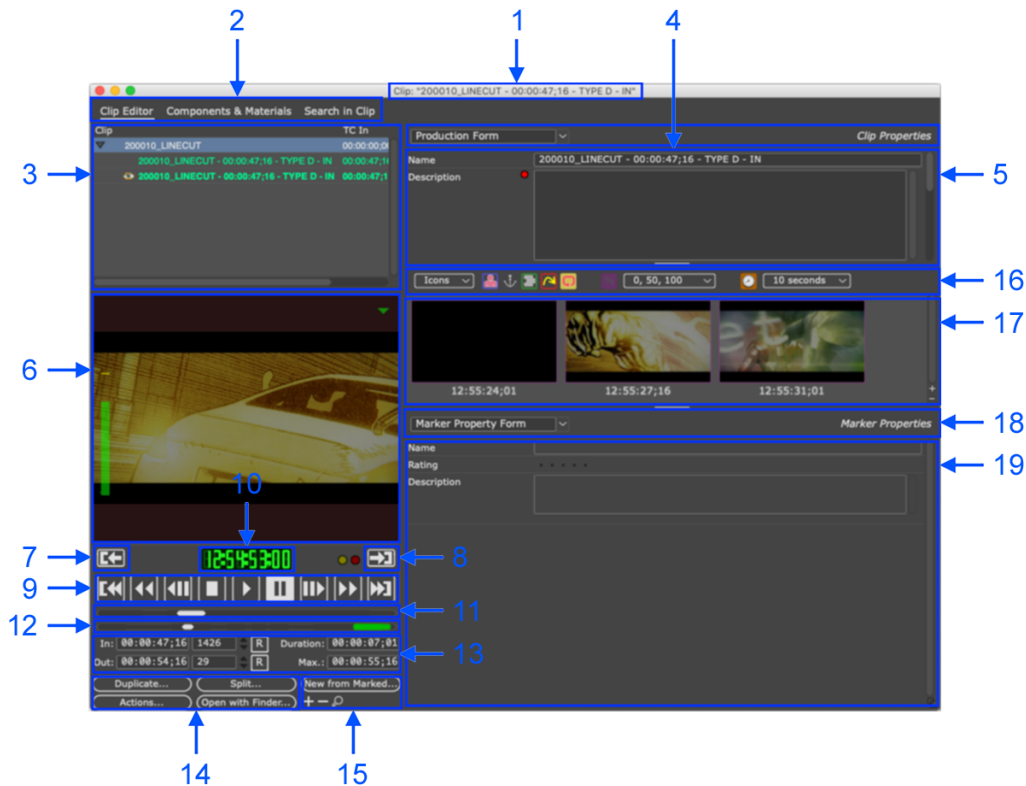


Figure 7.1 Clip Window Sections

- | | |
|--------------------------|---|
| 1) Clip Name | 11) Jog/Shuttle Slider |
| 2) Tabs | 12) Scrub Bar |
| 3) Trim List | 13) Timecode and Duration Metadata |
| 4) Property Form Menu | 14) Subclip Creation, Action, Open in Finder/Explorer Buttons |
| 5) Metadata Properties | 15) Poster Frame Buttons |
| 6) Video Player | 16) Maker Bar |
| 7) Mark In Button | 17) Marker Thumbnails |
| 8) Mark Out Button | 18) Marker Property Form Menu |
| 9) Video Player Controls | 19) Maker Metadata |
| 10) Timecode (TC) | |

Clip Name


The clip name is always displayed as the title of the Clip window.

Clip Window Tabs

The Clip window contains the following tabs:

- **Clip Editor** — clip, video, and metadata information.
- **Components & Materials** — component and material information for the selected clip.
- **Search in Clip:** — search through clip, subclips, and markers from the selected clip.

Clip Trim List

The upper left section of the Clip window displays the Clip Trim list. The list shows the clip and subclips that were created from selected master clip or other clips that were created from the same media (**Figure 7.2**). The  Eye icon in the Clip Trim list indicates the clip you are currently viewing.

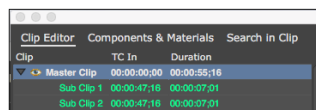


Figure 7.2 Clip Trim List

The Remove from List option on the Shortcut menu enables users to navigate easier through multiple subclips by temporary removing (hiding) the selected subclip (**Figure 7.3**).

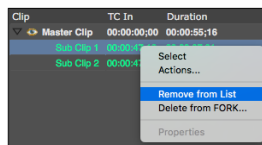




Figure 7.3 Hide a Subclip

After you use the Mark In or Mark Out buttons to edit the in or out points of a clip, The  Eye icon changes to a  Down Arrow icon to indicate that the clip has unsaved in or out points (**Figure 7.4**).

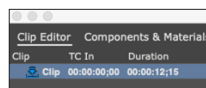


Figure 7.4 Unsaved In or Out Points

At this point you can choose to save the new marked in or out points to the current clip or create a subclip. When you close this window you will be prompted to save your points (**Figure 7.5**).

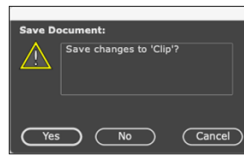


Figure 7.5 Save Document Dialog Box

You can change the In or Out points of an existing (sub) clip without creating a new clip. Click Yes in the Save Document dialog box to confirm saving the clip in order to change the In or Out point positions.

Video Player

During standard operation, the Video Player (**Figure 7.6**) shows a low resolution (proxy) version of the high resolution material from the storage. Proxy versions of content prevent the network from being saturated when many users are looking at video content at high resolution and bit rates.



Figure 7.6 Video Player

You can right-click in the Video Player to open a Shortcut menu of additional functions. Functions that you do not have permission to use are grayed out on the Shortcut menu (**Figure 7.7**).



Figure 7.7 Video Player Shortcut Menu

The main options on the Shortcut menu are as follows:

- **Show Full-size** — show the video actual size in a separate window.
- **Show Full-Screen** — show the video in full screen. Use the ESC key to cancel this view.
- **High Quality** — switch to the high resolution (original) content.
- **Reload** — reload the clip from the storage into the clip window.
- **Show Audio Meters** — display the audiometers levels of the clip.

Audio Metering and Monitoring

In the Audio Meter window you can select any of the 16 channels to be routed to the right and left speaker output of your computer (**Figure 7.8**). The master slider determines the output volume and the check box in the upper right corner can be used to mute the audio altogether. Should the clip hold less than 16 channels of audio, the unused meters do not light up.



Figure 7.8 Audio Meter Window

- ★ Settings changed in the Audio Meter window are just for audio monitoring purposes, they do not modify the individual audio tracks within the clip.

Extended Options

The Clip window offers some additional options when displaying clips. A status indicator in upper right corner of the Video Player changes shape and color as follows to indicate the current clip status as follows:



Ready — the clip is ready to use.



Ingesting — the clip is still being ingested.

Click on the status indicator to open a menu containing the following options:

- **Overlay**
- **Video Display**
- **Source**
- **Timecode Source**

Overlay

The Overlay option opens the following sub-menu containing the following options:

- **Status** — overlay VTR-style information.
- **Timecode** — overlay timecode information.
- **Closed Captions** — users can choose to display Closed Caption information, if this is available in the ingested clip. Users can select 608 or 708 CC data and the different tracks or services.
- **Subtitles** — overlay available subtitle data.
- **Audio Meters** — overlay audio meters on top of the active video. The number of visible meters depends on the number of available audio tracks in the clip.
- **Player Info** — overlay technical information on the frames per second being shown in the Video Player, the frame size of the video being shown, and the actual size being displayed.

Video Display

The Video Display option enables different ways of displaying the video material being played back. These options include:

- **Aperture**
- **Scaling**
- **Interlacing**
- **Filtering**
- **Source Range**
- **Color Space selection**
- **Background selection**
- **Retina Scaling**

It is outside of the scope of this manual to explain the full functionality of these options. Ross Video advises using the supplied default settings.

Source

The Source option gives users information about the structure of the currently playing file, as well as the codec(s) used for encoding. For example (**Figure 7.9**):

```
✓ 1.1 Video (1920 x 1080, Interlaced 'Apple ProRes 422 LT') @ 30000/1001 [ID:1]
✓ 2.1 Timecode (Format 30 'QuickTime/MP4 Timecode') @ 30000/1001 [Muted][ID:2]
✓ 3.1 Audio (1 Channel, 24 Bits @ 48000Hz 'PCM Audio') @ 48000/1 [ID:3]
✓ 4.2 Audio (1 Channel, 24 Bits @ 48000Hz 'PCM Audio') @ 48000/1 [ID:4]
```



Figure 7.9 Example Source Information

Timecode Source

When a clip contain multiple timecode tracks, the tracks are selectable from the Timecode Source sub-menu.










Marking Regions in Clips

Marking Buttons

Click the  Mark In button to set the current position in the video as the in point. Click the  Mark Out button to set the current position in the video as the out point.

Video Player Controls

Use the following button in the Video Player control section to control the clip loaded in the Video Player.

	Goto In — goto the set In point.		Pause — pause the clip.
	Rewind — jump to the first frame in the clip.		Step Forward — move a set number of frames forward. Right-click on the button to change the step value to 1, 2, 3, 4, 5, or 10 frame or to 1 second.
	Step Back — move a set number of frames backwards. Right-click on the button to change the step value to 1, 2, 3, 4, 5, or 10 frame or to 1 second.		Fast Forward — jump to the last frame in the clip.
	Stop — stop playing the clip.		Goto Out — goto the set Out point.
	Play — play the clip.		

Timecode Field

The timecode field shows the timecode setting chosen for the selected subclip. Timecode will always show according to the characteristics of the clip. If a clip has a non-drop frame (NDF) timecode, a colon is used as a separator between the seconds and frames notation (**Figure 7.10**).



Figure 7.10 NDF Timecode

When a clip has a drop frame (DF) timecode, a semicolon is used as a separator between the seconds and frames notation (**Figure 7.11**).



Figure 7.11 DF Timecode

There are several timecode options to choose from, which can be accessed by right-clicking on the timecode counter:

- **Current Timecode** — the current timecode always starts with 00:00:00:00. It is the TC that is stamped by Workflow Client and shown by default when a clip is opened. It's always continuous.
- **Offset Timecode** — a continuous timecode that starts with a value depending on the ingest type. For “tape ingest” it is typically the “TC in point” and for “live ingests” the time-of-day of the recording.
- **Original Timecode** — the timecode when the clip is ingested from a VTR and tape-timecode was ingested as well.
- **In Point Time** — the elapsed time after the IN-point of the clip.
- **Frame Counter** — the amount of frames counted, starting from 0 at the start of the clip.
- **User bits** — additional information, like reel number, or camera identification or something similar. Commonly used in VTRs, this field will only be available for VTR ingests where tape-timecode was ingested as well.
- **TC Min** — first frame of current clip.
- **TC Max** — last frame of current clip.

Moving Through a Clip

Shuttle/Position Bar

The top, small bar directly underneath the Transport Controls is the shuttle/position bar. Right click to open the context menu and change mode between Shuttle and Position mode (**Figure 7.12**).



Figure 7.12 Shuttle/Position Bar

In Shuttle mode, click and drag the bar to either side to move through the video at multiple times the normal speed. It returns to the center when the mouse button is released. Position mode enables a user to directly place the playhead at a certain position within the clip.

- ★ The bar will always show the maximum length of the clip. If a user is moving through a clip that is currently being ingested, the bar will represent the whole clip length, even if there may not yet be video captured after a certain point.

Scrub Bar

The small bar in the bottom area (“scrub area”), which represents the full length of the clip, can be used to jump to a certain position in the clip. Just move the scrub bar by dragging it through the scrub area or by clicking anywhere inside the area.

- ★ When viewing a clip that is currently being ingested, always change the shuttle to position and use this bar to move through the clip.

By setting an IN and OUT point on the current clip, a certain area of that bar will become yellow. A user can now create a Subclip from this particular marked area. When the Subclip has been created, the yellow markers are will turn green (**Figure 7.13**).

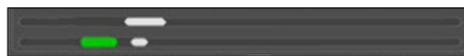


Figure 7.13 New Subclip

Timecode (TC) and Duration Metadata

The fields display the following timecode and duration metadata for the selected subclip:



- **TC in** — the timecode in of the selected clip. This changed with every new “Mark In” and doesn't need to be the first frame of the clip.
- **TC out** — the timecode out of the selected clip. This changed with every new “Mark Out” and doesn't need to be the last frame of the clip.
- **Trimmed in** — the amount of frames from the first frame to the new “Mark In”. The “R” before this field enables the user to review the first five seconds starting at the “Mark In” point of the clip.
- **Trimmed out** — the amount of frames from the new “Mark Out” to the last frame. The “R” before this field enables the user to review the last five seconds starting at the “Mark Out” point of the clip.
- **Max duration** — the duration from the first to the last frame of the clip.
- **Trimmed duration** — the duration from the “Mark In” to “Mark Out” of the clip.

Subclips

Since video files can be long (an entire conference, sports event or an interview), it is useful to divide them up by marking them into subclips to make them shorter, easier to find, and easier to edit. Creating subclips does not create any additional file on the system, it is setting new mark-in and mark-out points on the same material.

A subclip is a portion of a master clip that makes finding and assembling content easier. Users can create any number of subclips that reference a master clip, and they can overlap with each other. Subclips can hold their own set of metadata, the system can be set to have subclips inherit the metadata value from its “master” clip. When a users creates subclips, these can either be precise and frame-accurate, or quick and roughly created with handles. These subclips can later be modified and made more precise if needed.

To create a subclip

1. Move the playhead or the shuttle where the clip should start.
2. Click  **Mark In**.
3. Move the playhead or the shuttle to where the clip should end.
4. Click  **Mark Out**.

The scrub bar shortens to indicate the location of the subclip “in” and “out” points relative to the entire clip. The clip in the **Clip Trim** list has an arrow icon next to it to show there are unsaved changes.

Another way of marking the in or out points of a clip is to hover the cursor over the beginning or end of the scrub bar that shows the duration of the clip. This will overlay a bracket that a user can drag. Click and drag the bracket to mark the required in or out point.

5. There are three ways to create subclips by using the subclip creation buttons:
 - **Duplicate** — duplicate the clip from the mark in to the mark out.
 - **Split** — split the clip into two, at the position of the playhead. Clicking **Split** opens a new subclip window to name the clips as follows: use the original clip name with a suffix (#001, /#002, ...), or to enter new names for each subclip.
 - **New From Marked** — create a new subclip from the currently marked area.

These options can also be selected from the **Clip** menu while viewing a clip.

New Subclip Options

The New Subclip dialog box contains a number of options to set for a new clip (**Figure 7.14**).

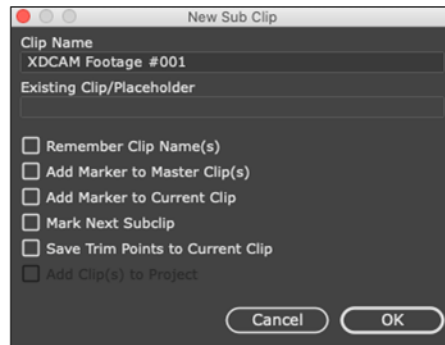


Figure 7.14 New Subclip Dialog Box

The New Subclip dialog box contains the following options:

- **Clip Name** — name of the subclip is based on the original clip name, it can be changed to be more descriptive.
- **Existing Clip/Placeholder** — by dragging and dropping a (placeholder) clip onto this field, the subclip will either fill the placeholder and create a clip or replace the existing material of the clip by the subclip's material.
- **Check Remember Clip Name(s)** — to enable successive subclips to automatically be named the same as the previous subclip created.
- **Add marker to Current Clip** — adds subclip marker to the “Mark In” timecode. This marker can be seen by activating the subclip markers.
- **Mark Next Subclip** — will set an in-point on the originating clip to enable for creation of a new subclip that seamlessly follows the current one.
- **Save Trim Points to Current Clip** — the trim points from this subclip will be saved to the original clip. This is useful when creating multiple subclips with the same in or out points.
- **Add Clip(s) to Project** — enables immediate allocation of the created subclip to a specified project.

A user can use the same name as the master clip. Workflow Client will append #00, #002, ... to differentiate the newly created subclips.



Changing the Duration of an Existing Subclip

Users may adjust the in or out of an existing subclip without having to create a new one.

To change subclip duration

1. In the **Bins** list, double-click the **subclip** to edit if its window is not already open. If **subclips** are not displayed, make sure **Subclips** check box is selected in the **Filters** section.

When the window opens, users will see two more indications that it is a subclip: the indented name is highlighted in the clip trim list, and the scrub line is green. Remember that subclips are green and master clips are yellow.

2. Use one of the following methods to set a new in point:
 - Hover the cursor over the beginning of the scrub bar and drag the bracket to where it should be.
 - Move the playhead to the new in point and click  **Mark In**.
3. Use one of the following methods to set a new out point:
 - Hover the cursor over the end of the scrub bar and drag the bracket to where it should be.
 - Move the playhead to the new in point and click  **Mark Out**.

Trimming the Master Clip

The same way subclips can be created and trimmed, a user can also apply new in and out points to the master clip. When setting new in and out points, the file itself will not be modified, the portion of the clip that is outside of the in and out markers is still available for playback.

To save the changes to the master clip, use the File menu to select Save, or use the Save keyboard shortcut as follows:

- **Mac OS** — Cmd S
- **Windows** — Ctrl S

Additional Functions

Actions

Actions in Workflow Client are workflow automations that can be triggered on one or multiple clips. The Actions button in the bottom left corner enables users to trigger a workflow automation for this specific object. After clicking the Actions button, a window with the configured and available automations will open. These will differ between the different facilities and are customized to the customer's needs.

Open in Finder/Explorer

Depending on the operating system used by the client computer, click one of the following buttons to show the object in its original storage location:

- **Mac OS** — Open in Finder
- **Windows** — Open in Explorer

Some file types can be set to automatically be opened with 3rd party applications. This is configured within the operating system settings of that particular client computer.

Poster Frame

The poster frame buttons enables users to create a still frame within a clip and are located in the bottom right corner of the clip window.

To set the poster frame

1. Move the player to the appropriated frame that should be used as a poster frame.
2. Click + to store this timecode for the poster frame.

The action will create a poster frame based on this timecode. The system will hold one timecode in the poster frame buffer. Clicking - will delete the timecode from the poster frame buffer. Clicking the magnifying glass will move the playhead to the poster frame position.

Markers

Marker Bar

Markers are pointers to a certain timecode in subclips. There are several kinds of markers: user markers (created by the user), percentage, and time markers (generated automatically). Toggle to switch the marker view on or off.

Marker Thumbnails

The view of the markers can be changed from list view to icon view by changing the view in the drop down menu.

User Markers

User markers are markers based on a timecode within a clip. They enable the user to associate descriptive text with a certain timecode. User markers may hold metadata. The user markers that are created by one user can be seen by anyone in the facility that opens this clip.

To create a user marker

1. Open a clip by selecting it from the **Content Navigator**.
2. Activate the first icon, **User Markers** on the **Marker bar**.

3. Position the playhead at a point at which a marker should be placed.
4. Click + in the lower right of the marker panel.

A marker is created at the timecode of the playhead and is displayed in the marker's panel. The **Name** field in the marker property form at the bottom right of the window will be set to the clip name and the timecode value of the marker position. This field is highlighted after creation of the marker to enable users to edit the name and create a more descriptive name.

Edit User Markers

You can edit the timecode and information associated with a user marker.

To edit a user marker

1. Right-click the user marker to edit.
The **Context** menu opens.
2. In the window that opens, edit the **Name** and **Description** as required.
The original timecode is displayed in the top left corner of the window.
3. Change the timecode as follows:
 - a. Position the playhead at a new timecode
 - b. Use the **Context** menu to select **Set Timecode**.

Find a User Marker

To locate a Marker that has been set, users can use the Find command in the Content Navigator to find markers with certain names. The Find command searches through all of Workflow Client. Double-clicking on a found marker opens the master clip and the marker timecode position.

- ★ When a clip is sent to a FCP X or Adobe Premiere project, any user markers will show up as regular clip markers, where they can be used for searching and making subclips.

Marker Property Form Menu

When a user marker is created it will show metadata properties from the default marker property form. If a facility uses more than one marker property form these can be found and opened using the Marker Property Form menu.

Anchor Markers

Anchor markers are a special kind of markers, which can only be set by importing external metadata. When an anchor marker gets shifted, linked user markers in the same clip will be shifted at the same value. This way the system will enable the inclusion of a particular offset for markers in a specific clip.

Percentage Markers

Percentage markers can be displayed at regular intervals, with their thumbnails outlined in purple. The user can turn the display on and off with the % button, and change the number of them with the pull down menu of values.

For example, activating them with a setting of “0, 50, 100” displays a marker at the first, midpoint, and last frame.

Activating them with “0, 25...100” displays markers every 25% of the way through the clip.

Activating them with “0, 10...100” displays markers every 10% of the way through the clip, and activating them with “0, 5...100” displays them every 5% of the way through the clip.

Time Markers

Time markers can also be displayed and are outlined in orange. They are similar to percentage markers, but divide a clip by a specified time value, displaying markers every 1, 2, 5, 10, 20, or 30 seconds, or 1, 2, 5, or 10 minutes. These markers are switched on and off with the clock button, and change the interval with the pull down menu of values.

- ★ On a Clip that is still being ingested, both the Percentage and Time Markers will create all the markers for the complete duration of the clip. If no material can be found (yet) for that marker, it will show up black.

All the markers mentioned above are also accessible by right-clicking in the panel where the marker thumbnails are normally shown. This will display a context menu with the same options.

If a user has changed the “Mark In” and “Mark Out” and the markers are outside of the marked area, they will be shown dimmed. It is also possible to activate more than one marker view at the same time.

Marker Metadata

When a marker is created it will show metadata properties from the default marker property form.

- ★ Metadata can not be added to Percentage and Time markers, as these are generated and managed by the System.

Metadata

As mentioned earlier in this manual, the Primestream Workflow Suite has many options to enrich assets with metadata. The metadata scheme is completely customizable, indexable and searchable and searching through the database has been heavily optimized to meet even the most outspoken needs.

Metadata fields are organized in forms. Forms are customisable and changes to forms will reflect immediately throughout the whole system. System Administrators can determine the default form for specific user groups and permissions to metadata fields and forms.

Property Form Menu

Users can choose different property forms from the Property Form menu (**Figure 7.15**), depending on the user's permissions. The metadata fields will change accordingly after selecting a new form.

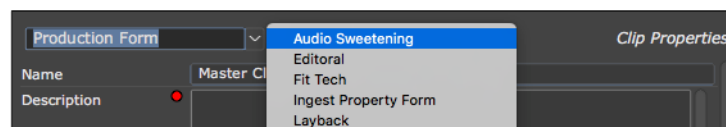


Figure 7.15 Property Form Menu

Metadata Properties

The custom metadata fields are set up by a System Administrator, as well as the form they will show up in (**Figure 7.16**).

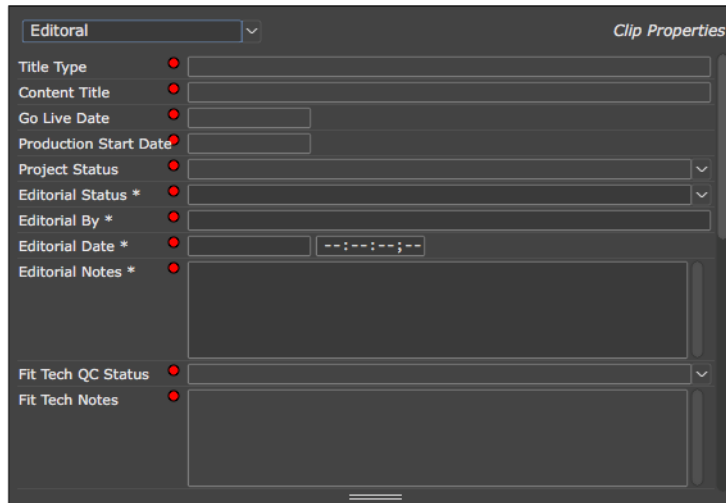


Figure 7.16 Example Metadata Form

Changing Metadata

Changing metadata does not require saving. The input is saved instantly as the user leaves the metadata field and the server will receive the updated information. The values will always update according to the latest data entered, even if different users are editing the same metadata field.

If a metadata value was not set, the editable field will be preceded by a red dot, indicating the field is empty. When the field holds a value, the red dot disappears.

Check Boxes

Check boxes represent a special kind of metadata field, as it does not hold text or numbers, but a yes/no status. Users can check the box, which sets the value of this check box to True. Clearing a check box will set the value to False. However, if a check box value was never modified, the value of this check box is undefined. It is important to understand this behavior when setting up searches and smart bins.

- — Undefined value
- — True value
- — False value

Date Metadata

Right-click in the Date metadata field to open the Context menu (**Figure 7.15**). Users are able to change the date (for example: for flush or deletion workflows) from the range of selection options. Selecting the Pick options a calendar to select a date.

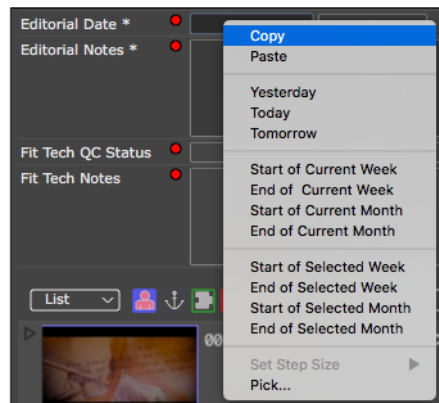


Figure 7.17 Date Metadata Context Menu

Clip Window Tabs

Previous pages described all options of the clip editor tab. The other tabs of the clip window are components & materials and search in clip.

Components and Materials

This tab gives users access to the components and materials of the clip that is being viewed. On Workflow Client-Ingested clips, users will see a video component file and multiple files for the audio components. The proxy track may not show as a separate component as it can be embedded on ingest in the wrapper file.

A clip that has been dropped in a watch folder, sent back to the Workflow Client from a craft editor, or added by any other way, will generate a low resolution proxy after the clip has been registered.

Detailed explanation about the possibilities of this tab can be found in our knowledge base.

Search In Clip

This tab enables users to search within the clip. For example, to search for metadata within the created subclips. Both the basic Find and its options can be used, but also the advanced Find from within this tab. Please go to the respective sections in this manual to learn more about the basic and advanced Find functions.

Projects

This tab enables the creation of projects in the Content Navigator. For more information about projects please refer to the Editing manuals.

Content Browser

The Content Browser combines the functionality of the Content Navigator and the Clip Window.

This chapter discusses the following topic:

- The User Interface

The User Interface

The Content Browser combines the functionality of the Content Navigator and the Clip Window. This may make working with many assets quicker and more comfortable. Both Content Navigator/Clip Window and Content Browser can be used simultaneously in the same system.

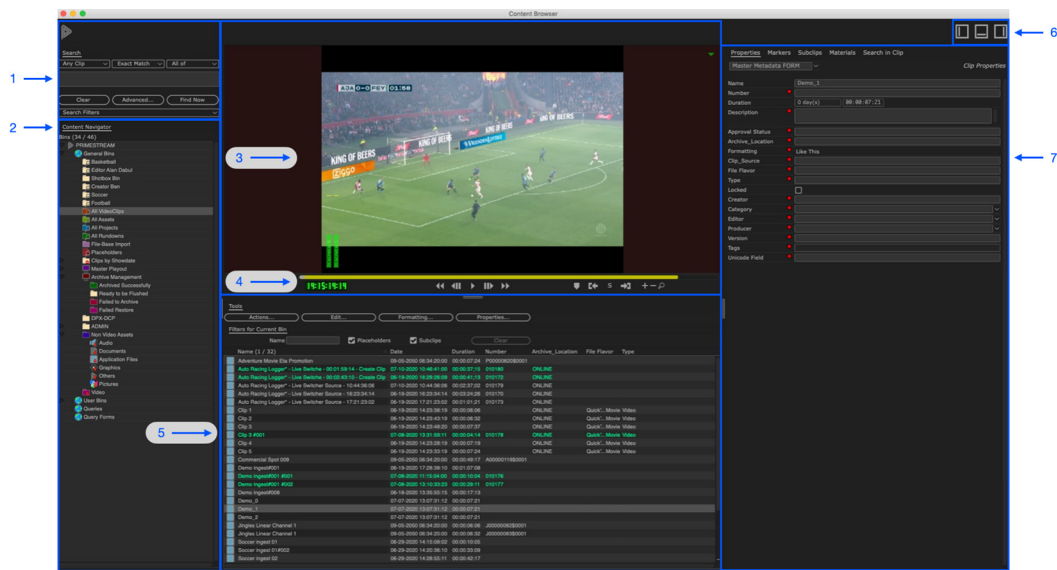


Figure 8.1 Content Navigator Sections

- | | |
|--|---------------------------|
| 1) Search Options | 5) Selected Bin Contents |
| 2) Bins and Smart Bins | 6) Window Layout Controls |
| 3) Player | 7) Metadata |
| 4) Transport, Marker, and Subclip Controls | |

★ The Content Browser is available in Workflow Suite 2020 v7.0 - 13916 or greater.

Ingesting Clips

Ingest is the standard term used to describe addition of assets to the Media Asset Management System, either by importing files or by capturing audio/video signals.

This chapter discusses the following topics:

- Ingest Options
- Live & Tape
- Multi
- Ingest Buttons
- Scheduled Ingest Events

Ingest Options

The Clip Ingest module of the Workflow Client enables users to ingest video signals into the system.

- ★ If the Modules menu (**Figure 9.1**) does not contain the Clip Ingest command, either the facility did not obtain a license for the module or the user does not have permission to access it.

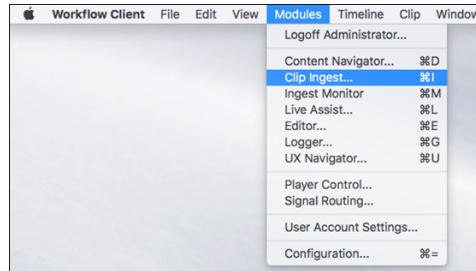


Figure 9.1 Clip Ingest Command on the Modules Menu

The Ingest module has the following options to organize and perform capturing of audio/video signals:

- **Live & Tape** — used this ingest option to manually ingest from a single channel. Due to the capability of connecting and controlling VTR (tape) machines, this module is also used to perform batch-digitization of tape collections.
- **Multi** — when performing multiple manual ingests from live feeds, this module will give the user control over some or all of her/his ingest resources. The user can perform batch operations, such as batch prepare and record, batch mark and batch stop.
- **File Server** — the File Server module enables direct ingest of media from P2, XDCAM, or SxS cartridges. Although this workflow is nowadays mostly performed using NLE's, the Workflow Suite is capable of doing this type of ingest as well.
- **Scheduled** — this module enables the user to set up a schedule for one or more ingest ports. These ingests will be performed by the server, it is not required that the user stays logged in to their client in order to start and stop the ingest(s).
- **Compile & Print to Tape** — although this item can be found within the Ingest section, it is basically a Playback tool, especially designed to create recordings of one or more clips to VTRs.

Live & Tape

The Live & Tape module (**Figure 9.2**) is designed for single live video ingests and batch tape ingests using a VTR.

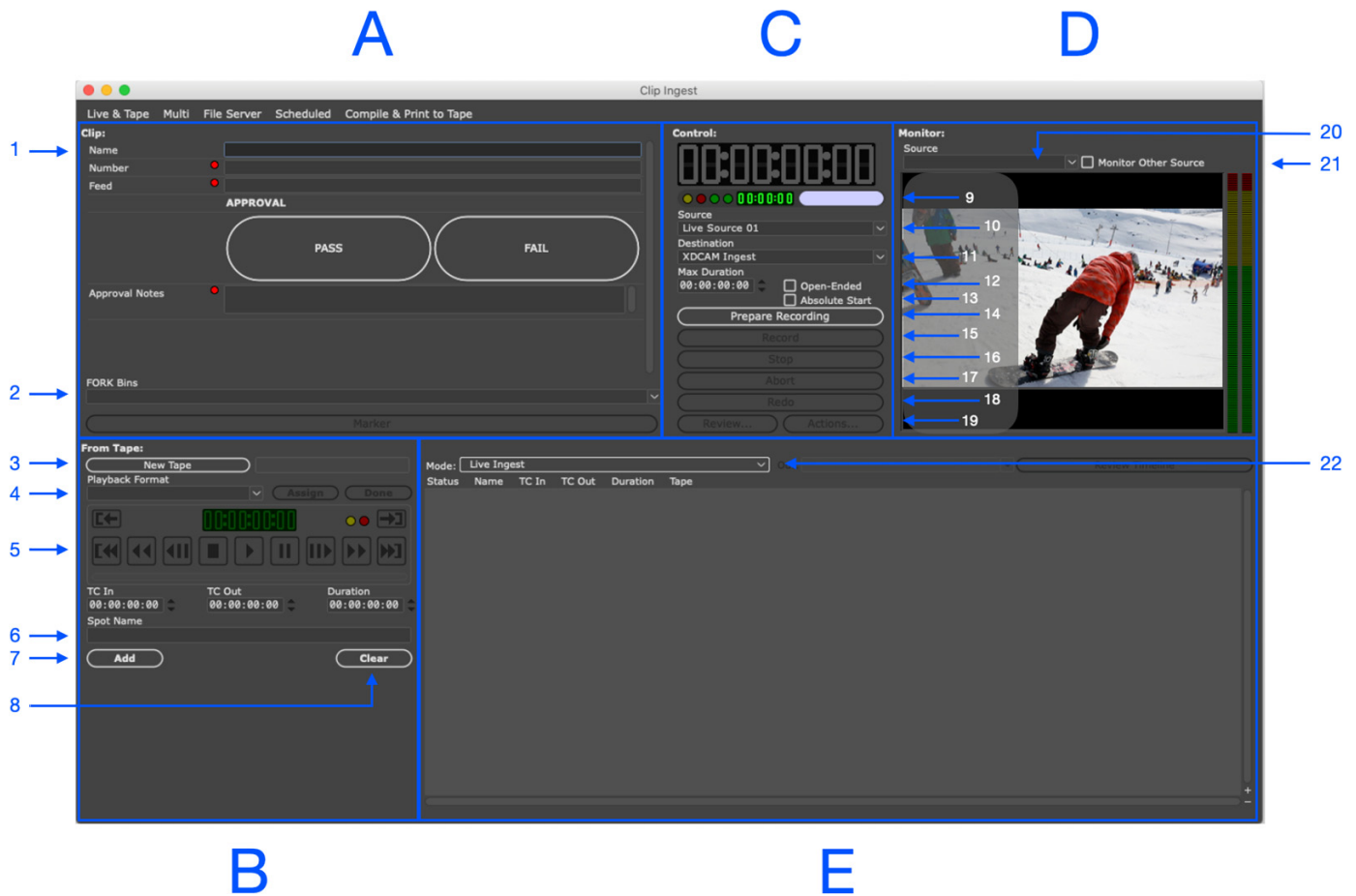


Figure 9.2 Live & Tape Module User Interface

A — Metadata Section

- 1) Clip Name and Metadata
- 2) Destination Bin (Optional)

D — Tape Machine Control Section

- 3) Create New Tape Button
- 4) Format Menu
- 5) VTR Transport Control
- 6) Spot Name
- 7) Add Spot Button
- 8) Clear Spot Data Button

B — Ingest Control Section

- 9) Timecode and Progress
- 10) Source Selection
- 11) Destination Selection
- 12) Open-Ended Option
- 13) Absolute Start Option
- 14) Prepare Recording
- 15) Record Button
- 16) Stop Button
- 17) Abort Button
- 18) Redo Button
- 19) Review and Actions Buttons

C — Ingest Monitor Section

- 20) Monitor Source
- 21) Other Monitor Source Selection

E — Mode Selection and Batch Spot Ingest Section

- 22) Mode Selection

Destination Bin

Users can define a Bin where the ingested clip will be placed. If no Bin is selected, the clip will not be placed in any Bin, but possibly by using Smart Bins.

Create New Tape

This will reset the batch ingest list in section E. The Workflow Suite can associate Reel/Tape numbers with the clips to be ingested, making it easy to reference any clip back to its source Tape.

Format Menu

In the Format menu (**Figure 9.3**), users can select the tape format that holds the original material. By selecting the format and pressing Assign, the Workflow Suite will scan the system for resources (for example: VTRs) capable of handling this format and will prompt the user to insert the tape into that particular VTR or Deck.

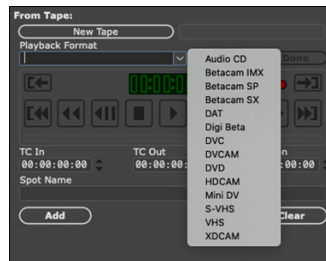


Figure 9.3 Format Menu

VTR Transport Control

If a VTR has been connected and configured in the system, the Workflow Client can control the tape transport remotely. It is possible to set IN and OUT points for the spot that should be ingested.

Add Spot

When IN and OUT have been set on the particular spot, by clicking Add, this spot will be added to the list of spots that will be (batch) ingested. These spots will therefore show up in section E of the interface.

Clear Data for Spot

This button will clear IN and OUT points within the Transport Control section.

Timecode and Progress Indicators





Whenever an Ingest is running, the big timecode counter will turn red (**Figure 9.4**), making users aware a clip is being recorded. The counter will display the elapsed duration of the ingest, the smaller counter in green will display the remaining time for this ingest.



Figure 9.4 Ingest Timecode

The bar below the timecode counter will give the user a graphical representation of the Ingest progress.

The colored LEDs below the timecode counter will indicate the status of the acquired resource (Ingest port) as follows:

-  **Port Cued**
-  **Port Busy**
-  **Port Ready/Finished**
-  **All Transactions Complete**

Source Selection

The Workflow Server can be connected to most video routers on the market and control crosspoint setting on these routing devices. In the Source selection a user may choose a signal source as it is available on the router. By clicking the Prepare button, the system will identify an available ingest resource (Input on a video-capture card) capable of handling that specific format and route the source signal to the output of the router which connects to that capture card input. This process is known as path-finding.

If the Workflow Server is not controlling a router, the actual ingest resources can also be defined as sources. As the system will not be able to manage the available ingest resources, it is now up to the users to choose the right ingest ports and manually apply the correct signals to these.

Destination Selection

The Destination Selection menu will show one or more presets, determining the storage (location) that will be used for the actual ingest and other specifics, such as codec, amount of audio channels etc. These presets are pre-configured on initial setup of the Workflow Suite.

Maximum Duration/Open Ended

Ingest duration can be set in the following ways:

- **Maximum Duration** — the ingest will automatically stop when it has reached the set maximum duration, if it was not stopped manually prior to that.
- **Open Ended** — the ingest would theoretically run indefinitely. As it is not desired in systems like this to let ingests run forever and because there is still a maximum file size that operating systems will be able to handle, the maximum ingest duration in open ended mode is limited to 12 hrs and 25 minutes.

When opening a clip that is still being ingested in the Clip Window, the final duration of the clip is being displayed and used for internal operations. Also in the Content Navigator and Content Browser, users will see the final duration, not the elapsed ingest duration.

Absolute Start Selection

An ingest operator can use the Absolute Start option to schedule the start of the ingest. When checking the appropriate check box in the interface and clicking Prepare, the user will see the Absolute Start Time dialog box open (**Figure 9.5**). Here the start date and time can be set for this ingest to start.

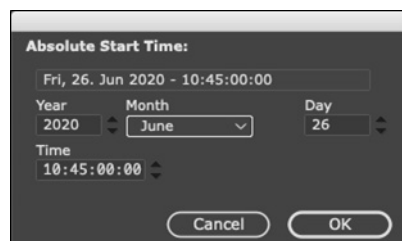


Figure 9.5 Absolute Start Time Settings

The Control interface will now show the scheduled start time in gray in the big counter and a button labeled Timer Override (**Figure 9.6**). The ingest will now start at the scheduled time or when the user overrides the scheduled start by clicking the Timer Override button.

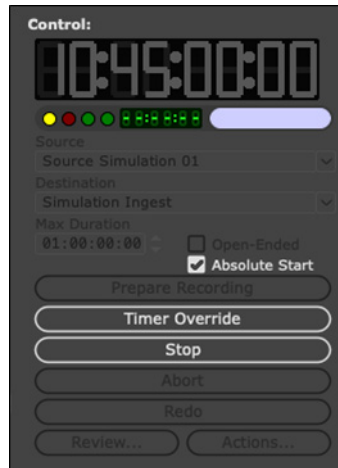


Figure 9.6 Control UI Changes

Prepare Recording

Reserves an ingest port for this task and sends a low-resolution stream to the Client application. Nothing is being recorded yet. It will make sure this port is not available for other recordings until this ingest is finished or unprepared.

Record

Starts the actual ingest. At that moment, a file is being written to the storage. The timecode field will show the timecode in red starting with 00:00:00:00. The ingest stream will be visible until the ingest finishes or is being stopped manually.

Stop

Stops the Ingest. It will end the recording, and it frees up the reserved port. It keeps any video recorded up to that point, and it will retain the settings, including source, destination, and clip name, in case the user wants to start another recording using the same settings.

Abort

This will stop the current ingest and delete all material ingested.

Redo

The Redo function enables users to redo an ingest. The material linked to the clip that will be redone will be deleted in this action.

- ★ Because Abort and Redo are destructive and will immediately delete ingested material, we strongly advise against using these options and alternatively create a new ingest and clean up the wrong ones afterwards.

Review/Actions

When an ingest has been running for approx. 20 seconds, the buttons Review and Actions will light up. Pressing the Review button will open the clip inside the clip window, where users can start browsing, adding metadata etc. Pressing the Actions button will reveal all the scripts and automations available for the system. This amount and kind of automations shown will depend on the configuration and user permissions.

Monitor Source and Other Monitor Source Selection

These two options are linked. Whenever a user selects the Monitor other Source check box, the system enables the user to select any of the available monitor streams. If the box is unchecked, the monitor will automatically follow the source monitor that has been selected.

Mode Selection

This menu will determine if the system is set for Tape or Live Ingest.

Multi

The Multi module enables users to organize and execute multiple live ingests from one single window and is used for ingesting multiple feeds from different sources at the same time.

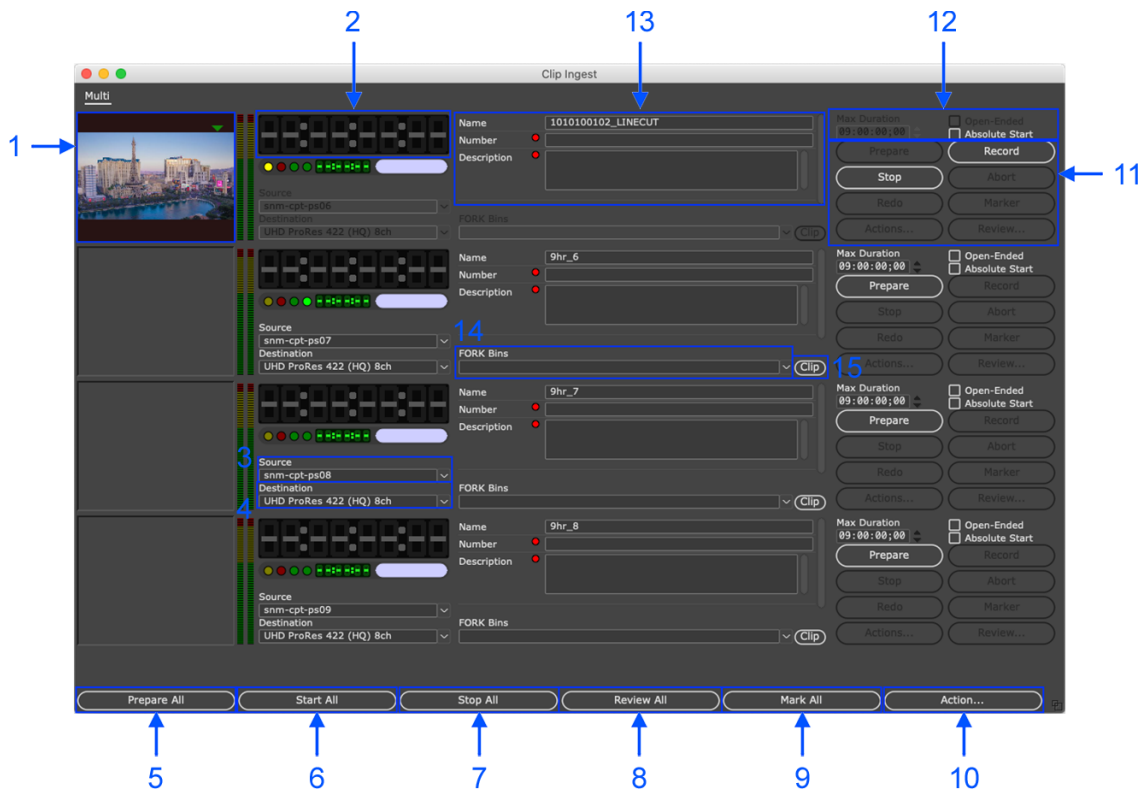


Figure 9.7 Multi Module User Interface

- | | | |
|-----------------------|----------------------|-------------------------------|
| 1) Video Monitor | 6) Start All Button | 11) Ingest Controls |
| 2) Timecode Counter | 7) Stop All Button | 12) Maximum Duration Settings |
| 3) Source Menu | 8) Review All Button | 13) Ingest Metadata Form |
| 4) Destination Menu | 9) Mark All Button | 14) Bins Menu |
| 5) Prepare All Button | 10) Action Button | 15) Clip Picker |

Video Monitor

This window will show the video stream coming directly from the ingest port.

Timecode Counter

This field will show the timecode when an Ingest is running. This timecode counter always starts with 00:00:00:00 and will NOT show time of day. However the time of day can be recorded as a separate timecode.

Source Menu

The Workflow Server can be connected to most video routers on the market and control crosspoint setting on these routing devices. In the Source selection a user may choose a signal source as it is available on the router. By clicking the Prepare button, the system will identify an available ingest resource (Input on a video-capture card) capable of handling that specific format and route the source signal to the output of the router which connects to that capture card input. This process is known as path-finding.

If the Workflow Server is not controlling a router, the actual ingest resources can also be defined as sources. As the system will not be able to manage the available ingest resources, it is now up to the users to choose the right ingest ports and manually apply the correct signals to these.

Destination Menu

The Destination menu will show one or more presets, determining the storage (location) that will be used for the actual ingest and other specifics, such as codec, amount of audio channels etc. These presets are pre-configured on initial setup of the Workflow Suite.

Prepare All

The Prepare All button sets all configured ingest channels in prepare mode. This button is only available if the facility has a license for it and the user has the permission to use it.

Start All

The Start All button starts all ingests that have been set in prepare mode. This button is only available if the facility has a license for it and the user has the permission to use it.

Stop All

The Stop All button stops all ingests shown in the same window. This button is only available if the facility has a license for it and the user has the permission to use it.

Review All

The Review All will open all clips that are still ingesting and shown in this window or have been ingested and are still available in the individual channels. This button is only available if the facility has a license for it and the user has the permission to use it.

Mark All

The Mark All button enables users to add a marker on all ingests at the same time. This button is only available if the facility has a license for it and the user has the permission to use it.

Action

The Action button enables users to trigger an action for all feeds that are ingesting. This button is only available if the facility has a license for it and the user has the permission to use it.

Ingest Buttons

Prepare Recording

Reserves an ingest port for this task and sends a low-resolution stream to the Client application. Nothing is being recorded yet. It will make sure this port is not available for other recordings until this ingest is finished or unprepared.

Record

Starts the Ingest. At that moment, a file is being written to the storage. The timecode field will show the timecode in red starting with 00:00:00:00. The ingest stream will be visible until the ingest finishes or is being stopped manually.

Stop

Stops the Ingest. It will end the recording, and it frees up the reserved port. It keeps any video recorded up to that point, and it will retain the settings, including source, destination, and clip name, in case the user wants to start another recording using the same settings.

Abort

Cancel the recording, delete any material recorded, and clear the settings. It will not save any recordings.

Redo

Redo the Ingest with the chosen source and destination.

Marker

The Marker button enables users to create markers within this clip.

Actions

The Actions button enables users to trigger an action (script) on this clip.

Review

This function is available approximately 15 seconds after the Ingest was started. The review will load the clip up to the point already ingested, and enables the user to review it and start adding metadata.

Maximum Duration

Ingest duration can be set in the following ways:

- **Maximum Duration** — the ingest will automatically stop when it has reached the set maximum duration, if it was not stopped manually prior to that.
- **Open Ended** — the ingest would theoretically run indefinitely. As it is not desired in systems like this to let ingests run forever and because there is still a maximum file size that operating systems will be able to handle, the maximum ingest duration in open ended mode is limited to 12 hrs and 25 minutes.

When opening a clip that is still being ingested in the Clip Window, the final duration of the clip is being displayed and used for internal operations. Also in the Content Navigator and Content Browser, users will see the final duration, not the elapsed ingest duration.

Absolute Start Selection

The Absolute Start selection acts as a simple scheduled event when a user wants to delay the start of an ingest until a specific time in the future. When a user clicks Prepare, with Absolute Start selected, the Absolute Start Time dialog box (**Figure 9.8**) opens prompting the user to enter the date and time the ingest should start.

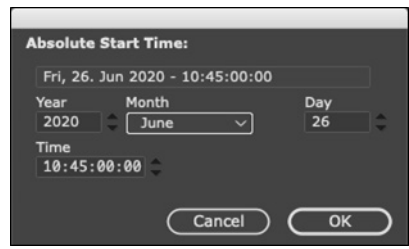


Figure 9.8 Absolute Start Time Settings

- ★ When an Ingest is in Prepare mode or has been started, the user can not close the Ingest window, nor close the Client application. As long as an ingest channel is in Prepare mode, the port is being reserved and is not available for other ingests.

Ingest Metadata Form

The Ingest Metadata and Properties differ per Workflow Suite installation. The Metadata Properties in the Client are specific for the facilities' workflow.

- ★ Please consult your administrator if you have any questions regarding these properties.

Bins

The Bin tool enables users to Ingest to a specific Bin. If this workflow is supported in the facility, users may click the button and choose a Bin to Ingest in. It will only enable the user to pick bins with the Ingest Selection check box selected.

Multi Ingest Window Resizing

The Multi Ingest window enables the user to control multiple Ingests at the same time. To adjust the number of ingest rows displayed in the window, resize the window, the amount of Ingest channels displayed will dynamically change.

The amount of ingests that can be done at the same time depend on the Ingest ports that are available in the facility. Users will see a message when trying to do an ingest but exceeded the maximum amount of available resources.

- ★ It is possible that the system administrator has limited the maximum amount of Ingest ports available for specific groups.

Adding Markers During Ingest

Users can add Markers to a clip while it is being ingested.

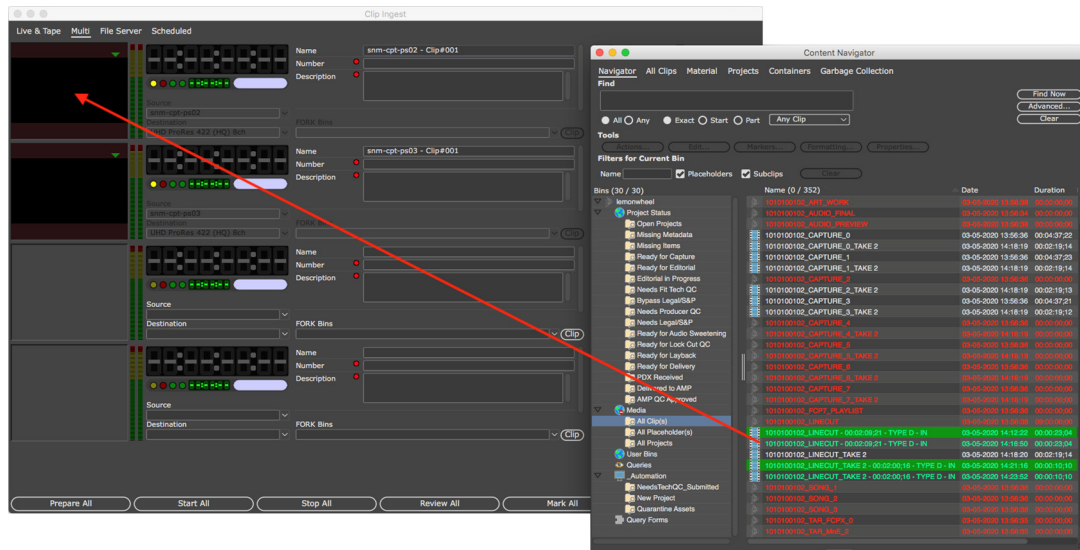
To add markers to a clip during ingest

1. Start a clip ingests
2. Use the **Video Monitor** and **Timecode Counter** to monitor your clip ingest for the location to place a marker.
3. At a point in the clip that you want to add a maker, click **Marker** in the **Ingest Controls** section or **Mark All** at the bottom of the window.
4. Click **OK** to save the marker and close the window.

Placeholder Ingest

There are several ways to Ingest directly into a Placeholder.

- **Select a Placeholder** — In the Content Navigator, right-click the placeholder to ingest into and use the Shortcut menu to select Ingest Live & Tape.
- **Drag and Drop a Placeholder** — drag the placeholder to ingest into from the Content Navigator into the Video Monitor in the Multi tab. You can also use the method with the Single Ingest window (Live & Tape).



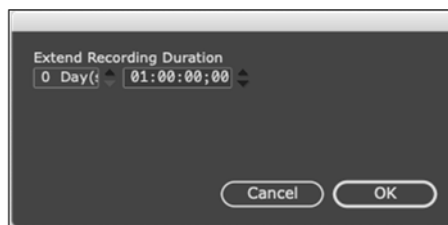
Extending an Ingest

A user is able to extend the duration of the ingest after it's been started. This can be done for ingests that have been started in the Multi tab.

To extend an ingest

1. While an ingest is running, click on the grayed out time setting in a **Max Duration** box.

The **Extend Recording Duration** dialog box opens.



2. Use the **Day** and **Time** controls to extend the original recording duration.
3. Click **OK**.

The selected **Max Duration** box displays the extended recording duration. After extending a recording duration, it ca not be changed back to the original recording duration. However, users can always manually stop the ingest.

Scheduled Ingest Events

The Scheduled (**Figure 9.9**) option enables users to set up a (recurring) schedule of ingests that should happen at specific days and times. These ingests will be managed by the Server and not by the Client, meaning that these Ingests are independent from the actual client application.

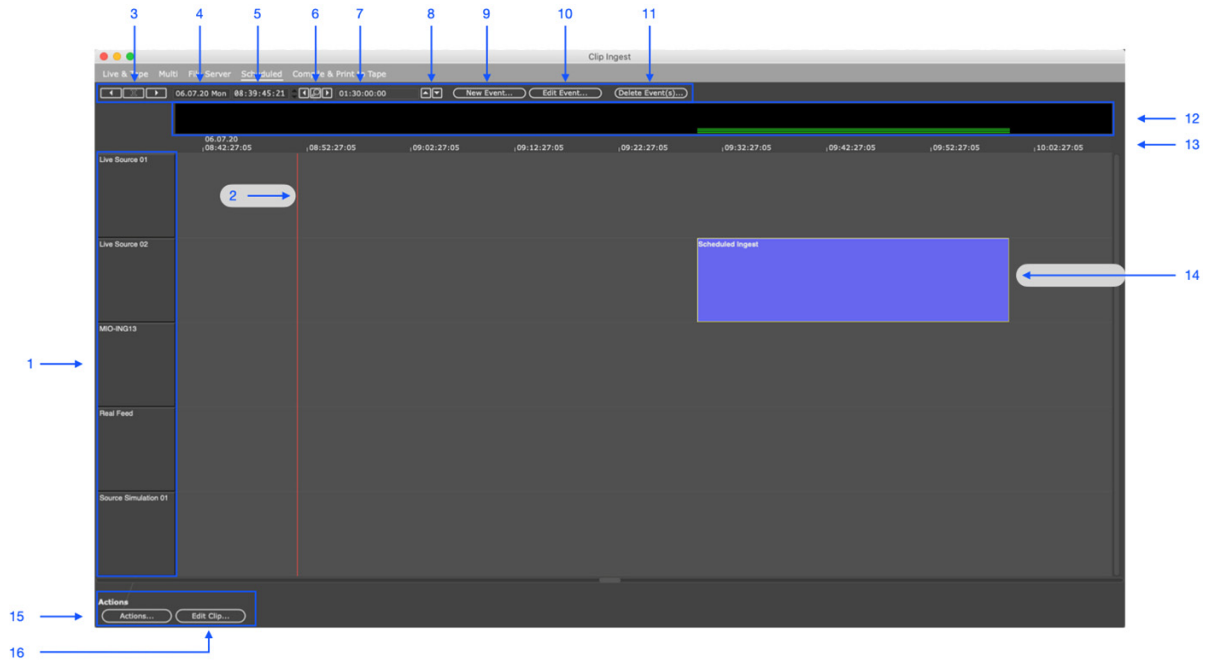


Figure 9.9 Scheduled Module User Interface

- | | | |
|---------------------------|---------------------------|--------------------------------------|
| 1) Sources | 7) Duration In Display | 12) Resources Availability Indicator |
| 2) Current Time Indicator | 8) Vertical Zoom | 13) Time Indicator |
| 3) Time Scroller | 9) Create New Event | 14) Event |
| 4) Start Date Display | 10) Edit Existing Event | 15) Action Menu |
| 5) Start Time Display | 11) Delete Existing Event | 16) Edit Clip |
| 6) Zoom Rate/Default | | |

Creating a New Ingest Event

A user can use the New Scheduled Ingest Event dialog box (**Figure 9.10**) to create a new ingest event.

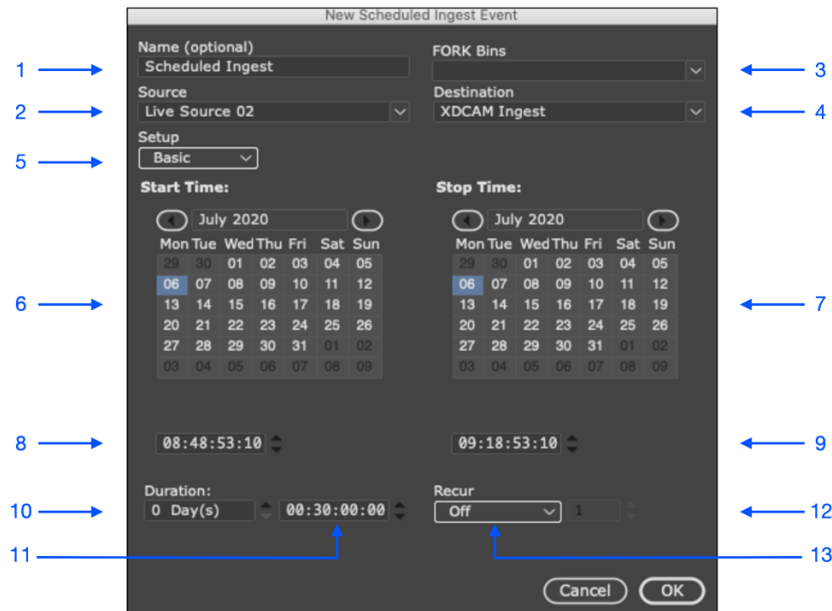


Figure 9.10 New Scheduled Event Dialog Box

- | | | |
|--------------------------|------------------------|----------------------------|
| 1) Name of the Clip | 6) Start Date Calendar | 10) Duration in Days |
| 2) Source Selection | 7) End Date Calendar | 11) Duration in Time |
| 3) Bin Selection | 8) Start Time | 12) Recurring Event Option |
| 4) Destination Selection | 9) End Time | 13) Event Recurrence Count |
| 5) Setup Selection | | |

To create a new ingest event

- In the **Scheduled** window, click **New Event**.
The **New Scheduled Event** dialog box opens.
- In the **New Scheduled Event** dialog box, enter a name for the ingested clip in the **Name** box.
A clip name is optional.
- Use the **Source** list to select a source for the ingest.
- Use the **Bins** and **Destination** lists to select a destination in which to store the ingested clip.
A Bin is option for the ingested clip destination.
- In the **Start Time** section, use the **Calendar** to select the start date for the ingest event.
- Below the **Start Time Calendar**, use the **Time** box to enter or select the start time for the ingest event.
- In the **Stop Time** section, use the **Calendar** to select the stop date for the ingest event.
- Below the **Stop Time Calendar**, use the **Time** box to enter or select the stop time for the ingest event.

The **Duration** boxes display the duration set by the elected **Start Time** and **Stop Time**. If required, a user can edit the set **Duration**. Editing the **Duration** will modify the **Stop Time** accordingly.

9. For recurring ingest events, complete the following steps to set the recurrence interval:
 - a. Use the **Recur** list to select when to repeat the ingest even. The available options are as follows:
 - **Hourly**
 - **Daily**
 - **Weekly**
 Select **Off** to turn recurrence off.
 - b. In the box to the right of the **Recur** list, enter or select the amount of recurring events.
10. Click **OK**.

The event is added to the **Scheduled** window.

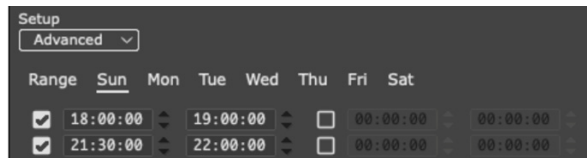
Advance Scheduling Options

There are also advanced options for ingest events that enable users to create a more flexible schedule. Within the Advanced schedule setup, users can create more advanced schedules, especially for recurring recordings. By defining a date range, the schedule will repeat within the range specified. Exceptions can be set, to prevent scheduled recordings to take place during special days. The system bases these dates on the Gregorian calendar.

To set advanced option for an ingest event

1. Create a new ingest event or edit an existing ingest event.
2. Use the **Setup** list to select **Advanced**.

The **Advanced** date settings open.



3. Use the **Advanced** date settings to set up multiple events per weekday by entering the start and end time and activating that event by checking the box.

Editing an Event

By clicking the Edit Event users can edit the currently selected event. Should the event have started already, users can extend the event. Events can not be made shorter.

Deleting an Event

An event can only be deleted if it has been scheduled but has not yet started or after it has finished. If an event gets deleted before the ingest took place, the system will ask if the placeholder clip that was created for the scheduled ingest should be deleted as well (**Figure 9.11**).

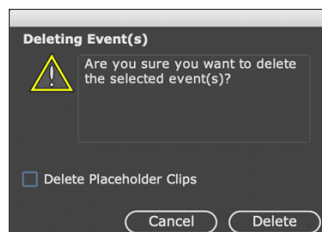


Figure 9.11 Delete Placeholder Clips

If the event gets deleted after the ingest stops, the ingested clip will not be deleted.

Ingest Status and Options

The actual event shows up in blue inside the Scheduled Ingest window. Shortly before the time reaches the start of the ingest event (30 seconds prior), the event will show up in orange. When the event starts, it will turn red (**Figure 9.12**).

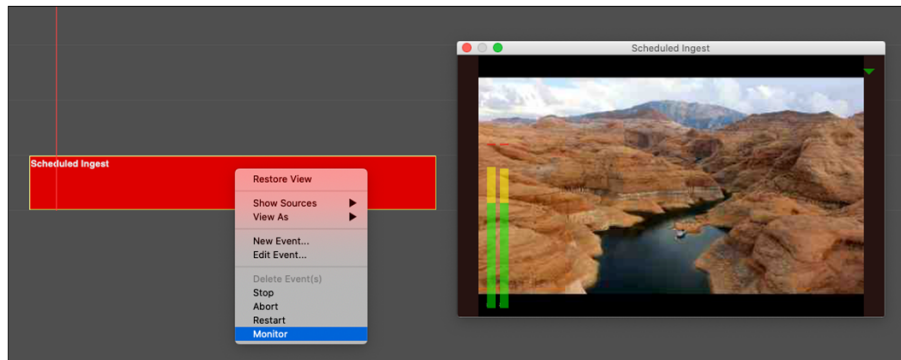


Figure 9.12 Selected Scheduled Event

Right-clicking in the scheduled ingest window will open a Shortcut menu with the following additional options:

- **Restore View** — reset the view and zoom factors to default.
- **Show Sources** — by default all available sources will be shown in this window, unless they are disabled here.
- **View As** — view as Timeline or List.
- **New Event** — create a new ingest event.
- **Edit Event** — edit the selected ingest event.
- **Delete Event** — delete the selected ingest event.
- **Stop** — stop the selected event.
- **Abort** — abort the selected event.
- **Restart** — restart the selected event.
- **Monitor** — open a streaming video window for the selected source.

Ingest Monitor

In order to view the status of the different resources (video cards) in the system, the Workflow Client comes with a module called Ingest Monitor.

When opening this window, a user can check currently running transcoding jobs (ingest or playback) on video cards, as well as recent jobs executed.

This chapter discusses the following topic:

- The User Interface

The User Interface

In order to view the status of the different resources (video cards) in the system, the Workflow Client comes with a module called Ingest Monitor (**Figure 10.1**). When opening this window, a user can check currently running transcoding jobs (ingest or playback) on video cards, as well as recent jobs executed.

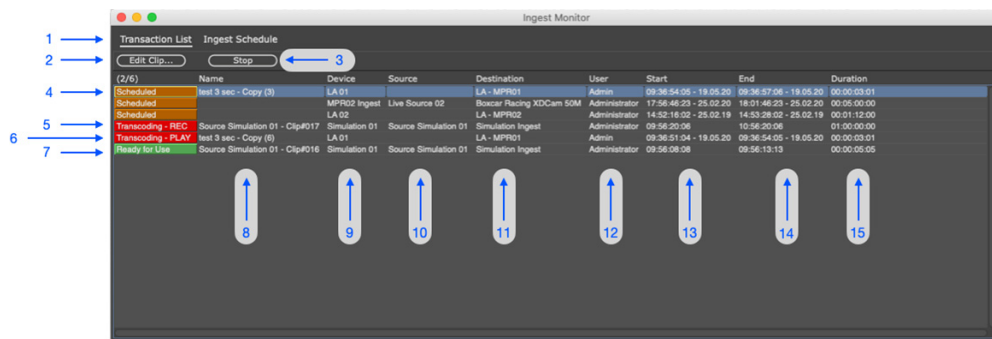


Figure 10.1 Ingest Monitor Module User Interface

1) View Selection	6) Playback Job Running	11) Destination Selected
2) Edit Selected Clip	7) Finished Job - Ready to Use	12) User Initiating the Selected Job
3) Stop Selected	8) Clip Name	13) Start Time/Date of the Selected Job
4) Job Scheduled	9) Device Used	14) Stop Time/Date of the Selected Job
5) Recording Job Running	10) Source Selected/Recorded	15) Duration of the Selected Job

A user can see all the current and scheduled transcoding jobs. Transcoding in this particular context means transcoding from or to a video stream. Users are also able to select a specific transaction (job) and stop the transaction or edit the clip that is currently being transcoded or done transcoding.

The Ingest Monitor window also gives the user information about the specific resources scheduled, currently in use or those that have been used recently. The source column will show which source has been selected for an ingest, the destination column will show the destination (ingest profile) used. When playing back there is no source specified, the destination will reflect the playback resource used.

The Ingest Monitor window is extremely helpful when a user needs to free up resources that got stuck. If for whatever reason a port is set to ingest but did not get released, it is possible to free it up using this window. The Ingest Monitor will clean itself up regularly.

Live Assist Monitor

The Live Assist module enables users to play media from the Workflow Suite out on air.

This chapter discusses the following topics:

- Opening the Live Assist module
- Rundown Mode
- Shotbox Mode

Opening the Live Assist module

Once a user logged on, the Live Assist Module can be selected from the Workflow Client menu.

- ★ If the Modules menu (**Figure 11.1**) does not contain the Live Assist command, either the facility did not obtain a license for the module or the user does not have permission to access it.

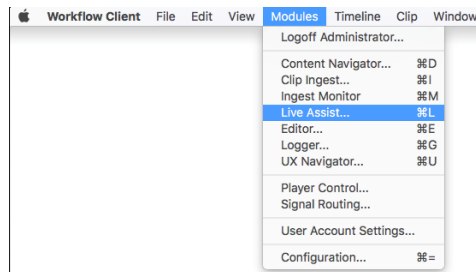


Figure 11.1 Live Assist Command on the Modules Menu

When opening the Live Assist module, users will be able to select the appropriate Control Room configuration. This configuration is specific to the facility and can differ between facilities.

- ★ Individual control rooms should only be opened on one Workflow Client at a time. Trying to open a control room that is already active elsewhere, will result in a warning that the user is about to take over control over that particular control room and overriding another Workflow Client user.

It is possible to manage multiple control rooms from one client. In that situation, the user has to open multiple Live Assist windows from the Workflow Client Menu and choose another control room for each Live Assist Module. In general, there are two modes of operation within Live Assist: standard rundown mode or video Shotbox mode.

Rundown Mode

Figure 11.2 shows the Live Assist window in Rundown mode. The example control room shows a 2-channel Live Assist set up. The channels within one control room can be set to represent A-B mode, which means that clips added to the specific channels will be cascaded depending on the playout order. It is also possible to configure the channels as independent channels. In that case, there will not be any cascading within the available playback channels.

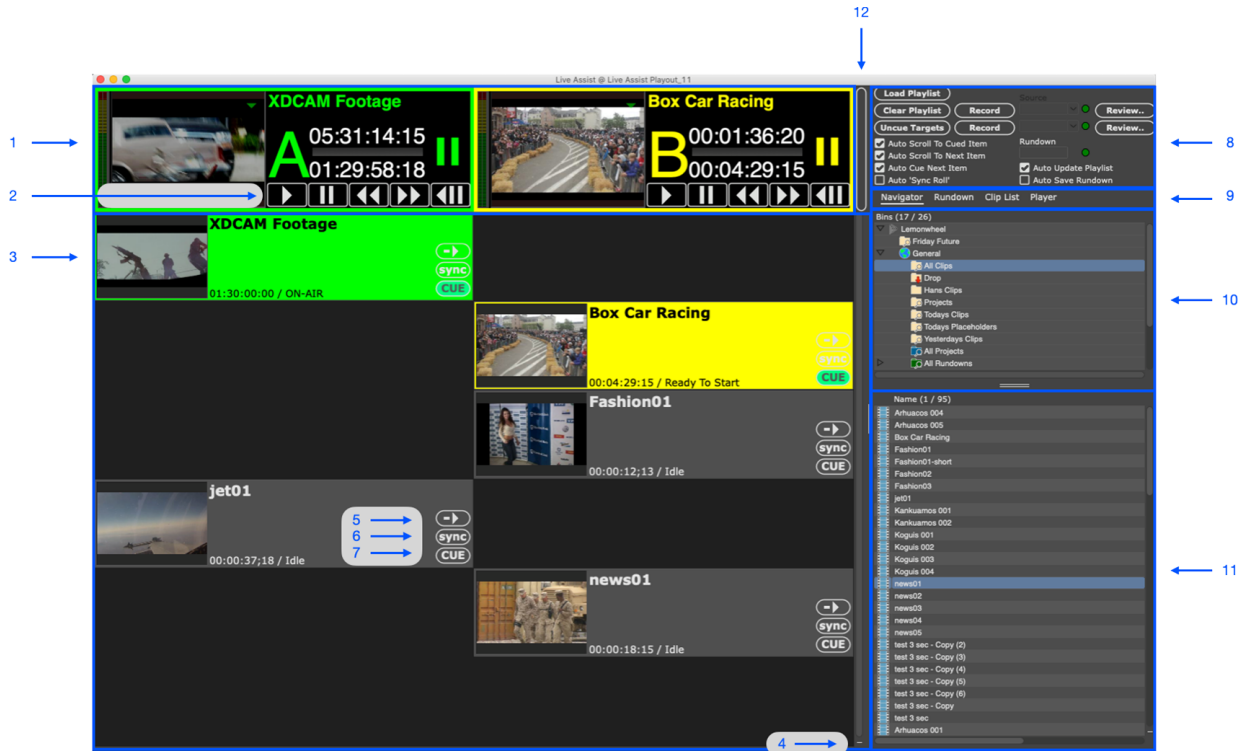


Figure 11.2 Live Assist Window Rundown Mode User Interface

- | | | |
|-------------------------------------|-----------------------------|--------------------------------------|
| 1) Channel Preview and Control Area | 5) Playback Mode | 9) View Section (Navigator Selected) |
| 2) Transport Controls | 6) Enable Sync Play | 10) Content Navigator Bins |
| 3) Clip Currently in Play Mode | 7) Cue Clip | 11) Bin Content |
| 4) Delete Selected Item | 8) Playlist Control Section | 12) View Mode Selector |

Channel Preview and Control




When a clip is cued, the first frame or a thumbnail will be shown in the channel preview window. Should the system be configured to show actual playback of video, this preview window will show the actual clip playing. The title on the right hand top of the window represents the clip name, below that the channel name/number is displayed. The top timecode window shows the current clip timecode, the lower timecode will count down to zero. The transport control buttons enable Play, Pause, Rewind, Fast Forward and Recue. When pressing the ALT key and pushing Rewind or Fast Forward, the player will step frame by frame.

Clip

When clicking on a clip in the play list, a special clip window will open, enabling users to edit the metadata of the clip. Users are also able to modify In and Out-points of this clip. These points will only be applied to the clip as long as it is in the active playlist. If a user wants to make permanent changes to the clip, holding ALT when clicking the clip will open the regular clip window. Any changes made to the clip in this mode will be permanently applied to the clip.

Playback Mode

Live Assist contains the following different playback modes:

-  **Normal** — the clip plays once.
-  **Back-to-Back** — clips seamlessly start playing after the previous clip in the same column ends.
-  **Loop** — the clip will automatically start playing back again when it reaches the end.

Sync Mode

If a user wants to play back clips from multiple columns at the same time, sync mode should be selected on the clips that should start simultaneously. These clips will all need to be at the same line. Then the user will need to cue all the clips that should start in sync. By clicking Start on any of the channels, all channels will start playing back. If an individual channel stops, the remaining channels will keep playing until the clip is finished.

- ★ Pressing the ALT key while dropping a clip in the channel column will enable the user to place the clip on the same line as the clip it needs to sync play with, even if the control room is set to cascade between the different channels.

Force Cue

In extraordinary circumstances it is possible a clip can not be cued (for example, the port is currently being used by another user). In this case, pressing ALT and the CUE button will force unload any clips that may be in the current port and will load just the clip the user selected.

Playlist Control Section

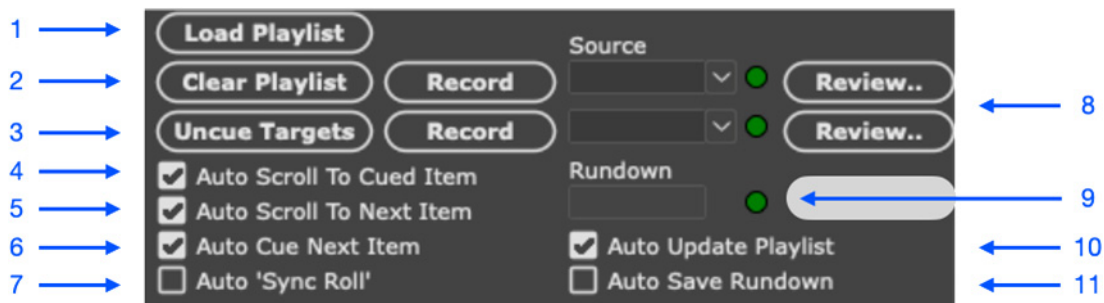


Figure 11.3 Playlist Control Section

- | | | |
|--|--|---|
| 1) Load Playlist — when a rundown is selected, this will load the rundown in the control room. | 2) Auto Scroll to Next Item — scroll the window automatically to the next item in the playlist. | 3) Rundown — this field indicates the current rundown loaded and active. |
| 4) Clear Playlist — clear all clips loaded in the columns of this control room. | 5) Auto Cue Next Item — when a clip finishes, automatically cue the next clip in the same column. | 6) Auto Update Playlist — when connected to an NCRS, enable updates to be reflected in the playlist immediately. |
| 7) Uncue Targets — uncue all currently cued clips in all channels. | 8) Auto 'Sync Roll' — any clip that was cued and is on the same line will automatically be sync played with the clip that is started. | 9) Auto Save Rundown — changes made in the actual playlist will be reflected in the selected rundown. |
| 10) Auto Scroll to Cued Item — scroll the window automatically to the next cued item in the playlist. | 11) Ingest — the Live Assist window also enables the setup of two ingest channels, as explained earlier in this guide. | |

Toolbar

The toolbar below the Playlist Control Section enables the user to use multiple views and tools. The available views and tools are as follows:

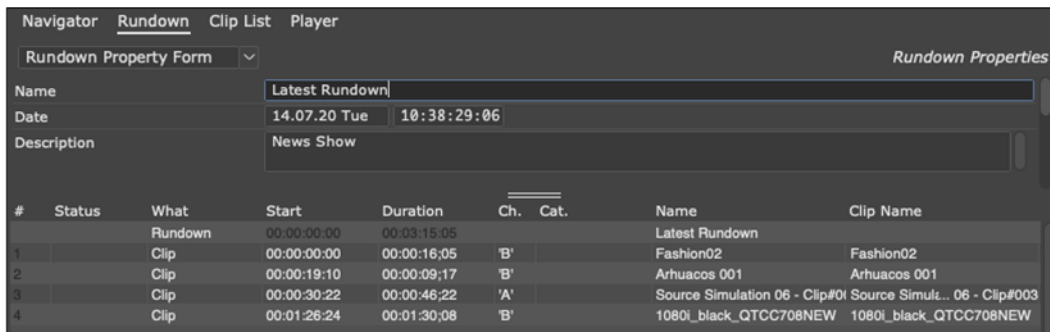
- **Content Navigator**
- **Rundown View**
- **Clip List View**
- **Player Control**

Content Navigator

For information about the Content Navigator section, refer to the chapter “**Content Navigator**” on page 5–1.

Rundown

A rundown is a collection of clips in a specific order and assigned to a specific Live Assist playback channel. The Rundown windows (**Figure 11.4**) shows the content of the selected rundown. The Rundown Property Form is customizable and will show specific metadata fields to describe the selected rundown.



The screenshot shows the 'Rundown' tab in the software interface. At the top, there are tabs for 'Navigator', 'Rundown', 'Clip List', and 'Player'. Below the tabs is a 'Rundown Property Form' with the following fields:

- Name: Latest Rundown
- Date: 14.07.20 Tue 10:38:29:06
- Description: News Show

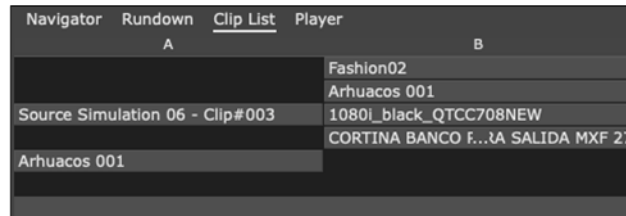
Below the property form is a table with the following columns: #, Status, What, Start, Duration, Ch., Cat., Name, and Clip Name.

#	Status	What	Start	Duration	Ch.	Cat.	Name	Clip Name
		Rundown	00:00:00:00	00:03:15:05			Latest Rundown	
1		Clip	00:00:00:00	00:00:16:05	'B'		Fashion02	Fashion02
2		Clip	00:00:19:10	00:00:09:17	'B'		Arhuacos 001	Arhuacos 001
3		Clip	00:00:30:22	00:00:46:22	'A'		Source Simulation 06 - Clip#01	Source Simult... 06 - Clip#003
4		Clip	00:01:26:24	00:01:30:08	'B'		1080i_black_QTCC708NEW	1080i_black_QTCC708NEW

Figure 11.4 Rundown Window

Clip List

The Clip List window (**Figure 11.5**) is a simplified representation of the current loaded clips in the Live Assist Playlist.



The screenshot shows the 'Clip List' tab in the software interface. It displays two columns, labeled 'A' and 'B', containing the following clip names:

A	B
	Fashion02
	Arhuacos 001
Source Simulation 06 - Clip#003	1080i_black_QTCC708NEW
	CORTINA BANCO F...A SALIDA MXF 27
Arhuacos 001	

Figure 11.5 Clip List Window

Player

By selecting the Player window (**Figure 11.6**) and selecting a Live Assist playback channel (click on the actual playback window), the user is able to control playback of that particular clip through the transport controls shown.



Figure 11.6 Player Window

- ★ After a user takes over control of the playback channel through the Player window, the normal behavior (back-to-back or loop playback) will change. In order to re-enable back-to-back and loop playback functions on the playlist, the user must re-cue the clip(s) that should be played back.

View Mode Selector

Clicking the View Mode Selector bar (Item 12 in “Live Assist Window Rundown Mode User Interface” on page 11–3) will toggle between the default mode (**Figure 11.7**) and full screen mode (**Figure 11.8**).

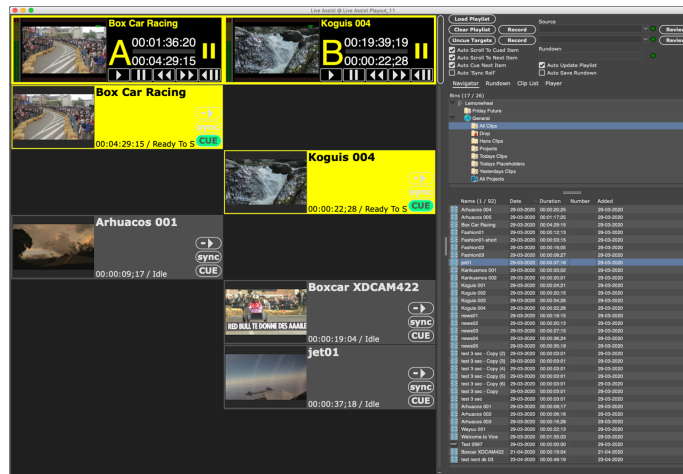


Figure 11.7 Default View

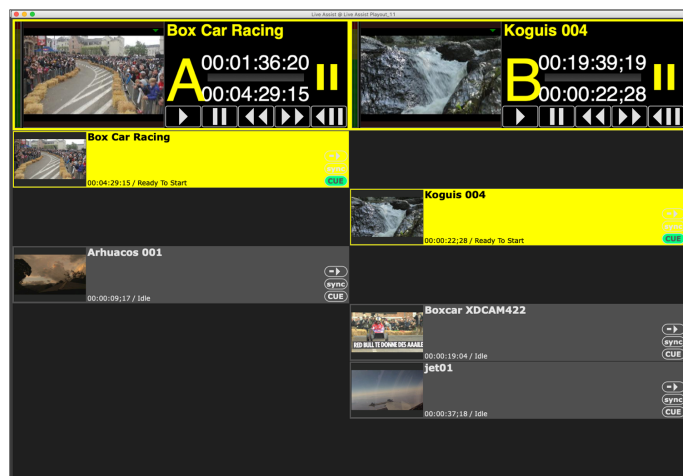


Figure 11.8 Full Screen View

Shotbox Mode

Figure 11.9 shows the Live Assist window in Shotbox mode. In this mode, Live Assist will not follow the order of a playlist, but rather present all the clips that are candidate for playback and will enable the user to quickly and easily cue up any clip in any of the available channels. As many of the sections have already been explained in the previous section, the following section will only cover the additional features and functions.

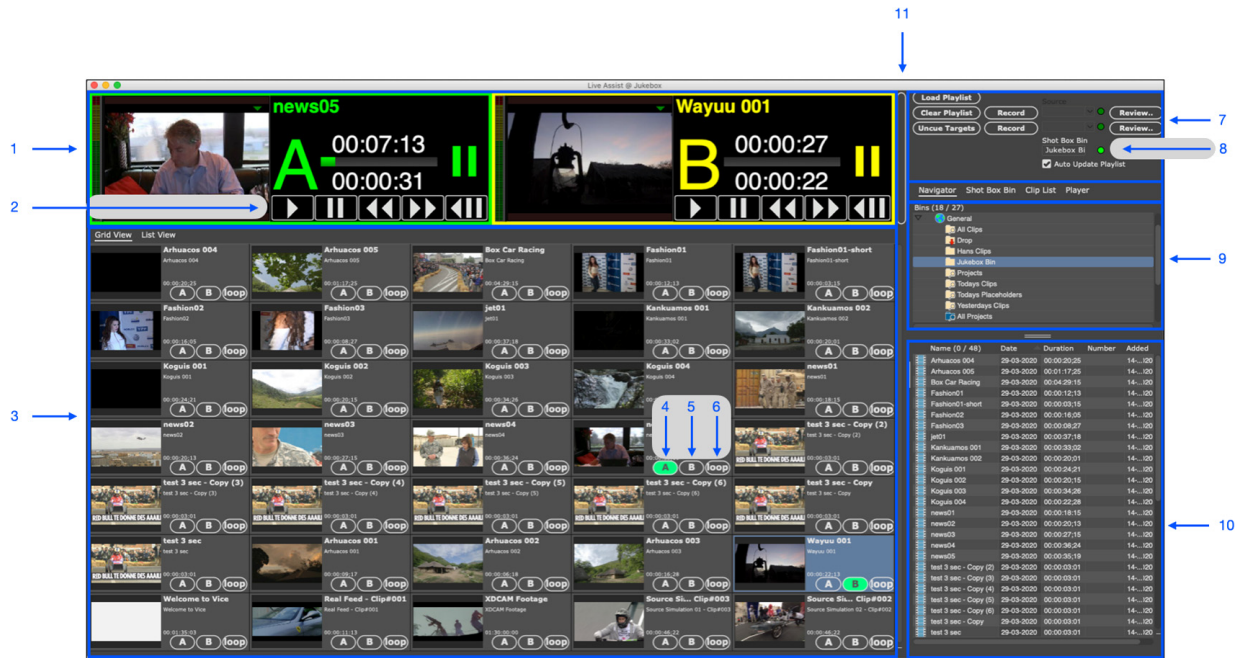


Figure 11.9 Live Assist Window Shotbox Mode User Interface

- | | | |
|-------------------------------------|-----------------------------|---------------------------|
| 1) Channel Preview and Control Area | 5) Cue On Channel B | 9) Content Navigator Bins |
| 2) Transport Controls | 6) Select Play Mode | 10) Bin Content |
| 3) Clip Collection | 7) Playlist Control Section | 11) View Mode Selector |
| 4) Cue On Channel A | 8) Shot Box Bin Selection | |

A user can select a bin that contains all the clips that will be candidate for playback. Upon selecting, all clips will load into the clip collection window. All clips will have Cue buttons for all playback channels available in the Live Assist control room setup. When clicking the cue button on a clip, it will be loaded in the appropriate Playlist and is ready for playback.

To enable changes to the bin being reflected in the clip collection window, select the Auto Update Playlist check box. By sorting on different columns and reloading the Playlist (Load Playlist button) the order of the clips in the clip collection section can be manipulated.

Roll-Over Window

Should the bin selected as the source for the shot box contain more clips than can be displayed inside the Live Assist window, a Roll-Over window (**Figure 11.10**) will be displayed. This window will contain all the clips would not fit in the actual clip collection section.



Figure 11.10 Roll-Over Window

By changing the sorting of the clips in the bin, the user can manipulate which clips would be in the actual clip collection section and which will be rolled over.

- ★ Because the system has been designed to enable full accessibility to clips to be played out, the main window (clip collection section) does not have any scrollbars. The Roll-Over window will have scrollbars, enabling even big collections of clips to be loaded into the Shotbox.

Logger

The Logger module enables users to create markers and subclips within a user-friendly interface. The logger interfaces can be configured and modified to suit individual needs.

This chapter discusses the following topics:

- Opening the Logger Module
- Logger Window User Interface
- Player/Review Section
- Marker Section
- Logger Section
- Clip, Subclip, and Marker Section

Opening the Logger Module

Once a user logged on, the Live Assist Module can be selected from the Workflow Client menu.

- ★ If the Modules menu (**Figure 12.1**) does not contain the Logger command, either the facility did not obtain a license for the module or the user does not have permission to access it.

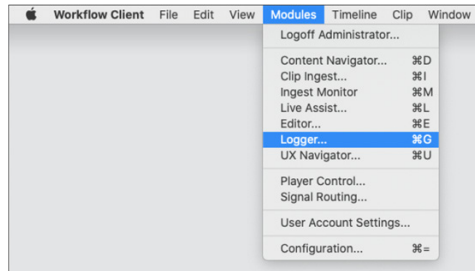


Figure 12.1 Logger Command on the Modules Menu

From the window that opens (**Figure 12.2**), select a logger setup. For example, select Soccer Logger and then click OK.

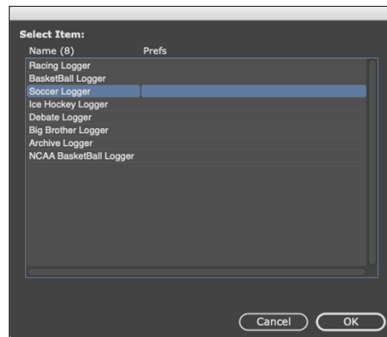


Figure 12.2 Logger Setup Selection

Logger Window User Interface

Figure 12.3 shows an example Logger window layout. Logger windows are configured and tailored to meet the specific needs and requirements of a facility.

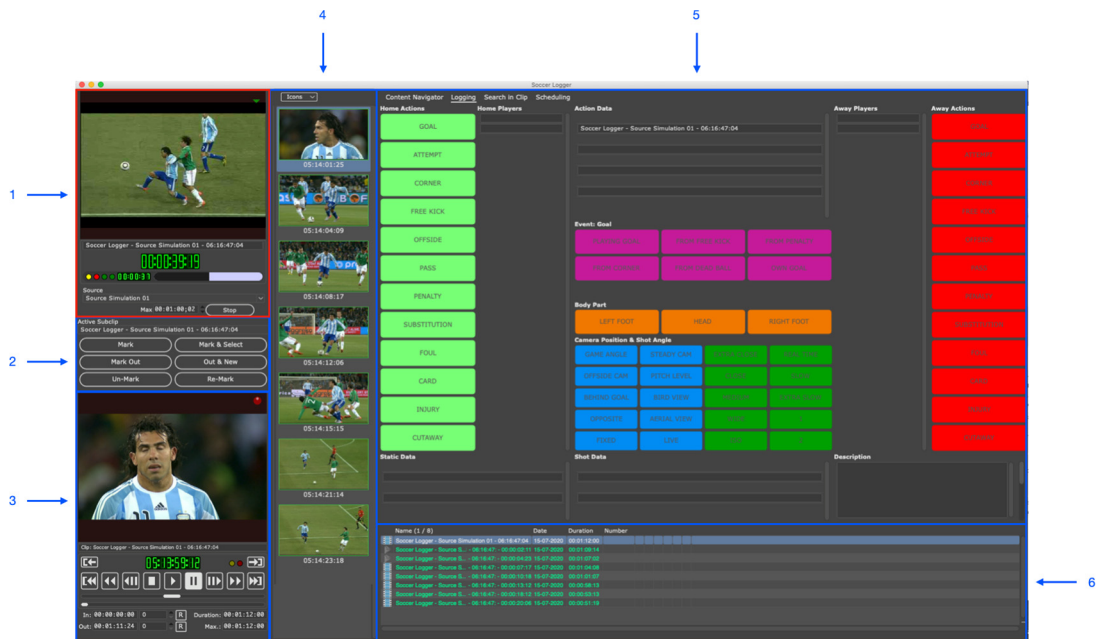


Figure 12.3 Live Assist Window Rundown Mode User Interface

- | | | |
|---------------------|--------------------------|-----------------------------------|
| 1) Recorder Section | 3) Player/Review Section | 5) Logger Section |
| 2) Marker Control | 4) Marker Section | 6) Clip, Subclip, and Marker List |

Recorder Section

The logger can be used to live log an incoming source, create subclips and markers, and manipulate metadata in real time as the material gets created in the system. If the recording window has a red border (Figure 12.4), this stream is going to be used as a source for the logging.

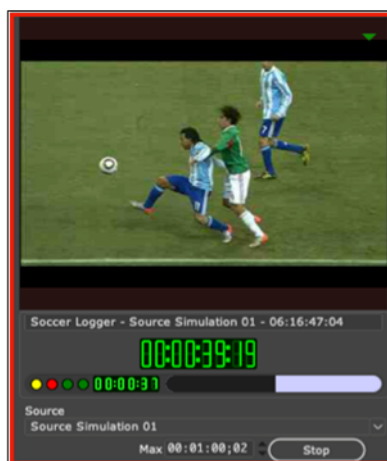


Figure 12.4 Logging Source Stream

Source Menu

Users can select different ingest sources from the Source menu (**Figure 12.5**).



Figure 12.5 Example Logger Source Menu

★ It is not possible to select different Destinations, these are pre-configured in the set up of the logger preset.

Maximum Duration

The Maximum Duration field enables the user to enter the duration for this specific recording. The logger module does not allow open ended ingests, a user will need to enter a specific duration. Users need to set this time with much extra as this time can not be extended. A recording can always be stopped ahead of the maximum duration set.

Record Button

Clicking the Record button starts the ingest of the selected source. There is no Prepare function in the Logger module, streaming video will only be available shortly after the actual recording started. The Timecode field will show the timecode in red starting with 00:00:00:00 as soon as the recording is running.

Marker Control

The Marker Control section contains the following buttons to create and manage markers:

- **Mark** — create a new logger event.
- **Mark Out** — sets or resets the Out point of the current subclip at the playhead position.
- **Un-Mark** — remove the existing logger event.
- **Mark & Select** — create a new logger event and load it into the Player window.
- **Out & New** — sets or resets the Out point of the current subclip at the playhead position and creates a new event.
- **Re-Mark** — resets the In point of the current subclip at the playhead position.

Player/Review Section

The Player/Review section is used to review created subclips. Users can toggle back and forth between the Recorder and Player and log events in both places. The Player has the same look and functionality as the Player explained in chapter “**Working with Clips**” on page 7–1.

When this Player window is highlighted with a red border (**Figure 12.6**), any log entries created will link to the clip being played in this player window. Underneath the video part of the Player, users can identify which (sub)clip they are currently working on.

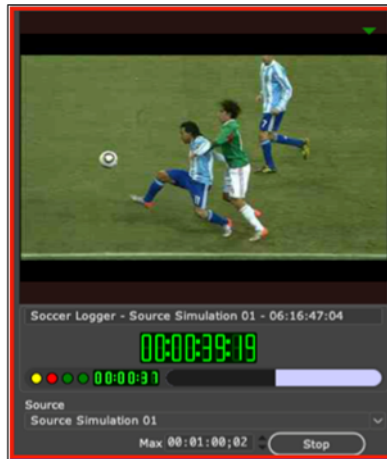


Figure 12.6 Log Entries Link to the Playing Clip

Marker Section

Depending on the configuration, part of the interface could be configured to show subclip markers. Selecting any of the markers will move the playhead of the Player. Double-clicking a marker will open a new clip window, where users can view and edit the subclip in the same way as described earlier in this guide.

Logger Section

Depending on the logger configuration, different buttons within the Logger section can have different functions and actions linked. Buttons can be used to set metadata, create subclips, markers, and trigger scripts. When creating subclips, buttons can be configured to incorporate offsets for the In and Out points set, creating subclips with more handles for later post-production. Buttons can also be configured to bring the focus to different buttons.

The logger section can also hold metadata fields, these can either be configured to show pre-defined values or be used to fill in extra data by users. The Logger module can be flexibly configured to meet facility requirements.

Clip, Subclip, and Marker Section

Any clips, subclips, and markers created through the Logger window (or already available when loading existing clips into the Player window) will be visible in this section. Double-clicking an entry here will open a regular clip window, enabling users to edit the clips, subclips and markers as described earlier in this manual.

Keyboard Shortcuts

Users can use keyboard shortcuts in Workflow Client modules to quickly execute module commands.

This chapter discusses the following topic:

- Keyboard Shortcut Setup

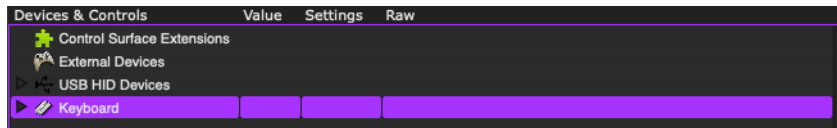
Keyboard Shortcut Setup

For each Workflow Client module, users can setup keyboard shortcuts to quickly execute module commands.

To setup keyboard shortcuts for a module

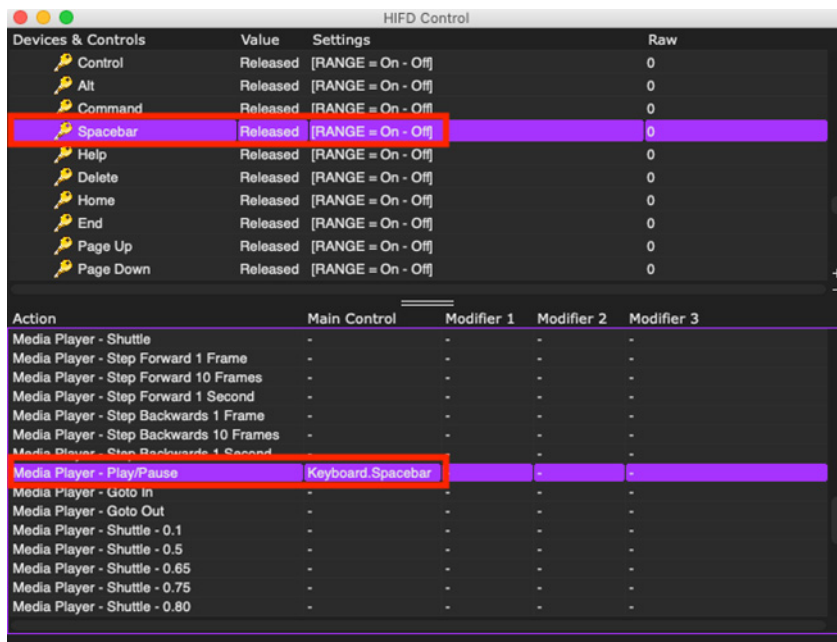
1. In the **Workflow Client**, open the module for which to assign keyboard shortcuts.
2. Use the **Window** item in the menubar to select the **HIFD Control** option.

The **HIFD Control** window opens. The top half of the **HIFD Control** window displays the connected devices and the possible keyboard keys that can be used to control actions within the module. The lower half of the window displays the available actions.



3. In the **Devices & Controls** column, expand the **Keyboard** node.
4. In the expanded **Keyboard** node, select the **keyboard key** to use as the shortcut for a command.
5. In the lower half of the **HIFD Control** window, use the **Action** column to select the **action** to execute with the selected **keyboard key**.
6. Double-click in the **Main Control** column associated with the selected **action**.

The **Main Control** column displays the selected **keyboard key** to show that it is assigned to the selected **action**.



7. To assign a modifier key to an action keyboard shortcut, enter the modifier key in the **Modifier 1** column associated with the **action**. **Shift** or **Ctrl** are commonly used modifier keys.

Action	Main Control	Modifier 1	Modifier 2	Modifier 3
Media Player - Step Backwards 1 Frame	-	-	-	-
Media Player - Step Backwards 10 Frames	-	-	-	-
Media Player - Step Backwards 1 Second	-	-	-	-
Media Player - Play/Pause	Keyboard Spacebar	Keyboard Control	-	-
Media Player - Goto In	-	-	-	-

Additional modifiers can be entered in the **Modifier 2** and **Modifier 3** columns associated with the **action**. To execute the action a user must press and hold the keys in the **Modifier** columns and the key in the **Main Control** column.

8. After setting up Workflow Client module keyboard shortcuts, they can be managed as follows:
 - **Unassign** — hold down the Alt key and double-click the key in the Main Control column to unassign from an action.
 - **Import/Export** — right-click in the HIFD Control window to import or export keyboard shortcuts.

Workflow Client Color Scheme

Users can customize the color scheme of the Workflow Client to their liking.

This chapter discusses the following topics:

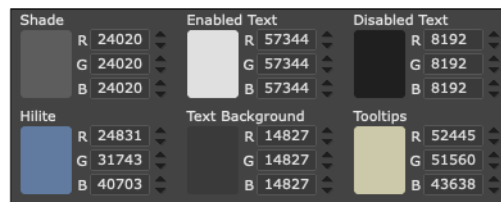
- Customizing a Color Scheme
- Selecting a Preset Color Scheme

Customizing a Color Scheme

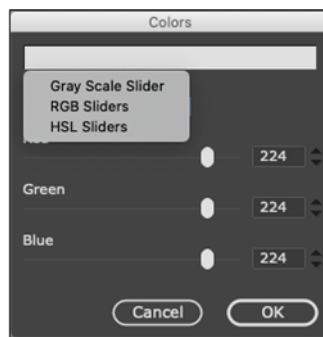
Users can customize the color scheme of the Workflow Client to their liking.

To define a custom color scheme

1. Open the **Workflow Client**.
2. Use the **File** menu to select **Preferences**.
A screen opens.
3. On the screen that opens, click **More**.
The **Application Properties** dialog box opens.
4. In the **Application Properties** dialog box, click **Appearance**.
The **Appearance** dialog box opens.



5. Use the **Appearance** settings to adjust the colors of the Workflow Client user interface.
6. To edit a user interface color, complete the following steps:
 - a. Click a user interface color block.
The **Colors** dialog box opens for the selected color.
 - b. Use the **Pallets** menu to select the color pallet to used to edit the selected color.



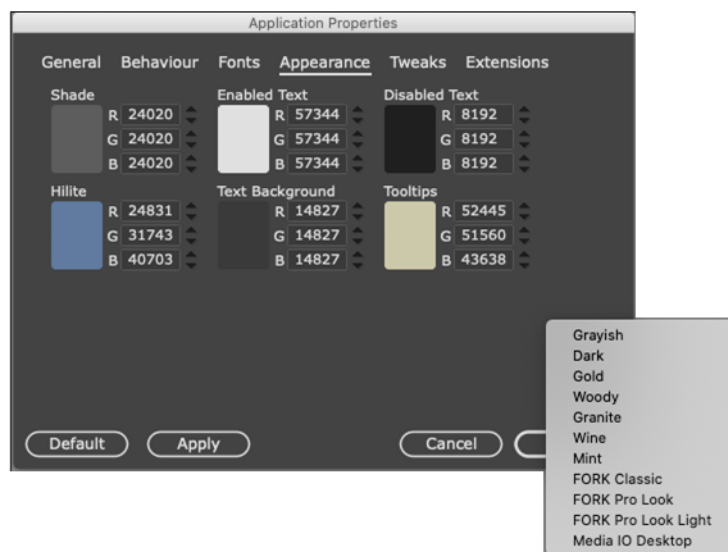
- c. Use the color component sliders to define a new color for the selected user interface color.
 - d. Click **OK**.
The **Appearance** dialog box displays the newly defined color. Appearance settings are stored in the Client preferences, not with the User Accounts.
If you do not like the defined color, edit the color settings again or click **Default**. Clicking **Default** resets the user interface colors to the default color values.
7. Edit the other user interface colors to your liking.
 8. Click **Apply**.
 9. Click **OK**.

Selecting a Preset Color Scheme

The Workflow Client contains several preset color schemes that a user can select instead of editing each user interface color.

To select a preset color scheme

1. Open the **Workflow Client**.
2. Use the **File** menu to select **Preferences**.
A screen opens.
3. On the screen that opens, click **More**.
The **Application Properties** dialog box opens.
4. In the **Application Properties** dialog box, click **Appearance**.
The **Appearance** dialog box opens.
5. Right-click in an empty area of the **Appearance** dialog box.
The **Color Scheme** menu opens.



6. Use the **Color Scheme** menu to select a color scheme for the Workflow Client.
The **Appearance** dialog box updates to display the colors of the selected color scheme. Appearance settings are stored in the Client preferences, not with the User Accounts.
If you do not like the selected color scheme, select another **color scheme** or click **Default**. Clicking **Default** resets the user interface colors to the default color values.
7. Click **Apply**.
8. Click **OK**.

