

User and Administrator Guide

Version 2024.1

Contents

С	Contents	2
W	Velcome	7
	A note from the team	7
	What does Axle AI do?	7
	What is Axle AI?	7
P	Part 1: User Guide	9
1	Axle Al Quick Start	10
	Accessing Axle AI	10
	Axle AI Window	12
	Player View	14
	Searching for Files	15
	Simple Search	16
	Advanced Search	16
	Browsing through a Flattened View	17
	Saving a Search (Smart Filter)	17
	ElasticSearch Syntax	19
	Quick Search	19
	Search for One Term or Another	19
	Search for an Exact String or Expression	19
	Search with the Root of a Word	19
	Search for Specific Metadata Fields	20
	Search for Multiple Metadata Fields	20
	Specific Axle AI Fields	20
	Searching Multiple Tags in One or More Fields	21
	Combining Standard and Metadata Search Features	21

Prioritizing Terms	21
Boolean Operations (must be present or must not be present)	22
Tagging Your Media with Metadata	23
Editing Metadata in Bulk	24
Types of Metadata Fields	25
Next Steps	25
Glossary	26
2 Interface Guide	27
Introduction	27
Navigation Panel	29
Catalogs	29
Bins	29
Smart Filters	30
Archives	31
Metadata Panel	31
File Details	32
Metadata	32
Timeline Data	32
Processing Icon	32
Toolbars	33
Logo Area	33
Search Bar	33
User Icon	34
Navigation Bar Toggle	34
Refresh Button	37
View Toggle	37
Add Columns	37
Command (Gear) Menu	38
Player View	39

	Comments	41
	Subclips	44
3	Creating Subclips and Exporting a Bin	45
	Creating Bins	45
	Creating Subclips	46
	Exporting Subclips	47
4	Al Features	49
	Introduction	49
	Axle Speech	49
	Creating an Account with Axle Speech	49
	Processing Using Axle Speech	49
	Reading Axle Speech Data	50
	Microsoft Video Indexer	52
	Creating an Account with Microsoft Video Indexer	52
	Processing using Microsoft Video Indexer	52
	Reading the Microsoft Video Indexer Data	53
	Speechmatics	55
	Creating an account with Speechmatics	55
	Processing using Speechmatics	55
	Reading the Speechmatics Data	55
5	Axle Al Panels for Adobe Creative Cloud Applications	56
P	art 2: Administrator Guide	59
1	Installation	60
	System Requirements	60
	Axle AI for Linux	60
	Axle AI for MacOS	60
	Installing Axle AI	61
	First-Time Setup	62
	License and User Setup	62

	Catalog Setup	63
2	Administration Basics	64
	Adding Users	65
	Setting Catalogs and Permissions	66
	Managing Catalogs	68
	Removing a Catalog	69
	Metadata Setup	70
	Metadata Field Creation Walkthrough	71
3	Administrator Pages Reference	73
	Introduction	73
	Users Page	74
	Manage Users	74
	Catalogs Page	77
	Data Fields Page	80
	Customized Metadata Fields (Catalog Specific)	80
	Metadata Filter	83
	Appearance Page	84
	Advanced Page	88
	License	88
	Generate Proxies	88
	Editing Proxy	88
	Connectr IP	88
	Microsoft AI Settings	88
	Speechmatics AI Settings	88
	Domain Name	88
	Folder Metadata Inheritance	89
	Email Settings	89
	Websockets Configuration	89
	Sweep Option	89

	Track Modification Date	90
	XML Import Folder	90
	Existing Proxies	90
	Exclusions For Paths	90
	Axle Speech Settings	90
	Axle AI Version	90
	Status Page	91
	Logs Page	92
4	Al Features	93
	Introduction	93
	Axle Speech	93
	Microsoft Video Indexer	95
	Speechmatics	96
5	Axle Panel for Adobe Premiere Pro CC	98
6	Proxies and Proxy Storage	99
	What Are Proxies?	99
	Proxy Storage	99
	Default Proxy Storage Location	100
	Changing the Proxy Storage Location	100
7	Archiving	103
	Standard Archiving	103
	Long-Term Storage	106
	Removing Archived Assets	106
	Restoring Archived Assets	108
8	Managing Exclusions	109
9	Troubleshooting	111

Welcome

A note from the team

Thank you for joining Axle AI for MacOS, Windows, and mobile clients. This software is the product of our team's obsession with simplifying your media management workflow, and we value any feedback you have to give. If you have any insights, concerns, or questions, please email us at info@axle.ai or call us at +1-415-225-1926. If you encounter a problem, or it seems the software isn't working correctly, please get in touch with our support team at support@axle.ai or call +1-415-225-1926.

What does Axle AI do?

Axle AI is designed to make it easy to organize, find, and work with all of your media. All Macs, Windows PCs, and iPads on your network can then access the Axle AI interface through any modern web browser. With this interface, you can browse through your media library, play proxy media directly in the browser, apply metadata to your media, search for your media, leave comments on individual files, download files to your computer, and more. In addition, a simplified version of the interface is available as a panel for each of the main Adobe Creative Cloud applications (AfterEffects, Illustrator, InDesign, Photoshop, and Premiere Pro) and for iOS and Android smartphones. Editors can access their content through this Axle AI panel without needing to open the web browser at all.

What is Axle AI?

Axle AI is software that is installed on a Mac or Linux server computer that you own and control. It scans network storage volumes or folders that you specify, and presents their contents through a clean, elegant browser interface that can be accessed from anywhere on your network. The software is built from a number of components, the most important of which are the Axle AI processes: the PostgreSQL database and the browser-based interface. Axle AI has other useful background utilities to make your media production seamless, such as a proxy generator.

The Axle AI processes are the collection of processes running on the Linux or Mac system that conduct all the behind-the-scenes operations of Axle AI, including detecting when new

files have been added, moving files for you, writing metadata information to the database, communicating with the proxy generation software, and more.

Axle AI's PostgreSQL database is where all the information in Axle AI is stored. This includes references for all the files Axle AI has detected and metadata that users have created in Axle AI. Axle AI also includes a powerful search engine, Elastic Search, that makes it possible to quickly search across all metadata (technical, AI-driven and custom user-entered) to find media quickly.

Our AI-based features plug seamlessly into the core Axle AI MAM platform; you can get integrated transcriptions via our Axle Speech or third party (Speechmatics) software, and likewise get automatic recognition of faces, objects, logos, on-screen characters and overall scene understanding through our Axle AI Tags module, as well as through one or more third party packages (such as Microsoft Video Indexer). For customers who want everything handled on premise, we recommend a second server devoted to running Axle AI Tags plus speech transcription, networked to the main Axle AI MAM server.

Our browser-based interface is how you interact with Axle AI, view your media, change your Axle AI settings, and do almost everything else. The proxy generator is how Axle AI creates the proxies that users see when they play videos in the interface. Currently, there are two methods Axle AI uses for generating proxies: FFmpeg, an open-source transcoding tool that is included with Axle AI for both Linux and MacOS, and the Axle AI Advanced Transcode module for handling high-end RAW formats (R3D, ARRI and Blackmagic Raw) available for MacOS. In addition, Axle AI's connectr application, which allows straightforward visual building of custom workflows, can provide more sophisticated transcode services for Axle AI.

Part 1: User Guide

- 1 Axle AI Quick Start
- 2 Interface Guide
- 3 Making Subclips and Exporting a Bin
- 4 AI Features
- 5 Axle AI Panels for Adobe Creative Cloud Applications

1 Axle Al Quick Start

Welcome to Axle AI! We've designed Axle AI with simplicity and accessibility in mind. After reading this Quick Start chapter, you should be able to use Axle AI's basic features right away. You can find more detailed information about all user features in the Interface Guide.

Like any application, Axle AI has its own vocabulary and concepts. Understanding them will help you take full advantage of the software's features. See the Glossary to learn about Axle AI terminology. Also, important terms in this Quick Start are marked as hypertext links to the Glossary or to another part of the User and Administrator Guide.

Accessing Axle Al

Keep in mind that Axle AI is a server application. Axle AI is always running from the Axle AI server that your administrator has set up, whether the server is on a Linux system or a MacOS system. This also means Axle AI is never off. As long as the server is turned on, Axle AI is always running, even if no one is logged in.

Any computer on your network can use Axle AI at the defined address: ip address/axleweb. Your administrator will supply you with this address.

To access Axle Al:

- Open a supported browser (Chrome, Safari, Firefox, or IE 11+).
- Type the URL of your Axle AI server into the address bar.

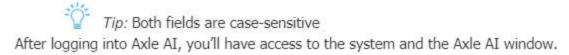


... Tip: Be sure to include https:// if you have SSL (Secure Sockets Layer) installed for your site.

You should see the following screen in your browser:



3. Log in with your Axle AI username and password on the login screen.

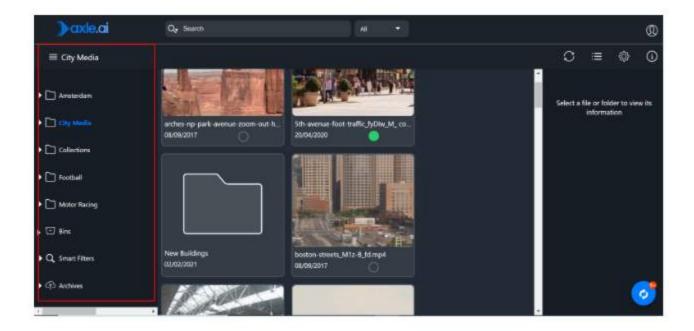


Axle Al Window

The Axle AI window has four main panels:

- navigation panel
- asset panel
- metadata panel
- toolbars

The navigation panel is on the left side of the window. Use the navigation panel to browse through the available <u>catalogs</u> and <u>bins</u>. (The catalogs and bins that you see depend on the permissions set up by your administrator).

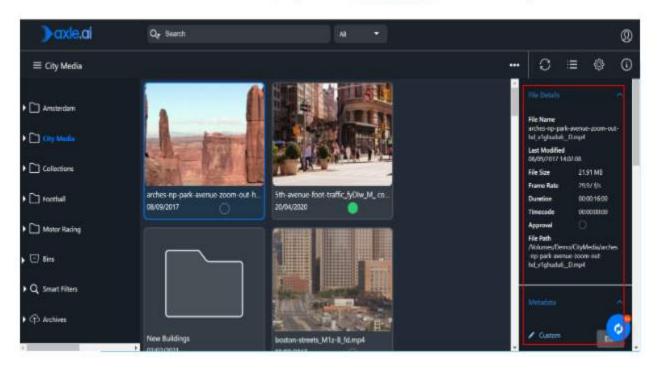


The navigation panel also includes <u>Smart Filters</u>, which are your saved searches. You'll also see <u>archives</u> if your administrator has set them up.

Axle AI's interface has been designed to be familiar to anyone who has used macOS Finder or Windows Explorer. The folder structure you see in Axle AI mirrors the folder structure of the media storage that is being cataloged by Axle AI.

In the center you see the asset panel, which displays the contents of the catalog, bin, or archive you have selected in the navigation panel.

To see details for a file or group of files, click the checkbox in the bottom left corner of any asset. Information about the asset is displayed in the metadata panel on the right.



If you want a quick view of an asset, drag through the thumbnail to scrub forward and back.

At the top of the window are the toolbars. They are the driving force behind the actions you perform within Axle AI, allowing you to conduct powerful searches, and to perform common functions on assets without having to leave the main sections of the Axle AI window.



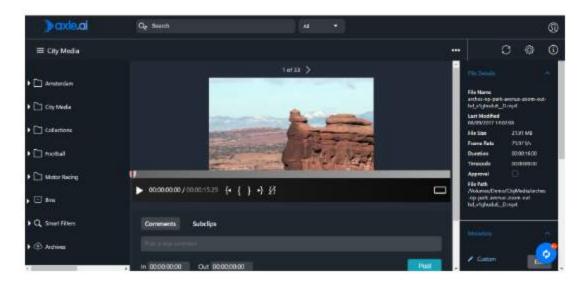
There are only two menus in Axle AI:

- The Action menu (...), which is only displayed when you select one or more assets
- The Command menu (gear icon)

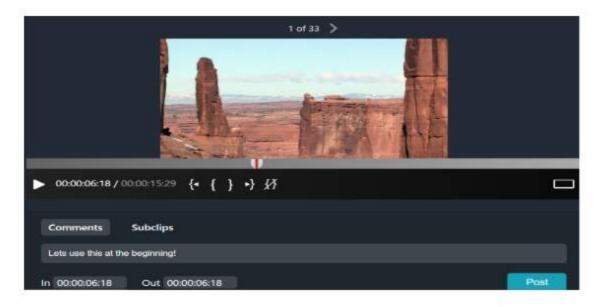
In both cases the menu options that you see depend on the items you have selected and the permissions set up by your administrator.

Player View

If you want to play an asset, click on its thumbnail. You then enter the player view, where you can watch the <u>proxy</u> preview version of the asset. You can <u>add comments</u>, create transcripts (through <u>Axle Speech</u>), <u>create subclips</u>, and <u>edit metadata</u> in the metadata panel. Use the arrows at the top of the window to navigate through your catalog or search results.



It's easy to add a comment. Navigate to the frame you want to add the comment, click the Comments tab, enter your comment, and click Post.



The comment is displayed in the timeline as a small white triangle. Comments are searchable, and they are displayed as markers in editing software like Premiere. See the section <u>Comments</u> for step-by-step information.

Searching for Files

Axle AI's search tool can find files based on a wide variety of criteria. You can use Axle AI's search bar, at the top of the screen, to do a simple search. To do an advanced search, click the magnifying glass in the search bar. The location of the search bar makes it easy to access from anywhere in the Axle AI user interface.

Simple Search

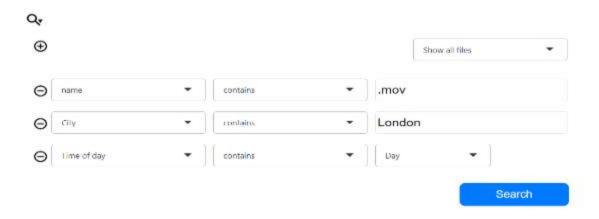
To search, just type one or more words in the search bar and press Enter. Axle AI searches for the words throughout the database, including transcriptions, comments, subclip names, metadata, titles, etc.



Axle AI uses the Elastic Search library to help you find what you're looking for. If you're looking to perform specific searches, see <u>Elastic Search Syntax</u> to learn about different ways to search for your media.

Advanced Search

To open the advanced search, click the magnifying glass on the left side of the search bar.



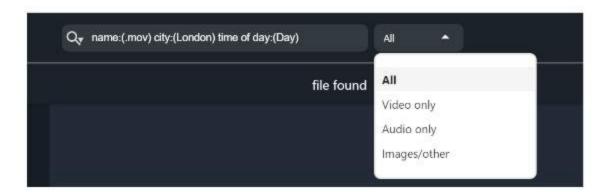
Here, you can choose specific fields to search:

- · Add new fields with the + (plus) button
- Remove existing fields with the (minus) button

The first column displayed is the field name, the second column allows you to choose the operator, or search conditions, and the third column sets the search term. Click the Search button to find files based on your choices.

Browsing through a Flattened View

A feature that can help your search is choosing a "flattened" view of certain media types (video, audio or images/other) from a drop-down menu to the right of the search bar.



This gives you a quick overview of the subset of your current search results and flattens out the folder structure so that you only see the desired media.

This approach can be especially useful with large hierarchical folder structures, like DSLR camera media volumes, where you would otherwise be hunting your way through a lot of folders. In this way, it can also speed up navigating your way around a storage volume before you know exactly what you're looking for.

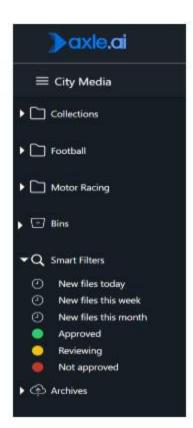
Saving a Search (Smart Filter)

If you have a search that you use often, you can save it for quick reuse.

To save a search:

- Click the Command menu (gear icon) in the upper right of the browser window and choose Save Search.
- 2. Enter a name for the saved search.

This action adds a Smart Filter, letting you easily perform the search again at any time.



The resulting Smart Filters can be found in the navigation panel on the left side of your browser, under the catalogs and bins. Simply click on any Smart Filter to rerun the search. In the example, the user-created Smart Filter is named "Sunny Boston."

The Axle AI system comes with six preconfigured Smart Filters:

- New files today
- New files this week
- · New files this month
- Approved
- Reviewing
- Not Approved

All Smart Filters you create will get added to the list of these preexisting Smart Filters.





Tip: You can quickly mark the approval status of an asset by choosing a color from the dot at the bottom right corner of the thumbnail

Elastic Search Syntax

Axle AI uses the Elastic Search library for searches. Use the following syntax to refine your simple search.

Quick Search

If you enter the search terms:

red car

Axle AI searches across comments, file names, timeline data, and metadata for the terms red and car. Axle AI then displays only files and folders that contain both red and car.

Search for One Term or Another

To search for files and folders that contain either one term or another, enter the following:

red OR car



Tip: make sure "OR" is capitalized, or the function won't show you the results you're looking for.

Search for an Exact String or Expression

To search for files and folders that contain only exact wording, use quotation marks (" ") to enclose the terms. For example, enter the following:

"red car"

Search with the Root of a Word

To expand your search of a string of letters, use an asterisk (*). For example, if you enter: car*

Axle AI searches for a word that starts with car, and can return cars, card, cards, cargo etc.

You can use asterisks at the start and the end of the string. For example, if you enter: *car*

Axle AI can return terms such as autocar and tarot cards.

Search for Specific Metadata Fields

Use the name of the field and its content. For example, if you want to search for the term red in a metadata field named color, enter the following:

```
color:red
```

Axle AI displays only files and folders that contain the metadata field color: and the term red.

Search for Multiple Metadata Fields

You can enter the following to perform an AND search:

```
object:car color:red
```

Similarly, you can enter the following to perform an OR search:

```
object:car OR color:red
```

Specific Axle AI Fields

You can also search on fields created by Axle AI, such as the name of an asset or a posted comment, as shown by examples in the following table:

name:myasset.mov	Returns the file or folder with the name used in the search.
approval:approved (other options are pending and rejected)	Returns files tagged as approved
type:file type:folder	Returns only a file or folder; most useful combined with other terms

The following example shows the entries if you want to search for files that have been approved, have a comment containing the term **use**, and the metadata color **red**.

```
type:file approval:approved comments:use color:red
```

Searching Multiple Tags in One or More Fields

You can use parentheses () to restrict keywords or search terms to specific fields. For example, you can search for a project labeled **Axle** and **2021** by using the following syntax:

```
project: (Axle 2021)
```

You can use OR to search for a project with either label:

```
project: (Axle OR 2021)
```

Combining Standard and Metadata Search Features

Below is an example of a search that includes what we've previously learned about standard search and metadata search features:

```
type:file approval:pending comments:(use clip) color:(red OR green) producer:bruce*
```

Here, Axle AI will return files that are pending approval, where comments contain both "use" and "clip," the color is either red or green, and the producer's name starts with Bruce.

Prioritizing Terms

You can prioritize or "boost" some terms in a search expression and arrange the ordering of the results. For example, you might decide that a location is more important than the color. If you want to prioritize the location, you can add a caret and a number, such as:

```
^x
```

where x is a number. The higher the number, the bigger the boost.

In the following example, you want to find clips containing the location **France** or the project **training**. By using a boost for France, you can instruct Axle AI to first show files containing both tags and then show files with the location first:

```
project:training OR location:france^2
```

Boolean Operations (must be present or must not be present)

You can use a plus sign (+) or a minus sign (-) to force entries. For example, if you want to use the color **red** in the search but do not want to include any folder or file that has **france** as metadata, name, or comments, enter the following:

```
-france color:red
```

If a search must contain a term, use +:

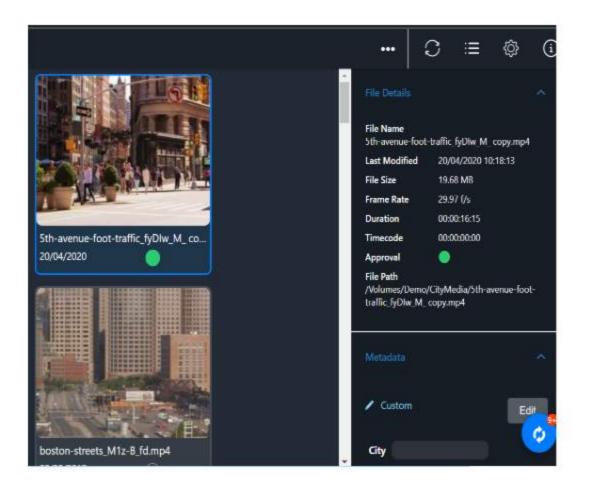
```
+france color:red
```

Tagging Your Media with Custom Metadata

To see the <u>metadata</u> fields for one or more files, click the checkbox below the desired file or files. The metadata panel on the right side of the Axle AI window displays information about the chosen file or files.

The metadata panel is divided into three sections: File Details, Metadata, and Timeline data.

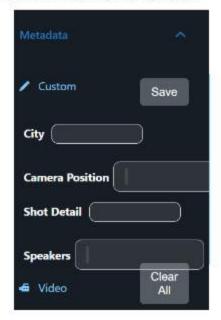
The following information describes how you can view and tag information about selected media in the Metadata section

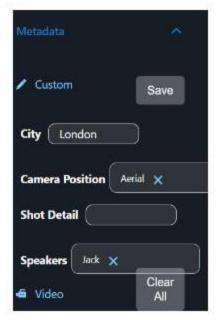


To tag media with metadata:

 In the Metadata section, the first subheading is labeled Custom. Click on the Custom text to expand the content. This Custom section contains the metadata fields created by your administrator.

In the left image below, you can see the three fields created for this example: City, Camera Position, and Speaker.





- Click the Edit button to the right of the Custom subheading to edit the fields (in this case, Project, Location, and Weather).
- Once in Edit mode, the Edit button changes to a Save button, and you can enter or edit values for each field according to its type. For a text field, type in what you like. For a drop-down menu, choose from the list of available values, and so on.
- When you've finished editing, click the Save button to save and lock in the data. The right image above displays the set of completed custom fields for this example.

Editing Metadata in Bulk

You can choose multiple files at once to edit all of their metadata simultaneously. Any changes made will be applied to all chosen files.

You can also choose an entire folder and edit its metadata. This metadata will automatically be applied to all files in the chosen folder if your system administrator has enabled that option.



Tip: It's a good idea to tag in bulk when you first start tagging a set of files or a catalog. However, after you've been working and tagging the files for a while it can cause problems because information can get overwritten.

Types of Custom Metadata Fields

Finally, remember that your system administrator has control over the types, order, and layout of the metadata fields. Field types include:

- Text boxes
- Large text boxes
- Drop-down lists
- Checkboxes
- Multi-select tags
- Date fields

If you would like to see these field types used in your layout, contact your administrator, and they can set up or add one or more fields of each type. In the case of some fields such as drop-down lists and multi-select tags, the administrator will also set the values available for users to choose. See Metadata Setup in the Administrator Guide.

Next Steps

Now that you've learned about the basic features of Axle AI, you can explore the rest of the User Guide to learn more. Enjoy your explorations!

Glossary

User: In Axle AI, a user is a name, password, email, and set of permissions. You must be logged in as a user to use Axle AI. Any number of people can be signed in as the same user at the same time, but their actions will all be recorded as the same user.

Catalog: A catalog is a folder you designate in your storage that Axle AI monitors and recreates in its interface. When you make changes to the folder (add or remove files or folders, rename files, etc.), Axle AI automatically updates itself to match. When you make changes in Axle AI (move files, rename files, etc.), Axle AI changes the original files in your storage to match.

Bin: A bin is a project area. This is where you can keep files that all pertain to a specific project.

Proxy: The media you see in Axle AI (with the exception of audio files) are proxies of the original that Axle AI has automatically generated with either FFmpeg or another transcoder. This allows you to play media quickly, even over a network connection. Until Axle AI has generated a proxy for it, files in Axle AI are represented with a document and clock icon. You can add metadata during this phase, but you cannot see the media in Axle AI.

Metadata: Metadata is information about your files that Axle AI stores in its database. To add metadata to your Axle AI files, you must first create data fields in the admin section. Once that's done, any user with the appropriate permissions can fill in the data fields for specific files. You can search your media library for specific metadata or combinations of metadata, making it the best way to organize your media.

2 Interface Guide

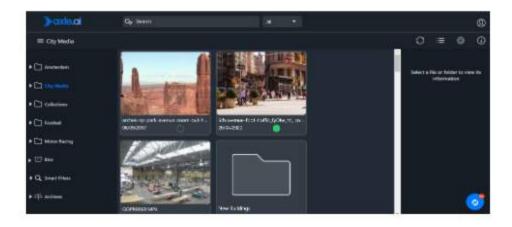
Introduction

After logging in to Axle AI, you will see your home catalog. By default, this is the first catalog you created and can also be set to any catalog from the user administration page. Inside this folder will be the files and folders you're initially able to see from Axle AI. Before diving in, it's important to keep a few key points in mind:

- Axle AI may look like an application, but it's not it's a webpage in a browser.
 This means many of the things you'd expect to do with an application, like dragging and dropping elements to other applications, probably won't work.
- Axle AI is basically an overlay on your existing folder structures, but it is not
 intended to replace most of the things you do with the macOS Finder or
 filesystem access. It's much better to do things like renaming files, copying,
 pasting, and deleting from the macOS Finder, rather than trying to do them in
 Axle AI.
- Unlike most media asset management systems, Axle AI doesn't try to manage
 your storage for you. The things that Axle AI can do H.264 proxy media
 creation, review, and approval workflows, annotation, transcription, subclip
 selection, export to the timeline of your NLE software, etc. are mostly overlay
 functions to your file storage and your existing edit workflows on that storage.

The Axle AI user interface is separated into four main areas:

- The <u>navigation panel</u> on the left
- The asset panel in the center
- The metadata panel on the right.
- . The toolbars along the top

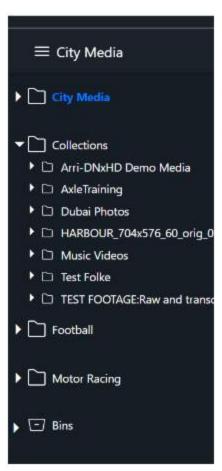


In addition, Axle AI has a <u>player view</u>, which is used to display and play media assets, as well as AI-generated metadata from speech transcripts, face recognition, and other automatic tagging engines. See <u>AI Features</u> for more information.

Navigation Panel

The navigation panel includes your catalogs, bins, smart filters, and archives.

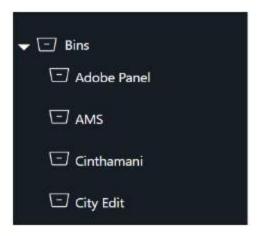
Catalogs



On the left side of the user interface, the navigation panel provides a way to move among your catalogs, which are represented with folder icons. Click on a folder to view its contents in the central asset panel.

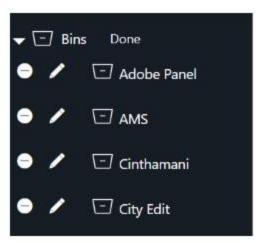
Just as in macOS Finder or Windows Explorer, you can expand the view of any folder by clicking on the triangle to its left to reveal its subfolders. The catalog structure comes directly from your storage; Axle AI simply mirrors it.

Bins



Bins are containers for clips and subclips. Subclips are Axle AI's term for virtual files that can be exported to editing software such as Final Cut Pro, Premiere Pro, and Avid Media Composer, where they link with the actual media on your storage.

Click the name of a bin to see its contents in the asset area, to the right of the navigation panel.



To delete a bin:

- Open the Bins folder by clicking the arrow to the left of the word Bins.
- Click the Edit link that appears when you hover over the word 'Bin.'
- Click the circle next to the bin you want to delete on the far left.

Create a new bin from the Command menu. For more information, see <u>Creating Bins</u>.

Archives



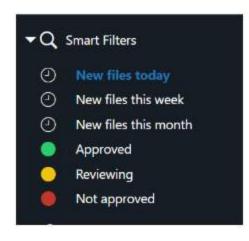
Below the Smart Filters section, Axle AI has an optional section for Archives. These archives can be one or more storage repositories (including cloud, disk or LTO tape) that contain assets that are no longer in active use. These can be restored to Axle AI's primary storage at any time.

Click the arrow to the left of Archives to see the archives configured on your system.

Click an individual archive to see the files added to that archive. For more information on archives, see Archiving in the Administration Guide.

Smart Filters

Smart Filters, in the Navigation bar, are saved searches that you can run again. Smart Filters are unique per user – you only see your own Smart Filters.



To apply a Smart Filter:

- 1. Click the arrow to the left of Smart Filters.
- Click the desired smart filter.

To delete a Smart Filter

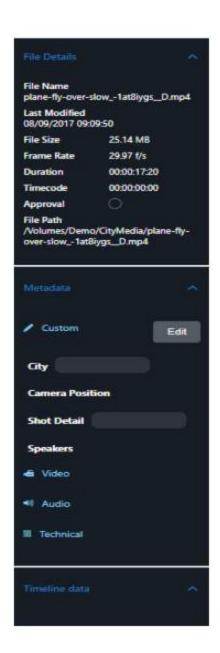
- Click the arrow to the left of Smart Filters.
- Click Edit that appears when you hover over Smart Filters.
- Click the circle next to the filter you want to delete

You can delete Smart Filters that you created, but you cannot delete the default Smart Filters. For more information, see <u>Saving a Search (Smart Filter)</u>.

Metadata Panel

The metadata panel contains information about the currently selected asset or group of assets. You can use the info button to hide and show the metadata panel.





File Details

At the top of the column, the File Details section shows information about the asset, including date last modified, the file size, and the approval status. Video files will also show the frame rate, the duration, and the timecode. Click the File Details header to collapse the section.

Metadata

The Metadata section contains custom fields that have been set up by your administrator. It also includes information Axle AI extracted from the file when it was indexed: Video, Audio, Technical, and Data. Click the Custom header to collapse the Custom section. Click the Metadata header to collapse the entire section.

For information about editing metadata, see <u>Tagging</u> Your Media with Metadata.

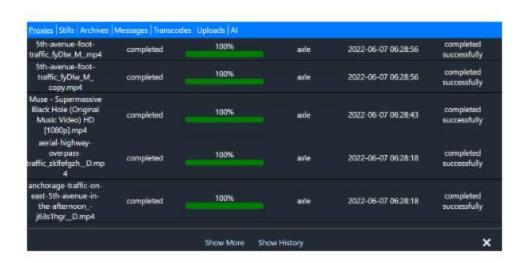
Timeline Data

Displays data from Axle AI analysis. See <u>4 AI</u> Features.

Processing Icon



The processing icon is in the lower-right corner of the Axle AI window. When one or more processes are active, the icon shows two arrows and the number of active jobs. When all jobs are complete, the icon shows a check mark. Click the icon to check the status of various processes, as shown in the following illustration.



Toolbars

Axle AI's search panel, displayed above the other three panels in the application, has two rows. It includes the search bar and commands for common functions.



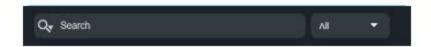
The following sections describe the top row and then the bottom row, from left to right.

Logo Area

Axle AI's logo area is located in the top left corner of the user interface. Administrators can choose a logo for each user so that they see the logo of their company, production, or product. See the section on the Users page of the Administrator Guide for more details.

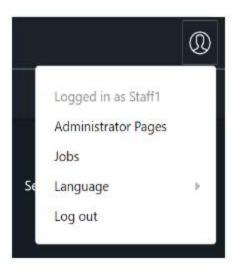


Search Bar



Search your catalogs by entering terms into the box and pressing Enter. You can use logical operators, such as "and" and "or." See <u>Searching for Files</u> for more information.

User Icon



Click the user icon to open the user menu which allows you to access the administration pages (if you are an administrator), change the current language, or log out of Axle AI and return to the login screen.

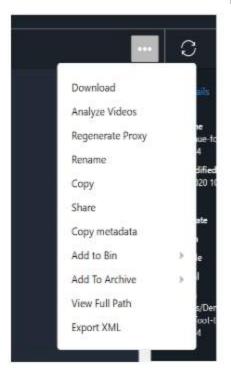
Navigation Bar Toggle



Click the navigation bar toggle to hide or reveal the navigation panel. The button is labeled with the selected catalog.

The contextual Action menu (three dots) only appears when you have chosen one or more assets by clicking their checkbox, and only reveals actions appropriate for the assets chosen.

The actions are as follows:



Download: Axle AI will open a pop-up window where you can choose the preferred format in which you want to download the file for editing or other use. You can download:

- The original file from your storage, or the proxy that Axle AI has created.
- The original or proxy file inside a .zip archive.
- The selected file in a native mac format.

If you choose to download multiple files, you will only have the option to download as a zip file or as native Mac files

Download	d		×
Originals	Proxies	Download File	
Originals	Proxies	Download Zip	
Originals	Proxies	Download Native Mac	
		Car	ncel

Analyze Videos: Sends the selected assets to an Axle AI service, such as Axle Speech or Microsoft Video Indexer. For more information, see <u>4 AI Features</u>.

Regenerate Proxy: Re-creates the low-resolution proxy of the currently chosen asset or assets. You can also use this option to regenerate the low-res proxies for a folder's contents.

Rename: Opens a window that allows you to rename the chosen file. This will apply to the original file on your storage as well. If you have more than one asset chosen, this action will not appear.

Copy: Copies the chosen assets to the Axle AI clipboard for pasting elsewhere.

Share: Generates a link that allows recipients to access Axle AI as a guest user that can only see the files chosen when you chose Share. You can enter the email addresses of recipients, as well as specify on what date within the next month your guests' access will expire. Axle AI will only send an email to your recipients if you have configured an email address for Axle AI in the Advanced administrator page. After pressing save, Axle AI will update your link, so you can distribute it yourself.

Copy metadata: Copies metadata from one selected asset to one or more selected assets.

Add to Bin: Hover over this option to reveal the available bins. Click on one of the bins to send the currently chosen file(s) to the bin as subclips.

If you don't have any bins, or want to create a new one, choose Create New Bin. Type a name and click Create. You will have to create one before bins become available to choose.

Add to Archive: Hover over this option to reveal the available archives. Click an archive to copy the chosen file(s) to that archive.

View Full Path: This option shows the universal path for the chosen file in a pop-up window where you can copy it to your clipboard, paste it into Finder, and locate the file.

Import SRT: Imports an SRT file as a transcription.

Export XML: Exports the XML records of the chosen file(s) and downloads them through your browser.

The Actions menu contains the following items if you have selected a subclip in a bin:

- Delete subclips
- Download
- Share

Refresh Button



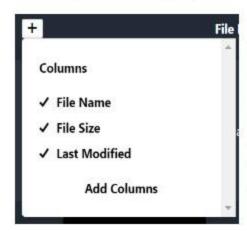
Use this button to rescan new files that you have uploaded into storage.

View Toggle

The View toggle appears to the right of the Refresh button. Click the View toggle to switch between list view and table view. In list view, you can click a column name to sort the assets by ascending or descending order.

Add Columns

The Add Columns button (a plus sign) is visible only in list view. Here, you can decide what columns you want to display .



- Click the plus button. A menu appears with the currently visible columns. checked
- Click a column to hide it.
- Click the Add Columns option at the bottom to see columns you have hidden as well as all the custom metadata you have created.
- Click an option to add it to the list of visible columns.

Command (Gear) Menu

Click the gear button (upper right of screen) to choose from a group of commands. The particular commands change depending on the task you are performing.



Upload: Click to upload small files into your storage system. They will be uploaded into the storage being read by Axle AI. Note: Not recommended for bulk upload or large files. Contact Axle AI if this is something you need.

New folder: Click to create a new folder in the current directory. This will create a folder on your storage. You will have the opportunity to name the folder or cancel before it is created.

New bin: Click to create a new bin for storing subclips.

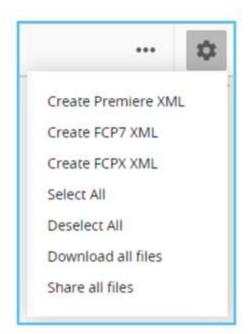
Paste: Click to paste the contents of the Axle AI clipboard into the current directory.

Save Search: Saves the current search parameters as a Smart Filter. This only appears if you are viewing search results.

Select all: Selects all files on the current page.

Deselect all: This only appears if you have files selected. Deselects all currently selected files.

The Command menu includes the following options if you have selected a subclip in a bin:



Create XML: Creates an XML file for the selected editor and downloads it into your browser's downloads folder. See Exporting Subclips.

Select All: Selects all files on the current page.

Deselect All: This only appears if you have files selected. Deselects all currently selected files.

Download all files: Axle AI will open a pop-up window where you can choose the preferred format in which you want to download the file. Similar to Download in the Action menu.

Share all files: Generates

a link that allows recipients to access Axle AI as a guest user that can only see the files chosen when you chose Share. This command opens a pop-up window in which you can enter the email addresses of recipients, as well as specify on what date within the next month your guests' access will expire. You can also give users permission to download from that link. If a guest adds comments or changes the approval status, the information is displayed with the asset in Axle AI.



Info Button

Click the i icon to show or hide the metadata panel.

Player View

Click an asset to enter player view, where you can see:

- The proxy that Axle AI has created for that asset
- · The file information and metadata associated with that asset
- · Comments left by users.
- Transcripts and other information created by AI features.

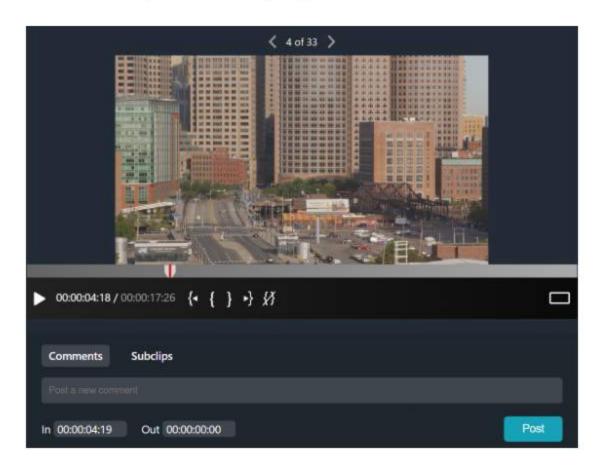
Axle AI can display many types of video files, audio files, image files, and PDF files. If Axle AI cannot display a file, you will see an icon representing it instead. Features like commenting and applying metadata will work for files that do not have a proxy.

When Axle AI catalogs and displays an asset in player view, it displays different content based on the type of asset:

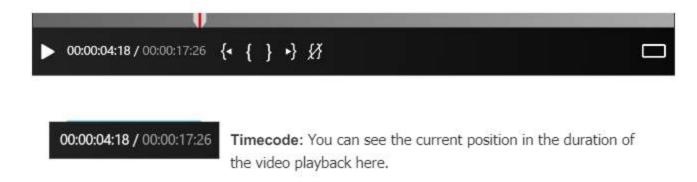
When displaying an audio file, Axle AI will display the audio file's waveform across the asset's timeline.

When displaying an image, Axle AI will display a low-resolution proxy of the asset you are currently looking at.

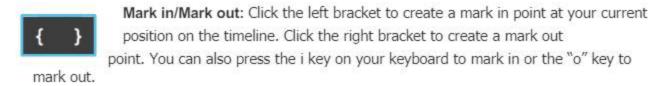
When displaying a video file, Axle AI will show you a preview for the video file using the first frame of that asset. Axle AI also shows a special toolbar for video files at the bottom of an asset, with the following components:



Timebar: The gray timebar represents the length of the video. You can click and drag along the timebar to scrub through the video. Small white triangles represent comments, and the dark vertical line is the current position in the video.



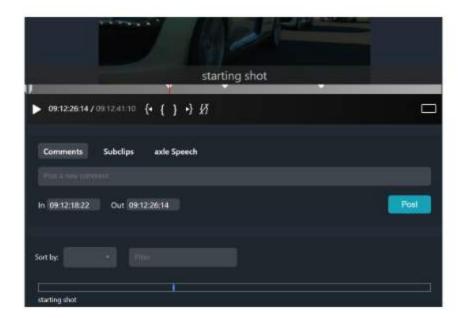
Play/Pause: Click the forward facing triangle to begin or pause playback of the video. You can also press spacebar on the keyboard.



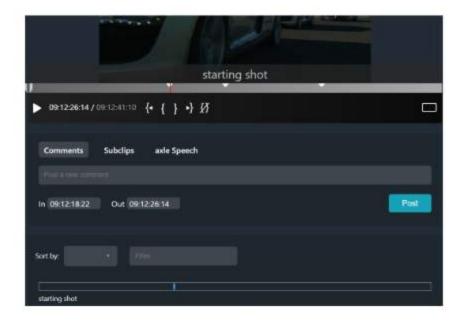
Beneath the toolbar are tabs for comments and subclips, as described in the following sections.

Comments

Comments are messages that are linked to specific frames in a video file, or a file in general for



other types of files. Only users who have permission to post comments can use this feature.



To post a comment:

- 1. Position the video on the frame you want to comment on.
- 2. Type your comment in the comment bar and click the Post button.

A small triangle will be added to the timebar to mark the comment, and the comment will be added in the comment stream area (similar to the timebar), with a marker for the comment. Click on the marker to display the frame and comment in the player.

You can also comment on a selection of the video by using the mark in and mark out buttons. In the comment stream, the comment will have a gray bar that matches what you chose with the mark in and out points. Click on the marker to display the first frame of the segment.



To edit a comment:

- 1. Hover the mouse over the comment in the comment stream area.
- 2. Click the pencil icon that appears.
- 3. Edit the comment in the comment box and click Update.

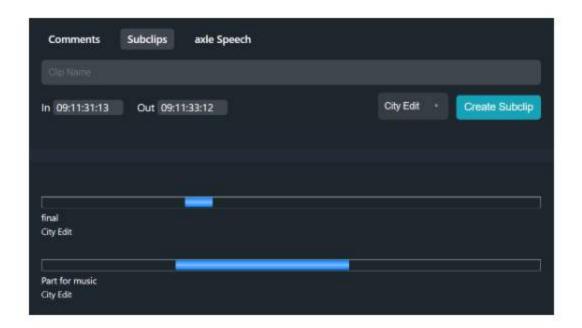
To delete a comment:

- 1. Hover the mouse over the comment.
- 2. Click the trash can icon that appears.

To help find comments, there is also a filter text field and a sort drop-down menu. As you type text into the filter field, Axle AI will hide all comments that don't contain that text, allowing you to focus on what you need.

Choose an option from the Sort menu to change the order in which comments appear.

Subclips



Subclips are virtual selections of clips that are stored in bins that can be exported via an XML file into Premiere Pro or Final Cut Pro. This instructs the editing software to bring the media from the storage into the current project. A subclip can be an entire video or just a selection, or another piece of media. For more information, see Creating Subclips.

3 Creating Subclips and Exporting a Bin

Axle AI lets you create subclips from media files or selections of media files. These subclips are stored in special folders called <u>bins</u>. The following sections describe how to create subclips and bins, which you can use in Adobe Premiere Pro CC, Apple FCPX, and Avid Media Composer

Subclips and bins do not exist on your file storage or take up space. They are markers that reference your existing files.

When you have created subclips, you can open the bin containing them and choose the subclips you would like to work with in Adobe Premiere Pro or Apple FCPX, and export them as an XMI file.

Import that file into the editor when you're on the same network as the storage, and it will link to the original high-res media files from that storage. Axle AI also offers an option to support Avid Media Composer via the AAF format. Contact Axle AI for more information.

Creating Bins

When you first log on to Axle AI, you won't have any bins in which to store subclips.

To create a bin:

- 1. Choose New Bin from the Command menu (gear icon) in the upper right.
- 2. Type a name for your bin and click Save.

The new bin appears in the Bins folder in the Navigation bar at left.

Bins are automatically shared across users. That makes them an intuitive way to share lists of subclips or media files with your coworkers.



Tip: Your administrator can set access privileges to catalogs, and even to folders within a given catalog, on a per-user basis. That means that your view of the

catalogs may differ from that of your colleague. For more information see Users in the Administrator Guide.

To ensure file access security, if you place a clip or subclip in a bin which your colleague does not have permission to access, they won't be able to see that particular file in the bin.

On the other hand, they will be able to see the bin itself as well as any clips or subclips that they do have permission to access.

Creating Subclips

There are two ways to create subclips and add them to a bin:

Method 1: Create a subclip by adding a clip to a bin.

- 1. When viewing the contents of a folder or a search result, choose one or more assets by clicking the checkbox in the lower left corner.
- 2. In the Action menu, choose Add to Bin and choose the appropriate bin. This will place pointers to this clip or clips to the bin.



Tip: These clips are complete but are considered subclips in a bin.

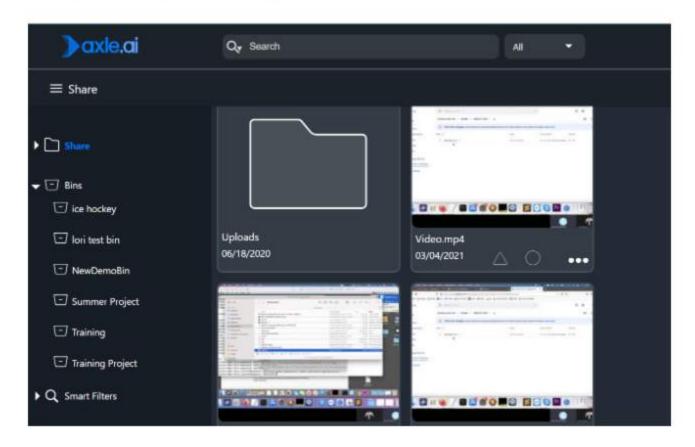
Method 2: Create a subclip from a specific selection of a clip.

- Click the thumbnail of the asset to enter player view.
- Choose beginning and ending frames as follows:
 - a. Select the beginning of the frame: Navigate to the first frame you'd like to include and then click the { button in the video toolbar, or press the I key on your keyboard. You'll see a blue opening bracket appear in the timebar.
 - b. Select the ending of the frame: Navigate to the final frame you'd like to include and click the } button on the video toolbar, or press the O key on the keyboard. You'll see a blue closing bracket on the timebar.
- 3. Click the Subclips tab, just underneath the video toolbar.



See Creating Bins.

Exporting Subclips



View the contents of a bin by choosing the bin from the navigation panel on the left.

Each subclip has a blue bar beneath it to indicate what portion of the original video was selected. Click any subclip to load the player view for that video.

To export subclips into your editor:

- Choose the subclips by clicking the square checkbox below and to the left of the clip thumbnail
- Open the Command menu (gear icon) and choose the editing software you want to use (for example, Create Premiere XML).

When you choose an editor, a compatible XML file will automatically download into your browser's downloads folder. Import this XML file into your editor, and the editor will automatically link the media from your storage to the current project if you are connected to the same network as the storage.

Keep in mind, this does not move or duplicate the media; the media remains on the storage.

4 Al Features

Introduction

Axle AI can be configured to work with the Axle Speech and Axle Tags services as well as thirdparty AI/ML (artificial intelligence/machine learning) analysis services to offer greater insight into your video and to make searching easier. For third parties, Axle AI can be configured with Microsoft's Video Indexer service and with Speechmatics' transcription service; we are adding more third parties over time.

Once Axle AI is linked with the appropriate service, you can upload proxies for analysis and view the data all within the Axle AI interface. All AI-generated data is also fully searchable with Axle AI's standard and advanced searches.

Axle Al Speech

Creating an Account with Axle Speech

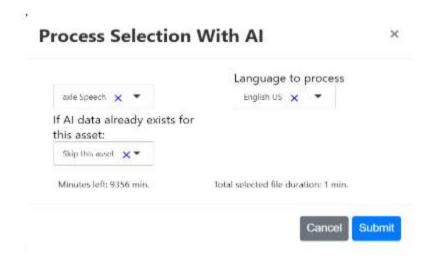
Axle Speech is a high-performance, cost-effective speech transcription service. Contact your administrator to see if this has been configured. If your instance of Axle AI has been configured with Axle Speech, then you're all set.

If not, an administrator will need to create an Axle Speech account, and enable it for each user in the Administrator settings of Axle AI. For more information see Axle AI Speech in the Administrator Guide.

Processing Using Axle Speech

To submit an asset to Axle Speech:

- 1. Choose one or more assets using the checkbox in the lower left of the thumbnail.
- Choose Analyze Videos from the Action (...) menu.

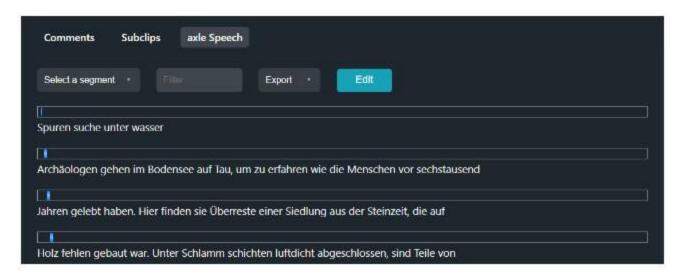


- 3. Choose Axle Speech from the drop-down menu.
- 4. Choose the appropriate language from the drop-down menu.
- 5. Choose what to do if AI data already exists:
 - Redownload transcript: Downloads the transcript from cloud storage so if you need a copy, Axle does not need to rescan the file.
 - Reupload the asset: Uploads the video and imports the data once the analysis is complete.
 - Skip this asset: If Axle Speech already has data about this asset, it will not be reuploaded.
- 6. Click Submit.

The proxies for the assets you have chosen will be uploaded to the Axle Speech servers for analysis, and the data will be automatically downloaded back into Axle AI.

Reading Axle Speech Data

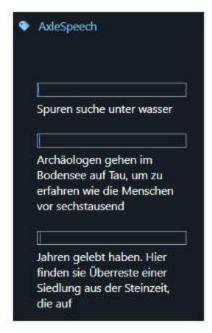
Once an asset has been analyzed by Axle Speech and the data has been downloaded into Axle AI, you can view the data by clicking the asset to enter player view. In addition to the Comments and Subclips tabs below the player, there will be a tab for Axle Speech, which displays the transcript in segments.



The Axle Speech tab includes the following controls:

- A drop-down list you can use to jump to specific segments in the transcript.
- A Filter box in which you can enter text to shows only segments that contain that text.
- An Export button with several options for various file formats.
- An Edit button that opens a Transcript window in the metadata panel, in which you
 can edit segments of the transcript.

You can also view this data in the metadata panel, in the Timeline Data section.



Axle Al Tags

At its core, our Tags feature is designed to revolutionize the way you search your media. Like the main Axle AI user interface, the front end for Axle Tags runs in most standard browsers on a Mac or PC. With a rich starting library of 300 identifiable logos and over 1200 recognizable objects already in your database, you are all set to get to work. Whether you're searching for a specific video featuring a bicycle in the background, drinking glasses, an animal or even a pair of earrings, Tags has got you covered.

The integration of advanced AI face recognition takes your editing experience to a whole new level. Simply assign a Face to a person to train the database, and Tags will effortlessly identify that face in your videos and track their presence throughout: you'll gain invaluable insights into the composition and flow of your content and you'll save time doing it.

Because this is cutting edge technology and AI can make mistakes, we've provided an editing system for you to be able to curate any wrongly recognized Face, Logo or Object in just a few clicks. This Quickstart guide provides step-by-step instructions alongside screenshots and expert tips to ensure you make the most of Axle AI Tags.

Axle Al Tags Window

The axle Tags window consists of a navigation bar on the left panel, where you can browse through Analyzed, People, Logos, Objects, Reports and Admin.

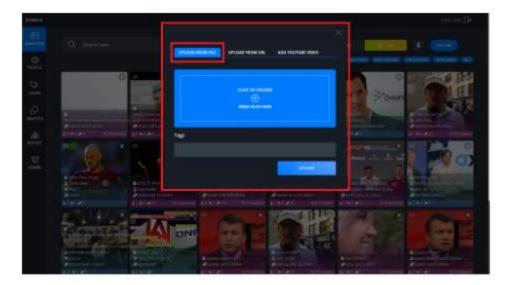


Uploading a training file

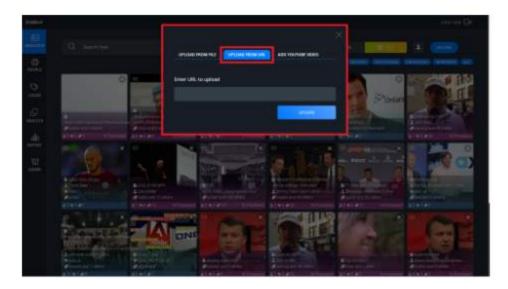
 From the Analyzed page, click on the Upload button, on the top right corner, under the logout icon.



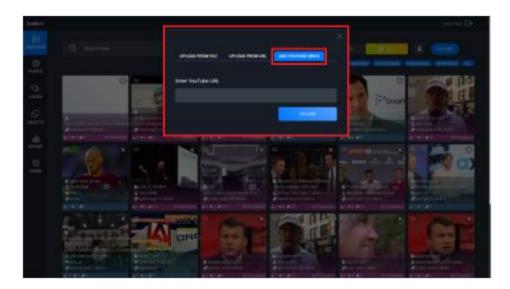
A pop-up window with three options on how to upload your video will appear. The default option on screen is to upload from a file, either by clicking on the blue rectangle to select the files from your local computer, or dragging and dropping your files onto the blue rectangle, and finally clicking on Upload.



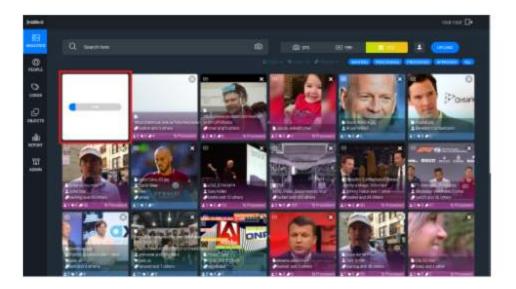
If you want to upload your file from a URL, copy the link to your file, click on the 'Upload from URL' tab, and paste your link on the empty field, and click on Upload.



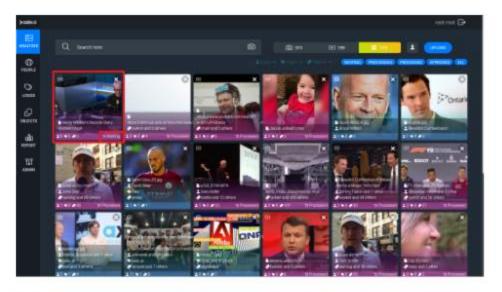
If you want to upload a file from Youtube, copy the link to the file, and paste it onto the empty field, finally click on Upload.



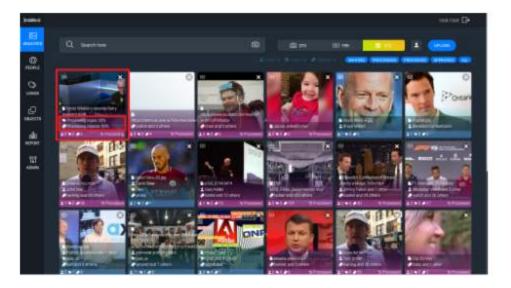
3. The pop-up window will automatically close, and you'll see the Analyzed page again. On the upper left corner, under the search bar, you'll see a progress bar for your file upload.



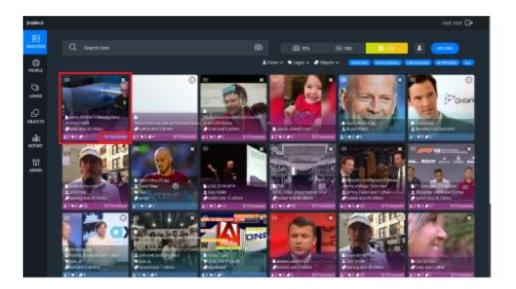
 Once the video has been uploaded, you'll see a thumbnail where the progress bar had been, with a status line on the bottom right corner that will read 'Waiting' until the video begins to be processed, when it will change to 'Processing'.



You will also see progress bars for the processing of Faces, Logos and Objects.

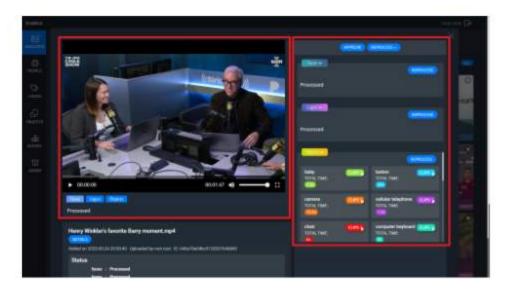


Once the video is finished processing, the status line will read 'Processed'.

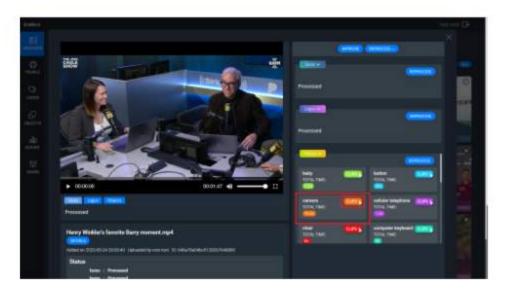


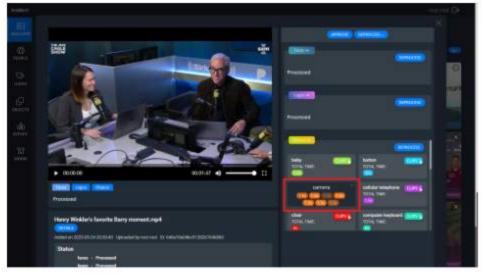
Viewing your file

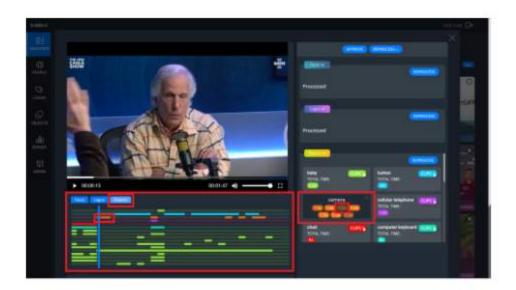
- 1. From the Analyzed page, click on the file you want to open.
- A new pop-up window will appear, where you'll see your file to the left side, and a panel for Faces, Logos and Objects to the right side.



3. To view any identified Face, Logo and Object, click on that element's Clips.



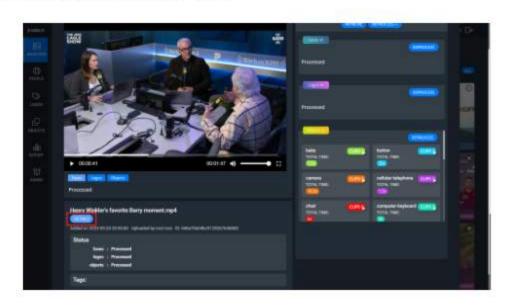


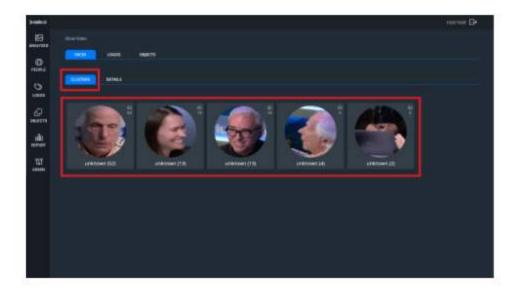


Assigning a face to a person, from a file

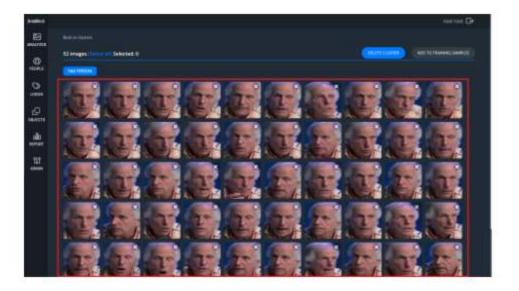
When you first upload a file, the database won't contain any Faces, only Logos and Objects. Here's how you can add a Face to your file.

1. Click Details under the timeline.





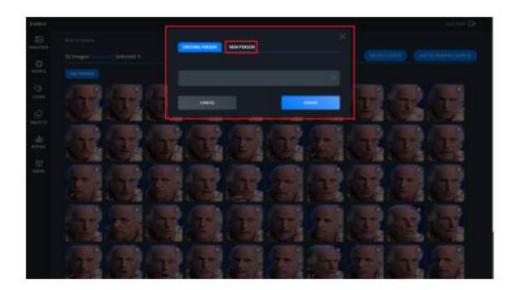
Click on the thumbnail that features the face you want to tag on this file, and you'll see all the segments where that face appears.



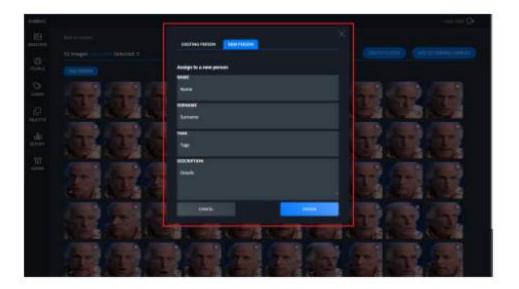
Select the pictures you want by clicking on them, a checkmark will appear on the bottom left corner of the picture, and the Selected status on the upper left corner will be updated. You can also click on Select all to choose all pictures.



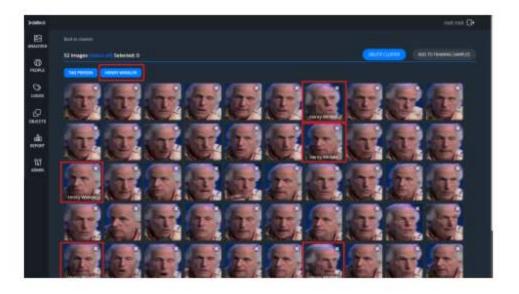
4. Once you have selected your pictures, click on Tag person. A new window will open, giving you the option to tag an existing person in the database, or a new person. Since this is your first file upload, there won't be any Faces on the database, so click on the New person tab.



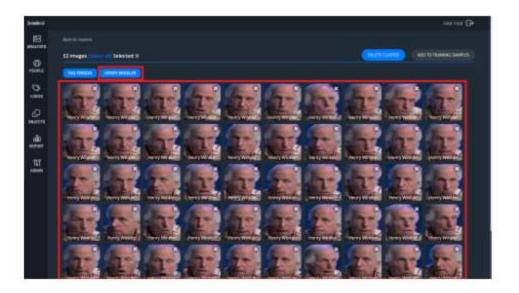
5. Complete the name and surname fields, and click on Assign.



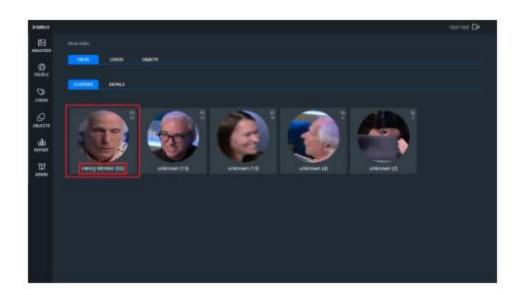
6. You'll now see the pictures you selected are tagged with that person's name.



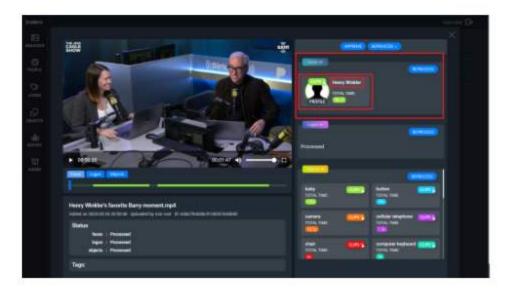
If you've selected all pictures, your cluster will look like the following screenshot.



Return to Clusters by clicking on Back to clusters. Now you can see your identified Face tagged under its name.



Click on Show Video next. Now your new Face will show up under the Faces tab, on the upper right panel.



9. You'll notice our Face has no profile picture, this is because we have only tagged this one particular file with this Face, we haven't added this Face to the database. In order for Tags to recognize this face in other files, we need to click on Profile, under the placeholder image, and upload an image of the Face under Training samples. We suggest adding between 4 and 20 high quality samples for optimal recognition results.



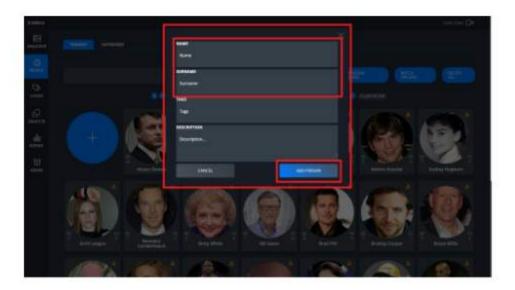
Now we have tagged this file with this Face and we have added this Face to the database.

Assigning a face to a person to train the database

1. From the People page, click on the blue Add button with the [+] to add a Face.



Complete the empty fields for this Face's name and surname, and click on Assign.



You'll now see a new thumbnail next to the blue Add button, with a placeholder image as a profile.



Click on the new Face with the placeholder image to add the training samples.

4. Click on the blue square to upload your training samples. We recommend uploading between 4 and 20 high quality sample photographs for this Face.



You can upload the samples from a local file, or from a URL. Click on Save when ready. You'll see a progress bar indicating the status of your upload, as shown in the following screenshot.



And all your samples will appear on display once the upload is complete.



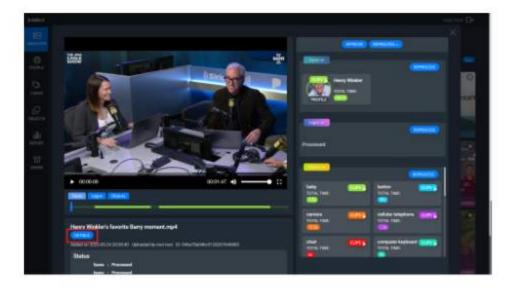
To add a profile picture for this Face, simply double click on any of the sample images.



Now you have successfully added a Face to the database.

Curating

1. From the Analyzed page, open the file you want to curate, and click on Details.



Choose what you want to edit: Faces, Logos or Objects. For any option, all the recognized elements will be displayed under their corresponding tab. For this example, we are going to click on Objects.



3. We are going to see all the elements recognized as Objects. As you can see on the screenshot, our first Object is "baby", but what we see in the picture is in fact, not a baby, but an elderly Hollywood superstar, Henry Winkler. Remember, AI can make mistakes, but the great thing is that you can fix them: just click on the upper right corner [x] on the element or grouping that's mistakenly recognized that you want to delete. The page will refresh and your changes will have been saved.



Before deleting the element "baby".



After deleting the element "baby" we no longer see it as a recognized Object, and in its place we see the next Object in alphabetical order, in this case, "button".

Microsoft Video Indexer

Creating an Account with Microsoft Video Indexer

Microsoft Video Indexer (MVI) is one of the leading AI/ML cloud services for video analysis. Please contact your system administrator to see if this has been configured. If your instance of Axle AI has been configured with MVI, then you're all set.

If not, an administrator will need to create an MVI account and enable it for each user in the Administrator settings of Axle AI. For more information see the <u>Microsoft Video Indexer section</u> in the Administrator guide.



Tip: Microsoft Video Indexer has been renamed "Azure Video Analyzer for Media."

Processing using Microsoft Video Indexer

To submit an asset to MVI:

1. Choose one or more assets using the checkbox in the lower left of the thumbnail.

- 2. Choose Analyze Videos from the Action (...) menu.
- 3. Choose Microsoft Video Indexer from the drop-down menu.
- 4. Choose the appropriate languages from the drop-down menus and click Submit.
- 5. Choose what to do if AI data already exists:
 - Fetch: If failure, reupload. Will attempt to download data from MVI for import into Axle AI. If the data cannot be imported, it will upload the video and import the data once the analysis is complete.
 - Pull the breakdown: Will attempt to download data from MVI for import into Axle
 AI. If the data cannot be imported, no further action will be taken.
 - Reupload the asset: Uploads the video and imports the data once the analysis is complete.
 - Skip this asset: If MVI already has data about this asset, no further action will be taken.
- 6. Click Submit.

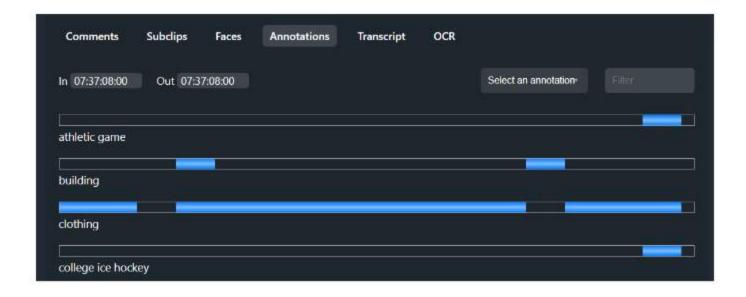
The proxies for the assets you have chosen will be uploaded to the Video Indexer servers for analysis, and the data will be automatically downloaded back into Axle AI.

You can also decide what to do if MVI already has data for the chosen assets:

Reading the Microsoft Video Indexer Data

Once an asset has been analyzed by MVI and the data has been downloaded into Axle AI, you can view the data by clicking the asset to open player view. In addition to the Comments and Subclips tabs below the player, there will be tabs for Faces, Annotations, Transcript, and OCR. Choose any tab to view the appropriate data.

- Faces The results of MVI's facial recognition. You can see a thumbnail of the face, the name associated with the face, and timecode markers where the face appeared in the video. Click the name to edit it. This will be uploaded back to MVI, so you can teach it to recognize specific faces.
- Annotations The results of MVI's object and keyword analysis.
- Transcript The results of MVI's speech-to-text transcription. You can edit the transcript, and export it out of Axle AI.
- OCR The results of MVI's optical character recognition, i.e., reading text.





You can also view this data in the metadata panel, in the Timeline Data section



Annotations also appear if you click the tag in an asset's thumbnail.

Speechmatics

Creating an account with Speechmatics

To use Axle AI with Speechmatics, your administrator will need to create a Speechmatics account, and enable it for each user of the system. For more information see the <u>Speechmatics</u> section in the Administrator Guide.

Processing using Speechmatics

To submit an asset to Speechmatics:

- 1. Choose one or more assets using the checkbox in the lower left of the thumbnail.
- 2. Choose Analyze Videos from the Action (...) menu.
- 3. Choose Speechmatics from the drop-down menu.
- Choose the appropriate language from the drop-down menu (Global English is recommended for English audio).
- 7. Choose what to do if AI data already exists:
 - Reupload the asset: Uploads the video and imports the data once the analysis is complete.
 - Skip this asset: If Speechmatics already has data about this asset, it will not be reuploaded.
- 8. Click Submit.

The proxies for the assets you have chosen will be uploaded to the Speechmatics servers for analysis, and the data will be automatically downloaded back into Axle AI.

Reading the Speechmatics Data

Once an asset has been analyzed by Speechmatics and the data has been downloaded into Axle AI, you can view the data by clicking the asset to open player view.

In addition to the Comments and Subclips tabs below the player, there will be a tab for Speechmatics, which displays the transcript, similar to that for <u>Axle Speech</u>.

You can also view this data in the metadata panel, in the Timeline Data section.

5 Axle Al Panels for Adobe Creative Cloud Applications

Axle AI has extensions for the Adobe Creative Cloud applications, which add a new panel you can use to browse and search your Axle AI media files, as well as easily import clips from your Axle AI library into the current Premiere or After Effects project, or Photoshop, Illustrator or InDesign layouts. See Axle Panel for Adobe Premiere Pro CC in the Administrator Guide for more information.

Once installed, the Axle AI panel is available under the Extension menu in Premiere and the other Adobe CC applications. When activated, the panel will prompt the user to enter the network location of the Axle AI server (the same address you use to access Axle AI through your browser), and a username and login for Axle AI.



Once you've successfully logged in, you can browse your Axle AI library through the panel.

The files and folders are organized just as they are in Axle AI and on your media storage. You can use the search bar at the top to find specific files. The search bar in the panel uses the same Elastic Search as Axle AI.

You can see a file's archival and approval status with the icons between the thumbnail and the file name. Choose a file or files and click Import Selected to add the chosen files to the current Premiere project.

Click a file to enter a player view where you can play the proxy media.

Part 2: Administrator Guide

1 Installation

System Requirements

Axle AI for Linux

Axle AI for Linux is delivered as a .OVA file including a full CentOS instance, which can be installed on either physical or virtual machines. In the case of a virtual installation, a hypervisor, such as VMWare, or cloud platform, such as Google's GCP, supporting virtual machines is required. We recommend at least 8 CPU cores, (physical or virtual) 32Gbytes of RAM, and 256GB of system disk space; since many of our Linux installations are larger sites, installations can be considerably larger than this guideline.

Axle AI for MacOS

Axle AI for MacOS requires a Mac computer running macOS 10.10 or later on a quad—core or faster Intel system with at least 16GB of RAM as its server. MacOS's Apache and PHP versions are also required but should already be in place as part of any standard MacOS desktop install. Other versions of Apache and PHP, and other SQL databases besides PostgreSQL are not supported. Java 8 update 66 or higher must also be installed. The Java installer is included separately with the Axle AI installer. Please check java.com for the latest updates.

In addition, Axle AI requires an Ethernet connection to your local network, ideally 10GbE, and a wired connection to your media storage. To access the interface, your device must be able to run current versions of Chrome, Safari, Firefox, or Internet Explorer. You will also need a storage location for the proxies Axle AI generates. The Axle AI team recommends a 2 to 6 TB storage device directly connected to the Axle AI server, but proxies can also be stored on the Axle AI server or on your central media storage using an NFS connection.

Caution: MacOS's server app cannot be installed! If this app has been installed, even if the features are disabled, Axle AI will not install or work correctly. The server app must be completely removed for Axle AI to function properly.

Installing Axle Al

For Linux, Axle AI comes preinstalled on a CentOS .OVA image. For

MacOS, the Axle AI installer is a standard Mac package file.

You won't need both of these, just one or the other; only one system in your network needs to be set up as the Axle AI server, and the rest of your computers will access it via their web browsers or via our panels for Adobe CC applications.

Axle AI for Mac is a web server application and is installed in /Library/WebServer/documents/axle, so once the installer completes, you won't need to drag an application into your Applications folder, as you would in the case of a typical app. It only needs to be installed on the Mac acting as your media management server, and all the other Macs and PCs in your network, as well as mobile devices, can then access it via web browser.

Important: Before you install Axle AI, make sure that you are logged in as a user that the server can have active at all times. Axle AI will not function unless the active user is the user who installed Axle AI. This user must have administrative privileges.

To install Axle Al:

- 1. Launch the installation package file to begin the installation.
- Click Continue to advance through the steps of the installation process, and enter your password when prompted.
- Once the installer finishes copying and setting up all required files, it will create the necessary database tables and entries.
- 4. After Axle AI is finished installing, it will prompt you to restart your computer.

First-Time Setup

Axle AI will begin running automatically after the computer has restarted.

To access the Axle Al interface:

1. Open your web browser of choice.

Axle AI supports Safari, Chrome, Firefox, and Internet Explorer 11+

Navigate to http://localhost/axleweb on the server itself, or [ip address of server]/axleweb on other computers on the same network.

Tip: You can find the IP address of the Axle AI server by opening the System



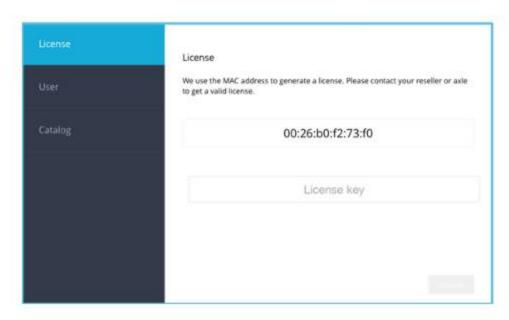
Preferences app on the Macintosh Axle AI server, choosing Network, and choosing the appropriate Ethernet connection.

The first time you access the Axle AI interface, you will be guided through the first-time setup process where you set up your first user and catalog, as well as configure your Cam settings.

License and User Setup

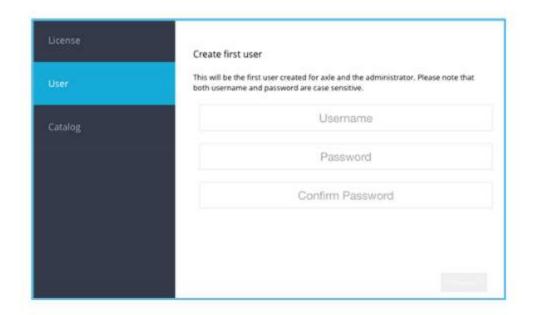
Creating your first user:

Enter your Axle AI license.



If you don't have a license, or the license you enter doesn't work, please email our support team at support@axle.ai and include the MAC address given in the window.

After entering your license, click Proceed. The Create First User screen opens.



- Enter the username and password for your first user. This first user has administrator privileges and can function as the Axle AI administrator. The password can be changed later, and both are case-sensitive.
- 4. Click Proceed.

Catalog Setup

A catalog in Axle AI is a folder location that Axle AI monitors and recreates in the interface. It can be a single folder with nothing in it, or a volume with thousands of subfolders and files. You cannot change a catalog location once it is created without rebuilding it from scratch. Be sure the catalog folder is something you can leave as-is for the foreseeable future.



To designate a location for a catalog, enter its path into the appropriate field. If you are using Safari, you can drag and drop the desired catalog location from Finder into the empty field to fill in the correct path. Otherwise, you will have to enter the path yourself.

In the second field, you can determine where you want Axle AI to store the proxy files it creates. Apache must be separately configured to have access to the chosen location, and network storage must be connected using NFS. For more information, see the Proxy Storage. The Axle AI team recommends leaving the default location during installation. This location can be changed later. Click Proceed.

You've completed the first-time setup process, and the login screen is displayed. Now you'll need to create users, catalogs, and metadata fields. Proceed to the next section, <u>Administration</u>
<u>Basics</u>.

2 Administration Basics

The basic administration tasks are creating and managing users, catalogs, and metadata fields. You perform these tasks by using the Administration Pages. This chapter provides basic information in the following sections:

- Adding Users
- Managing Catalogs
- Metadata Setup

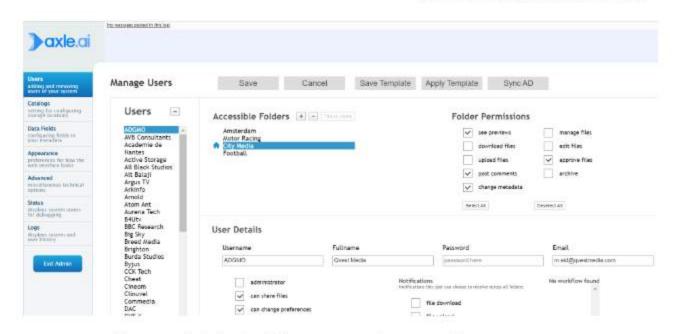
For complete information on these pages, see <u>Administrator Pages Reference</u>. Only users with administrator privileges can access the Administrator Pages.

Adding Users

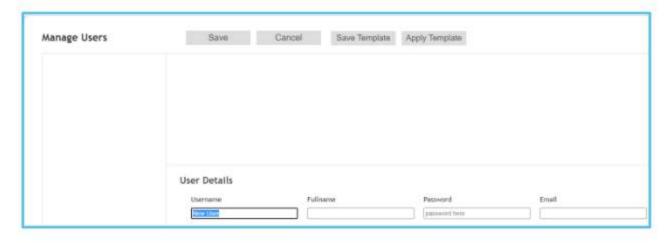
On the Users Page, you can add new users to the system and set up their permissions. By default, your first user will be an administrator and have full permissions in the catalog you created during initial setup.

To add a user:

1. Click the user icon on the top right and choose Administrator Pages.



2. To add a user, click the plus (+) icon next to the Users title.



- 3. Fill in the username, fullname (optional), password, and email (optional).
- Click Save. The new user is displayed in the list of users. A message tells you to add a catalog. See the next section.

To remove a user, select it in the list and click the minus (-) icon.

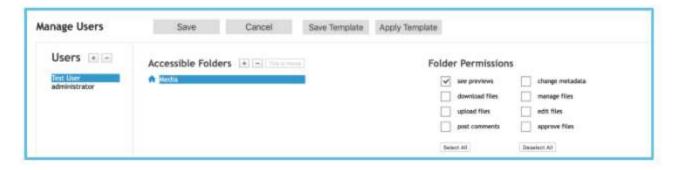
Setting Catalogs and Permissions

After creating a new user, you need to specify at least one catalog, and then apply permissions.



Tip: You created a catalog during the first-time setup.

There are two types of permissions in Axle AI: catalog-specific and universal. Catalog-specific permissions only apply to individual catalogs, while universal permissions apply throughout Axle AI. Catalog-specific permissions are listed as Folder Permissions.



To authorize catalogs and assign permissions:

- 1. Choose the user in the left box.
- 2. To authorize a catalog for a user, click the plus button next to the Accessible Folders heading and select the catalog from the pop-up window.
 - (Optional) Click the triangle beside the catalog to choose an individual folder inside a catalog. This allows you to manage permissions on the folder level.
- 3. Once you've chosen the catalog, check or uncheck the permission boxes under the Folder Permissions heading.
 - See Previews is checked by default. If it is not checked, the user will not be able to see the catalog at all. Full details of each permission option are listed in the Users Page section.

- To designate the selected catalog as the user's home catalog, which they see first when they log into Axle AI, click the This is Home button, next to the plus and minus buttons.
- In the User Details section, choose the permissions you want to apply. Full details of each permission option are listed in the <u>Users Page</u> section.



6. Click Save.

Managing Catalogs

A catalog is a folder on a NAS, SAN, or directly attached storage that is indexed and managed by Axle AI. Use the Catalogs administration page to add new catalogs, remove old ones, and change where Axle AI stores proxy files.

To add a new catalog:

- 1. In the Administrator Pages, click the Catalog heading on the left side of the window.
- Click the Add a New Catalog button at the top-right. In the pop-up window, enter the location of the folder



Tip: From Safari, you can drop a folder from Finder into the empty field.

3. (Optional) Enter the IP address and catalog name. You only need to specify the IP address of the catalog if you plan to export <u>subclips</u> from Axle AI into editing applications on non-Mac computers. If you do not enter a name for the catalog, Axle AI will use the name of the folder you have chosen.



Click Add Catalog.

Once you create a new catalog, Axle AI will add its contents to the proxy generation queue.

Depending on the size of the catalog, it may take some time before Axle AI makes all the proxies. Until proxies are created, you cannot play your media in Axle AI, but you can add metadata.

You also have the option to change where Axle AI will store the proxies for this catalog.

For more information, see Changing the Proxy Storage Location.

Removing a Catalog

To remove a catalog:

- 1. Choose a catalog from the Remove a Catalog drop-down menu.
- 2. Click Remove Catalog.

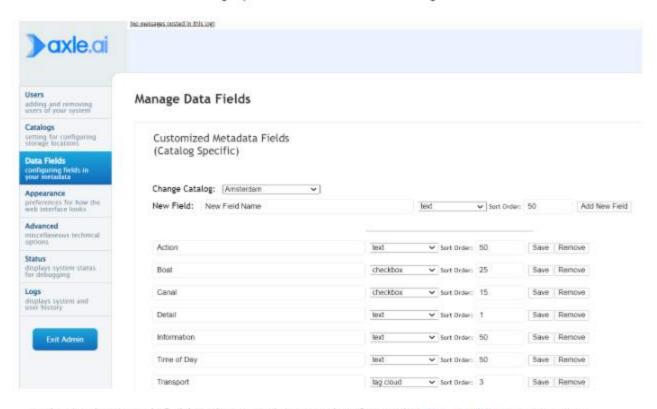


Metadata Setup

The first step in using Axle AI to tag and organize your media is to create metadata fields. Once created, these fields will automatically be available for all files in the appropriate catalog.

To create metadata fields:

1. In the Administrator Pages, click the Data Fields heading on the left side of the window.



To learn about each field in the Metadata panel, refer to the <u>Data Fields Page</u> section.

Metadata Field Creation Walkthrough

This section will walk you through creation of a new metadata field. We'll make a drop-down list for keeping track of the locations where footage was shot.

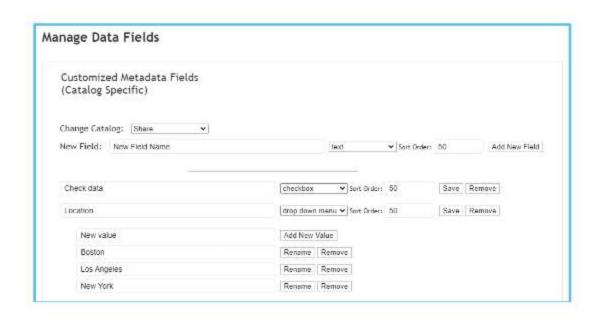
1. In the New Field text box, type a name for the field. For this field, enter "Location."



- From the drop-down menu, select "drop down menu." (Don't worry about the sort order for now)
- Click Add New Field. You'll see the entry Location listed, along with an indented box labeled New Value.



- In the New value box, type the first location. In our example, type "Boston" and click Add New Value. A confirmation message is displayed at the top left of the page for each field or value you add.
- 5. Add two more locations: Los Angeles and New York.



You can use the buttons to rename or remove values at any time. There is no limit to the number of values you can create.

Use the same process to create other metadata fields: a text field labeled Project and a tag cloud labeled Weather. Use the Sort Order to adjust the field's position. Lower numbers appear higher in the list, and fields with the same number are ordered alphabetically.

You now have a simple set of metadata categories to work with. To see how to use these in Axle AI's main user interface, see <u>Tagging Your Media with Metadata</u>.

3 Administrator Pages Reference

Introduction

Axle AI's Administrator Pages allow you to add new users, adjust users' permissions, add new catalogs, add new data fields, adjust Axle AI's appearance, and more. This section provides detailed information for each of the following pages:

- Users Page
- Manage Users
- Catalogs Page
- Data Fields Page
- Advanced Page
- Status Page
- Logs Page

The initial user you created with Axle AI is an administrator by default, and you can make any user an administrator by checking the administrator checkbox on that user's page.

To open the Administrator Pages:

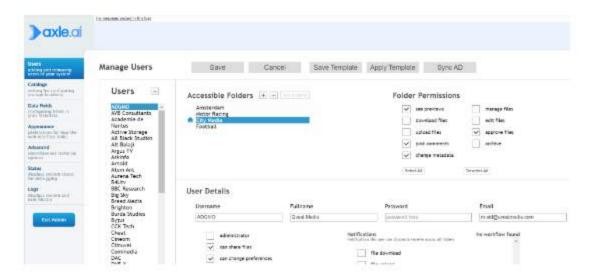
- Click on the user button at the top right of the Axle ui window.
- Choose Administrator Pages. If this option does not appear, then you are not logged in as a user with administrative privileges.

Users Page

The Users page is where you manage Axle AI's users. You can choose which folders different users can access, change permissions for certain users, and modify the logo that users see when they log into Axle AI.

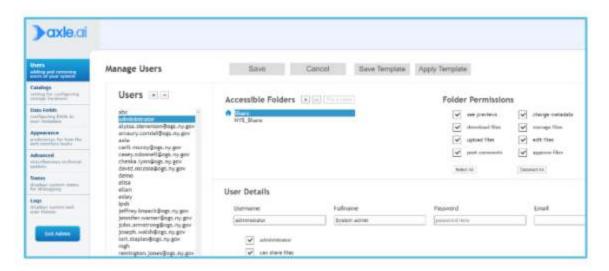
Manage Users

This section of the page houses all of the information about specific users: what folders they are allowed to access, the logo they see when they log into Axle AI, and permissions regarding what actions specific users may perform on assets cataloged within Axle AI.

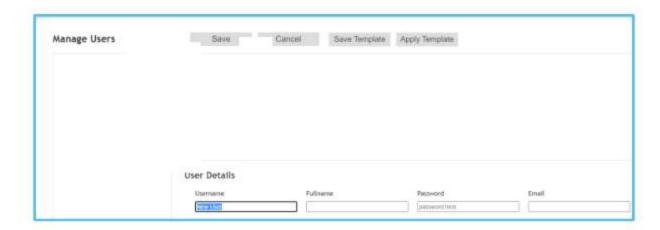


To add a user:

1. Click the user icon on the top right and choose Administrator Pages.



2. To add a user, click the plus (+) icon next to the Users title.



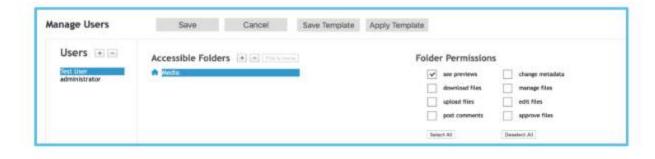
- Fill in the username, fullname (optional), password, and email (optional).
- Click Save. The new user is displayed in the list of users. A message tells you to add a catalog. See the next section.

To remove a user, select it in the list and click the minus (-) icon.

Setting Catalogs and Permissions

After creating a new user, you need to specify at least one catalog, and then apply permissions. Tip: You created a catalog during the first-time setup.

There are two types of permissions in Axle AI: catalog-specific and universal. Catalog-specific permissions only apply to individual catalogs, while universal permissions apply throughout Axle AI. Catalog-specific permissions are listed as Folder Permissions.



To authorize catalogs and assign permissions:

- Choose the user in the left box.
- To authorize a catalog for a user, click the plus button next to the Accessible Folders heading and select the catalog from the pop-up window.
 - (Optional) Click the triangle beside the catalog to choose an individual folder inside a catalog. This allows you to manage permissions on the folder level.
- Once you've chosen the catalog, check or uncheck the permission boxes under the Folder Permissions heading.
 - See Previews is checked by default. If it is not checked, the user will not be able to see the catalog at all. Full details of each permission option are listed in the <u>Users Page</u> section.
- To designate the selected catalog as the user's home catalog, which they see first when they log into Axle AI, click the This is Home button, next to the plus and minus buttons.
- In the User Details section, choose the permissions you want to apply. Full details of each permission option are listed in the <u>Users Page</u> section.



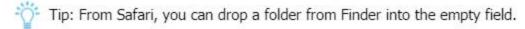
6. Click Save.

Managing Catalogs

A catalog is a folder on a NAS, SAN, or directly attached storage that is indexed and managed by Axle AI. Use the Catalogs administration page to add new catalogs, remove old ones, and change where Axle AI stores proxy files.

To add a new catalog:

- In the Administrator Pages, click the Catalog heading on the left side of the window.
- Click the Add a New Catalog button at the top-right. In the pop-up window, enter the location of the folder



(Optional) Enter the IP address and catalog name. You only need to specify the IP address
of the catalog if you plan to export <u>subclips</u> from Axle AI into editing applications on nonMac computers. If you do not enter a name for the catalog, Axle AI will use the name of
the folder you have chosen.



4. Click Add Catalog.

Once you create a new catalog, Axle AI will add its contents to the proxy generation queue. Depending on the size of the catalog, it may take some time before the Axle AI makes all the proxies. Until proxies are created, you cannot play your media in Axle AI, but you can add metadata.

You also have the option to change where Axle AI will store the <u>proxies</u> for this catalog. For more information, see <u>Changing the Proxy Storage Location</u>.

Removing a Catalog

To remove a catalog:

- 1. Choose a catalog from the Remove a Catalog drop-down menu.
- Click Remove Catalog.

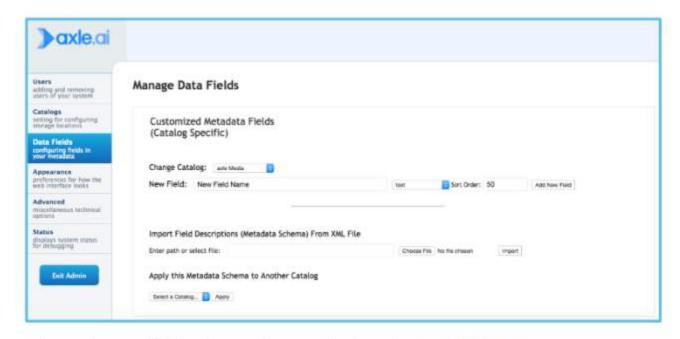


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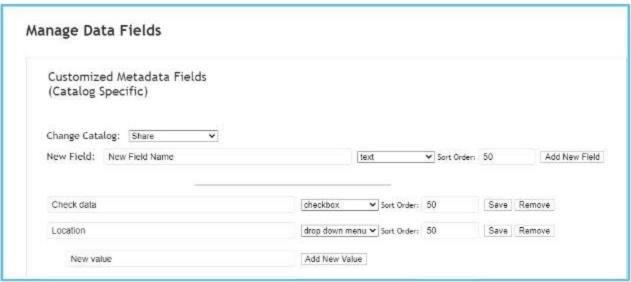
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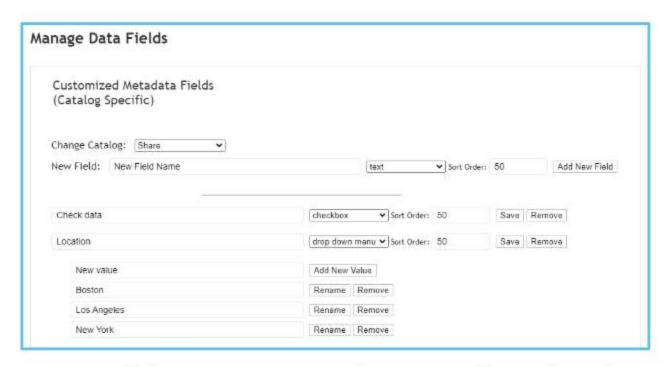
In the New Field text box, type a name for the field. For this field, enter "Location."



- From the drop-down menu, select "drop down menu." (Don't worry about the sort order for now)
- Click Add New Field. You'll see the entry Location listed, along with an indented box labeled New Value.



- 4. In the New value box, type the first location. In our example, type "Boston" and click Add New Value. A confirmation message is displayed at the top left of the page for each field or value you add.
- 5. Add two more locations: Los Angeles and New York.



You can use the buttons to rename or remove values at any time. There is no limit to the number of values you can create.

Use the same process to create other metadata fields: a text field labeled Project and a tag cloud labeled Weather. Use the Sort Order to adjust the field's position. Lower numbers appear higher in the list, and fields with the same number are ordered alphabetically.

You now have a simple set of metadata categories to work with. To see how to use these in axle ui, see <u>Tagging Your Media with Metadata</u>.

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- Logs Page

The initial user you created with Axle AI is an administrator by default, and you can make any user an administrator by checking the administrator checkbox on the user page.

To open the Administrator Pages:

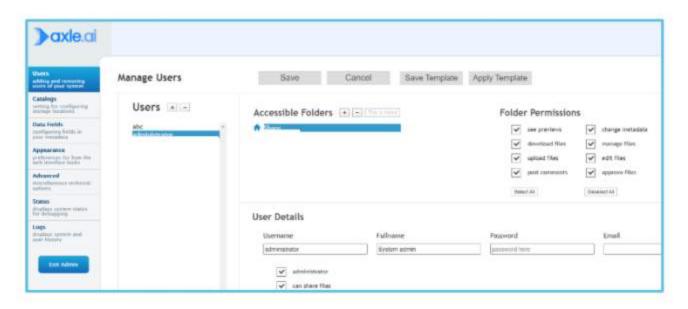
- 1. Click on the user button at the top right of the axle ui window.
- Choose Administrator Pages. If this option does not appear, then you are not logged in as a user with administrative privileges.

Users Page

The Users page is where you manage Axle AI's users. You can choose which folders different users can access, change permissions for certain users, and modify the logo that users see when they log into Axle AI.

Manage Users

This section of the page houses all of the information about specific users: what folders they are allowed to access, the logo they see when they log into Axle AI, and permissions regarding what actions specific users may perform on assets cataloged within Axle AI.



Templates: You can save time by creating a template for particular users. Complete the information that you want to use for the template, and click Save Template. Provide a name and description. When you want to use it, create one or more users and then click Apply Template. Select the template and users.

Users: This section lists users. Use the plus button to add a user. Use the minus button to remove a user. See <u>Adding Users</u>.

Accessible Folders: Lists catalogs (folders) that are accessible by a selected user. Use the plus button to add a catalog and the minus button to remove a catalog. Click the This is Home button to mark the first catalog the selected user sees after logging in.

Folder Permissions: Lets you select permissions for a specified folder by a selected user:

- · See previews: Allows the user to see the contents of a catalog.
- Download files: Allows the user to use Axle AI's download feature.
- Upload files: Allows the user to upload files via Axle AI into folders managed by Axle AI.
- Post comments: Allows the user to attach comments to content managed by Axle AI.
- Change metadata: Allows the user to change metadata for files.
- Manage files: Controls access to the Rename and Create Folder actions found under Axle AI's Actions button.
- Edit files: Enables the ability to cut, copy, and rename files from the content area of Axle AI's UI.
- Approve files: Allows the user to change the approval status of a file.

User Details: Lists information about the user:

- Username: The Axle AI user name of a newly created or chosen user.
- Fullname: The complete name of a newly created or chosen user (optional).
- Password/Confirm Password: Where user passwords are established and confirmed.
- Email: Email address for a newly created or chosen user (optional).

Universal Permissions: Permissions applied to all catalogs:

- Administrator: Gives Administrator privileges to the chosen user.
- Can share files: Enables the chosen user to create Guest accounts and share media.
- Can change preference: Allows the user to change Axle AI's administration pages.
- · Left sidebar hidden: Hides the navigation panel from the user.
- Can download high resolution: Allows the user to download the original high-resolution clips, which are very large.
- Can access bins: Allows the user to Create, Delete, and Add Clips to bins created in Axle AI.
- Can submit to connectr: Allows the user to submit assets to a connectr automated workflow.
- Can view real paths: Allows the user to view the complete path in the storage drive.
- Can process assets with AI: Allows the user to process assets through an axle AI
 application. Each use charged so the administrator might want to limit this ability.
- Can receive notifications: Allows the selected user to receive email notifications regarding
 events that occur within Axle AI.

Logo: Axle AI enables custom logos to be viewed on the login screen as well as the interface. Different users can be presented with different graphics upon login:

- Select from existing: Presents logos that have already been uploaded into the Axle AI server.
- Choose File: Enables the administrator to choose a logo from any accessible volume.

Catalogs Page

On the Catalogs page, you can see existing catalogs, add catalogs, remove catalogs, or change the folder where the low-res proxies are saved. You can also add or remove archives.

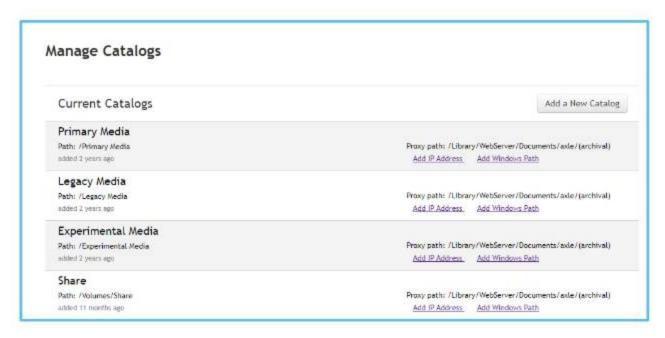


Tip: You can create multiple catalogs. Catalogs can be on different storage volumes, or different portions of a single storage volume.

A catalog is a folder on the NAS, SAN or directly attached storage that is indexed and managed by Axle AI. Within Axle AI, you can define multiple catalogs and Axle AI will index each one separately; thus, they don't have to be on the same storage volume. Additionally, catalogs can contain multiple levels of nested folders.

There are multiple ways for catalogs to be connected to Axle AI's server. Some examples include:

- Storage area network: This is typically a fibre channel-connected, block level device that
 is accessed concurrently by multiple workstations or servers.
- Network attached storage: This is typically a gigabit- or 10 gigabit-connected filesystem level device that is accessed concurrently by multiple workstations or servers using SMB, CIFS, NFS or AFP protocols.
- Direct attached storage: This is typically either a single large drive, or a RAID (redundant array of inexpensive disks) that is connected directly to the Axle AI server via ports such as Thunderbolt, Firewire, USB3 or eSATA.

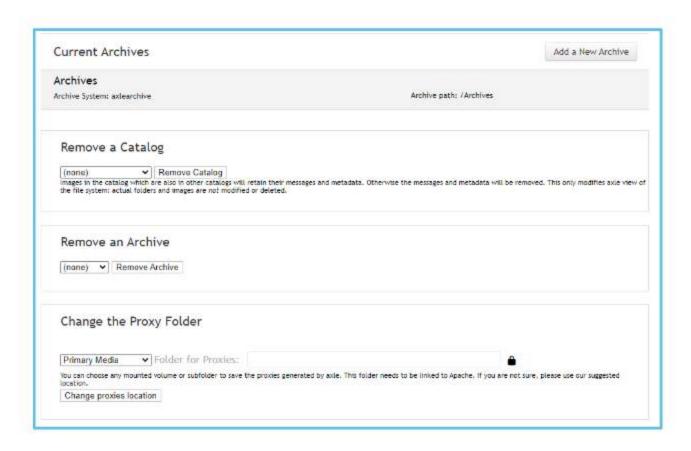


Current Catalogs: Lists the paths of all catalogs currently indexed by Axle AI. You can also add an IP address or a Windows drive letter to each catalog with the links below the proxy path.

Add a New Catalog: Click the Add a New Catalog button to open a window that allows you to add a new catalog to Axle AI.



- Catalog Path: This is where you specify the file directory for the new catalog that you
 want to create. If you are using Safari, you can drag and drop the intended folder directly
 from Finder into the empty field.
- IP Address: Specify the IP address of the storage device the catalog is on. The IP address
 is only needed if you plan on using Axle AI to export subclips into editing software on a
 Windows system.
- Catalog Name: This is where you enter the name for the new catalog you want to create.
 If you leave this blank, Axle AI uses the folder name.
 - Tip: Entering a name here does not change the original folder's name; it simply changes the display in Axle AI.
- Folder for Proxies: This is where you can specify the storage location for the low-res
 proxies for each asset that Axle AI uses as thumbnails in its user interface. Accept the
 default or change the location. You must click the lock to open a popup. See Changing the Proxy Folder below for more information.



Current Archives: Lists the paths of all catalogs currently indexed by Axle AI and lets you create a new archive. For more information about archiving, see Archiving in this Administration Guide.

Remove a Catalog: Choose an existing catalog from the drop-down menu, then click Remove Catalog.

Remove an Archive: Choose an existing archive from the drop-down menu, then click Remove Archive.

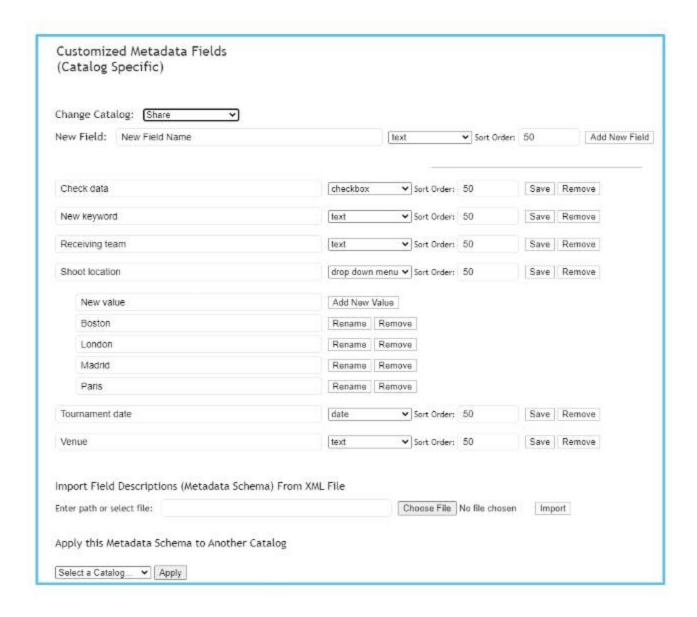
Change the Proxy Folder: Lets you change the location where Axle AI will store the <u>proxies</u> for a selected catalog. You'll need to edit Axle AI's Apache settings to authorize the new location. For more information, see <u>Changing the Proxy Storage Location</u> in this Administrator Guide.

Data Fields Page

The data fields page allows you to create and manage metadata fields you can fill in in the main user interface.

Customized Metadata Fields (Catalog Specific)

Metadata fields are associated with specific catalogs. This prevents catalogs with different types of media from having a lot of unnecessary fields you created for another catalog. The following illustration shows various types of metadata fields for the Share catalog.



For instructions on creating various metadata fields, see <u>Metadata Setup</u>. Axle AI supports the following formats:

- Text field: A character-limited field that you can type into freely when editing a file's metadata.
- Checkbox: A box you can check or uncheck.
- Radio Button: Allows you to define any number of options from which the user can
 choosing a single choice. The options are presented as labeled radio buttons.
- Drop-down Menu: Allows you to define any number of options from which the user can choose a single choice. The options are presented as a drop-down menu.
- Text large: A text field that, when chosen, will fill the entire information column and allow you to use complex formatting.
- Date: Opens a calendar that allows you to choose a date.
- Tag Cloud: Stores a list of values. Allows you to choose any number of values.

Use the Sort Order to adjust the field's position. Lower numbers appear higher in the list, and fields with the same number are ordered alphabetically.

Caution: If you delete a data field, it will remove all data associated with that field across all catalogs.

Import Field Descriptions (Metadata Schema) From XML File

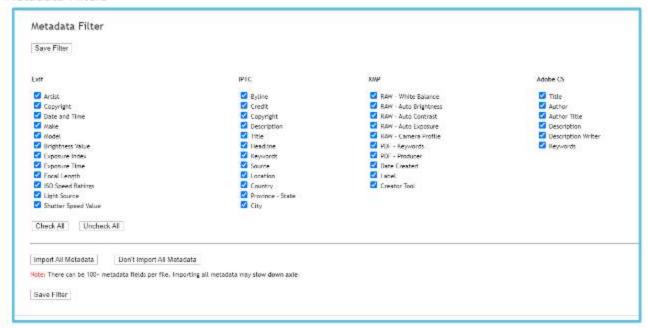
This section lets you specify where Axle AI can find an XML metadata schema you would like to import. This XML file needs to be created in accordance with Axle AI's XML specification.

Apply this Metadata Schema to Another Catalog

This feature saves you time by applying the same metadata fields to another catalog.

- Make sure the correct source catalog is chosen at the top of the page, and that the metadata fields in the center are as you want them.
- Choose the target catalog from the drop-down menu.
- Click Apply to copy the metadata fields.

Metadata Filters



Below the custom metadata section is a set of optional filters you can enable for various file types. When Axle AI indexes a new file, it will check for all the metadata you choose. If the chosen metadata is present, it will be visible in the info column along with the other non-custom metadata.



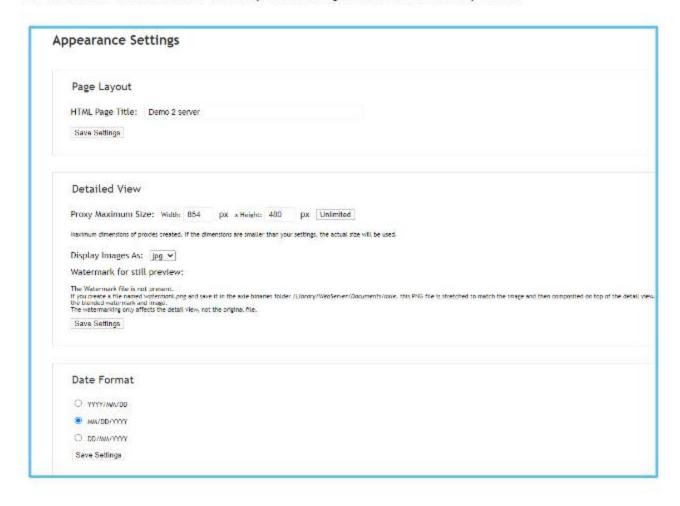
Tip: You will not be able to edit this metadata.

The Import All Metadata button makes Axle AI import all metadata that it finds in every file it indexes. This extended scanning and import procedure can slow down Axle AI. The Don't Import All Metadata button turns this off.

Click Save Filter after making your changes to save the filters you have chosen.

Appearance Page

Here you can configure the look and feel of Axle AI. The Axle AI team recommends leaving most fields at their default values unless you have a good reason to modify them.



Page Layout

Here you can change the title of the web page (the name that appears in your browser tab). Enter the title into the field and click Save Settings.

Detailed View

Here you can change some details about Axle AI's player view.

- Proxy Maximum Size: Sets the size of the canvas in the player view. Larger sizes mean
 you will still see images larger, but adds empty space around videos.
 - Caution: Despite what is says on the page, do not set Proxy Maximum Size to 0x0. This will prevent Axle AI from generating new proxies.
- Display Images As: Gives you the option of .jpg, .gif, or .png files for image proxies.
- Watermark: Tells you if a watermark file is present to add to image files. This is done by creating a file called watermark.png and saving it in /Library/WebServer/Documents/axle. Axle AI does not yet support automatic watermarking on video proxies.
- Save Settings: Click to confirm your changes.

Date Format

Select your desired format.

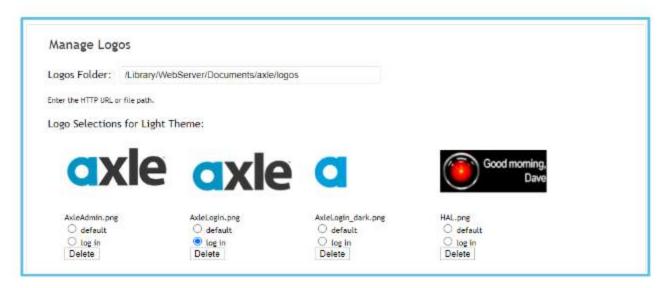
Thumbnails View

There are two options for modifying the properties of the thumbnails Axle AI attaches to each cataloged asset.

- File Name Clipping: Axle AI will truncate filenames longer than what you specify.
- Thumbnail Size: The thumbnails Axle AI creates will be at the resolution you enter here.
 This does not change their size in the Axle AI interface, just their resolution. If you notice a colored tint to your thumbnails, increasing the thumbnail size may fix it.

Manage Logos

Axle AI lets you replace the default axle logo with a logo that you choose.



- Logos Folder: Axle AI will automatically detect image files placed in this folder and make them available to choose.
- Logo Selections: Here you can choose the default logo for users as well as what logo is
 used on the login screen. Logos can be set for individual users on the <u>Users page</u>.
- Upload Logos: Click Choose File to open a window to add a logo to Axle AI. Logos should be 125x50 pixels and no larger than 20Kb.

Advanced Page

The Advanced page is used to control the more technical aspects of Axle AI.

License

Here you can review your license and enter a new one if necessary. Additionally you can find the MAC address of your server, which is used to generate a license.

Generate Proxies

This section is deprecated. The option cannot be changed.

Editing Proxy

Generate editing proxies for download: You can select this option to create a proxy useful for audio editing.

Connectr IP

Axle AI's Connectr workflow automation application, which allows straightforward visual building of custom workflows, can provide sophisticated transcode services for Axle AI. If you are using Connectr, enter the IP address as described in the setting.

Microsoft AI Settings

See Microsoft Video Indexer for information on these settings.

Speechmatics AI Settings

See Speechmatics for information on these settings.

Domain Name

Here you can enter a public domain name to share assets outside of your local network.

You must also set the same name for the Axle AI server in the Domain Name System (DNS) for your network. This domain is used in Axle AI's Share function. When you generate a new link to share media, you will have the choice of internal or external.

Folder Metadata Inheritance

There are four options which determine how Axle AI will apply metadata to individual files when you modify the metadata on their parent folder:

None: Axle AI will not apply metadata to files.

Ignore: If a file already has metadata in a field, that field will be skipped.

Append (Default): The metadata you add to the folder will be applied in each field after existing metadata.

Replace: Overwrites existing metadata with what you applied to the folder.

Email Settings

Here you can enter credentials for an email address for Axle AI to use. You can also specify a signature to use in all emails sent from Axle AI, define a header, and create a body prefix.

For information about what to put in the fields, consult your email provider. Most providers document how to configure an email client.

Websockets Configuration

The IP address needs to be the same as the IP address of the Axle server (except for reverse proxy). The port can be any port that is free. The default is 8081.

Sweep Option

Here you can change the time interval between system sweeps, when Axle AI looks through catalogs for any changes. Choose how frequently you want Axle AI to perform a sweep and click Save Settings. This will restart Axle AI.

The Minisweep Enabled checkbox allows you to enable or disable the minisweep. If minisweep is enabled, Axle AI will quickly check a folder on your storage when you enter it in the Axle AI interface, ensuring you have the most up-to-date view.

The Axle AI team strongly recommend leaving the minisweep enabled.

Track Modification Date

With this box checked, Axle AI will generate a new proxy for any media file when its modification date changes. This allows your proxy file to remain up to date if you edit over video files, for example.

XML Import Folder

Axle AI checks this folder for XML files that contain metadata to apply to files Axle AI has indexed.

For Axle AI to understand the XML, it must be formatted correctly. The schema for the metadata import as XML is inside a folder in the Axle AI Downloads folder called "XML docs," which also includes an example file.



Tip: Use Microsoft Excel to generate the example file and your own metadata schemas for import.

Existing Proxies

This allows you to reuse proxies that already exist in your storage, either because they had been created in Axle AI in the past or because a customer has their own proxies. By pointing Axle AI at the location of the existing proxies, Axle AI will automatically link them to the correct file, avoiding the creation of duplicated proxies.

Exclusions For Paths

See Managing Exclusions.

Axle Speech Settings

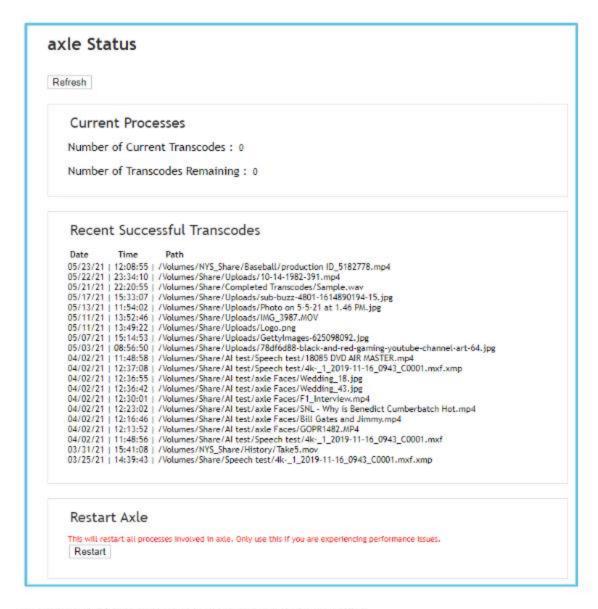
See Axle Speech for information on these settings.

Axle AI Version

Scroll to the very bottom of the page to see which version of Axle AI you are running.

Status Page

The Status page is where you can view the number of current and queued proxy transcodes, see a list of recently completed transcodes, and restart Axle AI.



Click the Refresh button to see the latest information.

Click the Restart button to restart Axle AI.



Tip: Restart Axle AI only if you are experiencing performance issues with the software.

Logs Page

The Logs page lets you view user activity generated by Axle AI. Select which type of activity you want displayed in the drop-down menu.

Clear Logs: Click to clear all logs from the display.

Backup Logs to a TXT file: Click to create a log file you can review and share.

5 Axle Panel for Adobe Premiere Pro CC

Axle AI has an extension for Premiere Pro CC on both Mac and Windows, which adds a new panel you can use to browse and search your Axle AI library, as well as easily import clips from your Axle AI library into the current Premiere project.

The Axle AI panel is available from the Adobe add-on store:

https://exchange.adobe.com/creativecloud.details.16813.html#.WNLaLBIrJQM

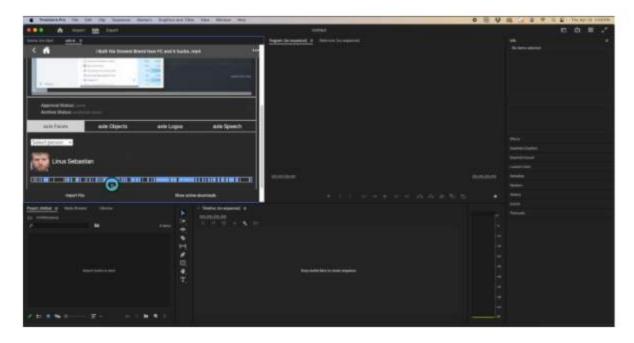
In addition, Axle AI has developed companion panels for additional Adobe CC applications (AfterEffects CC, Photoshop CC, Illustrator CC, InDesign CC). Contact Axle AI for download links and installation details. Like the Premiere Pro panel, these are available for both Mac and Windows.

The Axle Premiere Pro CC extension can be linked to your Creative Cloud account at no charge, and your local Creative Cloud app will automatically download and install the extension.

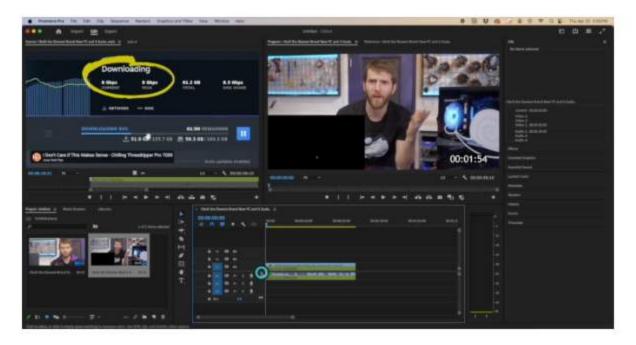
Once installed, the Axle AI panel will be available under the extension menu in Premiere. When activated, the panel will prompt the user to enter the network location of the Axle AI server (the same address you use to access Axle AI through your browser), and a username and login for Axle AI.



The Premiere Pro panel allows users to search the same technical metadata, custom metadata fields and AI-driven Tags metadata as the full Axle AI browser interface does.



Once an asset and relevant subclips have been selected, they can be dragged into the Premiere Pro timeline as shown below.



6 Proxies and ProxyStorage

The low-resolution H.264 proxies that Axle AI creates are one of the most valuable parts of the Axle AI solution: they allow you to browse your media quickly and easily over a network connection, and they remain playable after you have archived the original media.

However, they can be time-consuming to create, and if you change their storage or settings improperly, Axle AI can lose the information linking the proxies to the correct entries in the database.

What Are Proxies?

Proxies are transcoded versions of your media. When Axle AI indexes a new media file, it adds that file to the proxy queue. The proxy generator on your system (either FFmpeg or Prime)

takes jobs from the queue to generate proxies, and places the finished proxies in the location specified for that catalog. From that point on, the entry for the original file in the Axle AI database and for the proxy in the proxy storage location are linked. So although the file information you see in Axle AI comes from the original media file, the actual media you see in the browser is the proxy.



Tip: By default, Axle AI proxies are 1 megabit per second H.264 files with an MPEG4 wrapper.

Proxy Storage

Although each proxy file is typically quite small, making proxy files for all of your media can take up a considerable amount of space (usually 5-10% the size of the media Axle AI is managing). Make sure you have a suitable storage location that will hold all of this material.

Default Proxy Storage Location

The default proxy location is /Library/WebServer/Documents/axle/(archival), and all newly created catalogs will use this location automatically.



Tip: The Axle AI team recommends using a local or direct-attached storage device for proxy storage. If you would like to use network storage, it must be mounted using the NFS protocol, and not be part of an Axle AI catalog.

Changing the Proxy Storage Location

You can change the proxy storage location for a specific catalog from the Catalogs page. You'll need to edit Axle AI's Apache settings to authorize the new location as described in the following procedure. You only have to change the Apache settings once per location. After that, you can use the location for other catalogs.

You can confirm the current proxy storage for each catalog by looking at the Current Catalogs section at the top of the page.

Caution: Don't move the currently existing proxies yourself at any time.

To change the proxy location:

- Log into Axle AI as an administrator and choose Administrator Pages from the user icon in the upper right of the Axle AI window.
- Click Catalogs in the column on the left.
- Scroll down to the bottom of the Catalogs page to the section titled Change the Proxy Folder.
- Choose the catalog you would like to change from the drop-down menu.
- 5. Click the lock on the right.
- 6. Follow the instructions in the pop-up window, as shown below:



Tip: If your monitor is set to a low resolution, you may not be able to see the entirety of the window. Use your browser's zoom out feature (typically CMD+minus) to see the full window.

If you are using Safari, you can drag and drop your target folder into the empty field at the top. Otherwise, you will have to type or paste the full path to the folder.

- Once you are finished, click the Check button at the bottom of the window, which will change to a Proceed button if the check was successful.
- Click Proceed, then click the Change proxies location button. Axle AI will automatically move your proxies to the new location

You can see the progress by right-clicking the proxy folder in Finder and choosing get info. In the window that appears, you can see the size of the folder in the top-right corner. Once the number stops growing, the transfer is complete.

You will sometimes see a pipe error notification after changing the proxy location -- simply close the Administrator Pages tab in your browser and open it again.

You will have to restart the computer to view the proxies in the browser.

7 Archiving

Standard Archiving

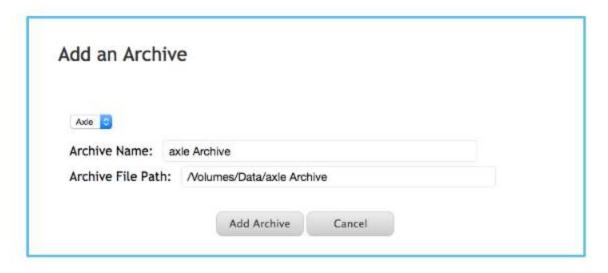
Archiving in Axle AI allows users to easily copy files to a predefined location, then remove the files from the original location while retaining the proxy and metadata information in the Axle AI database. This means that users can free up space on their main storage but not lose the information kept in Axle AI. Axle AI also makes it straightforward to restore files from the archive location to their original location on the storage.

This section is for standard Axle AI archives. If you are interested in archiving with cloud storage providers such as AWS, Backblaze, Seagate Lyve and Wasabi, or LTO tape-based archiving solutions such as mTape, Archiware P5,XenData, StorageDNA, or Front Porch DIVA, please contact Axle AI for installation details.

These software integrations are all available to add to your Axle AI system, and work consistently with the workflow described here once installed. In addition, the Axle AI team is available to do the required work in the event that you already have an LTO or cloud-based archive that may require some further integration with Axle AI.

To create a new Axle AI archive:

- Log into Axle AI as an administrator and choose Administrator Pages from the user icon in the upper right of the Axle AI window.
- 2. Click Catalogs in the column on the left.
- On the Catalog page, click the button labeled Add a New Archive. This will open the archive creation window.



- Choose Axle from the drop-down menu.
- 5. Enter the following:
 - a. Archive Name: The name of the archive. Use whatever you like. This name will appear in the user interface and will help you distinguish between archives.
 - b. Archive File Path: This is the directory location of your archive. Make sure this folder exists before you designate it as an archive. This is where the files you choose to archive will be copied to.
- 6. Click Add Archive.

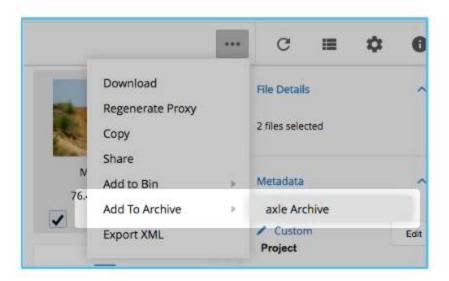
After you have created an archive, the Archive permission is available in the Users page.

To assign archive permission:

- In the Users section, choose the user you would like to be able to archive or restore files.
- In the Accessible Folders section, choose the catalog containing the files you would like the user to be able to archive.
- 3. Check the Archive permission.
- Click the Save button.
- Repeat for each catalog containing files you would like to archive.

To archive files or folders:

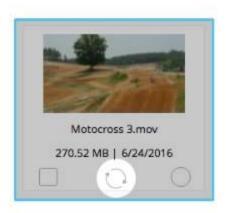
- In the Asset panel of the Axle AI window, choose one or more files or folders by clicking the small checkbox in the bottom-left (tile view) or left (list view).
- In the Action menu (...), choose Add to Archive, then choose the name of the archive you want to copy the files to.



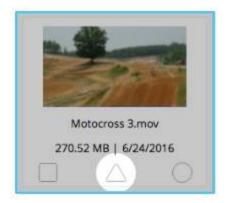
Axle AI will immediately begin copying the selection to the chosen archive location. Assets with the following characters in their names won't archive properly:

- •
- •
- . \

Axle AI displays the archival status for each asset in between the selection checkbox and the approval circle. By default this area is blank, but during the archive process the area displays two arrows in a circle, as shown below.



Once archiving is complete, it will display a white triangle, as shown below.



This indicates that a copy of the asset is in the archival location and in the original location on the storage. If there was an error, the archival status will show a red triangle, and you can find some error details in the archival metadata, visible in the metadata column on the right.



Tip: If you choose an archive from the navigation column on the left, you will see all assets archived to that location.

Long-Term Storage

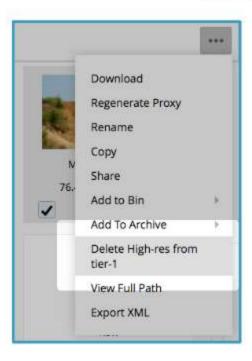
Once the assets have been copied to the archive location, they can be copied or moved to other locations. A common workflow is to configure LTO archiving software to automatically write the contents of the archive folder to tape. For details, consult the documentation of your LTO archiving software.

Removing Archived Assets

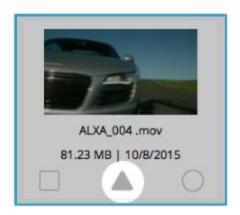
Axle AI does not perform any kind of check on the integrity of copied files. Before removing files from the original location, you may want to verify that the files were copied correctly.

To remove archived assets from the original location:

- 1. Select the files you want to remove.
- 2. Choose Delete High-res from tier-1 from the Action menu (...). This will immediately remove the file from the original location, leaving behind a zero-byte placeholder file.



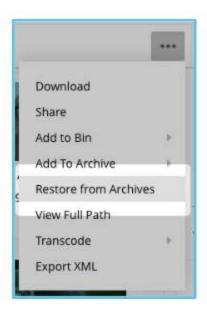
The white triangle will be replaced with a gray triangle, as shown below.



The proxy, metadata, and other information stored in Axle AI's database will be unchanged. Certain actions, like downloading the high-res file, or moving the file, will be disabled.

Restoring Archived Assets

- 1. Select the files you want to remove.
- 2. Choose Restore From Archives from the Action menu.



3. Axle AI will immediately begin copying the files back to their original locations.



Tip: The files must be present in their original folder structure in the archive location to be restored, so you'll have to move them back there if you moved them to an LTO tape or other storage device.

8 Managing Exclusions

Axle AI's default behavior to scan and represent every file and folder in your catalogs can sometimes result in a lot of non-media files or unnecessary folders filling the interface. To help manage this, Axle AI has the option to exclude files or folders by using regular expressions.

The field for managing exclusions is located near the bottom of the Advanced Page in the Admin section.



Tip: The exclusions must be in place before Axle AI has scanned the targeted files or folders. If the targeted files or folders are already part of the Axle AI database then it's too late to exclude them using this method.

Each exclusion is a regular expression that follows these rules:

- Exclude any folder with a specific name: .*\/foldername
- Exclude a specific folder: .*\/path\/to\/folder
- Exclude all files with the same file extension: (.zip for example): .*\.zip\$
- You can also exclude any file or folder that has some specific text in the name with this expression (cache for example): .cache.

Multiple exclusions should be separated by a semicolon, but note that the final exclusion should not have a semicolon after it.



Tip: All expressions are case sensitive.

The following picture is an example that excludes any folder named audio, any .zip file, and a specific folder located at /Volumes/media/unlicensed media.



To ensure that you have created your expression correctly, you can use the online tool Rubular at http://rubular.com, as shown below.



Using Rubular:

- Enter some sample folder paths into the text string box. For example:
 - /Volumes/media/CACHE/temp/abcd.pek
 - /Volumes/media/Photos/temp/abcd.pek
 - /Volumes/media/XML/abcd.xml
- Make sure that your test locations include something your expression should exclude.
- Test each expression you want to use by typing it into the regular expression box at the top. If the exclusion works, you'll see it highlighted in the match result box.
- Tip: An error in the exclusions field will prevent Axle AI from detecting new files. If you notice that Axle AI isn't adding new files to the interface, be sure to check that your exclusions field is free of errors.
- After saving your exclusions list, you need to restart the proxy plist for Axle AI to use it. This will prevent Axle AI from seeing files that match the exclusions.
- 5. To restart the plist, open terminal and execute these two commands:
 - sudo launchctl unload /Library/LaunchDaemons/com.axle.sweep.plist
 - sudo launchctl load /Library/LaunchDaemons/com.axle.sweep.plist

9 Troubleshooting

I have this icon instead of a thumbnail. What should I do?



Axle AI begins to create proxies and thumbnails as soon as new files are uploaded or copied into a cataloged folder. If you add a large number of files at once, it may take some time for Axle AI to render all of the images. This icon indicates that Axle AI recognized the file and is currently rendering the proxy.

I only have a white page as a thumbnail.



Axle AI cannot make a proxy of non-media files, or unrecognized media files. If Axle AI recognizes the type of file (for example, a Word document) it will show an appropriate icon. If Axle AI does not recognize the file, it will show the blank document icon.

Axle Al is intermittently slow.

There are a number of limitations that can cause Axle AI to run slowly. Some basic causes include the speed of connection between server and client, or the processing load on the Mac system that is hosting Axle AI (the Axle AI team recommends a quad processor Intel i7 or Xeon system).

Also, Axle AI is an extensive web application that handles a lot of data at the same time. You can reduce the number of data by deleting the metadata and log messages from the administrator pages of Axle AI. If Axle AI's speed is still not satisfactory, contact our technical support team.

The support team can change the number of transcodes that Axle AI generates simultaneously if that seems to be the cause of the problem.

How do I access Axle AI from the computer running Axle AI?

Open your preferred browser, Chrome, Safari, Internet Explorer 10+, Edge or Firefox and go to http://localhost/axleweb/ or http://127.0.0.1/axleweb/ Note: the trailing slash is usually necessary.

How do I access Axle Al from my network?

Open your browser and go to the http://[serverIPaddress]/axleweb/

You can find the IP address of your Axle AI server by opening the System Preferences app on the Macintosh Axle AI server, choosing Network, and choosing the appropriate Ethernet connection.

How do I access Axle Al from the Internet?

Most computer networks have routers/firewalls between the computers and the Internet; these network components must be configured to allow people from the Internet to access Axle AI. Set up the router to port forward/map port 80, 8081, and 8082 to the internal IP address of the computer running Axle AI. A user can now access Axle AI by opening a browser and going to http://externalIPaddress]/axle/.

You can find your network's external IP address by Googling "what is my IP?"

The external IP address can also be found in the router or firewall configuration utility. Note, Internet Service Providers can provide one of two different IP addresses to their clients, either dynamic or static. If you have a dynamic IP address your IP can change at any time meaning that people on the Internet may no longer know where to find you. There are several methods to fix this issue: upgrade to a static IP address, watch for an IP address change and update clients, or use a service like DynDNS or NoIP.

My Internet Service Provider blocks port 80; can I use a different port?

If your ISP blocks port 80 but leaves other ports open, this is a straightforward option. Choose a different port and configure your router to forward the open port to port 80 on the Axle AI server. Example: external port 8080 | IP 192.168.100.101 | internal port 80.

Is there any way to back up Axle Al's database?

Axle AI uses a standard PostgreSQL database, which can be backed up using standard PostgreSQL commands.

Axle AI automatically creates a database backup every day in /Library/WebServer/Documents/axle/generated-pages/DB_Backups. This is the default location and can be changed on a site-specific basis.

In the MacOS version, should I handle upgrading the Axle AI server's MacOS software?

Do not upgrade any of the software on the Axle AI MacOS server, including the OS, without consulting Axle AI tech support at support@axle.ai. Axle AI software relies on several dependencies, including Apache, and software updates can change the functioning of these dependencies without warning. The Axle AI team strives to make software compatible with any updates that Apple creates, but often the update process must be managed carefully to ensure no data is lost. If you would like to update the software on your Axle AI server, please contact Axle AI at support@axle.ai.

Axle Al is not generating thumbnails and previews; what should I do?

If many files were added recently, it may take Axle AI a fair amount of time to begin generating the previews. If Axle AI is not generating previews there are several procedures and items to check:

- Make sure that Axle AI is compatible with the type of file you added. If Axle AI does
 not recognize a file it will represent the file as a blank icon.
- Check that the file is indeed intact by opening it with another program and that the file name meets normal precedence, i.e. no trailing spaces.
- Clear the cache in the folder where the problem exists.

- Confirm that the Axle AI daemon is running in the Advanced section of the Administrative Pages.
- Restart the process if necessary.

I've forgotten my password. How can I get it back?

Because your installation of Axle AI runs exclusively on your own hardware, there is no automated password recovery feature. If there is another admin user on the system, they can change your password from the user section of the admin pages. If the only admin has forgotten his or her password, contact Axle AI at support@axle.ai and someone from the team can change your password for you.