

**Autodesk®**  
WiretapCentral™ 2011

# User Guide

## Autodesk® Visual Effects, Finishing and Color Grading 2011

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# Introduction

# 1

## Topics in this chapter:

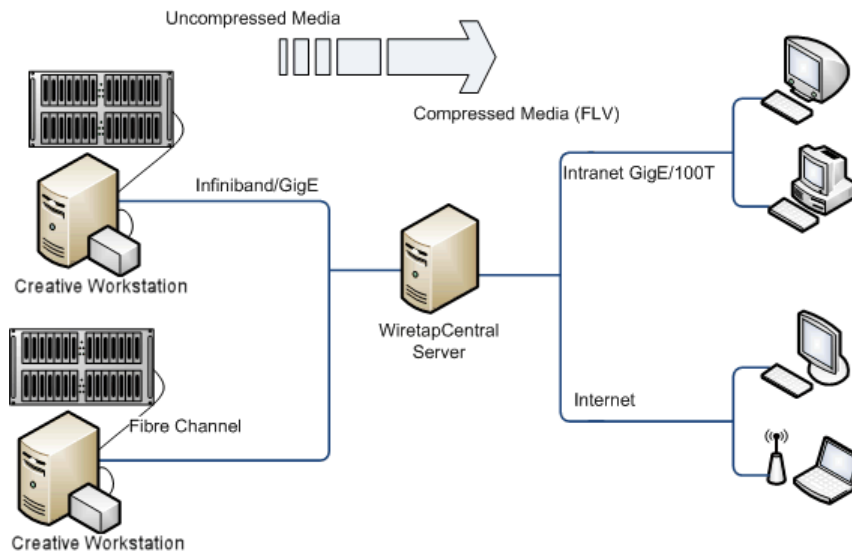
- [Overview](#) on page 1
- [About this Guide](#) on page 2
- [Contacting Customer Support](#) on page 3

## Overview

Autodesk® WiretapCentral™ is a fully integrated Web application that provides interactive access to all media assets in your facility network. It presents editorial, visual effects, and grading assets stored on any network-accessible Stone® filesystem or standard filesystem framestore.

The intuitive Web interface eliminates the need to be at an Autodesk creative workstation to import, play, encode media, or to submit and monitor background jobs. This allows the artist to offload media management and transcoding, and stay focused on creative tasks.

WiretapCentral straddles several different technologies, including Autodesk Visual Effects, Finishing and Colour Grading workstations, low-bandwidth Web video, and several different networking and collaboration protocols and tools.



WiretapCentral enables you to directly import REDCODE RAW and multi-channel OpenEXR files by leveraging the Autodesk® Wiretap® Gateway.

When importing media, WiretapCentral can use Autodesk® Backburner™ distributed background processing to maximize efficiency.

## About this Guide

This guide provides information on using WiretapCentral and the related components.

## Notation Conventions

A number of style conventions are used throughout your documentation. These conventions and examples of their use are shown as follows.

Convention	Example
Text that you enter in a command line or shell appears in Courier bold. Press the Enter key after each command.	<b>install rpm -qa</b>
Variable names appear in Courier, enclosed in angle brackets.	<filename>
Feedback from the command line or shell appears in Courier.	limit coredumpsize
Directory names, filenames, URLs, and command line utilities appear in <i>italics</i> .	<i>/usr/discreet</i>

## Related Documentation

Documentation for this release is installed with the product as PDF files and as an HTML help system, and is also available on the Autodesk web site at <http://www.autodesk.com/me-documentation>. From this page you can access the complete documentation library.

You should also refer to the product release notes for all late-breaking release information.

## **Contacting Customer Support**

For Autodesk Media and Entertainment Customer Support, visit <http://www.autodesk.com/support>.

Customer support is also available through your Autodesk reseller. To find a reseller near you, consult the reseller look-up database at <http://www.autodesk.com/resellers>.





# Using Wiretap Central

# 2

## Topics in this chapter:

- [Overview](#) on page 5
- [WiretapCentral User Interface](#) on page 5
- [Browsing using the Network Tree](#) on page 8
- [Browsing using Thumbnails](#) on page 9
- [Browsing Using the List View](#) on page 10
- [Using the Player](#) on page 12

## Overview

WiretapCentral presents a Wiretap® network as a hierarchy of hosts, volumes, projects, libraries, reels and clips. When you first point a web browser to the WiretapCentral server, the network tree lists all hosts detected on the network. Clicking on a host (which is the top-level data node) reveals its volumes, and so on down the hierarchy, to clips.

The network tree works in conjunction with the main view area to give you a more complete picture of the network and volume contents. Initially the main view area is empty. Once you start navigating a host, it displays the contents of the host's volumes, libraries, and reels, as you select them. By default it displays thumbnails for each clip, but it can also display clip metadata in a list view mode.

WiretapCentral can browse volumes on Autodesk Visual Effects and Finishing workstations. With Wiretap Gateway, it can browse volumes on Autodesk® Lustre® workstations and any storage device accessible on the network.

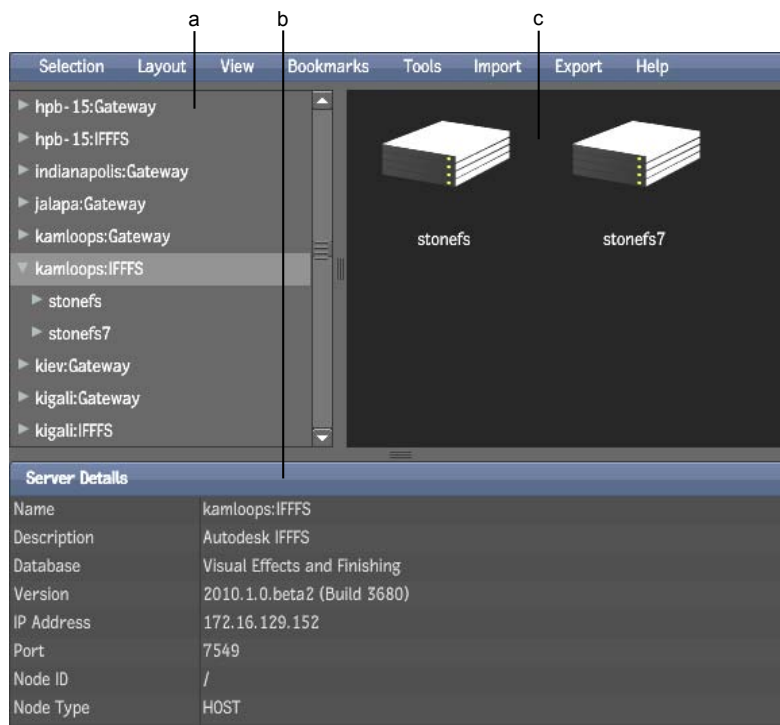
---

**NOTE** Clips stored on a Finishing workstation's EditDesk or a Visual Effects workstation's Desktop are not accessible.

---

## WiretapCentral User Interface

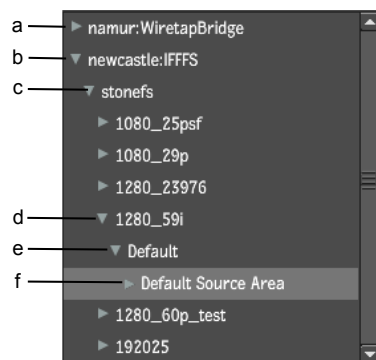
The user interface consists of three main areas, as shown in the following diagram.



(a) Network tree (b) Details area (c) Main view area

## Network Tree

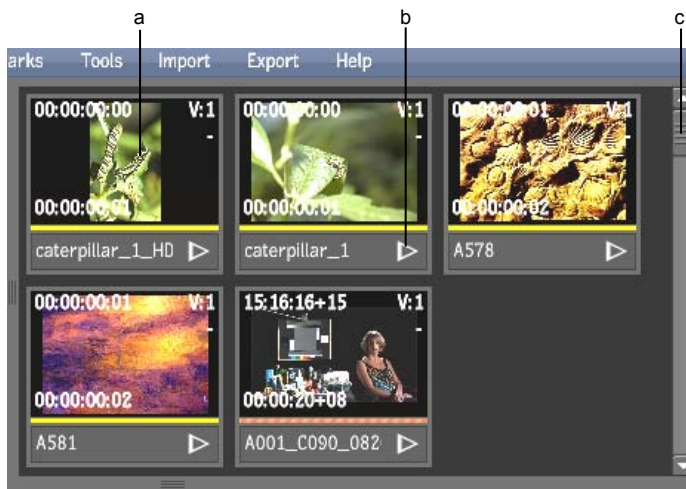
The network tree displays the contents of the Wiretap network in a tree hierarchy. Initially, it lists all the hosts discovered. Expanding a host displays its volumes, and the projects and clip libraries within.



(a) Host (collapsed) (b) Host (expanded)  
(c) Framestore (d) Project (e) Library (f) Reel

## Main View Area

The main view area occupies a central portion of the UI. It presents clip thumbnails, the list view, and the player. Switch between these display modes using the View menu, or double-click a thumbnail to open the player immediately.



(a) Clip Thumbnail (b) Play/Pause button (c) Scroll Bars

## Details Area

When you browse, the information for the node that you are currently on, whether server, volume, project, library, or clip, is presented in the Details areas. This information persists until you select another node.



## Changing the Layout

To change the layout of the user interface, select an option from the Layout menu.

Select	To
Normal	Display the network tree, the main area, and the details area. If displaying the player on higher-resolution monitors, this should be enough to show the whole frame.
Extended	Hide the details area, giving more space in the main area for thumbnails or list view items.
Full Screen	Hide the network tree and the details area, leaving only the main area. This is most useful when you need the most size in player mode.

# Browsing using the Network Tree

The network tree is an interactive tool for browsing the network and volume hierarchy. It works in conjunction with the main view area to show clips as thumbnails or in a list view.



(a) Network tree with library selected (b) Draggable divider (c) Main view area showing clip thumbnails

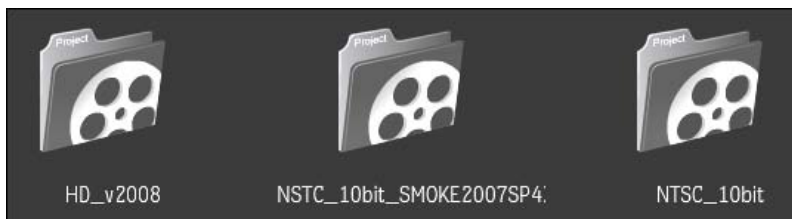
## To browse the network:

- 1 Click any host item in the network tree to display its volumes. While multiple volumes can be present, typically a host has just one volume — *stonefs*, for example.  
Icons representing the volumes appear in the main view area, when in thumbnail mode.



**NOTE** When you expand an item in the network tree an animated cursor indicates that a metadata transaction is taking place. Depending on the complexity of the tree, this can take some time.

- 2 Click a volume in the network tree to display its projects.  
Icons for the projects appear in the main view area.



- 3 Click collapsed items to further expand the network tree.
  - The data structure hierarchy is exactly what you would find browsing a clip library in any Autodesk Visual Effects and Finishing workstation.

- Once an item is expanded, you can collapse it again by clicking its expand/collapse arrow.
  - To switch between expanded items, click the item of interest. This changes the focus without collapsing the deselected item.
- 4 To expand all an item's selection at once, from the Selection menu, choose Expand Children.
  - 5 To refresh the view, choose either Refresh All or Refresh Selection.

## Using Bookmarks

Create and use bookmarks to keep track of frequently used locations by selecting an option from the Bookmarks menu. You can choose to add a bookmark for the currently shown location, or to go to a previously saved bookmark. You can also remove an unused bookmark.

## Managing Libraries and Reels

You can create new libraries and reels in a project, on an accessible volume, by choosing the appropriate option from the Tools menu. You can also add/remove directories on a Wiretap Gateway server. You can also remove any clip, and some nodes, by using the Delete option.

---

**NOTE** The option that allows deleting is on by default but can be turned off in the configuration file, which is found at `/var/www/html/WiretapCentral/wiretapcentral.cfg`. Under the Permissions section, uncomment the line: `DeleteEnabled=false`.

---

## Browsing using Thumbnails

By default, the main view area presents the Wiretap network and volume content as icons and thumbnails. For example, if a library is selected in the network tree, the main view area displays icons for the reels it contains. When you select a library or reel, thumbnails are generated for their clips. Once you have selected a host in the network tree, you can do all of your downward browsing using icons and thumbnails.

**To browse using thumbnails in the main view area:**

- 1 Switch to thumbnail mode, if necessary, by selecting Thumbnails from the View menu.
- 2 In the network tree, double-click the icon for the volume of interest.  
The main view area displays the projects contained by the selected volume.
- 3 Continue browsing the contents of the current host:
  - Double-click any icon to open it.
  - Double-click a clip thumbnail to switch the main view area to player mode and load the clip into the player.
  - To navigate back up the tree or to switch hosts, select another node in the network tree.

## Playing Thumbnail Previews

Icons and thumbnails in the main view area provide an intuitive means to navigate the network and volumes. More importantly, the thumbnails provide you with:

- Metadata corresponding to each clip, including the clip's name, timecode, duration, and tracks.

- A playable, scrubbable representation of the clip.
- A gateway to loading the clip directly into the player.

**To play thumbnail previews in the main view area:**

- 1 Navigate to the clip of interest.

By default, a single-image thumbnail is automatically generated for each clip in the main view area.



(a) Current timecode (b) Duration (c) Audio track indicator (d) Video track indicator (e) Clip name (f) Scrubbable progress bar icon (g) Play/Pause icon

- 2 Click the progress bar to generate the playable thumbnail.

Thumbnail generation is normally faster than real-time, depending on the network interface and processing power of the WiretapCentral server. Thumbnails are partially playable and scrubbable even when processing or downloading is not yet complete.

The meaning of the different colours is explained below.

Time Bar Colour	Description
orange corkscrew	Thumbnail is not yet encoded.
grey	A grey progress bar indicates thumbnail is being generated. Grey from start-to-finish indicates thumbnail is generated and resides in your browser's cache.
blue	Playable thumbnail has been generated on the server, but remains to be downloaded into your cache.
yellow	Indicates position when playing or scrubbing.

- 3 Play the thumbnail by clicking the Play icon.
- 4 Scrub the thumbnail by dragging over the progress bar.

## Browsing Using the List View

By default, the main view area displays the contents of the current library or reel as clip thumbnails. The list view presents an alternative view, presenting clips in table format, with sortable, repositionable columns.



## Using the Player

Thumbnails are convenient for previewing clips, but the player is larger and offers considerably more playback options. It presents clips at a width of 720 pixels, and usually at 100% JPEG quality. In addition, the player has controls for stepping through the action, looping, and playing backward.

From most areas of the user interface, double-clicking a clip opens the player and loads the clip into it. WiretapCentral automatically generates and downloads the high-resolution version from the clip on the volume, then streams the playable version to the player. For long clips, this can take a few seconds, depending on the network interface and processing power of the WiretapCentral server. If the clip has an NTSC or PAL proxy on the volume, the process is usually very close to real-time. As with thumbnails, you can begin playing as soon as the clip begins downloading.

## Loading a Clip into the Player

To load a clip into the player:

- 1 Navigate to the clip of interest.
- 2 Double-click on the clip to open the player and load the clip. You can double-click a thumbnail or a row in the list view.

The player appears in the main view area with the clip loaded.

The progress bar indicates how much of the clip has been downloaded. Clips in the player are partially playable and scrubbable even when processing or downloading is not yet complete.

The meaning of the different colours in the time bar is explained below.

Time Bar Colour	Description
orange corkscrew	Clip is not yet playable.
grey	A grey progress bar indicates a playable clip is being generated. Grey from start-to-finish indicates the clip is generated and resides in your browser's cache.
blue	Playable clip has been generated on the server, but remains to be downloaded into your cache.
yellow	Indicates position when playing or scrubbing.

- 3 To switch back to the previous view mode, from the View menu, select either Thumbnails or List View.

## Playing a Clip

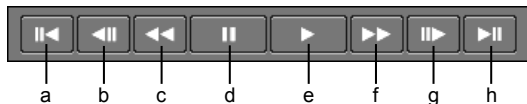
You can play a clip using the player controls, as shown in the following diagrams.





(a) Loop/mute/smooth display (b) Playback controls (c) Time bar (d) Zoom controls

The playback controls are detailed below.



(a) First frame of clip (b) Back one frame (c) Fast backward (d) Pause (e) Play (f) Fast forward (g) Forward one frame (h) Last frame of clip

## Panning and Zooming a Clip

You can pan the clip across the canvas and zoom in and out, even while the clip is playing.

**To pan and zoom a clip:**

- 1 To pan the clip, drag it using the mouse.
- 2 To zoom in and out:
  - Click the [+] and [-] UI buttons.
  - Use the wheel on the mouse.
- 3 To reset the player's default pan and zoom settings, click Home.
- 4 To fit the clip to the available player canvas, click Fit.



# Decoding RED Media

# 3

## Topics in this chapter:

- [About Importing RED Media](#) on page 15
- [Importing RED R3D Media Files](#) on page 16
- [Importing FCP XML Containing RED Media Files](#) on page 18
- [Importing an EDL Containing RED Media Files](#) on page 21
- [Adjusting the Settings](#) on page 24
- [Defining the Output Destination](#) on page 28
- [Submitting the Job](#) on page 30
- [Monitoring the Job](#) on page 31

## About Importing RED Media

RED digital cameras record RAW media that is compressed using a proprietary codec known as REDCODE™, which is saved as an R3D™ file. R3D files contain very high-resolution digital images (2K, 4K, or even higher). These files require a computational-intensive debayering process to transcode to a file format that can be read by Autodesk Visual Effects and Finishing applications.

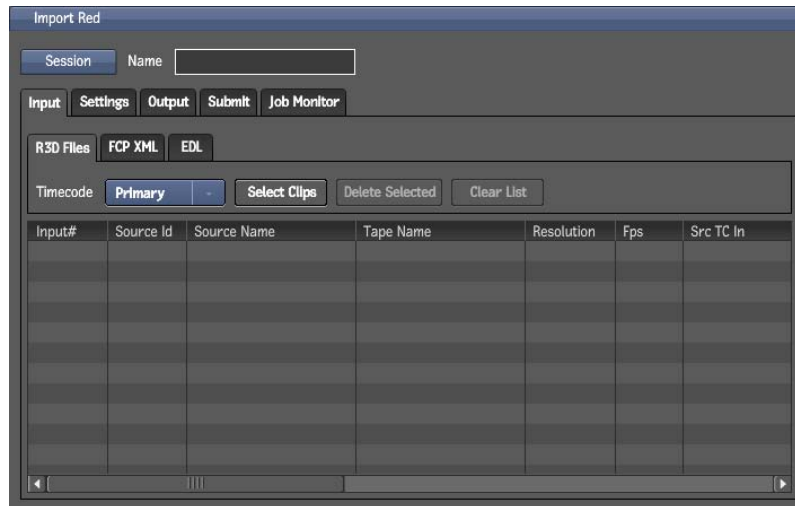
WiretapCentral can prepare a reel of clips, originating from RED source material, for conforming in an Autodesk Visual Effects and Finishing application. WiretapCentral is used to set up R3D transcoding jobs, which are sent to a Backburner network for decoding, leveraging a network of processing nodes (any Linux®-based computers, including the application workstation) to provide maximum processing speed. The jobs output image sequences to a location that is accessible to Autodesk Visual Effects and Finishing applications.

RED media can be imported as individual R3D files, or as either Apple® Final Cut Pro® XML or generic EDL files that contain RED media.

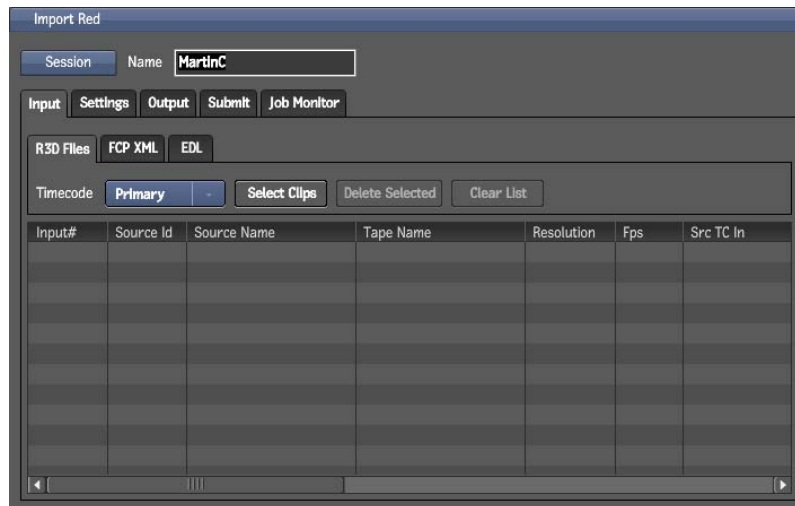
# Importing RED R3D Media Files

RED media can be imported as individual R3D files.

- 1 In WiretapCentral, from the Import menu, select RED.  
This starts a new import job. The Import Red window appears.



- 2 Enter a session name. Special characters are prohibited.  
The session name identifies your import job when saving or loading a session, and when outputting the job. It is also the job name in Backburner Manager.



- 3 Optional: Save the session. At any time, you can save a session. From the Session button, select Save or Save As. Use the Session button to load a previously saved Import Red session or delete one.

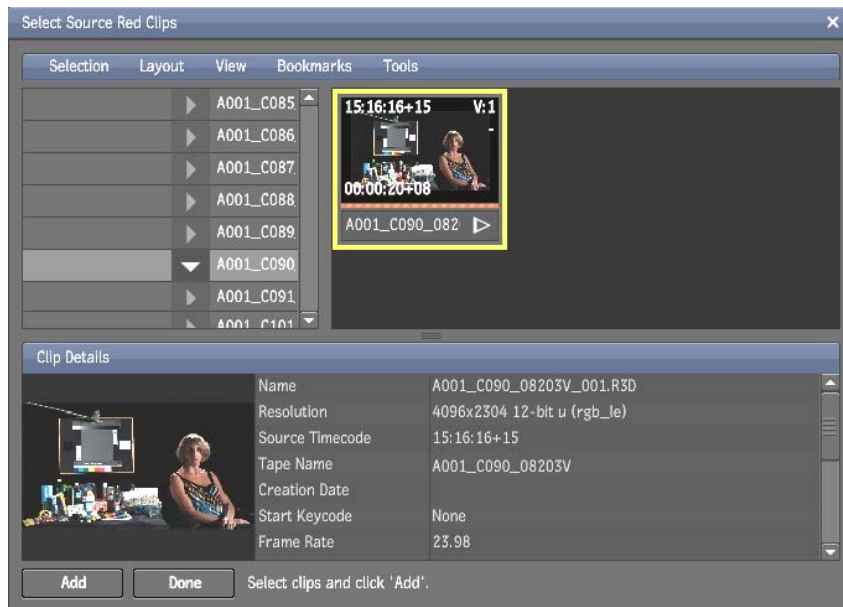
---

**WARNING** Sessions are saved as cookies. Deleting your browser cookies deletes your saved sessions. On Mozilla® Firefox®, using the Clear Recent History option deletes the browser cookies.

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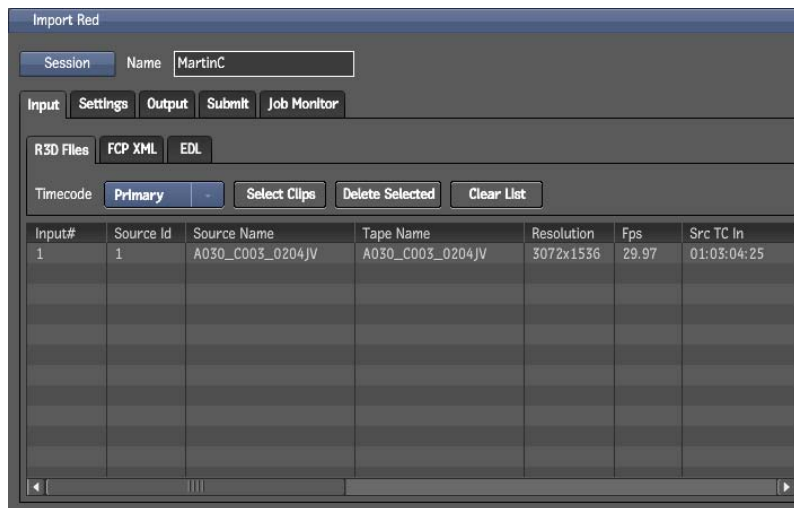
- 4 Ensure that the Input tab is selected.
- 5 From the Input tab, ensure that the R3D Files tab is selected.
- 6 From the R3D Files tab, select the Timecode to use.

- 7 From the R3D Files tab, click Select Clips.  
A browser appears.
- 8 By browsing through a Wiretap Gateway, select one or more RED clips and click Add.  
Select multiple files at a time by using the **Shift** or **Ctrl** key.



The number of clips selected is displayed at the bottom of the screen.

- 9 When you are finished, click Done.  
The selected clips appear in the Input list.



**NOTE** To verify the timecode used: if the Src TC columns matches either Edgecode or TOD TC (time of day) columns, the clip will be imported using the matching timecode. If it matches neither, the clip will be imported using the primary timecode.

- 10 When you are ready to proceed, click the Settings tab.  
See [Adjusting the Settings](#) on page 24.

# Importing FCP XML Containing RED Media Files

If you are importing an FCP XML pointing to RED media, then you must make sure to take the right steps in Final Cut Pro.

## Working in Final Cut Pro

For interoperability with FCP, there are a minimal number of steps that must be performed before importing into WiretapCentral.

- 1 Ensure that the original R3D files are stored in a location that is accessible to FCP.
- 2 Using REDRUSHES™, convert the R3D files into the QuickTime® DVCPRO HD format. Use DVCPRO720 and burn-in the timecode.

This is a less CPU-taxing format that you can easily import into Autodesk Visual Effects, Finishing, or Grading applications, and keep your entire edit, audio included, as a reference.

---

**NOTE** Do not modify the R3D filenames. Instead, use the various comment columns to identify your clips. Make sure that you keep the full 16-character filename as a reel name.

---

- 3 Edit in FCP using the QuickTime files (created in step 2) that contain the full original R3D filename. Be aware that the FCP XML file will be used in your Autodesk Visual Effects, Finishing, or Grading application, and that not all transitions, effects, and speed changes are supported. Consult your Autodesk Visual Effects, Finishing, or Grading application user guide.
- 4 Export an FCP XML of the final sequence for use in your Autodesk Visual Effects, Finishing, or Grading application.
  - 1 Select the sequence in the FCP browser.
  - 2 Choose File > Export > XML.
  - 3 Select Apple XML Interchange Format, version 4.
    - Do not select Include Master Clips Outside Selection.
    - Select Save project with latest clip metadata (recommended).

The generated XML file points to the QuickTime files that you used for your offline editing.

- 5 Copy the source R3D files, the QuickTime files, and the FCP XML to a media folder on a SAN or NFS. Ensure that:
  - The media folder is accessible from both WiretapCentral and your Autodesk Visual Effects, Finishing, and Grading application.
  - You keep the same file/folder hierarchy where one folder contains all .RDM and .RDC folders and subfolders. It makes it easier to search for and match events to media when loading the FCP XML.
  - You place the FCP XML in the top folder. This enables WiretapCentral to find automatically the underlying media during the import process.

## Avoiding the Log&Transfer Tool

If you use the Log&Transfer tool to ingest R3D files, the Reel name of the imported clips has a directory name. You will then have to manually rename each Reel to their 16-character RED filename.

Also, the Log&Transfer tool often imports only parts of clips over 4 GB, dividing them up while adding a “\_1”, “\_2” to the filename, which hinders relink operations later on.

Examples of faulty filenames: A clip named A001\_C004\_0206T9, imported in FCP using Log&Transfer, is renamed A001\_C004\_0206T10. A clip named A001\_C004\_0206TB, imported in FCP using Log&Transfer, is renamed A001\_C004\_0206TB1.

## Using the xml\_adsk\_tapename Script

The QuickTime files created in REDCINE™ have tape names that match the first four characters of the R3D filenames, such as A001. But WiretapCentral requires the full 16-character tape names. If you edit in FCP and export an XML with those QuickTime files, you need to convert the tape names back to 16-character format. Use the Python script installed by WiretapCentral to perform this conversion.

The Python script is located in the `/usr/discreet/wiretapcentral/scripts/` directory. Use it to process the FCP XML: it replaces the four-character tape names with the ones extracted from the header of the QuickTime file. You can then use the FCP XML in WiretapCentral.

The script creates a new copy of the processed XML file. To use it, put the script in a same directory as the FCP XML file and type:

```
python xml_adsk_tapename.py name_of_the_file_to_modify.xml
name_of_the_destination_file.xml
```

For example, to modify the tape names in *abc.xml*, navigate to the directory containing *abc.xml* and type:

```
python xml_adsk_tapename.py abc.xml abc_fixed.xml
```

## Importing FCP XML

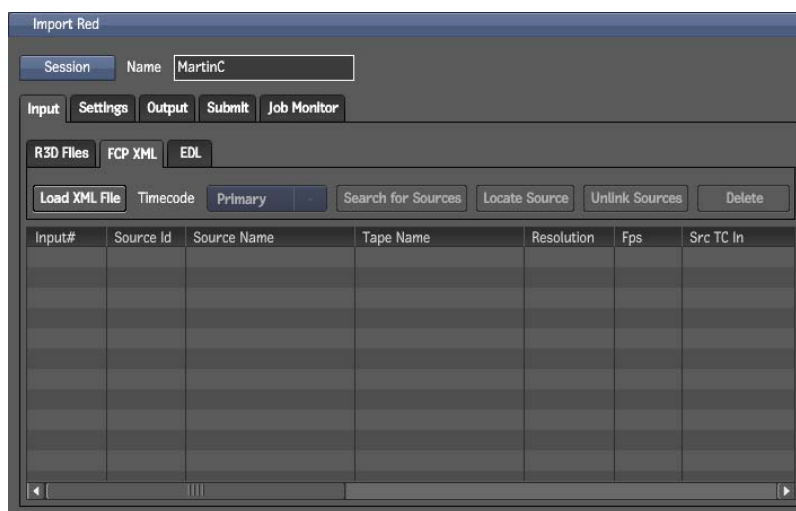
RED media can be imported as FCP XML pointing to R3D files.

- 1 In WiretapCentral, from the Import menu, select Red.

This starts a new import job. The Import Red window appears.

- 2 Enter a session name. Special characters are prohibited.

The session name identifies your import job when saving or loading a session, and when outputting the job. It is also the job name in Backburner Manager.



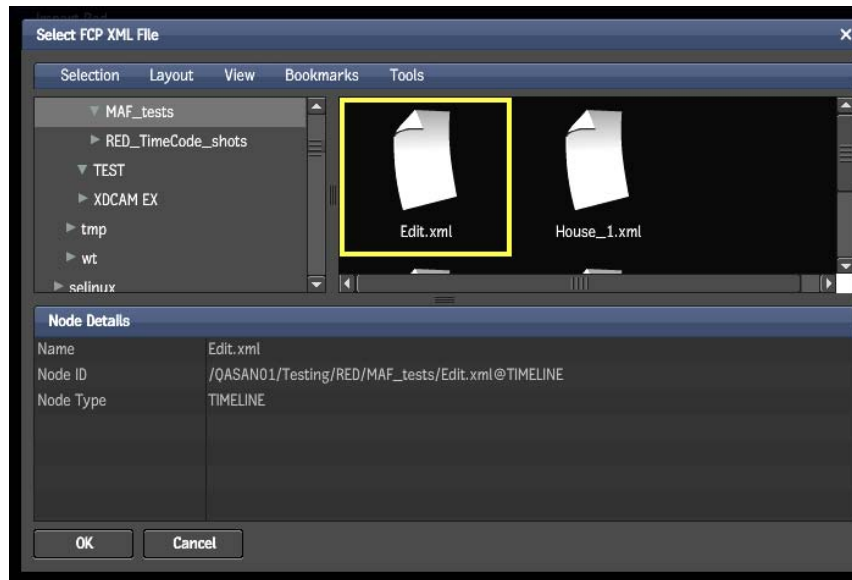
- 3 Optional: Save the session. At any time, you can save a session. From the Session button, select Save or Save As. Use the Session button to load a previously saved Import Red session or delete one.

---

**WARNING** Sessions are saved as cookies. Deleting your browser cookies deletes your saved sessions. On Firefox, using the Clear Recent History option deletes the browser cookies.

---

- 4 Ensure that the Input tab is selected.
- 5 From the Input tab, select the FCP XML tab.
- 6 From the FCP XML tab, click Load XML File.  
A browser appears.
- 7 Navigate to the folder containing the FCP XML file to be imported, and select the file.



- 8 Click OK.  
The events from the selected XML file appear in the Input list.
- 9 Select the Timecode to use.
- 10 Click Search for Sources to have WiretapCentral search the contents of a folder for the sources. A browser appears.
- 11 Navigate to the folder containing the R3D files. The files themselves are not displayed.
- 12 Select the location of the RED media files and click OK. WiretapCentral searches the folder and all subfolders for each clip referenced in the XML.  
In the list, the Status of each event with a located source changes from Missing to Found.
- 13 Optional: For each event with the Missing status:
  - 1 Select the event for which to locate an R3D file.
  - 2 Click Locate Source. A browser appears.
  - 3 Navigate to the R3D file, and select it.
  - 4 Click OK to link the R3D file to the event.  
In the list, the Status of the event changes from Missing to Found.



---

**NOTE** To verify the timecode used: if the Src TC columns matches either Edgecode or TOD TC (time of day) columns, the clip will be imported using the matching timecode. If it matches neither, the clip will be imported using the primary timecode.

---

- 14 When you are ready to proceed, click the Settings tab. See [Adjusting the Settings](#) on page 24.

## Importing an EDL Containing RED Media Files

If you are importing an EDL file pointing to RED media, then you must make sure to take the right steps in your editing application.

### Working in Avid

If you are editing in your Avid® application, you will need to export EDL sequences, since WiretapCentral does not support AAF.

Keep in mind that you will need to export one or more EDLs, so limit your edit to one video track. If you must edit using several tracks, you will have to make as many duplicates of your sequence as you have video tracks and remove any additional video from the duplicates. You will end up with several EDL files, one per video track.

---

**NOTE** When editing in Avid Media Composer®, export an EDL using Avid EDL Manager and the RED16 template (available at [www.avid.com/red](http://www.avid.com/red)). The tape name of each event then has the required 16 characters. Use the Python script provided with WiretapCentral to modify the Avid EDL and build a tape source table which works in WiretapCentral and in your Autodesk Visual Effects and Finishing software.

---

#### To export EDL files:

- 1 Edit your sequence in your Avid application.
- 2 Pare down your Avid sequence to make it more EDL-friendly.
- 3 Make as many duplicates of your sequence as you have tracks, and prepare video-only sequences, carefully naming each one.
- 4 Export each Avid sequence as a new EDL with the Avid EDL Manager using the following settings:
  - Set EDL type to RED16.
  - In the Options menu, set Reel ID Type to Cameraroll.
  - If Edgecode was used instead of TOD Timecode, set the Source TC option to Auxiliary TC 1.
  - Select the option that includes the source table with the saved EDL.
- 5 Repeat step 4 for each video track's corresponding sequence.
- 6 Copy the source R3D files, the fixed EDL to a media folder on a SAN or NFS. Ensure that:
  - The media folder is accessible from both WiretapCentral and your Autodesk Visual Effects, Finishing, and Grading application.
  - You keep the same file/folder hierarchy where one folder contains all .RDM and .RDC folders and subfolders. It makes it easier to search for and match events to media when loading the EDL file.
  - You place the EDL in the top folder. This enables WiretapCentral to find automatically the underlying media during the import process.

## Using the edl\_adsk\_tapename Script

The Avid RED16 EDL Manager template has the EDL source table and the tape name of each event which uses the full 16-character tape name. But the EDL parsing mechanism in WiretapCentral reads standard CMX events with tape names containing 8 characters or less. It also reads the tape source table.

WiretapCentral installs a Python script, which converts the events and the source table into a format compatible with WiretapCentral and Autodesk Visual Effects and Finishing systems.

The Python script is located in the `/usr/discreet/wiretapcentral/scripts/` directory. It creates a new copy of the processed EDL. To use it, put the script in a same directory as the Avid EDL file and type:

```
python edl_adsk_tapename.py name_of_the_file_to_modify.edl
name_of_the_destination_file.edl
```

For example, to modify the tape names in *abc.edl*, navigate to the directory containing *abc.edl* and type:

```
python xml_adsk_tapename.py abc.edl abc_fixed.edl
```

## Importing the EDL

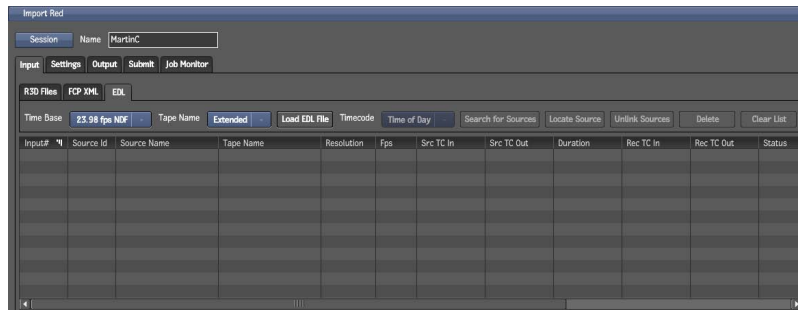
RED media can be imported as generic EDLs containing R3D files. The workflow goes as follows.

- 1 In WiretapCentral, from the Import menu, select Red.

This will start a new import job. The Import Red window appears.

- 2 Enter a session name. Special characters are prohibited.

The session name identifies your import job when saving or loading a session, and when outputting the job. It is also the job name in Backburner Manager.



- 3 Optional: Save the session. At any time, you can save a session. From the Session button, select Save or Save As. Use the Session button to load a previously saved Import Red session or delete one.

---

**WARNING** Sessions are saved as cookies. Deleting your browser cookies deletes your saved sessions. On Firefox, using the Clear Recent History option deletes the browser cookies.

---

- 4 Ensure that the Input tab is selected.

- 5 From the Input tab, select the EDL tab.

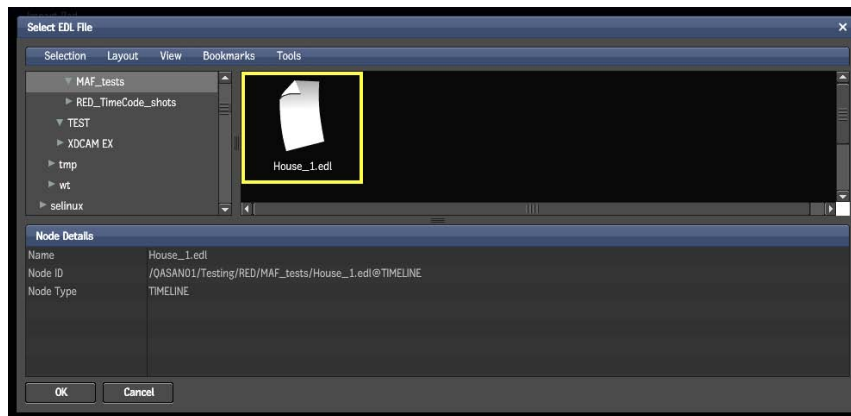
- 6 Select the Time Base for your EDL.

You must manually define the timeline's time base before importing the EDL as the EDL does not this information.

- 7 Select how Tape Name is written in the EDL.

If there is a tape name conversion, and the original tape name is written below each event, WiretapCentral shows the correct tape name. In the end you must have both the Source Name and Tape Name fields containing the same data.

- 8 Click Load EDL File. A browser appears.
- 9 Navigate to the folder containing the EDL file to be imported, and select the file.



- 10 Click OK.  
The events from the selected EDL file appear in the Input list.
- 11 Select the Timecode to use.
- 12 Click Search for Sources to have WiretapCentral search the contents of a folder for the sources. A browser appears.
- 13 Navigate to the folder containing the R3D files. The files themselves are not displayed.
- 14 Select the location of the RED media files and click OK. WiretapCentral searches the folder and all subfolders for each clip referenced in the EDL.  
In the list, the Status of each event with a located source changes from Missing to Found.
- 15 Optional: For each event with the Missing status:
  - 1 Select the event for which to locate an R3D file.
  - 2 Click Locate Source. A browser appears.
  - 3 Navigate to the R3D file, and select it.
  - 4 Click OK to link the R3D file to the event.  
In the list, the Status of the event changes from Missing to Found.

---

**NOTE** To verify the timecode used: if the Src TC columns matches either Edgecode or TOD TC (time of day) columns, the clip will be imported using the matching timecode. If it matches neither, the clip will be imported using the primary timecode.

---

- 16 When you are ready to proceed, click the Settings tab. See [Adjusting the Settings](#) on page 24.

# Adjusting the Settings

The Settings tab contains a number of parameters that can be set for the clips in your RED decoding session. These are divided under the Format and the Color tabs. The settings under these tabs are the staging area for the RED settings, and are not applied until you click the Apply button.

WiretapCentral reads the format and color metadata in the clip, as set in the camera, and populates the parameters as appropriate. You can additively load presets, or change the settings manually.

Settings that are not changed are greyed out. Clicking one will activate all in the group. Settings that are not enabled will not be applied.

The effects of the settings are displayed on the selected clip, in the Preview panel.

## To modify clip settings:

- 1 Select the Settings tab.
- 2 In the list, select the one or more clips to edit.
- 3 Click Load Selected Clip.

The format and color metadata are loaded in the Format and Color tabs.

---

**NOTE** If you selected multiple clips, the tabs display only information about the first clip in the list.

---

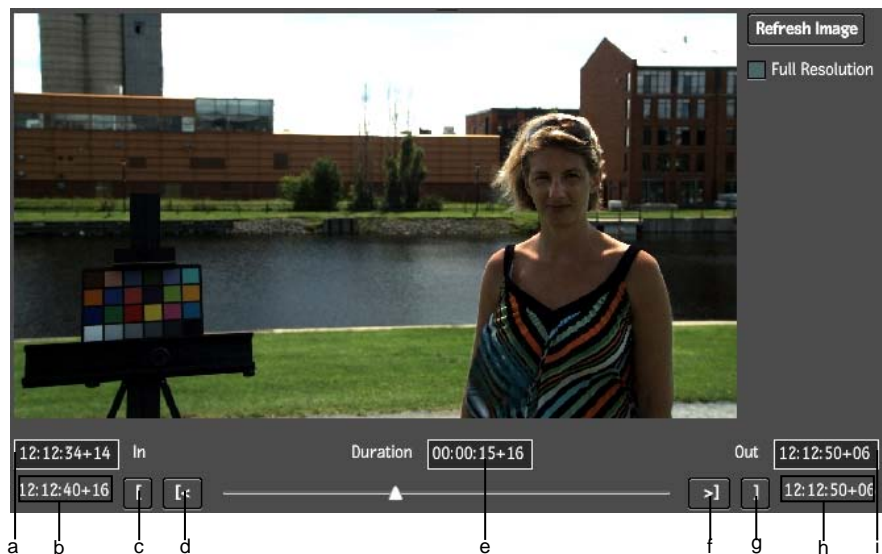
- 4 Adjust the Format and Color settings. See [Format Tab](#) on page 25 and [Color Tab](#) on page 27.
- 5 Optional: To discard the changes, click Defaults.
- 6 Once the adjustments are complete, click Apply to save the modified settings.

Use Restore Camera Settings to restore the original camera settings.

## Preview Panel

Use the Preview panel to monitor the changes to the Format and Color settings. You can also use the Preview panel to set In and Out markers. These markers define the actual clip to import. They are disabled when importing clips using an FCP XML or an EDL.

The image displayed in the Preview panel is a 1/8<sup>th</sup> resolution preview. Enable Full Resolution to view the clip at full resolution.

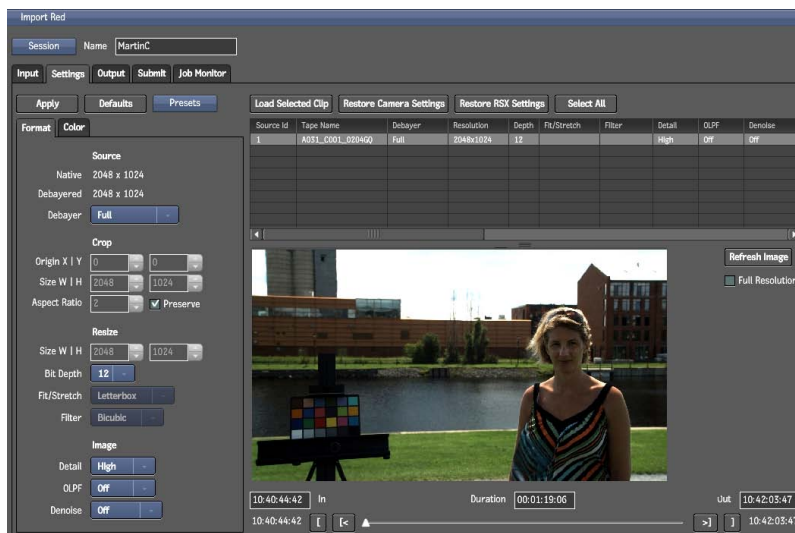


(a) In timecode (b) Start timecode (c) Mark In button (d) Go To In button (e) In-Out duration field (f) Mark Out button (g) Go To Out button (h) End timecode (i) Out timecode

## Format Tab

Use the Format Settings options to set:

- Resize
- Crop settings
- Debayer quality
- Detail level
- Optical Low Pass Filter options
- Denoise level



**Debayer** Select the level of quality required from the debayering algorithm. Higher resolutions take more time to process.

**Crop** Enter the desired Crop settings. Setting crop values displays a matching crop box on the clip displayed in the Preview panel.

**Size W | H (Resize)** Enter the desired resize settings. A resize setting that is not directly proportional to the size of the original media takes longer to process. Resize settings are automatically applied when Debayer is set to something else than Full.

**Bit Depth** RED media is 16 bits, but must be converted down to 12, 10 or 8 bits.

**Fit/Stretch** To use a different aspect ratio during resize, select a fit method option to be applied to the exported clip.

Select:	To:
Centre/Crop	Fit the source image, centred, over the destination frame. If the source is larger than the destination, it is cropped. If the source is smaller than the destination, it is surrounded by a black border.
Crop Edges	Fit one edge of the source into the destination frame without stretching or squashing the frame. Excess parts of the source frame after resizing are cropped. If the source, after the one edge is resized, is wider than the destination, its overhanging left and right edges are cropped. If the source is taller than the destination, the upper and lower edges are cropped.
Fill	Fit the source, width, and height, into the destination frame. If the source and destination frames do not have the same aspect ratio, the image can become distorted.
Letterbox	Fit the source to the destination frame without squashing or stretching it, and without cropping the source. If the source is wider than the destination, black bars fill the top and bottom of the destination frame. If the source is narrower than the destination, black bars fill the right and left sides of the frame. In all cases, the entire source frame is contained within the destination frame.

**Filter** Select the filter option to determine the quality of the interpolated resize result.

Select:	To get:
Impulse	Quick, low-quality results.
Triangle	Moderate results with little processing overhead.
Mitchell	Best results when resizing a clip to a higher resolution.
Bicubic	Very good results for resizing soft-looking images. Use to sharpen the image.
Quadratic	Good results for resizing simple images with straight edges. Similar to Gaussian but with more blurring. Use to soften the image.
Gaussian	Excellent results when resizing a clip with no patterns and a lot of straight edges to a lower resolution. Useful for softening some detail.
Shannon	Excellent results when resizing a clip to a lower resolution. Very similar to Lanczos, but results are a little softer.
Lanczos	Best results when resizing a clip containing a variety of patterns and elements to a lower resolution. It is the most complex with the longest processing time.

**Detail** Select the level of detail extraction required.

**OLPF** Select the level of Optical Low Pass Filter compensation to use. OLPF is a type of sharpening used to compensate for the optical anti-aliasing filter, which can induce softening of the image during recording.

**Denoise** Select the level of noise reduction applied to the debayered clip.

## Color Tab

WiretapCentral supports most color options available in RED applications, such as RED Alert!™.

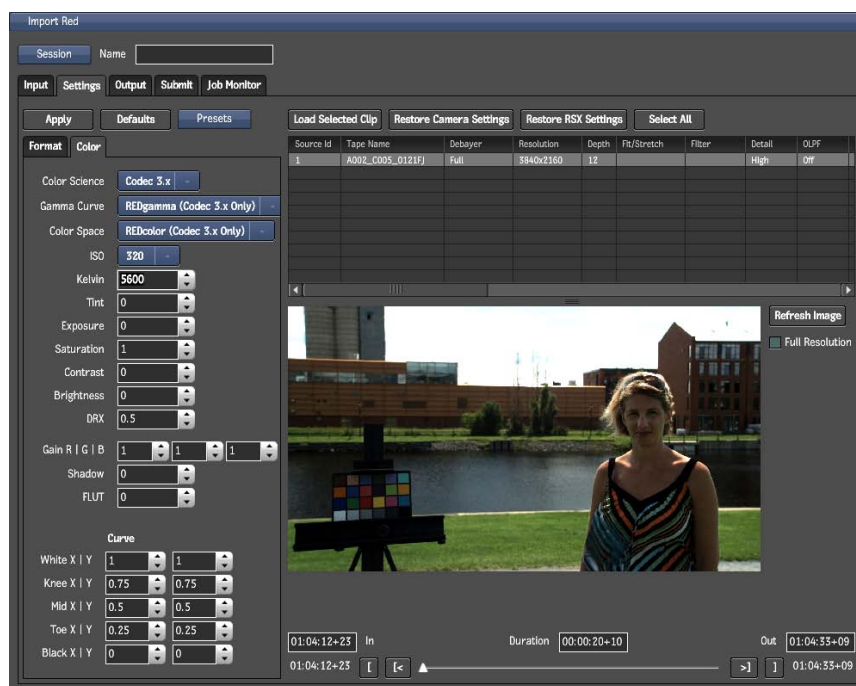
The Color Tab displays the settings for the clip metadata, as set in the camera. Alter these settings carefully, since overriding some values may produce unexpected results.

Load the RSX look created in RED Alert! by clicking Restore RSX Settings. The RSX file of a clip must reside in the same folder as the R3D file of that clip; this is the default behavior in RED Alert!.

---

**NOTE** The Color tab also contains settings for RGB Gain, as well as Color curve settings. We recommend that you do not change the default settings unless you have prior experience with color management.

---



**Color Science** Enables you to select whether to use the Color Science settings from version 2.x of the RED codec, or the settings from version 3.x of the codec. Select the correct codec, depending on the version of the camera firmware used when shooting the footage.

**Gamma Curve** Displays the value of the output gamma curve that is applied to the clips.

**Color Space** Displays the value of the native color space of the images, as set in the camera.

**ISO** Displays the value of the linear gain operation. Red images are always shot at 320 ISO.

**Kelvin** Displays the perceived color temperature of the image.

**Exposure** Displays the exposure increments, which are equivalent to f-stops.

**DRX** Displays the setting for Dynamix Range Extension, which sets how much pixel data is copied from non-saturated channels into saturated channels.

# Defining the Output Destination

Use the Output tab to change how timecode is used in the clip, to use handles, and to set one or more output destinations for your import RED job. A job can be sent to multiple destinations. The decoding is done once and streamed simultaneously to each location.

---

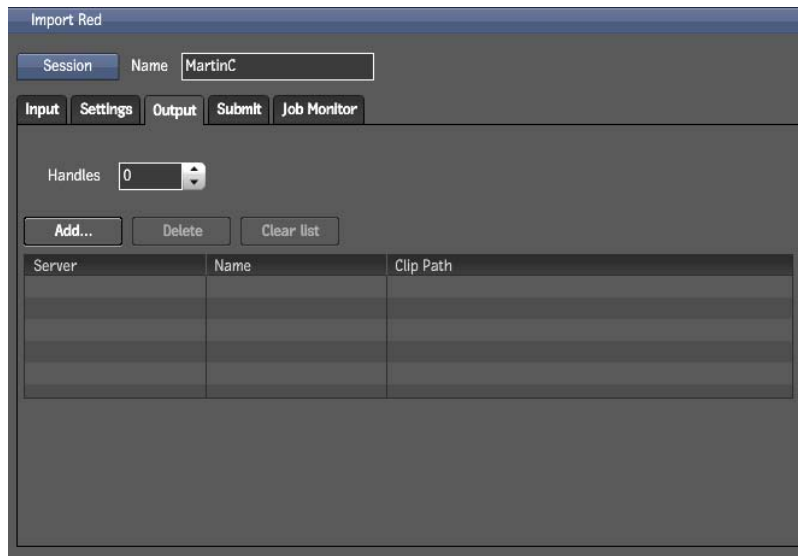
**WARNING** Be careful when transcoding to a StandardFS volume: if a file with the same name already exists in the destination folder, it will be overwritten with the newer file.

---

The clip placeholder is created right away and the media is populated in the background without locking the clip library in your Autodesk Visual Effects and Finishing application.

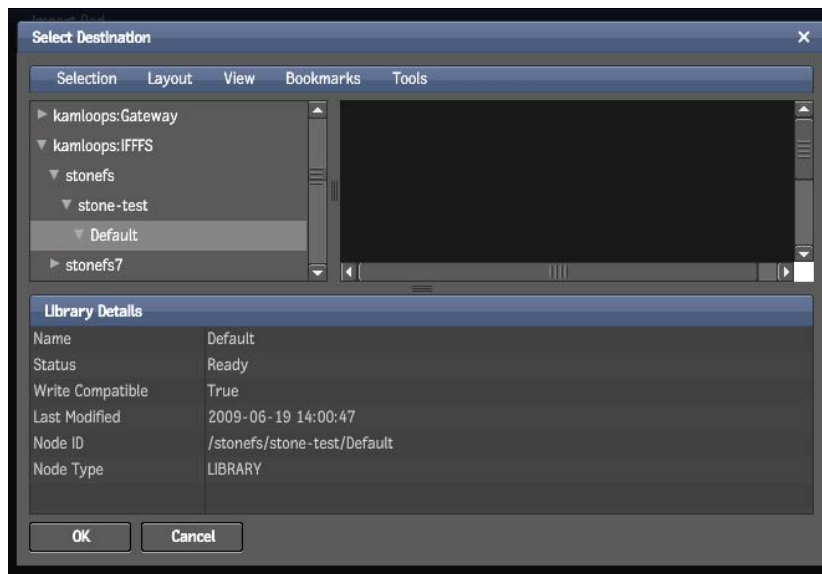
- 1 Click the Output tab.

The output options appear.



- 2 Click Add to add a destination for the given jobs.  
A browser appears.
- 3 Select one or more destination locations for the processed clips.





Depending on whether the destination is a StoneFS or a standard, unmanaged filesystem, different kinds of images sequences will be created.

- If the selected destination is a StoneFS on an Autodesk Visual Effects and Finishing workstation, uncompressed RGB images are generated and the corresponding clips are created in Project/Library/Reel. Clips are named according to their source R3D file name.
- If the selected destination is on a Wiretap Gateway server, then stand-alone DPX sequences are created in Main folder/Resolution.

---

**WARNING** If a file with the same name already exists in the destination folder, it will be overwritten with the newer file.

---



---

**NOTE** You should create a folder using the project name to identify your clips.

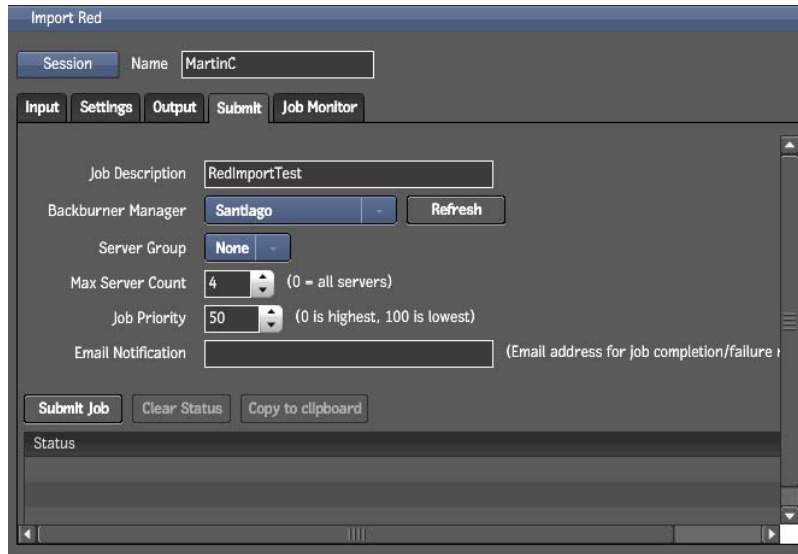
---

- 4 To create a new library, select a project then, from the Tools menu, select New Library.
- 5 To create a new reel, select a library then, from the Tools menu, select New Reel.
- 6 Select a destination and then select New Reel from the Tools menu.  
The DPX file name is always timecode-based, and is padded to 7 digits. Metadata is maintained in the DPX header. Other metadata gets written into the XML file that WiretapCentral produces for each clip. DPX sequences can be imported directly into Lustre, or as clips in Autodesk Visual Effects and Finishing applications.
- 7 When done, click OK.  
The selected destinations appear in the Output list.
- 8 Optional: Set Handles.  
In a conforming workflow, you may add extra frames to the heads and tails of clips to provide for dissolves and other transitions during finishing. Always set handles when importing FCP XML, since FCP sometimes adds an extra frame at the end of the last clip in the sequence which may cause problems upon import. WiretapCentral automatically adds enough handles to cover for transitions such as dissolves and wipes.

# Submitting the Job

Use the Submit tab to set your processing options and execute your job.

- 1 Click the Submit tab.

The screenshot shows the 'Import Red' application window. At the top, there's a title bar 'Import Red' and a 'Session' tab with the name 'MartinC'. Below this is a navigation bar with tabs: 'Input', 'Settings', 'Output', 'Submit' (which is active), and 'Job Monitor'. The main area contains several configuration fields: 'Job Description' with the value 'RedImportTest', 'Backburner Manager' with a dropdown set to 'Santiago' and a 'Refresh' button, 'Server Group' with a dropdown set to 'None', 'Max Server Count' with a spinner set to '4' (with a note '(0 = all servers)'), 'Job Priority' with a spinner set to '50' (with a note '(0 is highest, 100 is lowest)'), and 'Email Notification' with an empty text field and a placeholder '(Email address for job completion/failure)'. At the bottom of the main area are three buttons: 'Submit Job', 'Clear Status', and 'Copy to clipboard'. Below these is a 'Status' section with a scrollable area that is currently empty.

Set any of the following parameters.

**Job Description** Enter the description that will appear in Backburner monitor.

**Backburner Manager** WiretapCentral scans the local network for all available Backburner managers. Select the one to which you want to send the Import Red job.

**Server Group** Select the server group (if available) for the given Backburner manager. A server group is a virtual arrangement of processing nodes. By default, a job will go to all servers (up to the server limit), which may not be advantageous to your job or work environment. Server groups need to be set up in Backburner if you have a processing farm. See the *Backburner User Guide*.

**Max Server Count** Select the number of processing nodes to be used on the job.

**Job Priority** Set the job priority that is used in Backburner Manager for queued processes.

**Email Notification** Enter your e-mail address if you want to be notified of job completion or failure.

- 2 When done, click Submit Job.

This sends the jobs to Backburner for processing. The job status (clip creation on all destinations and submission of the job to Backburner manager) is displayed in the Status list.

## Monitoring the Job

Use the Job Monitor tab to follow the progress of all your submitted jobs.

- 1 Click the Job Monitor tab.

All the currently submitted jobs are displayed along with their status.

Name	Status	% Done	Tasks	Priority	Submitted	Started
23	suspended	0	0 / 803	50	2009-05-07 12:57:40	
test tod	waiting	0	0 / 3955	50	2009-06-22 15:06:40	
MartinC	waiting	0	0 / 3955	50	2009-07-21 10:08:14	

See [Monitoring the Decoding Jobs](#) on page 43.

You can also open the Backburner monitor selected in the Destination pane by clicking Web Monitor.

- 2 When you are done, from the Session box, select Save to keep your session information, then close the browser to end the session.



# Decoding OpenEXR Media

# 4

## Topics in this chapter:

- [About Importing OpenEXR Media](#) on page 33
- [Importing OpenEXR Media Files](#) on page 33
- [Adjusting the Settings](#) on page 36
- [Defining the Output Destination](#) on page 37
- [Submitting the Job](#) on page 39
- [Monitoring the Job](#) on page 40

## About Importing OpenEXR Media

OpenEXR files are designed to support multiple resolutions and additional channels, making them appealing for compositing. Since OpenEXR can store arbitrary channels (such as specular, diffuse, alpha, RGB, normals, etc) in one file, it takes away the need to store this information in separate files. However, to support all these arbitrary OpenEXR channels in Autodesk Visual Effects and Finishing applications, they need to be converted to separate sets of RGB clips upon import. These RGB files can then be modified and combined, for example in Action, to reconstitute the final clip.

WiretapCentral is used to set up OpenEXR transcoding jobs, which are sent to a Backburner network for encoding, leveraging a network of processing nodes (any Linux-based computers, including the application workstation) to provide maximum processing speed. The jobs output RGB image sequences to a location that is accessible to Autodesk Visual Effects, Finishing, and Grading applications.

---

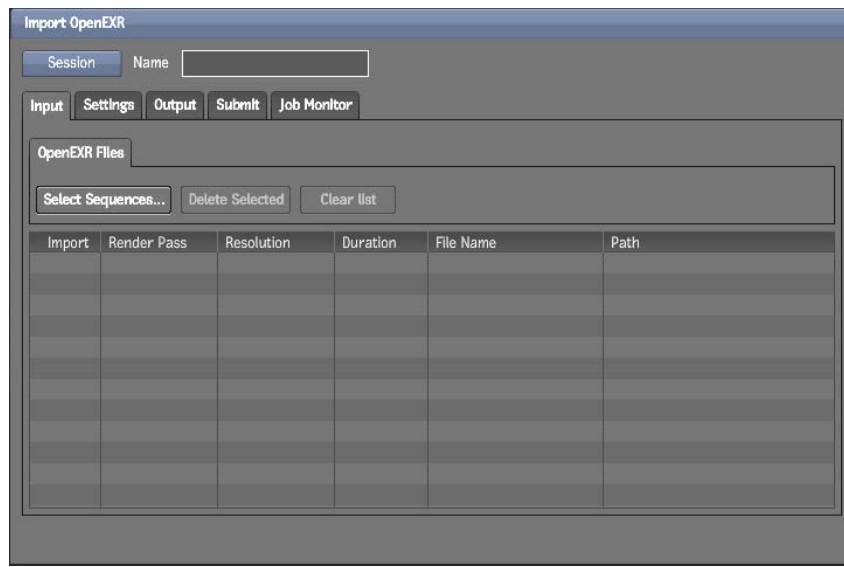
**NOTE** Multi-channel OpenEXR sequences are imported as 16-bit float. OpenEXR sequences at 32-bit float are converted to 16-bit float automatically.

---

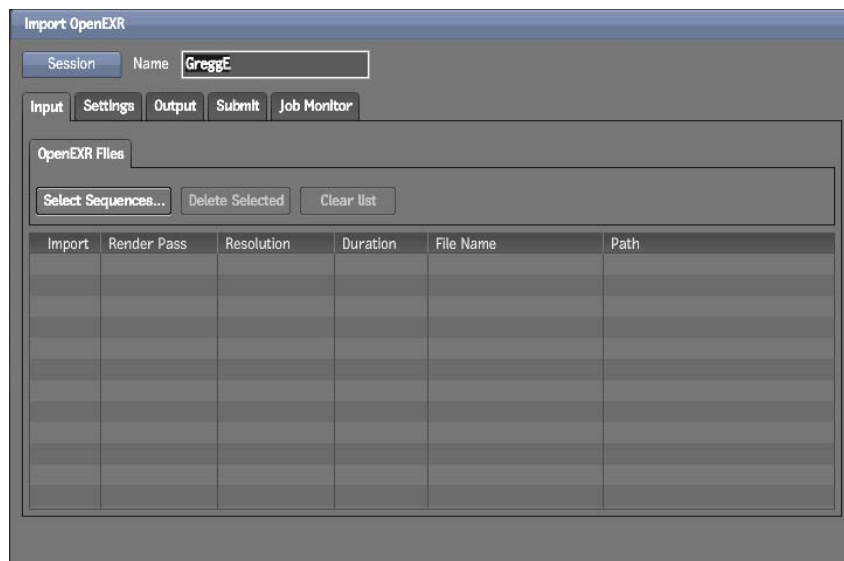
## Importing OpenEXR Media Files

OpenEXR media can be imported as individual multichannel files. The workflow goes as follows.

- 1 In WiretapCentral, from the Import menu, select OpenEXR.  
This will start a new import job. The Import OpenEXR window appears.

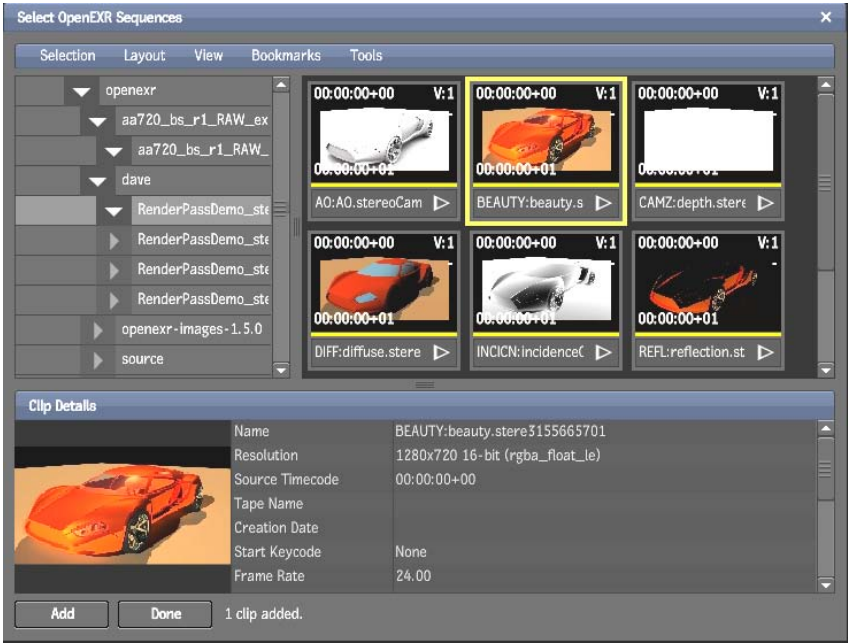


- 2 Enter a session name. Punctuation marks are prohibited. WiretapCentral indicates if the session name is invalid. Correct the name before going any further.  
  
The session name is used to identify your import job when saving or loading a session, and when outputting the job. The session name is used as the job name in Backburner Manager.  
  
You can save this session at any time. From the Session menu, select Save or Save As. From this menu, you can also load a previously saved Import OpenEXR session or delete one.

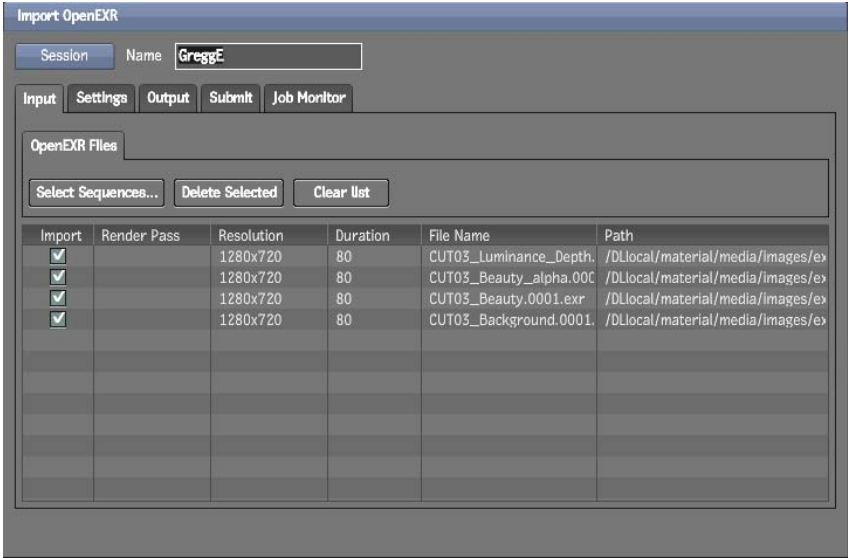


- 3 Ensure that the Input tab is selected.
- 4 From the OpenEXR Files tab, click Select Sequences.  
A browser appears.
- 5 By browsing through a Wiretap Gateway, select one or more clips and click Add.  
You can select multiple files at a time by using the **Shift** or **Ctrl** key.

For OpenEXR files containing multiple render passes, you can select the file, to select all render passes, or double-click the file to show the contained render passes. The render passes can then be added individually.



- 6 When you are finished, click Done. The selected clips appear in the Input list.



- 7 When you are ready to proceed, click the Settings tab. See [Adjusting the Settings](#) on page 36.

# Adjusting the Settings

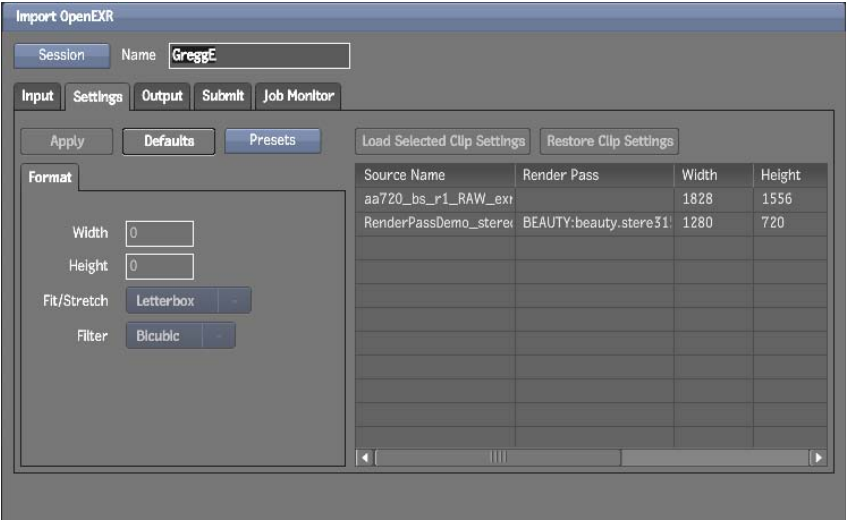
The Settings tab contains a number of parameters that can be set for the clips in your OpenEXR decoding session. These settings appear under the Format tab, and are the staging area for the OpenEXR settings. You can additively load presets, or change the settings manually. The settings are not applied until you click the Apply button.

Settings that are not changed are greyed out. Clicking one will activate all in the group. Settings that are not enabled will not be applied.

When you are done adjusting, click Apply to apply the settings to the selected clips in the list. The settings can be applied to all of the clips or to individual selections.

## Format Tab

Use the Format Settings options to perform any resizing, including resize filter options.



**Width / Height** Enter the desired resize settings.

**Fit/Stretch** To use a different aspect ratio during resize, select a fit method option to be applied to the exported clip.

Select:	To:
Centre/Crop	Fit the source image, centred, over the destination frame. If the source is larger than the destination, it is cropped. If the source is smaller than the destination, it is surrounded by a black border.
Crop Edges	Fit one edge of the source into the destination frame without stretching or squashing the frame. Excess parts of the source frame after resizing are cropped. If the source—after the one edge is resized—is wider than the destination, its overhanging left and right edges are cropped. If the source is taller than the destination, the upper and lower edges are cropped.
Fill	Fit the source, width and height, into the destination frame. If the source and destination frames do not have the same aspect ratio, the image can become distorted.



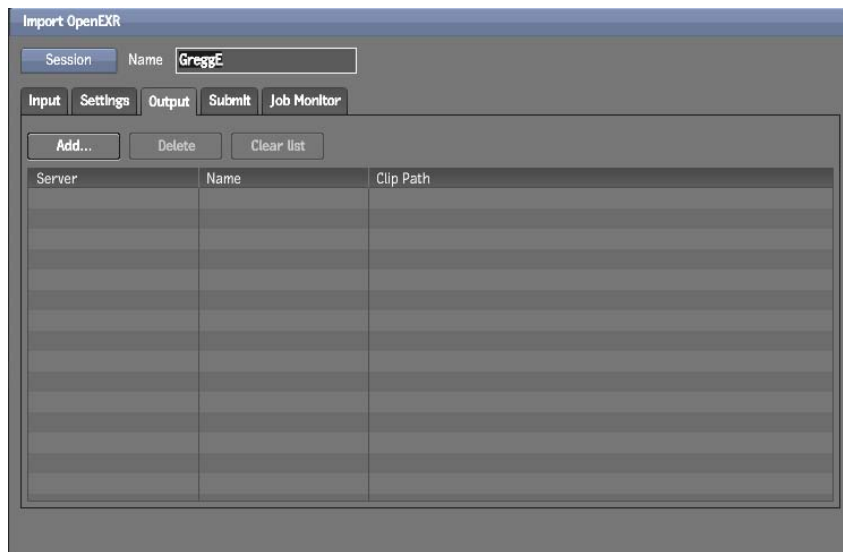
Select:	To:
Letterbox	Fit the source to the destination frame without squashing or stretching it, and without cropping the source. If the source is wider than the destination, black bars fill the top and bottom of the destination frame. If the source is narrower than the destination, black bars fill the right and left sides of the frame. In all cases, the entire source frame is contained within the destination frame.
<b>Filter</b> Select the filter option to determine the quality of the interpolated resize result.	
Select:	To get:
Impulse	Quick, low-quality results.
Triangle	Moderate results with little processing overhead.
Mitchell	Best results when resizing a clip to a higher resolution.
Bicubic	Very good results for resizing soft-looking images. Use to sharpen the image.
Quadratic	Good results for resizing simple images with straight edges. Similar to Gaussian but with more blurring. Use to soften the image.
Gaussian	Excellent results when resizing a clip with no patterns and a lot of straight edges to a lower resolution. Useful for softening some detail.
Shannon	Excellent results when resizing a clip to a lower resolution. Very similar to Lanczos, but results are a little softer.
Lanczos	Best results when resizing a clip containing a variety of patterns and elements to a lower resolution. It is the most complex with the longest processing time.

## Defining the Output Destination

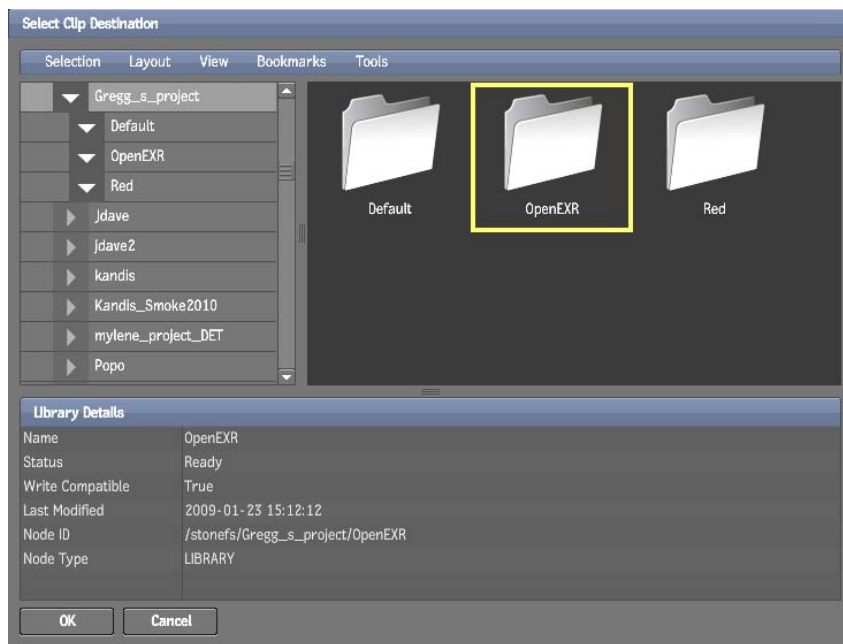
Use the Output tab to set one or more output destinations for your import OpenEXR job. A job can be sent to multiple destinations. The decoding is done once and streamed simultaneously to each location.

The clip placeholder is created right away and the media is populated in the background without locking the clip library in your Autodesk Visual Effects and Finishing application.

- 1 Click the Output tab.  
The output options appear.



- 2 Click Add to add a destination for the given jobs.  
A browser appears.
- 3 Select one or more destination locations for the processed clips.



The destination can be any StoneFS on an Autodesk Visual Effects and Finishing workstation. Uncompressed RGB images are generated and the corresponding clips are created in Project/Library/Reel. Clips are named according to their source file name.

- 4 To create a new library, select a project then, from the Tools menu, select New Library.
- 5 To create a new reel, select a library then, from the Tools menu, select New Reel.
- 6 When done, click OK.

The selected destinations appear in the Output list.



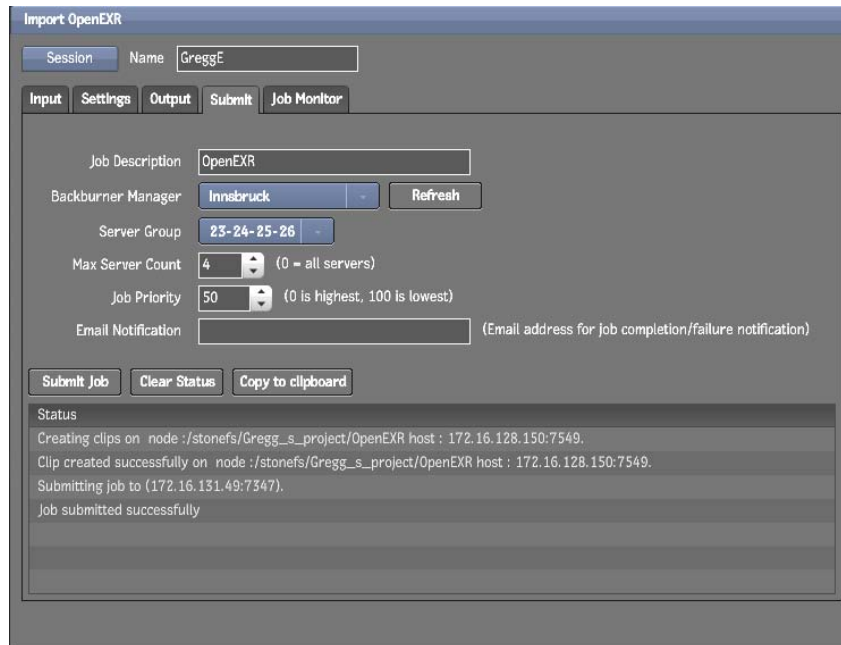
limit), which may not be advantageous to your job or work environment. Server groups need to be set up in Backburner if you have a processing farm. See the *Backburner User Guide*.

**Max Server Count** Select the number of processing nodes to be used on the job.

**Job Priority** Set the job priority that is used in Backburner Manager for queued processes.

**Email Notification** Enter your e-mail address if you want to be notified of job completion or failure.

- 2 When done, click Submit Job.



The screenshot shows the 'Import OpenEXR' dialog box with the following details:

- Session Name:** GreggE
- Input/Settings/Output/Submit/Job Monitor tabs:** The 'Submit' tab is selected.
- Job Description:** OpenEXR
- Backburner Manager:** Innebruck (with a Refresh button)
- Server Group:** 23-24-25-26
- Max Server Count:** 4 (0 = all servers)
- Job Priority:** 50 (0 is highest, 100 is lowest)
- Email Notification:** (Empty field with a note: Email address for job completion/failure notification)
- Buttons:** Submit Job, Clear Status, Copy to clipboard
- Status List:**
  - Creating clips on node :/stonefs/Gregg\_s\_project/OpenEXR host : 172.16.128.150:7549.
  - Clip created successfully on node :/stonefs/Gregg\_s\_project/OpenEXR host : 172.16.128.150:7549.
  - Submitting job to (172.16.131.49:7347).
  - Job submitted successfully

This sends the jobs to Backburner for processing. The job status (clip creation on all destinations and submission of the job to Backburner manager) is displayed in the Status list.

## Monitoring the Job

Use the Job Monitor tab to follow the progress of all your submitted jobs.

- 1 Click the Job Monitor tab.

All the currently submitted jobs are displayed along with their status.

Import OpenEXR

Session Name: OpenEXR

Input Settings Output Submit Job Monitor

Jobs Action Filter by name Select All Auto Refresh 30 Sec Refresh

Name	Status	% Done	Tasks	Priority	Submitted	Started
soldedesign_FULL	complete	100	515 / 515	1	2009-01-23 11:26:52	2009-01-23 11:26:52
soldedesign_NTSC_MITCHELL	complete	100	515 / 515	2	2009-01-23 11:30:06	2009-01-23 11:30:06
soldedesign_NTSC_BICUBIC	complete	100	515 / 515	3	2009-01-23 11:30:38	2009-01-23 11:30:38
soldedesign_NTSC_TRIANGLE	complete	100	515 / 515	4	2009-01-23 11:31:51	2009-01-23 11:31:51
soldedesign_NTSC_IMPULSE	complete	100	515 / 515	5	2009-01-23 11:32:36	2009-01-23 11:32:36
soldedesign_NTSC_LANCZOS	complete	100	515 / 515	6	2009-01-23 11:33:29	2009-01-23 11:33:29
soldedesign_NTSC_SHANNON	complete	100	515 / 515	7	2009-01-23 11:34:10	2009-01-23 11:34:10
soldedesign_NTSC_QUADRATIC	complete	100	515 / 515	8	2009-01-23 11:35:18	2009-01-23 11:35:18
soldedesign_NTSC_GAUSSIAN	complete	100	515 / 515	9	2009-01-23 11:37:08	2009-01-23 11:37:08
229IB_QASAN_4K_F_16_B2425	complete	100	1263 / 1263	11	2009-01-22 14:33:40	2009-01-22 14:33:40
teste2	complete	100	180 / 180	50	2009-01-23 12:49:28	2009-01-23 12:49:28
gregEXR	complete	100	180 / 180	50	2009-01-23 14:18:58	2009-01-23 14:18:58
teste2_1	idle	98	186 / 189	50	2009-01-23 14:59:03	2009-01-23 14:59:03
23jan-exr-1	waiting	0	0 / 642	50	2009-01-23 15:22:40	2009-01-23 15:22:40
23jan-exr-1_1	complete	100	616 / 616	50	2009-01-23 15:56:08	2009-01-23 15:56:08
OpenEXR	idle	5	9 / 181	50	2009-01-26 12:04:58	2009-01-26 12:04:58

See [Monitoring the Decoding Jobs](#) on page 43.

You can also open the Backburner monitor selected in the Destination pane by clicking Web Monitor.

- When you are done, from the Session box, select Save to keep your session information, then close the browser to end the session.



# Monitoring the Decoding Jobs

# 5

## Topics in this chapter:

- [Overview](#) on page 43
- [Understanding the Monitor User Interface](#) on page 44
- [Viewing Job Details and Job Tasks](#) on page 48

## Overview

The monitor provided in the media import workflow is suitable for monitoring and controlling your own recently submitted R3D and OpenEXR jobs. WiretapCentral also provides a more comprehensive monitor, available directly from the Tools menu. It has all the features of the monitor embedded in the media import workflow, plus additional tabs, for managing servers and server groups associated with the currently selected Backburner Manager, and for modifying the job-handling behaviour of the Backburner Manager itself.

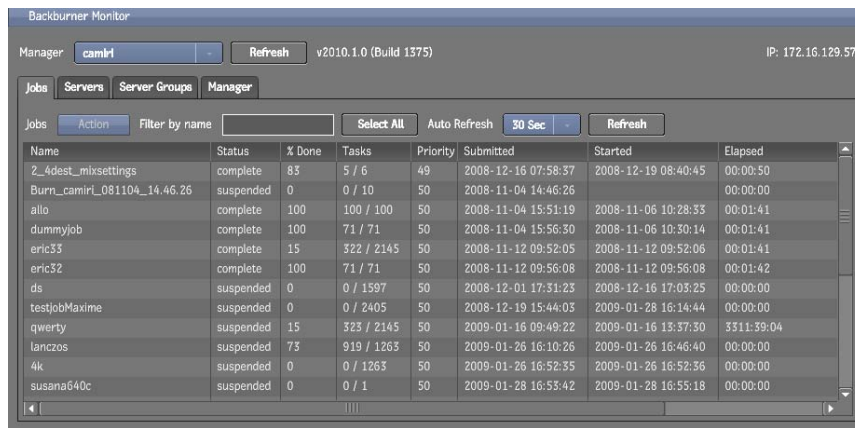
---

**NOTE** There are three monitors available in Backburner: The Backburner Windows® Monitor, Backburner Web Monitor and WiretapCentral Backburner Monitor (described in this chapter). For a comparison of the three, see the *Backburner User Guide*.

---

### To gain access to the WiretapCentral Backburner Monitor:

- 1 From the Tools menu, select Backburner Monitor.  
The WiretapCentral Backburner Monitor appears in a new browser window or tab (depending on your browser settings).
- 2 From the Backburner Manager drop-down list, select the Backburner Manager of interest.  
The information in the current tab is updated automatically.



- 3 You can update the display manually by clicking the Refresh button, or you can set a refresh rate from the Auto Refresh menu.
- 4 To perform an operation on a job, select the job in the Jobs tab, then select the desired operation from the Action menu.  
Shift-click or Ctrl-click to perform the same operation on more than one job at a time.
- 5 To view job details, double-click the job of interest.

## User Access Control

By default, no user name or password is needed to use WiretapCentral, and all jobs submitted from WiretapCentral to Backburner are owned by user “apache”. As a result, you can easily perform operations on all WiretapCentral jobs on the Backburner network, including suspending, activating, and deleting jobs submitted by other users. In addition, by default the user “apache” has administrator privileges over all other Backburner jobs, too, such as Burn® jobs submitted by an Autodesk Visual Effects and Finishing application. For information on setting up user access control, see the *WiretapCentral and Wiretap Gateway Installation and Configuration Guide*.

## Understanding the Monitor User Interface

The standalone monitor user interface features four tabs for viewing job, server, server group and manager information respectively. This section describes each of these tabs.

### Jobs Tab

The Jobs tab presents information relating to all jobs associated with the selected Backburner Manager. Use it to view and control the decoding jobs submitted from WiretapCentral, as well as to view jobs submitted to Backburner by other Autodesk Visual Effects and Finishing applications.



The screenshot shows the Backburner Monitor interface. At the top, there's a 'Manager' dropdown set to 'camlri' and a 'Refresh' button. Below this, there are tabs for 'Jobs', 'Servers', 'Server Groups', and 'Manager'. The 'Jobs' tab is active, showing a table of jobs. The table has columns for Name, Status, % Done, Tasks, Priority, Submitted, Started, and Elapsed. The jobs listed include '2\_dest\_mixsettings', 'Burn\_camlri\_081104\_14.46.26', 'allo', 'dummyjob', 'eric33', 'eric32', 'ds', 'testjobMaxime', 'qwerty', 'lanczos', '4k', and 'susana640c'.

Name	Status	% Done	Tasks	Priority	Submitted	Started	Elapsed
2_dest_mixsettings	complete	83	5 / 6	49	2008-12-16 07:58:37	2008-12-19 08:40:45	00:00:50
Burn_camlri_081104_14.46.26	suspended	0	0 / 10	50	2008-11-04 14:46:26		00:00:00
allo	complete	100	100 / 100	50	2008-11-04 15:51:19	2008-11-06 10:28:33	00:01:41
dummyjob	complete	100	71 / 71	50	2008-11-04 15:56:30	2008-11-06 10:30:14	00:01:41
eric33	complete	15	322 / 2145	50	2008-11-12 09:52:05	2008-11-12 09:52:06	00:01:41
eric32	complete	100	71 / 71	50	2008-11-12 09:56:08	2008-11-12 09:56:08	00:01:42
ds	suspended	0	0 / 1597	50	2008-12-01 17:31:23	2008-12-16 17:03:25	00:00:00
testjobMaxime	suspended	0	0 / 2405	50	2008-12-19 15:44:03	2009-01-28 16:14:44	00:00:00
qwerty	suspended	15	323 / 2145	50	2009-01-16 09:48:22	2009-01-16 15:37:30	3311:39:04
lanczos	suspended	73	919 / 1263	50	2009-01-26 16:10:26	2009-01-26 16:46:40	00:00:00
4k	suspended	0	0 / 1263	50	2009-01-26 16:52:35	2009-01-26 16:52:36	00:00:00
susana640c	suspended	0	0 / 1	50	2009-01-28 16:53:42	2009-01-28 16:55:18	00:00:00

The following table describes the operations available from the Action menu.

Select	To
Settings	Open the Job Details window for the selected job. See <a href="#">Viewing Job Details and Job Tasks</a> on page 48.
Activate	Resume a suspended job from where it was halted. Tasks that were already completed are left as-is, and are not redone.
Restart	Restart a suspended job and all its tasks from the beginning, setting the job status to <i>waiting</i> .
Suspend	Place the job on hold.
Delete	Remove the job from the job queue.

The following table presents the information found in the Jobs tab.

Column	Description
Name	This corresponds to the session name specified when submitting the decoding job.
Status	The current state of the job: complete: Completed successfully. active: Currently being serviced. suspended: On hold. idle: Not scheduled for service. waiting: Ready, and waiting to be serviced.
% Done	Percentage of tasks that have been completed.
Tasks	The number of completed tasks and the total number of tasks for the job. For example "55/145" indicates 55 out of 145 tasks for the job have been completed.
Priority	The job priority, from 0 to 100. Zero is the highest priority. 100 means the job is suspended. Default is 0.
Submitted	The time at which the job was originally submitted, in the following format: YYYY-MM-DD HH:MM:SS
Started	The time at which the job started, in the following format: YYYY-MM-DD HH:MM:SS. If the job has not started, zeros appear for the values.
Elapsed	The time duration consumed by the job (HH:MM:SS).

Column	Description
Type	The processing engine needed for the job. For example: Burn: The Burn renderer. Command Line Tool: The Backburner cmdjob command-line plug-in allows you to submit batch, executable, or script files to Backburner as “custom” jobs. mio: The MIO adapter is the processing engine responsible for carrying out transcoding jobs. Wire: Installed with Stone and Wire. Can be used to import/export media, perform Wire transfers, etc. Used by the Wiretap SDK’s background I/O tool, wiretap_bgio_tool.
Owner	The name of the user that submitted the job. This value is set automatically by Backburner when the job is first created. By default, all jobs submitted from WiretapCentral have an owner of “apache”.

## Servers Tab

The following table presents the information found on the Servers tab.

Column	Description
Name	Server name (host name)
Description	A short description of the server, entered when the server was installed
Status	The current activity of the server: absent: Server is no longer seen by the manager, possibly down. active: Server is currently working on a job. suspended: Server has been put on hold. idle: Server is inactive. error: Server is experiencing a problem.
Perf. Index	A value in the range [0–1] indicating the performance level of the server, relative to other servers on the same job. A score of 1 indicates this is the best-performing server.
Adapters	A comma-separated list of installed plug-ins and adapters, for example: Burn: The Burn renderer. Command Line Tool: The Backburner cmdjob command-line plug-in allows you to submit batch, executable, or script files to Backburner as “custom” jobs. mio: The MIO adapter is the processing engine responsible for carrying out transcoding jobs. Wire: Installed with Stone and Wire. Can be used to import/export media, perform Wire transfers, etc. Used by the Wiretap SDK’s background I/O tool, wiretap_bgio_tool.

## Server Groups Tab

A server group is a collection of render nodes grouped together for the purpose of organizing a render farm. It acts as a shortcut to multiple render nodes. By default, the Backburner Manager sends a job to all the render nodes equipped with a suitable processing engine. When you submit a job to a server group, it is sent to the render nodes within the group only, leaving those outside the group free for other uses.

The following table presents the information found in the Server Groups tab.

Column	Description
Name	The name of the server group
Servers	A comma-separated list of servers in the group

For more information on server groups, see the *Autodesk Backburner User Guide*.

## Manager Tab

Use the Manager tab to set options related to the Backburner network, such logs, server assignments criteria, job retries, and tasks performed when a job finishes.

Field	Description
Logging Level	Sets the type of events shown in the log files. Error: Fatal errors that halt the rendering of a job. Warning: Non-fatal warning information. These are events that do not cause the application to stop rendering a job. Debug: Detailed information about TCP/IP packets and the current state of Backburner Manager and the Backburner Servers. Debug Extended: A more verbose listing than Debug.
Default Mail Server	The Backburner Manager can send job success/failure notification to the address submitted with the job (or assigned to the job once it is in the queue). Use this field to indicate the server where the smtp mailer daemon is running. Changing this field affects all email notifications for the selected manager—not just those associated with your own jobs.
Max Concurrent Jobs	Sets the maximum number of jobs the manager sends out simultaneously. The optimal setting depends on the processor speed of the manager workstation, general job size, and overall network speed. Generally, the default value of 4 is adequate. You can change this value in the following situations: <ul style="list-style-type: none"><li>■ Decrease this value when rendering jobs are large and/or Backburner is struggling to keep up with jobs.</li><li>■ Increase this value when rendering jobs are small and/or Backburner has no trouble keeping up.</li></ul> <b>NOTE</b> Avoid increasing this value substantially. Too high a value may cause an increased number of node timeouts, because the jobs are sent faster than the nodes can handle them. In such cases, decrease the value.
Retry Count	The number of times the manager attempts to restart a failed task.
Time Between Retries	The time between each retry.
On Job Completion	Specifies what happens to job parameters once the job has successfully completed. Leave: Leave in the job list. Archive after <i>n</i> days: Remove from the job list and place in the job archive after the specified number of days. Set to 0 (zero) to archive the job immediately after its completion. Archiving saves a job's parameters; it does not, however, save rendered frames or source material. Delete after <i>n</i> days: Remove from the job list after the specified number of days. Set to 0 (zero) to delete the job immediately after its completion.

## Viewing Job Details and Job Tasks

Double-clicking on a job name opens the Job Details window where you can view additional information about a job, including its associated tasks, where they have been sent for processing, and their status. The top of the window displays the following information.

Field	Description
Name	The name of the job.
Type	The processing engine required to complete the job. For example: Burn: The Burn renderer. Command Line Tool: The Backburner cmdjob command-line plug-in allows you to submit batch, executable, or script files to Backburner as “custom” jobs. mio: The MIO adapter is the processing engine responsible for carrying out transcoding jobs. Wire: Installed with Stone and Wire. Can be used to import/export media, perform Wire transfers, etc. Used by the Wiretap SDK’s background I/O tool, wiretap_bgio_tool.
Node ID	The job’s ID as assigned by the Backburner Manager.

## General Info Tab

The following table describes the information found in the General Info tab.

Field	Description
Description	Job description as entered when the job was submitted
Submitted By	The owner of the job, and the host from which it was submitted
State	The current state of the job: complete (%): Completed successfully. The percentage is set by the Backburner Manager as each task is completed. active: Currently being serviced. suspended: On hold. idle: Not scheduled for service. waiting: Ready, and waiting to be serviced.
Priority	The job priority, from 0 to 100. Zero is the highest priority. 100 means the job is suspended. Default is 0.
Email Notification	The address to which job completion or job failure notifications are sent When using this feature, be sure to set the location of the mailer daemon too. See <a href="#">Manager Tab</a> on page 47.
Dependencies	List of jobs that must be completed before the selected job can be processed
Last Task Error	The last error message for the most recent task (associated with the job) executed by the Backburner Manager

## Tasks Tab

The following table describes the information found in the Tasks tab.

Column	Description
ID	The task number for this task

Column	Description
Status	The state of the task (active, complete, waiting, error)
Server	The name of the server where the task is being executed
Start Time	The time stamp at which the task was started (YYYY-MM-DD HH:MM:SS)
Elapsed Time	The time duration consumed by the task (HH:MM:SS.MS)
Last Error	The last execution error message associated with this task

## Server Assignment Tab

The Server Assignment tab allows you to view the servers assigned to the selected job. It also allows you to assign new servers or server groups to currently active jobs. A filtering mechanism allows you to limit the list of servers to those capable of handling the current job type only.

**NOTE** You can only modify server assignments for jobs having a status of *active*.

Field	Description
Assigned Server Group	Name of the server group to which the job was assigned. A server group is a collection of servers. Only servers in the specified group will work on the job.
Max Server Count	Within a server group, the maximum number of render nodes made available for the job, as specified when the job was submitted. Set to 0 (zero) to assign the job to all servers in the group.
Assigned Servers	A comma-separated list of servers currently assigned to the job.
Filter on Job Type	Select this checkbox to list only the servers capable of handling the job.
Name	Name of the server.
Assigned to Job	A checkbox indicating whether or not the listed server is assigned to the job. To add a new server to the job, check a checkbox. Notice the Assigned Servers list is updated automatically.
Description	A description of the server.
Status	The current activity of the server: absent: Server is no longer seen by the manager, possibly down. active: Server is currently working on a job. suspended: Server has been put on hold. idle: Server is inactive. error: Problem on the server.
Perf. Index	A value in the range [0–1] indicating the performance level of the server, relative to other servers on the same job. A score of 1 indicates this is the best-performing server.
Adapters	The adapters installed on the server, for example: Burn: The Burn renderer. Command Line Tool: The Backburner cmdjob command-line plug-in allows you to submit batch, executable, or script files to Backburner as “custom” jobs. For more information see the <i>Autodesk Backburner User Guide</i> . mio: The MIO adapter engine is responsible for transcoding some streaming media formats (such as R3D and OpenEXR).

Field	Description
	Wire: Installed with Stone and Wire. Can be used to import/export media, perform Wire transfers, etc. Used internally by Autodesk Visual Effects and Finishing applications.

## Advanced Info Tab

Some applications submit Backburner jobs with extended instructions for the processing engine. Use the Advanced Info tab to view and modify these extended instructions.

# Encoding Clips

# 6

## Topics in this chapter:

- [About Encoding Clips](#) on page 51
- [Supported Export Codecs](#) on page 52
- [Encoding Clips](#) on page 52
- [Customizing Encoding Presets](#) on page 56

## About Encoding Clips

Encoding clips is a three-step process that is done within the Export window: you select the input clip, set the processing options, and submit the job. Once the clip is encoded, you have the option of creating a package (containing all the clips you created), to upload to a web server.

---

**NOTE** Only fully-rendered clips can be encoded.

---

WiretapCentral guarantees frame and timecode accuracy; however, it is important to note the following limitations:

- Video clips are not broadcast-quality
- Clips are down-converted to 8-bit per channel RGB
- Film clips lack colour management
- All effects must be rendered
- Audio must be mixed down to 2 tracks; all other tracks are ignored

With these limitations in mind, it is recommended that any client final approval be done using the final delivery medium.

WiretapCentral encodes clips on the server, and they remain there once complete. The default storage capacity of this location is set at 20 GB. Once this capacity is reached, older clips are automatically deleted to make room for the new.

To modify the capacity of the storage, edit the *wiretapcentral.cfg* configuration file located at */var/www/html/WiretapCentral/* on Linux systems, or */Library/WebServer/Documents/WiretapCentral/* on Mac OS® X systems. Under the Export section, uncomment the line: *SizeGB=20* and set the size (in gigabytes).

## Supported Export Codecs

WiretapCentral can export clips in the following formats.

Codec	Comments
H.264	Main, High. Use Main when you want to minimize the use of computing resources. This is the setting used by QuickTime Pro. Use High for broadcast or disc storage at high-definition, such as for HD DVD or Blu-Ray.
iPod Touch/iPhone	H.264 format for Apple® iPhone® and iPod Touch®
iPod 5G	H.264 format for video-capable iPod®
MPEG-4	
MPEG-2	
MPEG-1	
FLV	Flash® Video
QT Animation	QuickTime file using the Animation codec
DV (PAL or NTSC)	Raw PAL or NTSC DV stream
MS MPEG-4	Microsoft® MPEG-4 version 2

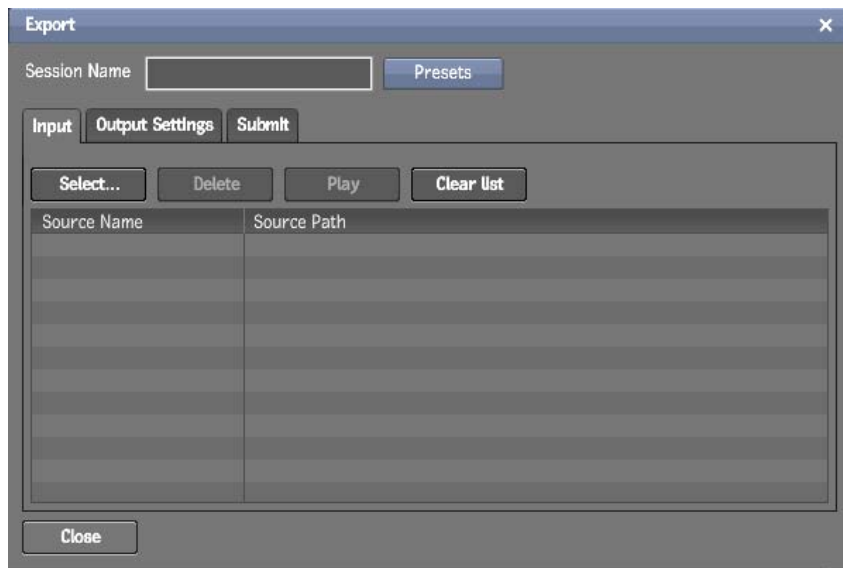
## Encoding Clips

Encode clips using the following procedure.

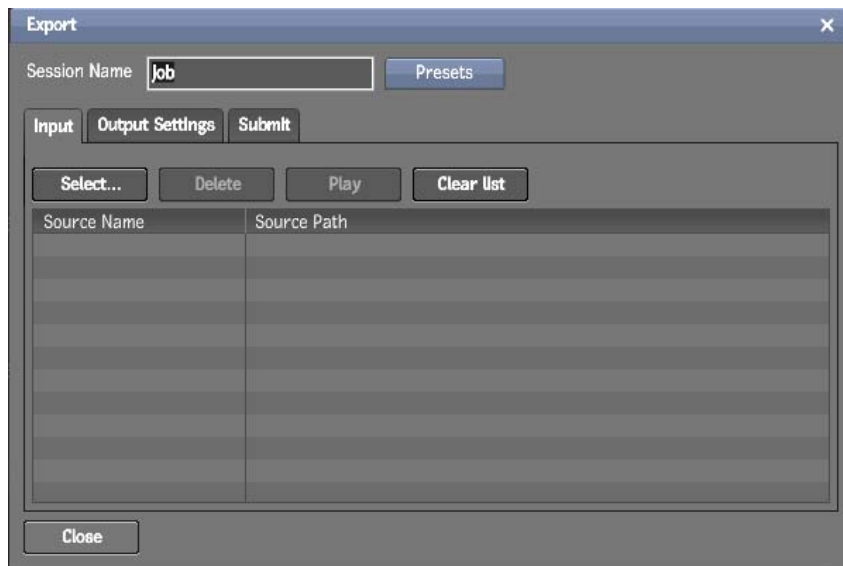
### To encode a clip:

- 1 From the Export menu, choose Selected or Entire List.  
The export window appears.





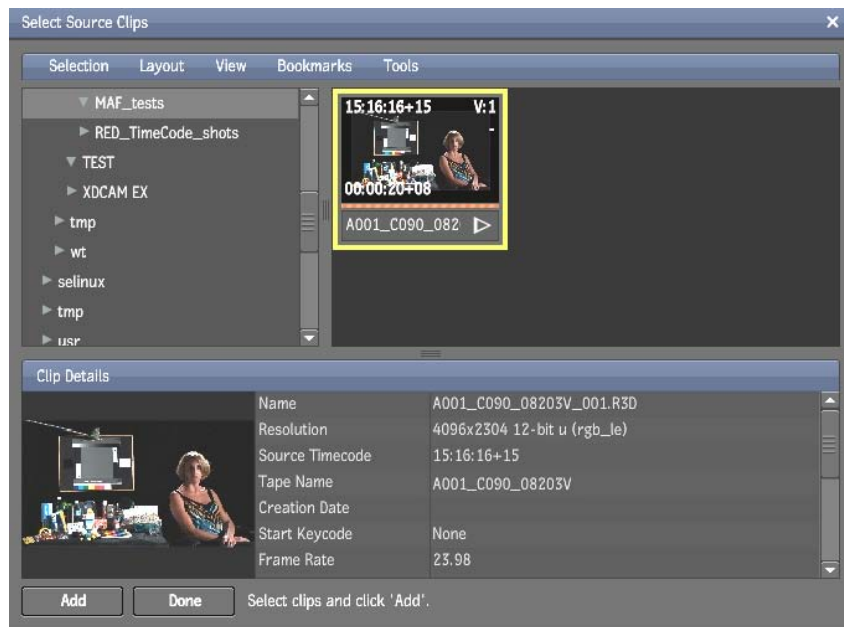
2 Name the export session.



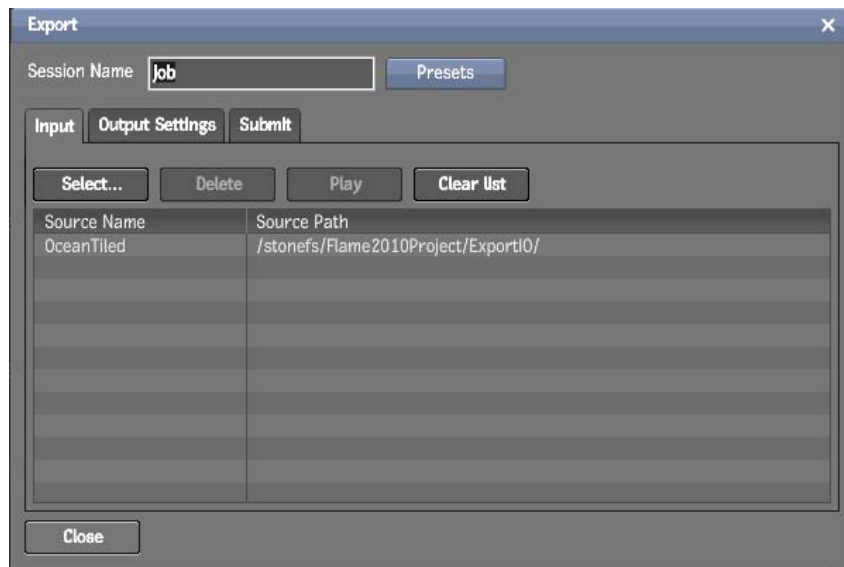
This name is used to create a subdirectory on the server to hold the encoded clips. If no Session name is entered, the name of the first clip selected, when entering the export panel, is used.

You can save this session at any time. From the Presets menu, select Save or Save As. From this menu, you can also load a previously saved session or delete one.

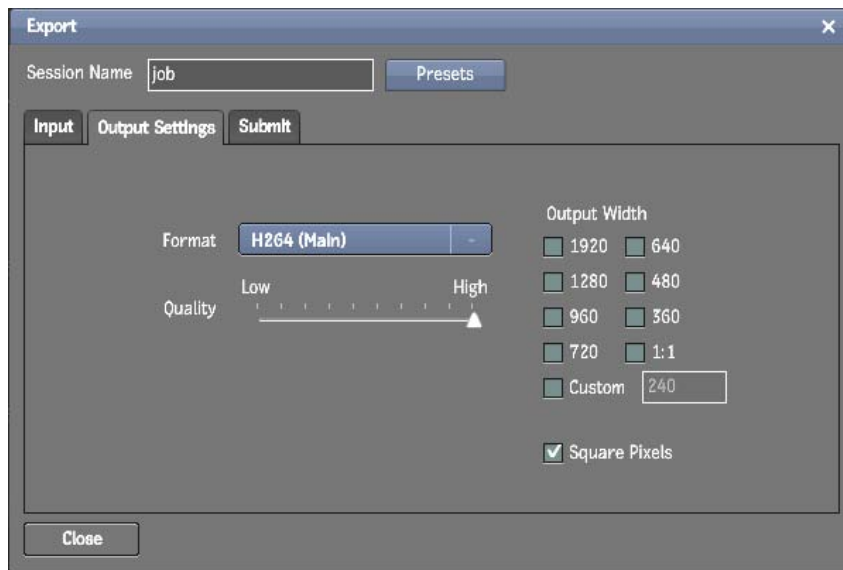
3 If you previously made a selection of clips, it will appear in the list. Otherwise, click Select. A browser appears.



- 4 Select one or more clips and click Add. When you are finished, click Done. The selected clips appear in the Input Clips list.

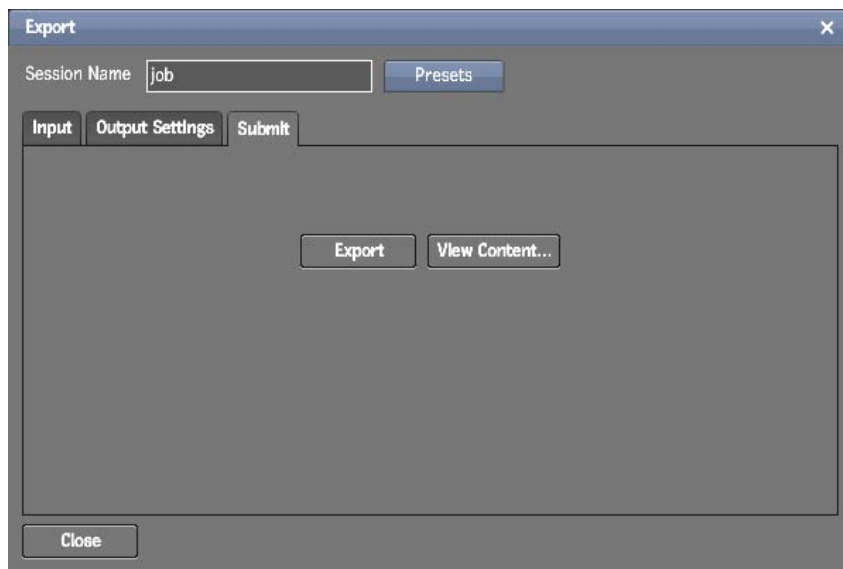


- 5 Click the Output Settings tab and set your encoding options, as desired. You can select multiple output widths.



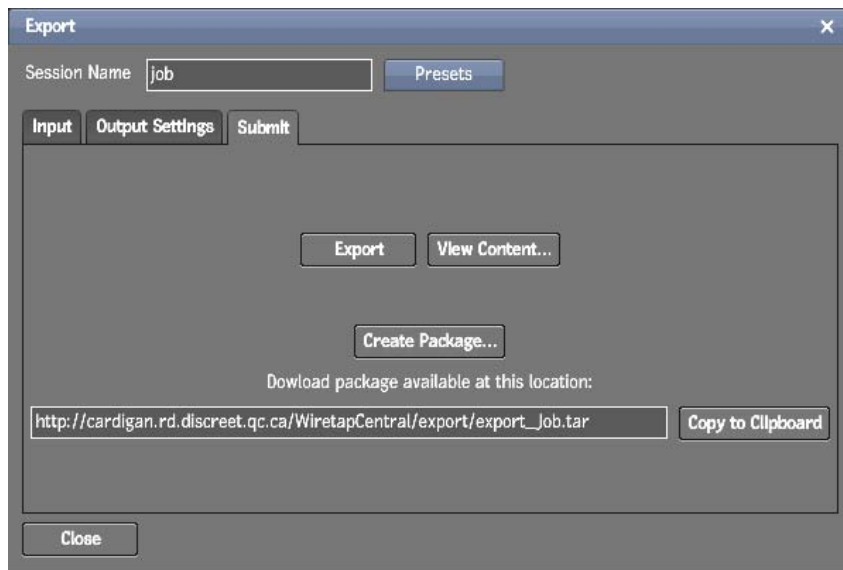
**NOTE** For information on defining the values of the steps in the Quality slider, see [Customizing Encoding Presets](#) on page 56.

- 6 Click the Submit Job tab and click Export.



A progress bar appears to indicate how much of the job has completed.

- 7 Click Done to continue.  
The Submit Job tab reappears with new options.



- 8 Click View Content to open a new browser displaying the server directory containing the generated clip.

The directory created on the server is based on the export session name.

WiretapCentral exports encoded clips to the following directory, as seen by a Web browser:

`http://<hostname_or_IP>/wiretapcentral/export/<session_name>/`

- 9 Click Create Package to add the clip, or clips, to a TAR file.

You can copy this path to the clipboard and then paste it in a browser to access the file.

You can also view this, and all created, packages. From the Export menu, click View Packages.

You should download the files once the encoding is complete to avoid losing them if the storage capacity is reached.

- 10 When you are done, close the window.

You can also return to the previous tab to export other formats of the same clips.

## Customizing Encoding Presets

When you submit an encoding job in the WiretapCentral UI, the WiretapCentral *ffmpeg* encoder is called with a series of command-line parameters, depending on the codec preset and quality level selected in the Export window.

These presets are stored in the *export\_presets.xml* file, located at */var/www/html/wiretapcentral/presets/* on Linux WiretapCentral server systems, or */Library/WebServer/Documents/WiretapCentral/* on Mac OS X WiretapCentral server systems.

Each preset defines the audio and video encoding format and parameters, as well as the video encoding quality.

WiretapCentral provides a number of useful default presets. Advanced users are encouraged to add new presets, or modify existing presets to better suit their needs.

### To modify encoding presets:

- 1 Open a terminal to the WiretapCentral server machine, and log in as root.

- 2 Open the file *export\_presets.xml* file in a text editor.

The file is located in the */var/www/html/wiretapcentral/presets/* directory on Linux systems, or in the */Library/WebServer/Documents/WiretapCentral/* directory on Mac OS X systems.

- Each encoding preset is defined by a `<preset>` node in the file.
  - Each `<preset>` node has an `<audio>` child node that defines the audio codec parameters, and a `<video>` child node that defines the video codec parameters.
  - `<audio>` nodes have a `<base>` child node that defines audio encoding parameters.
  - `<video>` nodes have a `<base>` child node that defines most of the video encoding parameters, as well as a number of `<quality>` child nodes that define the steps of the Quality slider in the Export window for that preset.
- 3 Modify the parameters in the `<base>` nodes, as well as the number and values of `<quality>` nodes. The number of `<quality>` nodes in the XML file for a preset will be reflected by the number of steps in the Quality slider for the respective preset.
  - 4 Save and close the *export\_presets.xml* file, and refresh the Web browser that points to WiretapCentral.

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**NOTE** Incorrect parameters may cause encoding jobs to fail. Read the information available online about *ffmpeg* parameters before making changes.

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If an encoding job fails without a clear error message after you have modified export preset settings, perform the following procedure to obtain detailed error information from the codec.

**To troubleshoot clip encoding:**

- 1 In the Export window, click View Presets.  
A new browser window opens to the  
`http://<hostname_or_IP>/wiretapcentral/export/<session_name>/` URL.  
Where `<session_name>` is the name of the failed export job.  
The list of files in the export session is displayed, including a file named *info.txt*.
- 2 Click the *info.txt* file.  
The browser displays the contents of the file.
- 3 Locate the “Full command (execute as apache or root):” line at the end of the file.  
The next line in the file contains the command and parameters that were sent by WiretapCentral to the codec when attempting to encode the clip.
- 4 Select the entire line and copy it to the clipboard.
- 5 Log into the WiretapCentral server machine as root, paste the command, and run it.  
The codec outputs detailed messages on the reason for the failure.
- 6 Refer to online *ffmpeg* discussion groups for information on how to troubleshoot the reported problems.

