



Harmony

Toon Boom Harmony V15.0 Control Center User Guide



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Control Center

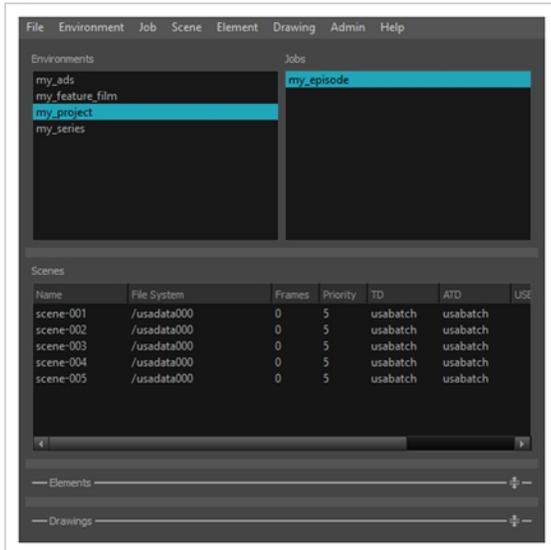
Using Harmony Server has the advantage that it centralizes your entire production on your server and organizes it into structured database. The key piece of Harmony Server is the Control Center module. From Control Center, you can manage your production database, users, visualize your rendering queue and more.

This chapter explains the general administrative tasks which must be performed to successfully run the Harmony solution.

Chapter 1: Starting Control Center

To manage a production, you will need the Control Center module. Control Center is used to create new environments, jobs, scenes and users, as well as to import and export scene packages. Control Center directly manages your server database.

You can start Control Center from the server or any client machine.



Before accessing the main Control Center interface, the Database Login dialog box opens, requesting a user name. By default, there is a user name created called **usabatch**. Type this user name to log in the first time. Once logged into Harmony, you can create your own set of users.



IMPORTANT

IMPORTANT: Do not delete the **usabatch** user name as it is used by Toon Boom Harmony Server for batch processing.

How to open Control Center

- Do one of the following:
 - Windows:** Open the Start menu and, in the Programs list, select **Toon Boom Harmony 15.0 [Edition] >  Control Center**
 - macOS:** In Finder, go to **Applications > Toon Boom Harmony 15.0 [Edition] Network >  Control Center**.
 - GNU/Linux:** In the GNOME menu, select **Applications > Toon Boom Harmony 15.0 [Edition] >  Control Center**.

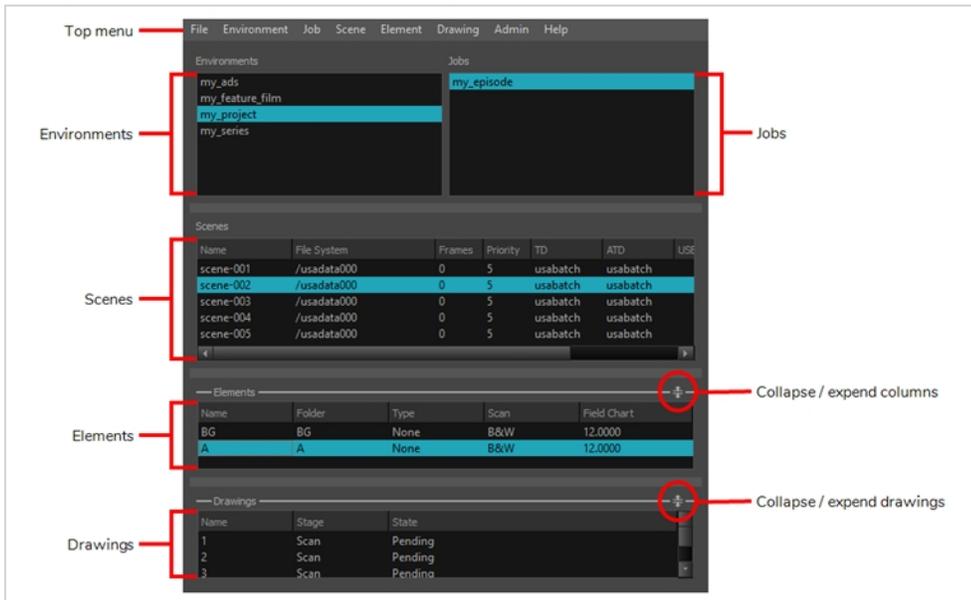
The Database Login dialog box opens.



2. In the User Name field, type **usabatch**. This is the default Harmony user.

The Control Center application opens.

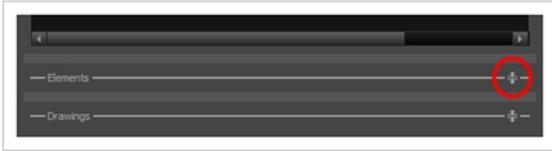
Chapter 2: Control Center Interface



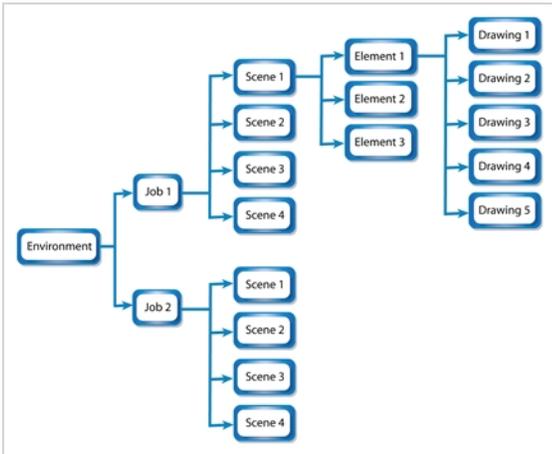
The Control Center interface is divided into six areas:

Parameter	Description
Top menu	Contains the commands available in Control Center. You can also find the commands in the contextual menus available in each area by right-clicking.
Environments	Displays one of your projects, such as a feature film, a TV series or a group of TV spots.
Jobs	Shows the sequences or episodes in your project (Environment). Select a project from the Environments list to see your jobs.
Scenes	Shows the scenes in an episode or sequence (Job). Select a job from the Jobs list to see your scenes.
Elements	Shows the layers or columns in a scene. Select a scene from the Scenes list to see your elements.
Drawings	Shows the drawings in your layer or column (Element). Select an element from the Elements list to see your drawings.

You can collapse and expand the Elements and Drawings sections of the user interface. As the elements and drawings are not created in Control Center, these sections are used less often. To simplify the interface, you can click on the Collapse/Expand  button to show or hide the Elements and Drawings sections.



Here is a typical example of the database structure:



Chapter 3: About Users in Control Center

In order to run any Harmony Server application, a project collaborator must log in to the database using a username that has been created by a server administrator beforehand.

In a studio productions with several project collaborators, each person is typically assigned different tasks, such as ink and paint or compositing. Users should be created for each project collaborator, and these users should be assigned the appropriate user type to make sure they have the proper permissions. For example, an user of the Ink and Paint type can only load a scene in the Paint application, meaning they are not able to make changes to a scene that exceeds their mandate.

By default, a database has two users, usabatch and BATCH. Those users should not be used by project collaborators. They are created when creating a new Harmony Server database to handle batch processing tasks.

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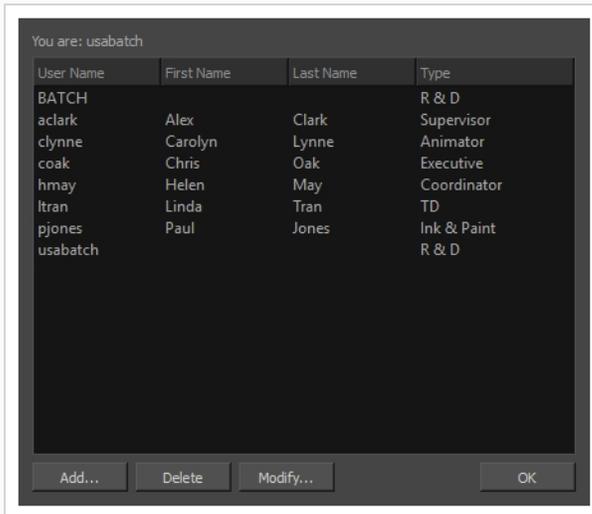
Viewing User Lists in Control Center

The User List dialog box lists all the users and their details, including: username, first and last names, and user type. The buttons at the bottom of the dialog box let you add, delete or modify the list of users.

How to view the user list

1. From the top menu, select **Admin > Users**.

The User List dialog box opens and displays your login name and a list of the other users in the system.



Adding Users in Control Center

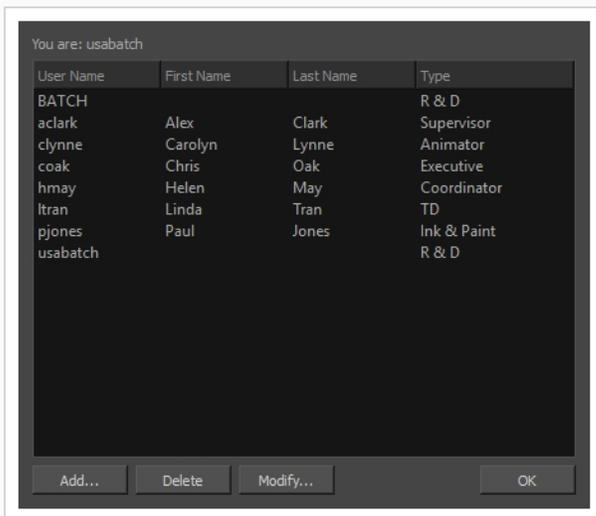
All Harmony users must have their name on the user list to log in to any application. The system uses the login to track activities; it is not a security lockout.

Each user also has a user "type" assigned to it which allows access to only some of the Harmony modules.

How to add a user to Harmony

1. To view the list of Harmony users, select **Admin > Users**.

The User List dialog box opens.



2. Click **Add**.

The Add User dialog box opens.

The screenshot shows the "Add User" dialog box with the following fields:

- User Name: [Empty text field]
- First Name: [Empty text field]
- Last Name: [Empty text field]
- Type: Ink & Paint (dropdown menu)

At the bottom are "OK" and "Cancel" buttons.

3. In the User Name field, type the person's user name.
4. Type the person's first name and last name in the corresponding First Name and Last Name fields. You can enter a space if you want leave the field blank.

- In the Type menu, select the user type. This defines the type of work the user typically performs. It will allow or block the person from accessing certain Harmony applications and perform operations in Control Center—see [User Types and Restrictions on page 18](#).

- Click **OK**.

The name appears in alphabetical order in the user list.

You are: usabatch

User Name	First Name	Last Name	Type
BATCH			R & D
aclark	Alex	Clark	Supervisor
clynne	Carolyn	Lynne	Animator
coak	Chris	Oak	Executive
hmay	Helen	May	Coordinator
jsmith	John	Smith	Animator
ltran	Linda	Tran	TD
pjones	Paul	Jones	Ink & Paint
usabatch			R & D

Add... Delete Modify... OK

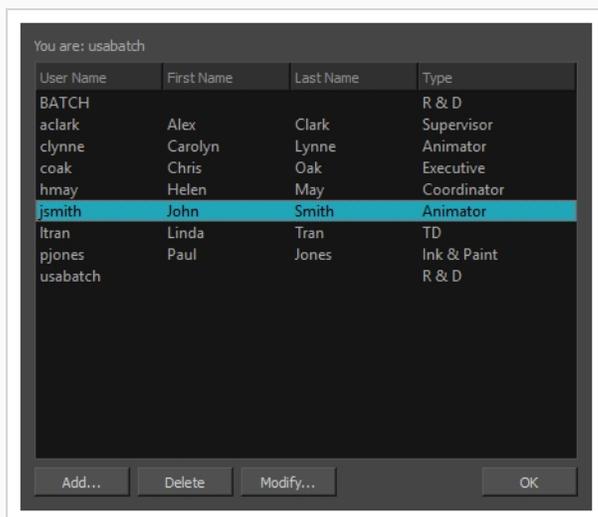
Deleting Users in Control Center

As your studio network grows and evolves, you may need to delete old or obsolete user profiles from your system. After you delete a user profile, the person who used that profile will no longer be able to access Harmony. You cannot delete yourself from the user list. If you accidentally delete a name, you must follow the procedure for adding a user to put the user back into the system.

How to delete a user

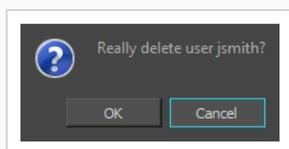
1. To view the list of users, select **Admin > Users**.

The User List dialog box opens.



2. In the user list, select the name you want to delete.
3. Click **Delete**.

The Confirm dialog box opens.



4. Confirm if you want to delete the user from Harmony.
 - Click **OK** to delete the selected user.
 - Click **Cancel** to abort the delete command.

Editing User Information in Control Center

You can edit the user profiles at any time to update the user information.



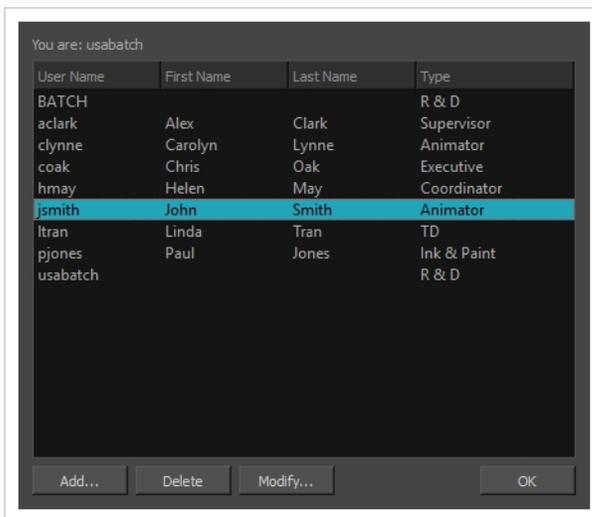
NOTE

NOTE: To change your own user profile, login as `usabatch` (the default user).

How to modify user information

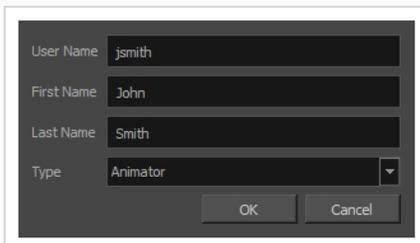
1. To view the list of users, select **Admin > Users**.

The User List dialog box displays.



2. Select the profile to modify.
3. Click **Modify**.

The Modify User dialog box appears.



4. Type or select the new information in any or all of the following:
 - **User Name:** The user's login name
 - **First Name:** The user's given name

- **Last Name:** The user's family name
- **Type:** The type of user. This also affects the user's privileges—see [User Types and Restrictions on page 18](#).

5. Click **OK**.

About the usabatch User Account

The usabatch user account is the go-to account used by Harmony for batch processing and background services. It can exist on two levels:

- As a Harmony Server account on your database. This user account processes all batch processing tasks such as rendering scenes and vectorizing drawings. If this user does not exist, the batch processing service will not be able to perform these tasks.
- As a user account on your machine's operating system. This user account is created during the configuration of your machine to connect to the Harmony database and run background services. Without this user, background services will not be able to launch, be them the batch processing service or services such as the database server or the WebCC server.



NOTE

The creation of the usabatch user account on the operating system is not required if you are running background services using Service Launcher, which launches on user log-in under the logged-in user's account. For more information, refer to the Service Launcher chapter of the Installation Guide.

On the Harmony database, usabatch is automatically created when creating the database's base file system. If this user is deleted, you can create it again. Make sure its username is **usabatch** and that its user type is one with all privileges, such as **R & D**, **Coordinator**, **Supervisor**, **Executive** or **TD**—see [Adding Users in Control Center](#) on page 12

On Windows, the user usabatch is automatically created when you install a service using the Configuration Wizard. On macOS and GNU/Linux, the creation of the user usabatch is part of the procedure for installing a background service in the Installation Guide.

User Types and Restrictions

Here are the different user types available and their restrictions/permissions:

Feature	R & D Coordinator Supervisor TD Executive	Animator	Xsheet Archive	Scan	Ink & Paint
Create environment	✓				
Change asset lock on environment	✓				
Delete environment	✓				
View vectorize queue ¹	✓	✓	✓	✓	✓
View render queue ¹	✓	✓	✓	✓	✓
Create job	✓	✓			
Change job priority	✓	✓	✓	✓	✓
Change job status	✓				
Delete job	✓				
Create scene	✓	✓		✓	✓
Delete scene	✓				
Unlock scenes locked by another user	✓				
Unlock scene version locked by another user	✓				
Unlock scene locked by oneself	✓	✓	✓		
Unlock scene version locked by oneself	✓	✓	✓		
Move scene ¹	✓				
Rename scene	✓				

Feature	R & D Coordinator Supervisor TD Executive	Animator	Xsheet Archive	Scan	Ink & Paint
Clear scene	✓				
Change scene priority	✓	✓	✓	✓	✓
Change scene status	✓				
Reorder scenes	✓				
Copy scenes	✓	✓			
Send to Vectorize	✓	✓	✓	✓	✓
Send to Unvectorize	✓	✓	✓	✓	✓
Send to Rendering	✓	✓	✓	✓	✓
Manage users	✓				
Change approval policy	✓				
Change vectorize style ¹ _	✓	✓	✓	✓	✓
Change asset lock ¹ _	✓				
Database lock manager ¹ _	✓				
Export scenes	✓	✓	✓		
Import scenes	✓	✓	✓		
View error log	✓	✓	✓	✓	✓
View elements ¹ _	✓	✓	✓	✓	✓
View drawings ¹ _	✓	✓	✓	✓	✓
Open in Harmony	✓	✓	✓		
Open in Harmony Paint ¹	✓	✓	✓	✓	

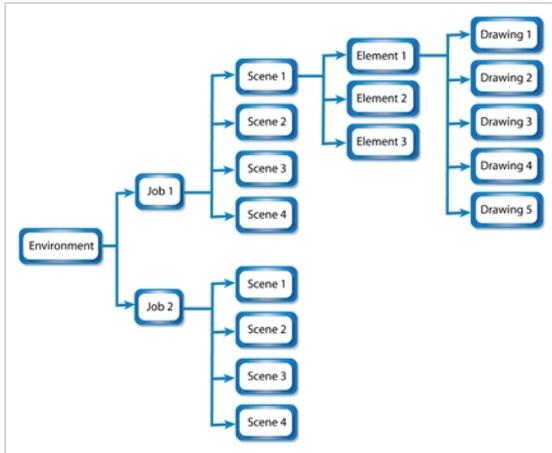
Feature	R & D Coordinator Supervisor TD Executive	Animator	Xsheet Archive	Scan	Ink & Paint
Open in Harmony Scan ¹	✓	✓	✓	✓	✓

¹ This feature is not available in WebCC.

Chapter 4: About Environments, Jobs and Scenes in Control Center

Every project you create with the Harmony solution starts with an environment; it is the highest level in Control Center. You can build a complete environment by adding jobs, scenes, elements and drawings.

Control Center divides your animation project into the following hierarchy, which organizes the sections of your animated projects:



- **Environment:** This is the name of your animation project.

Example: `adventure_movie`

- **Jobs:** These are the major sections of an environment, such as sequences or episodes.

Example: `adv_seq_001`, `adv_seq_002`



IMPORTANT

All jobs are stored in the same location in the Harmony database. Be sure to prefix all job names appropriately, so you can identify the project it belongs to. Each job must have a **different** name. You **cannot** give two jobs the same name.

- **Scene:** These are the different shots in a job.

Scenes are contained in their respective job folder in the Harmony database. Prefix all scenes names appropriately, so you can identify which environment and job they belong to.

Example: `sc_001`, `sc_002`

- **Elements:** These are the different layers and columns in your scenes.

If you have not created an exposure sheet yet, the Frames column in the **Scenes** list displays 0 and no elements appear in the Elements or Drawings list.

For example, scene **002** of **show_episode_6** could have the following elements:

- A background called **bg**.
- A character called **tony**.
- A highlight effect called **h1**.

You would then find these elements under job **002** and the **show_episode_6** scene. The Elements list would display the element names, types of elements in a scene, the type of scans, and the size of the field chart.

- **Drawings:** These are actual drawings of the elements (layers) in your scene.

For example, the **tony** element in **002** of **show_episode_6** could consist of 35 drawings. To find these drawings, you would look under Drawings to see the keyframes, state, and stage of each drawing.

As your projects come and go, you will probably want to start cleaning up your database, as well as your server's hard disk, by removing old and obsolete environments and their associated animation data.



IMPORTANT

After you delete a scene, job, or environment, the associated data is **permanently removed** from your storage disks. Make sure you really want to erase these items before you delete them as there is no way to retrieve the data after it has been erased.

You might want to export old environments and archive them somewhere else before you delete them from your system.



WARNING

If you are working in a mixed Windows/macOS/GNU/Linux environment or share files with other studios that do, you should use lowercase letters to name the various items in your animation projects and not include any spaces in component name. For example, write **the_show** instead of **The Show**. This recommendation is due to the fact that GNU/Linux is case-sensitive while Windows is not.

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About Environments in Control Center

Harmony uses environments to manage and organize related projects. Using environments allows you to organize your production projects by their nature or type.

If your projects center around episodic and commercial types of work, you can create two environments. For example, one environment called **commercials** and the other called **the_show**. Then you can insert the jobs that relate to each type of project. When you want to work on a commercial project, open the **commercials** environment and select the commercial job you need. Similarly, if you want to work on an episodic project, open the environment called **the_show**.

Environment	Job	
commercials	dentist	sc_001 sc_002
	soda	sc_001
	cereal	sc_001
the_show	sho_001	sc_001 sc_002
	sho_002	sc_001
	dentist	sc_001 sc_002

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Creating Environments in Control Center

Create environments in order to manage and organize you studio's projects.

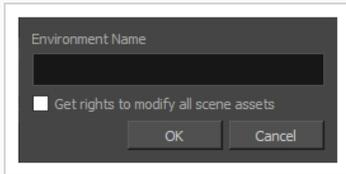
How to create an environment in Control Center

1. Do one of the following:

- ▶ From the top menu, select **Environment > Create**.
- ▶ Right-click in the Environments section and select **Create**.

In mixed platform Environments (Windows/macOS and Windows/GNU/Linux) it is best to name everything in lowercase so data can be interpreted the same way on each operating system. The same is true if working between studios using Windows, macOS, and GNU/Linux.

The Create Environment dialog box appears.

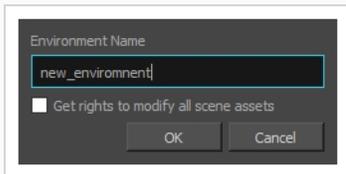


2. In the Environment Name field, type the new project's name.

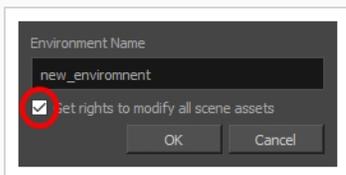


NOTE

The environment name must be composed of alphanumeric and can include underscores (_), but no spaces or other special characters, and it is case-sensitive. By default, an environment's name cannot exceed 23 characters. If Unicode is enabled, an environment's name cannot exceed 120 characters.



3. If you want the user to automatically get the rights to modify all the scene assets (drawing, scene setup, palette lists, etc.), select the **Get Rights to Modify All Scene Assets** option.



4. Click **OK**.

The new environment appears in alphabetical order in the Environments list.

After you create an environment, you must add it to the Batch Processing queue so it can vectorize and render the drawings and scenes automatically. You only have to add the environment to the Batch Processing queue once.

Deleting Environments in Control Center

When you are ready to remove old environments, you can delete them from the database. However, in order to prevent accidental loss of data, you can only delete an empty environment (an environment that contains no jobs, images, or palette information).

How to delete an environment

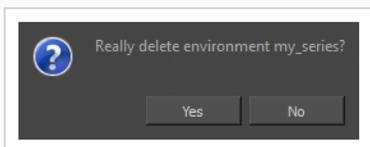
1. In the environment section, select the environment to delete from the Environments list.
2. Do one of the following:
 - From the top menu, select **Environment > Delete**.
 - Right-click in the Environments section and select **Delete**.



WARNING

The Delete command is only available for an empty environment. You must delete the scenes and jobs before you can successfully delete the environment.

The Confirm dialog box appears.



3. Click **Yes** to delete the selected Environment.

The environment no longer appears in the Environments list.

About Jobs in Control Center

Within each environment is a list of jobs. These jobs contain all the segments for your animated sequence. If you are creating a weekly television series called **The Show**, you could name your job `show_ep_06` (`the_show` would be the name of your environment).

If each episode was composed of 100 animated shots, each job would contain 100 scenes.

If you want to remove a job and its data from the Harmony database and archive it, you can export the job from Control Center.



IMPORTANT

You cannot archive a job by deleting the job. If you want to archive a job, you should export it to a new location where it can be stored permanently.

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Creating Jobs in Control Center

Every job must be created under an environment. Each job must have a unique name. Two jobs cannot have the same name, even if they appear in two different environments, because all the jobs are in the same folder on the server.

How to create a job

1. In the Environments section, select the project in which you want to create a job.
2. Do one of the following:
 - From the top menu, select **Job > Create**.
 - Right-click in the Jobs section and select **Create**.

The Create Job dialog box appears.

3. In the Name field, type the name of the job you want to create.



NOTE

The job name must be composed of alphanumeric and can include underscores (_), but no spaces or other special characters, and it is case-sensitive. By default, a job's name cannot exceed 23 characters. If Unicode is enabled, a job's name cannot exceed 120 characters.

4. In the TD menu, select a technical director (TD). You must select a technical director to create the job.

A TD is usually the person who oversees the animation project and makes sure the work is done properly. Select the person who most closely resembles this definition. If you do not have a particular user for the task, you can simply assign **usabatch**.

When you create your Harmony users, you can label a user as a technical director (TD).

5. In the ATD menu, select an assistant technical director (ATD). You must select an assistant technical director to create the job. If you do not have an ATD, select the same person for the TD and ATD jobs.

In some studios, the responsibilities of the technical director can be shared by more than one person. This second person is the ATD.

The technical director and assistant technical director you select appear in the Scenes list for each scene of the job.

6. In the Approval menu, select how Harmony will mark the various stages the scenes will pass in your production schedule.
 - **Automatic:** When you work on your scenes, Harmony automatically approves their status at each stage
 - **Manual:** When you work on the scenes, the technical director or the assistant technical director must approve their status at each stage using the Change Stage command (available in the Scene menu).
7. Drag the slider to adjust the priority. 0 = the highest priority for processing through the Vectorize or Render queue and 10 = a priority of 10 is the least important. Items with higher priorities pass in front of other projects with lower priorities in the Vectorize and Render queues even if there is already a queue processing.

If you do not know what priority to assign to your project, you can leave it at 5. You can always change it later.

8. Click **OK**.

Control Center adds your new job to the selected environment and it appears in alphabetical order in the Jobs list.

Changing Job Stages in Control Center

As you continue working on your animation project, you may want to update the status of the jobs in your environment. This status can display one of three things:

- The stage the job has reached
- When the job will be vectorized
- When the job will be rendered

As you complete your animation project, you can update a job's status to reflect where it is in the overall production process. You can classify jobs as being "In Production" or "Completed".

- **In Production:** The job is still a work in progress. The other nodes can still access this job.
- **Completed:** The job is finished. The Harmony database still has all the job's components (scenes, elements, drawings), but the job neither appears nor is accessible from the Harmony applications.

In most cases, you would mark a job as "Completed" after it has been finalized (inked, painted, rendered) and transferred to a medium, such as Blu-ray, or sent to post-production.

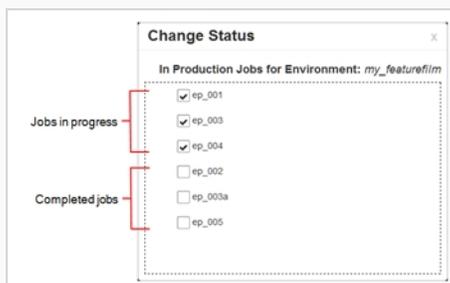
You can change a job's status from "Completed" to "In Production" at any time to continue working on it.

Changing the job's stage from In Production to Completed only hides the job in the Control Center window; all the associated files with the job are still on your system.

How to change a job's stage and view the list of completed jobs

1. In the Environments section, select an environment.
2. Do one of the following:
 - From the top menu, select **Job > Change Stage**.
 - Right-click in the Jobs section and select **Change Stage**.

The Change Stage of Jobs window appears.



3. Select the jobs whose stage you want to change.
 - If you want to change a job from **In Production** to **Completed**, select the jobs in the In Production list.

- If you want to change a job from **Completed** to **In Production**, select the jobs in the Completed list.
4. Click one of the Change buttons to change the job's status.
 - Click the Change to Completed ▷ button to change a job that is in production.
 - Click the Change to In Production ◁ button to change a job that is completed.
 5. Click **OK**.

Changing Job Priorities in Control Center

Before you send a job's scenes to be vectorized or rendered, you can change the job's priority level in the processing queue. Increasing a job's priority lets the system process it before other jobs in the processing queue.

Use the Choose New Priority dialog box to change a job's rendering and vectorization queue priority. The priority is set using a sliding scale where 0 is the highest priority and 10 is the lowest.

For example, if job B is before job A in the queue, you can change the priority, so job A is processed first.

Changing a job's priority does not affect vectorizing or rendering jobs that are already sent in the queue. It will only affect jobs that are sent after making the change. If you want to change a job's priority after it has been sent to the queue, use the Change Priority button in the Queue window.

How to change a job's priority

1. In the Environments section, select the environment containing the job you want to change the priority for.
2. In the Jobs section, select the job whose priority you want to change.
3. Do one of the following:
 - From the top menu, select **Job > Change Priority**.
 - Right-click in the Jobs section and select **Change Priority**.

The Choose New Priority dialog box appears.



4. Drag the slider to adjust the priority. 0 = the highest priority for processing through the Vectorize or Render queue and 10 = a priority of 10 is the least important. Items with higher priorities pass in front of other projects with lower priorities in the Vectorize and Render queues even if there is already a queue processing.
5. Click **OK**. When you send this job to be vectorized or rendered, it will have this new priority in the processing queue.

Deleting Jobs in Control Center

You should only delete jobs that you no longer need or that have already been exported to an archive (using the Export command available in the Admin menu).

When you delete a job, the following components are permanently removed:

- Scenes
- Elements
- Drawings
- Database information associated with the selected job
- Palettes stored under the selected job

Before you delete a job:

- Make sure no one else is currently using the job. Failure to do this may result in file corruption and loss of your work.
- Wait until everyone is offline. This ensures no one can open the data files while you delete them.



NOTE

You cannot delete a job if it still contains scenes.

How to delete a job

1. In the Environments section, select the environment containing the job you want to delete.
2. In the Jobs section, select the job you want to delete.
3. Do one of the following:
 - From the top menu, select **Job > Delete**.
 - Right-click in the Jobs section and select **Delete**.

The Confirm dialog box appears.



4. Click **OK**.

About Scenes

After you create a scene, you can view the corresponding elements and drawings in the Control Center window. When you select the environment and the job, the corresponding scenes for the selected job appears in the Scenes list in the Control Center window.

For each scene in your job, you must create a unique exposure sheet to lay out the drawings, camera effects, audio tracks, and other special effects for that scene.

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Creating Scenes in Control Center

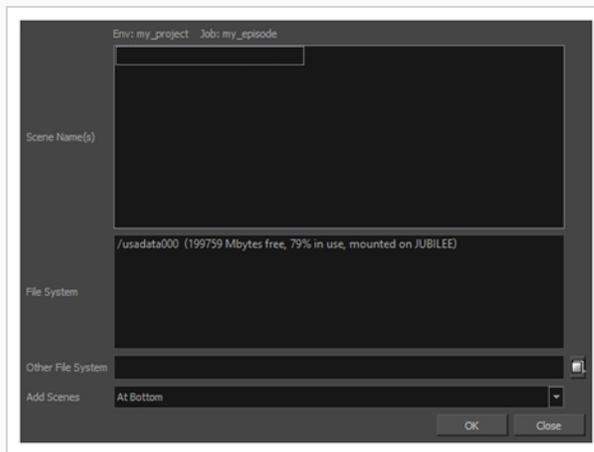
When creating your scene, you must select the path where you want to store the scene data and where you want the new scene to appear in the Scenes list. You can create a single scene or create multiple scenes all at once.

You do not have to enter the word "scene" when entering scene names. The system automatically adds **scene-** in front of the name. For example, when you type "3" in the Scene Name field, the scene name automatically displays as "scene-3" throughout the file system. The scene name will have "scene-" as a prefix, but that will only be visible when looking at the scene on the file system. The scene will appear without this prefix in all the Harmony applications.

How to create a scene

1. In the Environments section, select the environment containing the job you want to add scenes in.
2. In the Jobs section, select the job you want to add scenes in.
3. Do one of the following:
 - In the Scene section, select **Scene> Create**.
 - Right-click in the Scenes section and select **Create**.

The Create Scene dialog box appears.



4. Click in the Scene Name(s) field and enter the name for the first scene you want to create.
5. Press the Enter/Return keyboard shortcut to move onto the next scene.
6. Enter the name of the next scene you want to create.

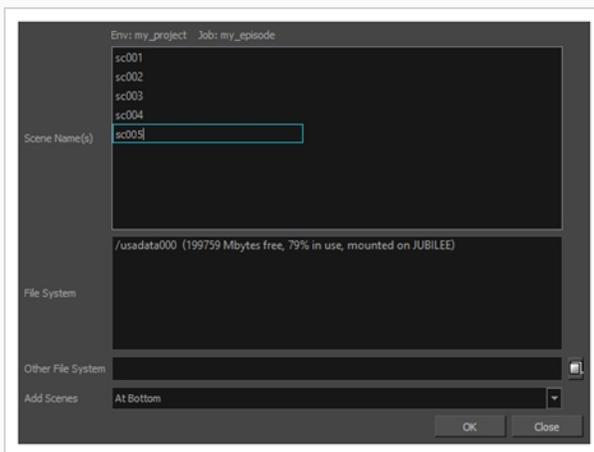
**NOTE**

By default, when creating a new scene or renaming a scene, the scene's name cannot exceed 23 characters. If Unicode is enabled, the scene's name can not exceed 119 characters.

When creating scenes in Control Center, you should enter the scene names exactly as they appear on the actual animation. This ensures that the information in your environment is consistent with the actual animation.

The job and scene names are alphanumeric and can include underscores (_), but no spaces, or other special characters. The environment name is case-sensitive.

7. Repeat the previous steps until you have named all the scenes you want to create.



8. In the File System list, click the path where you want to store the files.

If you do not see the desired path in the list, specify a different path in the Other File System field.

If you are unsure which disk drive to select, consult your technical director or system administrator.

The information in the File System list displays:

- Available drives on which you can store new scenes
- Space that is currently available (in megabytes)
- The percentage of space the drives are currently using

**NOTE**

Although you can add as many scenes as you wish, you can only select one path at a time. Therefore, Control Center stores all scenes you create in one session at the same place (same path).

9. Select where you want to place the scene in the Scenes list from the Add Scenes menu. These are the options:

- ▶ **At Bottom:** Places the new scenes at the bottom of the list
- ▶ **At Top:** Places the new scenes at the top of the list
- ▶ **Before Selected:** Places the new scenes before the selected scene
- ▶ **After Selected:** Places the new scenes after the selected scene
- ▶ **Name Sort:** Arranges the new scenes alphabetically.



NOTE

To use the After Selected and Before Selected options, you must select another scene from the Scene list in the Control Center window.

10. Click **OK**.

The new scene is created and displayed in the Scenes list. If you do not want to create the scene, click **Cancel**.

Deleting Scenes in Control Center

When you delete a scene, you not only remove the scene from the Control Center window, but you also permanently remove all the information associated with the scene including:

- Exposure sheet (and all associated versions)
- Elements
- Drawings
- Database information
- Any palettes stored in that scene's palette library

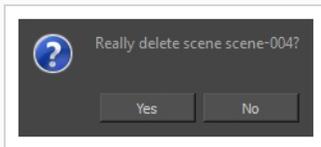
Before you delete a scene:

- Make sure that you really want to remove all this information from the system
- Are you going to use the scene in the future?
- Do you need to archive the scene for future use?
- Make sure no one else is currently using the scene.
- failure to do this may result in file corruption and loss of your work.
- Wait until everyone is offline. This ensures no one can open the scene while you delete it.

How to delete a scene

1. In the Scenes list, select the scene name you want to delete.
2. Select **Scene > Delete** or right-click anywhere in the Scenes list and select **Delete**.

The Confirm dialog box appears.



3. Click **Yes** to delete the scene and all its related information.

The scene name and all its associated files are deleted.

Moving Scenes in Control Center

When you create a scene, it and its associated files are stored on one drive. If you find you are running out of space, you can move a scene to another drive. However, you can consolidate all the scenes for a particular job in a single directory allowing you to find related information quickly. You may also want to file your scenes in specific directories, creating a customized directory system. The Move command lets you move scene data from one file system to another.

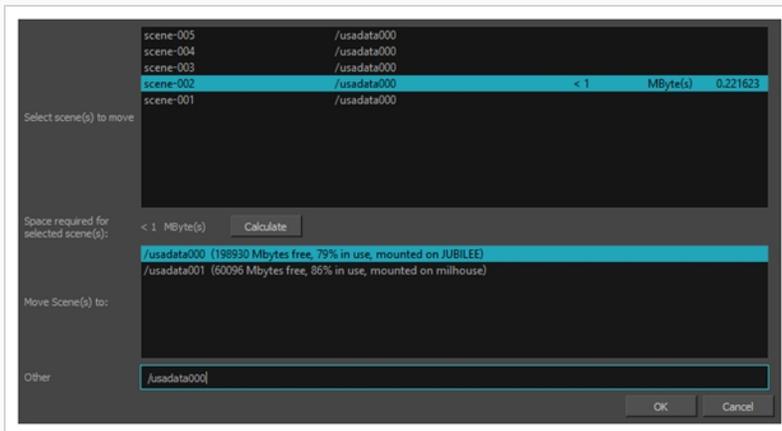
Before you move a scene's data:

- Make sure no one else is currently using the scene's data. Failure to do this may result in file corruption and loss of your work.
- Wait until everyone is offline. This ensures no one can open the data files while you move them.

How to move a scene from one directory to another directory

1. In the Scenes section, select the scenes you want to move.
2. Do one of the following:
 - From the top menu, select **Scene > Move**.
 - Right-click anywhere in the Scenes list and select **Move**.

The Move Scene dialog box appears.



3. In the Select Scene(s) to Move field, select the scenes you want to move from their current directory.
4. Click **Calculate** to know how much hard disk space your selection requires.
5. In the Move Scenes To list, select the directory where you want to move the scene. If it does not appear in the list, enter the directory path in the Other field.

The Control Center node automatically checks the amount of free space for each directory and compares it to the size of the scene you want to move.

If there is not enough disk space on a particular drive/mount point to store the scene, the directory displays a not "enough space message". Choose another disk from the list.

6. Click **OK**.

Renaming Scenes in Control Center

As you work on your scenes, their nature and contents may change and the name you gave the scene when you began the project may no longer reflect its contents. In this case, you can rename the scene to more accurately reflect its contents.

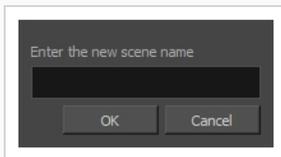
Before you rename a scene:

- Make sure no one else is currently using the scene.
Failure to do this may result in file corruption and loss of your work.
- Wait until everyone is offline. This ensures no one can open the scene while you rename it.

How to rename a scene

1. In the Scenes section, select the scene to rename.
2. Do one of the following:
 - From the top menu, select **Scene > Rename**.
 - Right-click anywhere in the Scenes list and select **Rename**.

The Rename Scene dialog box appears.



3. In the Enter New Scene Name field, type the new name for the scene and click **OK**. Try to keep scene names brief. It is recommended that you use no more than 23 characters.



NOTE

Use lower case letters if these scenes may be used with a Windows workstation.



NOTE

By default, when creating a new scene or renaming a scene, the scene's name cannot exceed 23 characters. If Unicode is enabled, the scene's name can not exceed 119 characters.

Changing Scene Priorities in Control Center

You can change the scene's priority level in the processing queue. Increasing a scene's priority lets the system process it before other scenes in the processing queue.

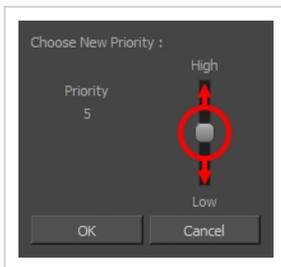
Use the Choose New Priority dialog box to change a scene's rendering and vectorization queue priority. The priority is set using a sliding scale where 0 is the highest priority and 10 is the lowest. If a scene has already been sent to the queue changing the priority at this point will not affect its priority in the queue. Changes will only be applied next time it is sent to the queue. To change a scene's priority after it's been sent to the queue, use the Change Priority button in the Queue window.

For example, If scene B comes before scene A in the queue, you can change the scene's priority so that scene A will be processed first.

How to change a scene's priority

1. Select the environment, the job and the scene you want to prioritize.
2. Do one of the following:
 - From the top menu, select **Scene > Change Priority**.
 - Right-click anywhere in the Scenes list and select **Change Priority**.

The Choose New Priority dialog box appears.



3. Drag the slider to adjust the priority. 0 = the highest priority for processing through the Vectorize or Render queue and 10 = a priority of 10 is the least important. Items with higher priorities pass in front of other projects with lower priorities in the Vectorize and Render queues even if there is already a queue processing.
4. Click **OK**.

The new scene priority appears in the Scenes list in the Priority column.

Changing Scene Stages in Control Center

The Change Status command allows you to change the approval stage name of a selected scene that is in Manual approval mode. You can also create customized approval stages that reflect the approval process in your production environment.

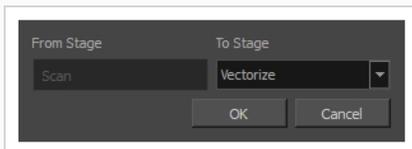
A scene's status is a method of tracking its progress in your production; the scene's current status does not stop you from advancing the scene to other stages.

Changing a scene's status and making manual approvals allows you to assign and change a scene's approval stages to keep track of its current status. For example, if you have a scene whose drawings are being scanned, you will mark it as the Scan stage. After you begin adding colour to these line drawings, you can change the scene's stage to Paint. If the selected scene has an automatic approval policy, the Change Stage command will be inactive in the Scene menu. To change a scene's status, you must ensure that the approval policy is set to Manual.

How to change a scene's status

1. In the Scenes section, select a scene.
2. Do one of the following:
 - From the top menu, select **Scene > Change Status**.
 - Right-click anywhere in the Scenes list and select **Change Status**.

The Change Status dialog box appears.



The current status of the selected scene appears in the From Stage field.

3. Select the status you want to apply to the current scene from the To Stage menu.
4. Click **OK**.

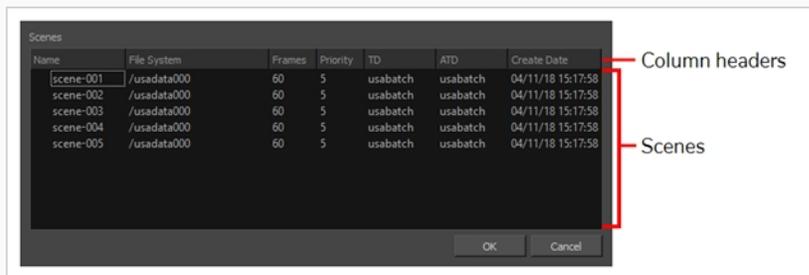
Reordering Scenes in Control Center

You can change the sequence of scenes in your job, which affects the order in which the scenes appear in the job throughout the system. You can place a scene anywhere in the Scenes list or you can sort them alphanumerically.

How to reorder scenes

1. Select the job whose scenes you want to re-sequence from the Jobs panel.
2. Do one of the following:
 - From the top menu, select **Scene > Reorder**.
 - Right-click anywhere in the Scenes list and select **Reorder**.

The Reorder Scenes dialog box appears.



3. Do one of the following:
 - In the column header, click on **Name**, **File System**, **Frames**, **Priority**, **TD**, **ATD** or **Create Date** to automatically sort all the listed scenes in order of value in the selected column. For example, to reorder scenes by name, click on **Name**. To reorder scenes by creation date/time, click on **Create Date**.

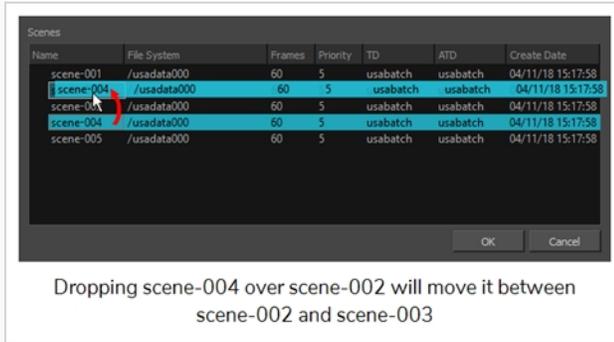


TIP

You can click on a column header twice to sort the scenes in reverse order.

- Click and drag on a scene to move it, then drop it where you want the scene to be listed. The

scene will be moved after the scene over which it was dropped.



Name	File System	Frames	Priority	TD	ATD	Create Date
scene-001	/usadata000	60	5	usabatch	usabatch	04/11/18 15:17:58
scene-004	/usadata000	60	5	usabatch	usabatch	04/11/18 15:17:58
scene-001	/usadata000	60	5	usabatch	usabatch	04/11/18 15:17:58
scene-004	/usadata000	60	5	usabatch	usabatch	04/11/18 15:17:58
scene-005	/usadata000	60	5	usabatch	usabatch	04/11/18 15:17:58

Dropping scene-004 over scene-002 will move it between scene-002 and scene-003

4. Once the scenes are ordered, click **OK**.

Clearing Scenes in Control Center

If you must restart a scene from scratch, you can completely erase a scene's exposure sheet. When you clear a scene, you delete all exposure sheet database information and reset the scene as if it were completely new. You are only deleting the files from the database; Control Center does not actually delete any image files (drawings, scan, final frames). If you have questions concerning the contents of a scene, you should contact the technical director responsible for the scene in question.

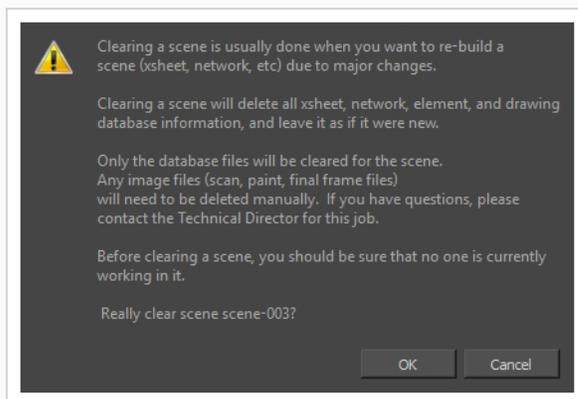
If you must clear a scene from Control Center, make sure no one else is currently using the scene's data. If you clear a scene that someone else is working on at that moment, you run the risk of corrupting the files and losing work.

If you must clear a scene, you should wait until everyone is offline to ensure that no one can open the data files while you clear them from Control Center.

How to clear a scene

1. Select the environment, job or scene you want to clear.
2. Do one of the following:
 - From the top menu, select **Scene > Clear**.
 - Right-click anywhere in the Scenes list and select **Clear**.

A confirmation dialog box appears.



3. Click **OK**.

The Scene list refreshes itself and displays blank elements and drawings lists, showing that the Control Center node has deleted the exposure sheet for the scene you cleared.

Copying Scenes

The copy command lets you copy a scene's content over to another existing scene. You can choose to copy all of a scene's data, or only its exposure sheet.



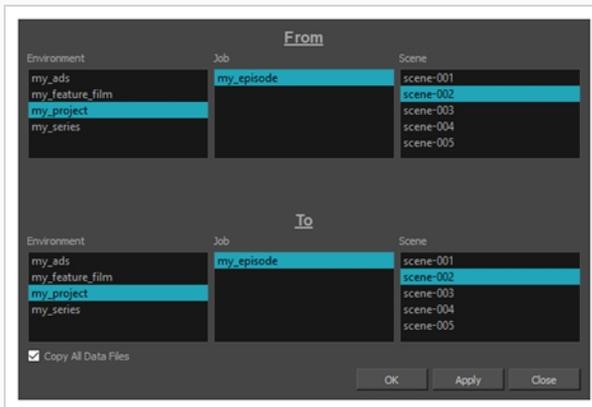
IMPORTANT

This will overwrite the target scene with the content of the source scene.

How to copy an exposure sheet to another scene

1. Select the environment and the job from the Control Center window.
2. Do one of the following:
 - From the top menu, select **Scene > Copy**.
 - Right-click anywhere in the Scenes list and select **Copy**.

The Copy Scene dialog box appears.



3. In the **From** section, select the scene to copy by selecting its environment, its job and then the source scene.
4. In the **To** section, select the scene to overwrite with the selected scene by selecting its environment, its job and then the target scene.
5. If you want to copy all of the source scene's content over the target scene, check the **Copy All Data Files** option. If you only want to copy the source scene's Xsheet over to the target scene, uncheck this option.
6. Click **OK**.
7. If the scene you are copying to already has an exposure sheet, a confirmation dialog box appears to verify that you want to overwrite the target scene's data. If you are only copying the source

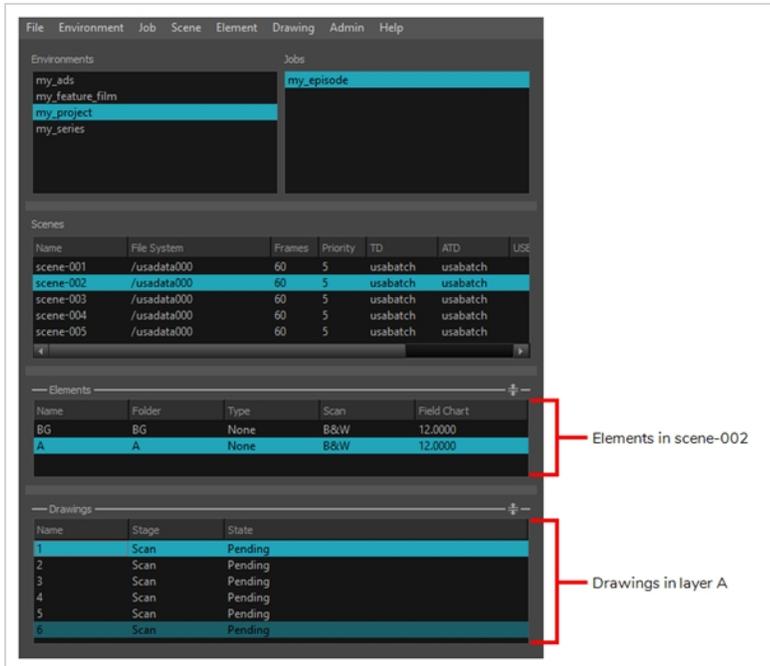
scene's Xsheet, this will only overwrite the target scene's Xsheet. If you are copying all of the source scene's data file, this will overwrite all of the target scene's data files.

- Click **Yes** if you want to copy over the existing scene.
- Click **No** to cancel or to select a different target scene.

The data in the source scene is copied over to the target scene. You can open the target scene in Harmony to verify that it contains the source scene's data.

About Elements and Drawings in Control Center

The Control Center user interface can display the elements in the selected scene. If you select an element in the Elements list, it can also display the drawings in this element. However, if you want to add, remove, rename or edit elements and drawings, you must open the scene in Harmony.



To view the selected scene's elements, click on the Expand/Collapse  button right of the **Elements** panel at the bottom of the Control Center user interface.

To view the selected element's drawings, click on the Expand/Collapse  button right of the **Drawings** panel at the bottom of the Control Center user interface.

Chapter 5: About Scene Import and Export in Control Center

You can export your scene to work offline from a location where the Harmony server is not located. An example would be from the studio to your home. When you return to the studio, you can then import your scene to reintegrate it back into the Harmony environment.

If your scene has shared images, textures (used colour-overrides) and palettes stored at the environment or job level on the Harmony server, these links will be broken when you export your file. You can create presets to point to where these linked files are located. For example, you can store your images, textures and palettes somewhere on your home computer and create a preset to point to where these files are located. Then when you get back to the studio, you can select another preset that points to where the files are located on the Harmony server.

Exporting Scenes from Control Center

You can use Control Center's export utility to migrate scenes from the database. You can either export them to offline, which makes it possible to open and work on the scene in Harmony without being connected to the database. You can also export them as database scene packages for backup, archival or to transport them to another database.

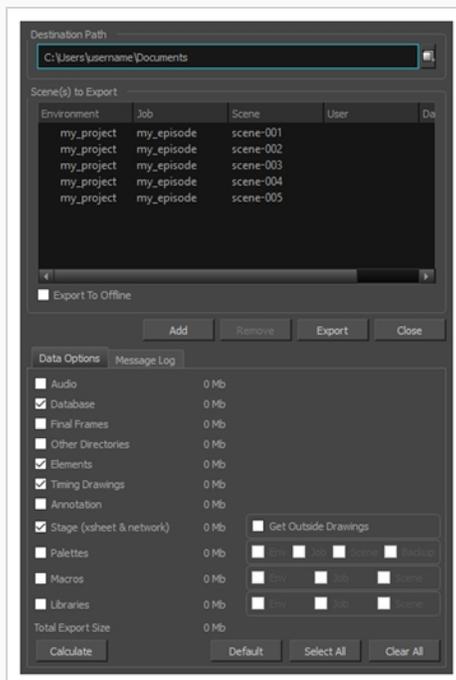
If you export a database scene package, it will include, among the exported files, two additional files:

- **README.txt**: Contains export statistics, such as creation date and user ID.
- **IEContents.dat**: Specifies export parameters. This file allows Control Center to import the scenes back to a database.

How to export data

1. Launch Control Center.
2. From the top menu, select **Admin > Export**.

The Export Scene(s) dialog box appears.



3. Enter the path where you want to export the files. You can also use the **Browse** button to select the path and create a folder. The destination must be an existing empty folder or a new folder that will be created during the export process.
4. Click **Add** to select the scenes that you want to export from the Harmony database. You can select a job to select all the scenes in the job. The scenes you select will appear in the list.

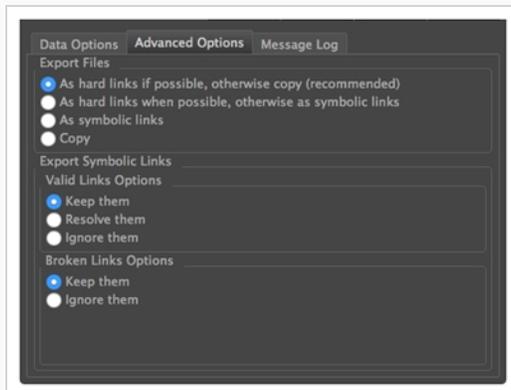
5. Select one or more scenes and click **Remove** to remove scenes from the export list.
6. If you want to export your scenes as *offline* scenes that you can open in Harmony Stand Alone, check the **Export to Offline** option. If this option is not enabled, your scenes will be exported in a database package that can only be imported into a database.
7. In the **Data Options** tab, select what you want to export:

Parameter	Description
Audio	Exports the Audio directory.
Database	<p>Selected by default, this option exports the elements in the scene.</p> <p>If you select this option and deselect the Elements option, you can access the elements from the Element Manager in the Control Center, but their drawing and bitmap files will not be included. The list of available versions in the scene is also exported. It is not possible to open a scene if this is not selected for export.</p>
Final Frames	Exports the directory that contains the final, rendered frames.
Other Directories	Exports all other directories and files in the scene's data structure.
Elements	Selected by default, this option exports the contents (drawing and bitmap files) of the Element directories.
Timing Drawings	Selected by default, this option exports the contents of the Timing directories.
Annotation	Lets you export the different drawings created while drawing in the Annotation columns and imported images.
Stage (xsheet & network)	Selected by default, this option exports the Harmony [Edition] directory, which contains the Harmony [Edition] files for each scene you export. These files are necessary if you want to reuse the exposure sheet (timing) and the

	<p>node structure from the original scene.</p> <p>If this option is selected, you can select the Get Outside Drawings option to copy drawings into the scene folder that is referred to by the Timing columns and their Element (Drawing) nodes.</p>
Palettes	<p>Exports the palette-library directories. Decide if you want to export the palette-library from the environment, job or scene level. When you select a level, the palette-library in lower-level directories will also be exported.</p> <p>Check Backup if you want to export the palette-list file which is necessary for the scene to know which palettes to use. In most cases, you should select this option as well as the Scene option.</p>
Macros	<p>Exports the macros (customized effect and node connections) that were created and stored in the environment, jobs or scenes to be exported. This is necessary if you have legacy scenes with macros.</p>
Libraries	<p>Exports templates created at the selected levels.</p>

8. In the **Advanced Options** tab:

- **Windows:** Due to constraints in the operating system, you do not have any choices on the Advanced Options tab. In GNU/Linux, you can make the following selections.
- **(macOS and GNU/Linux):** Select how you want to package the exported scene. The choices you make here are related to the size of the export package as well as the speed of the export process.



Select one of the following options in the Exporting Files section:

Parameter	Description
As hard links if possible, otherwise copy	<p>Speeds up the export process by making hard links to the original files on the file system. Hard links keep disk space usage to a minimum and ensure a quick export process.</p> <p>If it is not possible to create hard links (because the links cross file systems, for example), the entire contents will be copied to the destination directory, which will be a slower process that will take up more space on your file system.</p>
As hard links when possible, otherwise symbolic links	Ensures a quicker export process. However, if symbolic links are used and the original file is deleted, the symbolic link will be broken.
As symbolic links	Exports the scene using symbolic links to the original scene files (when importing, imports the scene using symbolic links to the export directory). While this process will reduce the size of the export directory, if the original file is deleted, the symbolic link will be broken.
Copy	Copies all scene data to the export location. This produces the largest export package and therefore takes the longest to complete. However, it is the simplest method.

In the Valid Links Options section, select one of the following options:

Parameter	Description
Keep them	Maintains symbolic links.
Resolve them	Removes symbolic links, replacing them with the actual files. When you use this option, the export

	package will contain real files, rather than symbolic links.
Ignore them	Does not include valid symbolic links in the export package.

In the Broken Links Options section, select of the following options:

Parameter	Description
Keep them	Keeps symbolic links to missing files. When the missing files are placed in the path searched by the symbolic link, broken links will be valid again.
Ignore them	Does not include broken symbolic links in the export package.

9. Click **Calculate** to get a preview of the size of your export package.
10. Click **Export**.

The selected files and components are exported. Use the Message Log tab to view messages generated during the export process.

Importing Scenes to Control Center

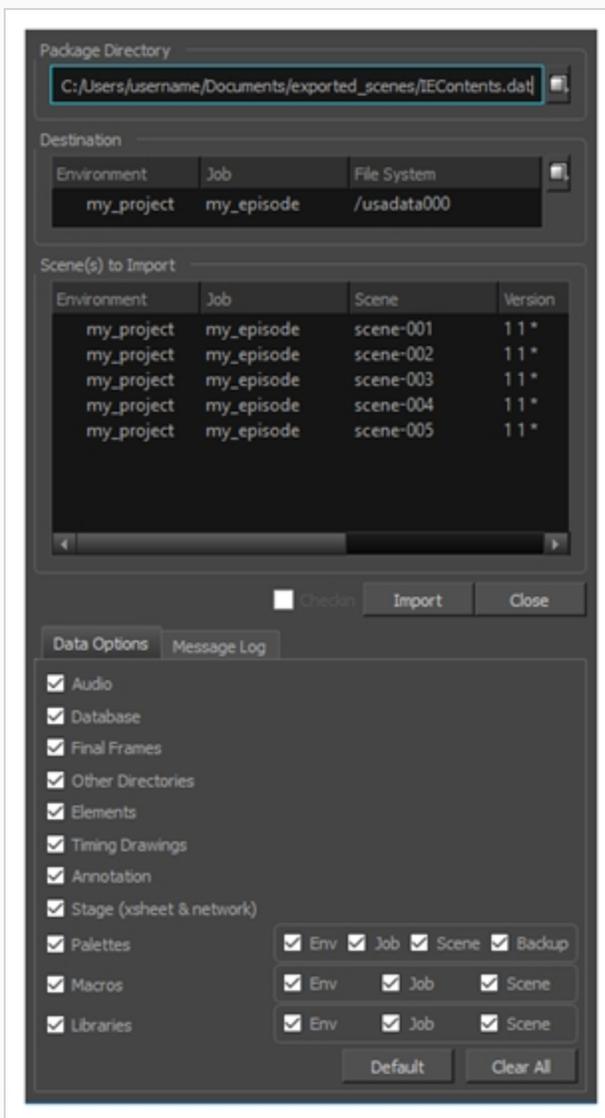
You can use the import utility to integrate scenes into a Harmony environment.

If the imported files are compressed, you must decompress them to a temporary directory before you can import them into Harmony. If you don't know how to decompress these files, see your system administrator.

How to import files into Control Center

1. Launch Control Center.
2. Select **Admin > Import**.

The Import Scene(s) dialog box appears.

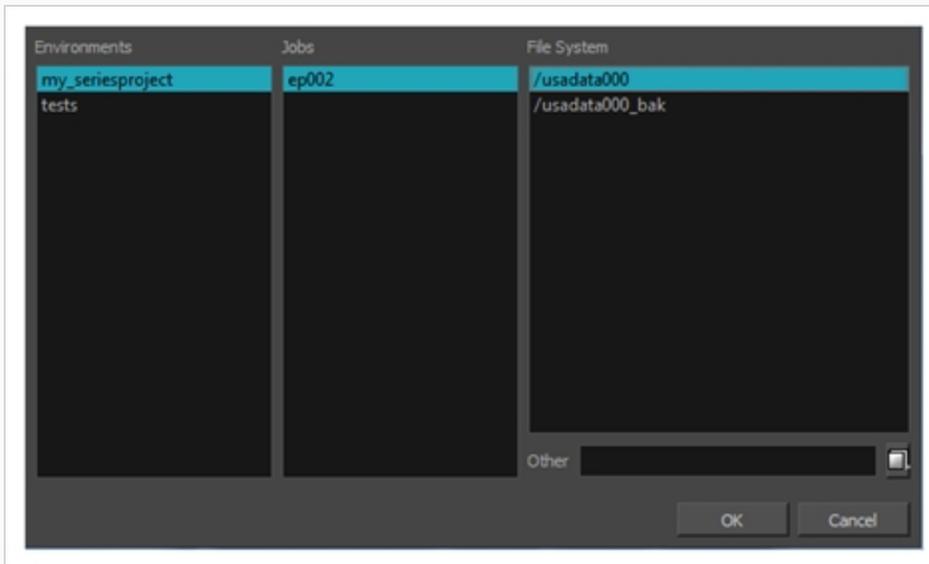


- In the Package Directory section, click on the browse button at the end of the field to search for a Harmony scene to import.

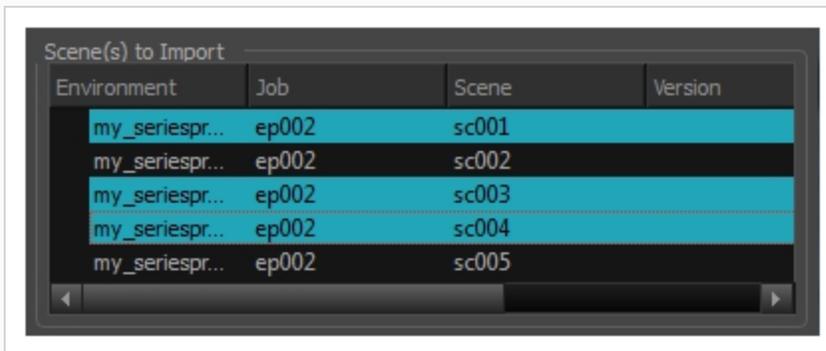


Any supported Harmony file can be imported, including **IEContents.dat** files. The **IEContents.dat** file includes database and scene file information. **IEContents.dat** files are created when you DO NOT check the Export to Offline option in the Export Scene(s) dialog box in Control Center.

- In the Destination section, click the browse button to open the File System Selector window. Select the environment, job and file system for where you want to place the imported scene.



- In the Scene(s) to Import section, select the scenes you would like to import. If no scenes are selected, all the scenes will be imported.



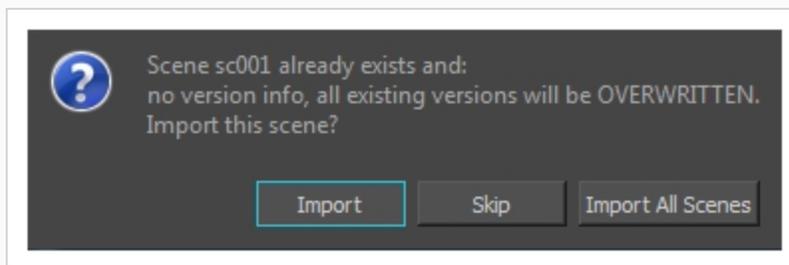
6. In the Data Options tab, customize your import options:

Parameter	Description
Audio	Exports the Audio directory.
Database	<p>Selected by default, this option exports the elements in the scene.</p> <p>If you select this option and deselect the Elements option, you can access the elements from the Element Manager in the Control Center, but their drawing and bitmap files will not be included. The list of available versions in the scene is also exported. It is not possible to open a scene if this is not selected for export.</p>
Final Frames	Exports the directory that contains the final, rendered frames.
Other Directories	Exports all other directories and files in the scene's data structure.
Elements	Selected by default, this option exports the contents (drawing and bitmap files) of the Element directories.
Timing Drawings	Selected by default, this option exports the contents of the Timing directories.
Annotation	Lets you export the different drawings created while drawing in the Annotation columns and imported images.
Stage (xsheet & network)	<p>Selected by default, this option exports the Harmony [Edition] directory, which contains the Harmony [Edition] files for each scene you export. These files are necessary if you want to reuse the exposure sheet (timing) and the node structure from the original scene.</p> <p>If this option is selected, you can select the Get Outside Drawings option to copy drawings into the scene folder that is referred to by the Timing columns and their Element (Drawing) nodes.</p>

Palettes	Exports the palette-library directories. Decide if you want to export the palette-library from the environment, job or scene level. When you select a level, the palette-library in lower-level directories will also be exported. Check Backup if you want to export the palette-list file which is necessary for the scene to know which palettes to use. In most cases, you should select this option as well as the Scene option.
Macros	Exports the macros (customized effect and node connections) that were created and stored in the environment, jobs or scenes to be exported. This is necessary if you have legacy scenes with macros.
Libraries	Exports templates created at the selected levels.

7. Check the Remap Paths for Linked Palettes and Images option if your scene contains palettes, images or textures linked to a an offline location. Then from the drop-down list, select the preset that points to the location on the server where copies of these same files are located—see [About Asset Remapping for Exported and Imported Scenes on page 63](#)
8. Check the Check In option (beside the Import button), if your scene was checked out during export. If your scene was not checked out, this option remains disabled.
9. Click **Import**.

If the scene already exists, the Scene Exists dialog box appears.



Decide if you want to import or skip importing your first selected scene. The Import All Scenes option will import all selected scenes.

10. Use the **Message Log** tab to view messages generated during the import process.

If the name of the scene you are importing in Control Center is too long, you will be prompted with an error message stating that it will be truncated. A scene's name cannot exceed 23 characters.

If you are importing scenes that were exported from the Harmony Network, or worked on in Harmony Stand Alone, the system will try to retrieve the version name.

About Asset Remapping for Exported and Imported Scenes

If your pipeline often involves exporting scenes from a database to *offline* so that you can work on them in Harmony Stand Alone, you might encounter the following issues:

- Exporting each scene you work on with its job and environment palettes uses up a lot of storage space and bandwidth.
- Scenes that use externally sourced palettes, textures or drawings cannot have access to these assets if they get exported from the database and opened on a different machine.

With asset remapping, it is possible to systematically remap the path to assets used by your scenes when exporting and importing them. Remapping allows you to tell Harmony that, when a scene uses palettes, textures or linked images from a specific location, to look for them in a different location instead.

Hence, provided that you organize your workflow so as to have job assets, environment assets and externally sourced assets stored in a specific space on your workstation, you do not need to export these assets with your scenes. You can simply keep them on your workstation and, after exporting a scene from the database, instruct Harmony to source assets from these locations on your computer rather than from their original location on their database.



Likewise, if you re-import an exported scene into the database, you can use remapping to make the scene source those assets from their database location again, instead of the location you remapped them to when you exported the scene. Since remapping assets is permanent, it is required to revert the effect of remapping when you import a scene that was remapped back into the database.

Remapping is done in two steps:

- Configuring the remapping rules. To do this, you will have to create remapping rules in an **.xml** document. Rules specify where to remap assets based on their type and, optionally, their original location.

- Applying the remapping rules. When you open an exported scene in Harmony Stand Alone, if you have remapping rules configured, you will be prompted to apply one of your remapping rule sets to the scene before you start working on it. When importing a scene back into the database, you can apply a remapping rule to it as it is being imported.

Remapping can be done on the following types of assets:

- **Palettes:** Palettes used by the scene, whether in your scene's palette list, an element's palette list or in a Colour-Override effect.
- **Textures:** Textures used by the scene that are external to the scene because they were added using a Colour-Override effect.



NOTE

Textures in palettes are packaged with their palettes, so remapping a palette will also remap its textures. Remapping textures is only necessary when they are used by a Colour-Override effect.

- **Linked drawings:** Drawing layers that use drawings that are not stored in an element in your scene, but from an external location instead.



NOTES

- Remapping tells Harmony where to look for assets, but does not actually copy/move the assets. When you export a scene from a database with the intention of remapping its linked assets, you must make sure to copy the assets from the database onto your machine, and store them where you intend to remap them. Hence, using this feature requires organizing your workflow around it.
- When you export a scene to offline and include the palettes from its own job and its own environment in the export, the palettes from the scene's job and environment are exported in sub-directories of the exported scene and are automatically remapped in the exported scene. Likewise, when importing an offline scene that includes job and environment palettes, they are automatically remapped to their original location. Hence, remapping palettes is not necessary if you source palettes from a scene's own job or environment, but it can allow you to keep your palettes single-sourced when working on offline scenes.

Configuring Palette, Texture and Image Remapping

In order to be able to automatically remap palettes, textures and images after exporting or importing scenes, you must create remapping presets.

A remapping preset determines the path in which to look for palettes, textures and linked drawings in the scene. These presets can be made to remap the path for all palettes, textures or linked drawings in the scene, or to only remap paths that match certain patterns.

You can configure several presets. You will be prompted to apply one (or none) of the configured remapping presets when opening a scene in Harmony Stand Alone and when importing a scene in Control Center.

To support a workflow where you export scenes from a database, work on them offline then reimport them into the database, you should at least have one preset to remap the assets to a path on your computer after you exported a scene, and one to remap them back to their original path in the database after you reimport them.

How to create remapping presets

1. Obtain a copy of the palettes, linked textures and linked drawings used by your scenes and store them in a specific, safe location on your machine. Make note of the location in which you stored each type of asset.
2. In a text editor with administrator privileges, open the `relink.xml` file located in Harmony's `etc` subdirectory:

- On **Windows**:

- a. Open the **Start** menu and, in the **Programs** list, go to **Windows Accessories**.
- b. Right-click on **Notepad** and select **More > Run as administrator**.
- c. In the top menu, select **File > Open**
- d. Browse to and open the following file:

```
C:\Program Files (x86)\Toon Boom Animation\Toon Boom Harmony 15.0  
[Edition]\etc\relink.xml
```

- On **macOS**: In a terminal, type in the following command:

- If you have Harmony Server:

```
$ sudo vi /Applications/Toon Boom Harmony 15.0 [Edition]  
Network/tba/etc/relink.xml
```

- If you have Harmony Stand Alone:

```
$ sudo vi /Applications/Toon Boom Harmony 15.0  
[Edition]/tba/etc/relink.xml
```

- On **GNU/Linux**: In a terminal, type in the following command:

```
$ sudo gedit /usr/local/ToonBoomAnimation/harmony[Edition]_
15.0/etc/relink.xml
```

3. The default **relink.xml** file will look as follows, with instructions in a commented out tag, followed by two sample remapping rules (bolded), also in commented out tags:

```
<?xml version="1.0" encoding="UTF-8"?> <!-- Do not remove this line -->
<relinks> <!-- Do not remove this line -->

  <!-- Configuration file for the definition of path remapping presets for
offline scenes.

  This file is a configuration file for the script : TB_RelinkPaths.js. The
script will look for this
  file in either the <application>/etc folder. If you are running in
database mode, you may also put
  a copy of this file in the environment folder (ie. /USA_
DB/environments/<the_environment_name>/relink.xml) and its
  settings will override the one in <application>/etc/relink.xml.

  The presets let you remap the paths when opening an offline scene that
came from another setup, for example a
  database or another offline site. They can also be used when re-importing
an offline scene into an existing
  database and you want to remap to existing paths.

  In each preset there are paths for palettes, textures and images. They
identify where files outside of
  the scene will be located.
  Palettes can come from palette list files in the scene or the different
elements, or from Colour-Override
  nodes.
  Textures are those referenced in the Individual Colour Overrides of the
Colour-Override node.
  Images are those referenced in the Drawing Name field of timing columns.

  The <relink name="..."> and </relink> tokens must exist to initialize
the preset selection list which appears in
  the remapping dialog.

  "path" elements as written in the example below are expected by the TB_
RelinkPaths.js script which is provided in
  the distribution package.

  All text in "description" elements will be displayed at the bottom of the
remapping dialog when the corresponding
  preset is selected.

  KEYWORDS in XML "relink" elements.
```

```

- type                - either "palette", "textures", "images" -
identify the types of object.
- value               - the remapped folder.
- root                - define a root where the remapping will stop.
Subfolders from this folder will be kept. the 'root' can either be
                        a full absolute path or just a string in the
path.
- allowRemapExisting - if 'true', will allow remapping path for files
even if they exists. The default is to ignore
                        remapping for files that exists.
- allowRemapInScene  - if 'true', will allow remapping path for files
that are within the scene hierarchy.
                        This variable must be set to 'true' if you
want to remap job and environmanet palettes for an offline scene.
- filter              - allow specifying a filter for a regular
expression that must true for the remapping operation to be executed attempted
on the
                        data. The filter must lead to an absolute
path.
                        (ie. %JOB_FOLDER%\.* ).
                        Filter is interpreted as a JavaScript Regular
Expression. Please refer to JavaScript RegExp documentation.

```

KEYWORDS in PATHS

This version introduces new keywords that can be inserted in paths variables : 'root', 'value' and 'filter'.

At runtime, these variables will be replaced by the actual real value of the moment, given the scene, job and environment opened by the end user. There is a set of variable that returns an aboslute folder and a second set that just return the last name.

```

%SCENE_FOLDER% ==> keyword for the current scene folder.
%JOB_FOLDER% ==>  keyword for the current job folder of the scene - for
offline scene, this in same as %SCENE_FOLDER%/jobs/Digital
%ENV_FOLDER% ==> Identify the current environment folder of the scene -
for offline scene, this in same as %SCENE_FOLDER%/environments/Digital
%SCENE% ==> the current scene name.
%JOB% ==> Identify the current job folder of the scene - for offline
scene, this is always 'Digital'
%ENV% ==> Identify the current environment folder of the scene - for
offline scene, this is always 'Digital'

```

Operations are now executed in cascade by the script. So, it is possible to have mutliple remapping entries for a given type, such as 'palette'. Each entry will be executed in order, without memory of what has been changed by the previous entry. (the same file can be remapped multiple times).

```
-->
```

```
<!--
```

Example for a preset named "group1".
 In this example the description elements are used to add the contents of the 3 "path" elements to the remapping dialog.

```
<relink name="group1">
  <description value="Preset for group1" />
  <description value="" />
  <description value="Palettes: /path/to/group1/palettes" />
  <description value="Textures: /path/to/group1/textures" />
  <description value="Images: /path/to/group1/images" />

  <path type="palette" value="/path/to/group1/palettes" />
  <path type="texture" value="/path/to/group1/textures" />
  <path type="image" value="/path/to/group1/images" />
</relink>
-->
```

<!--
 Another example that remaps the palettes stored in the job and in the environment to different folders. The files in the job folder are filtered in by a regular expression (filter), and the one in the environment are filtered using a 'root' keyword which is the absolute path of the environment.
 This works for both database and offline scenes.

```
<relink name="Remap palettes">
  <description value=" Remap the palettes given a set of cascading rules." />
  <path type="palette" filter="%JOB_FOLDER%\\.*"
value="/Users/usabatch/PPP/job-%JOB%" allowRemapExisting="true"
allowRemapInScene="true" />
  <path type="palette" root="%ENV_FOLDER%/palette-library"
value="/Users/usabatch/PPP/env-%ENV%" />
</relink>
-->

</relinks> <!-- Do not remove this line -->
```



NOTE

These samples are inside comment blocks (ie: `<!-- comment -->`), so they are not taken in account. Just as soon as you create one relink rule outside of a comment block, but within the `<relinks>` block, Harmony will take this rule in account and will prompt you to choose if you want to remap assets in a scene whenever you open a scene in Harmony Stand Alone.

4. Copy and paste the first sample (**bolded**) and paste it just below the comments, but before the `</relinks>` closing tag.

```

<!--
  Example for a preset named "group1".
  In this example the description elements are used to add the contents of the
3 "path" elements to the remapping
  dialog.

<relink name="group1">
  <description value="Preset for group1" />
  <description value="" />
  <description value="Palettes: /path/to/group1/palettes" />
  <description value="Textures: /path/to/group1/textures" />
  <description value="Images: /path/to/group1/images" />

  <path type="palette" value="/path/to/group1/palettes" />
  <path type="texture" value="/path/to/group1/textures" />
  <path type="image" value="/path/to/group1/images" />
</relink>
-->

<!--
  Another example that remaps the palettes stored in the job and in the
environment to different folders. The files in the job folder
  are filtered in by a regular expression (filter), and the one in the
environment are filtered using a 'root' keyword which is the absolute path
  of the environment.
  This works for both database and offline scenes.

<relink name="Remap palettes">
  <description value=" Remap the palettes given a set of cascading rules." />
  <path type="palette" filter="%JOB_FOLDER%\/.*"
value="/Users/usabatch/PPP/job-%JOB%" allowRemapExisting="true"
allowRemapInScene="true" />
  <path type="palette" root="%ENV_FOLDER%/palette-library"
value="/Users/usabatch/PPP/env-%ENV%" />
</relink>
-->

<relink name="group1">
<description value="Preset for group1" />
<description value="" />
<description value="Palettes: /path/to/group1/palettes" />
<description value="Textures: /path/to/group1/textures" />
<description value="Images: /path/to/group1/images" />

<path type="palette" value="/path/to/group1/palettes" />
<path type="texture" value="/path/to/group1/textures" />
<path type="image" value="/path/to/group1/images" />
</relink>

</relinks> <!-- Do not remove this line -->

```

5. Change using the **name** attribute of the **<relink>** tag, change the name of the relink rule from

group1 to something relevant. For example, if you're creating the rule to apply when you open a scene that was just exported from the database, you could name it "**Remap exported scenes (Offline)**"

```
<relink name="Remap exported scenes (Offline)">
  <description value="Preset for group1" />
  <description value="" />
  <description value="Palettes: /path/to/group1/palettes" />
  <description value="Textures: /path/to/group1/textures" />
  <description value="Images: /path/to/group1/images" />

  <path type="palette" value="/path/to/group1/palettes" />
  <path type="texture" value="/path/to/group1/textures" />
  <path type="image" value="/
path/to/group1/images" />
</relink>
```

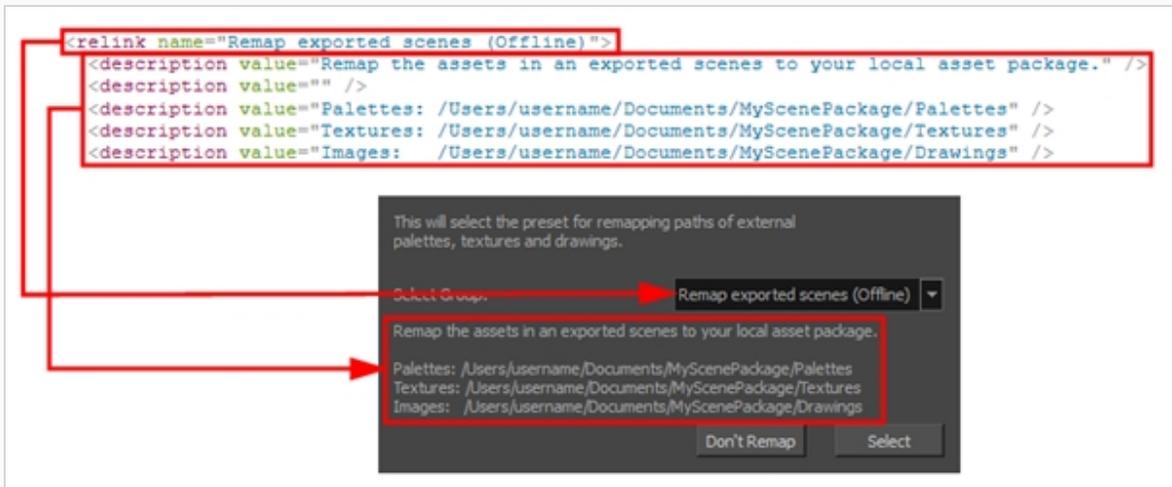
- Using the `<description>` tags, change the description of the rule to something relevant.

In the sample, the description states the path where the rule remaps each kind of asset. Hence, if you're making a rule to remap assets from a database location to your local copy of the assets, and you stored your copy in the directory `/Users/username/Documents/MyScenePackage` in sub-folders named **Palettes**, **Textures** and **Drawings**, you could set the description to this:

```
<relink name="Remap exported scenes (Offline)">
  <description value="Remap the assets in an exported scenes to your local
asset package." />
  <description value="" />
  <description value="Palettes:
/Users/username/Documents/MyScenePackage/Palettes" />
  <description value="Textures:
/Users/username/Documents/MyScenePackage/Textures" />
  <description value="Images:
/Users/username/Documents/MyScenePackage/Drawings" />

  <path type="palette" value="/path/to/group1/palettes" />
  <path type="texture" value="/path/to/group1/textures" />
  <path type="image" value="/path/to/group1/images" />
</relink>
```

Specifying the locations in which the rule remaps the asset in the description is not necessary, but it can be very useful. A rule's description appears in the remapping prompt when a scene is opened, so it will remind the project contributor where they are supposed to copy the scene's assets each time they open the scene.



Each description tag makes a line in the description field in the remapping prompt. A rule can have one, several or even no description tag. Therefore, adding a description to a rule is entirely optional.

- In the `<path>` tags, change the value of the `value` attribute to the full path where your copy of the assets are going to be located. If you're making a rule to remap assets from a database location to your local copy of the assets, and you store your copy in the directory `/Users/username/Documents/MyScenePackage` in sub-folders named **Palettes**, **Textures** and **Drawings**, you could set the rules like so:

```

<relink name="Remap exported scenes (Offline)">
  <description value="Remap the assets in an exported scenes to your local
asset package." />
  <description value="" />
  <description value="Palettes:
/Users/username/Documents/MyScenePackage/Palettes" />
  <description value="Textures:
/Users/username/Documents/MyScenePackage/Textures" />
  <description value="Images:
/Users/username/Documents/MyScenePackage/Drawings" />

  <path type="palette"
value="/Users/username/Documents/MyScenePackage/Palettes" />
  <path type="texture"
value="/Users/username/Documents/MyScenePackage/Textures" />
  <path type="image"
value="/Users/username/Documents/MyScenePackage/Drawings" />
</relink>

```

When writing remapping rules, you must take in account the following technicalities for paths:

- The paths should use UNIX-style forward slashes (/) as separators.
- The path should **not** end with a slash.

- The path should typically begin with a forward slash. However, if you are on Windows and are making a rule to remap assets to a local directory, you can specify the drive letter followed by a colon before the first forward slash, like so:

C:/Users/username/Documents/MyScenePackage/Palettes

This is optional. If you start the path with a forward-slash, instead, Harmony will presume the asset is located on the drive on which it is installed. For example, if Harmony installed on drive **C:**, the following path will translate to the same location:

/Users/username/Documents/MyScenePackage/Palettes

If you are working in a multi-platform environment, it is recommended to avoid specifying drive letters if possible, for portability.

- If you are working on a rule to remap assets to a database location, do not specify a drive letter, even on Windows. If you open a scene with paths containing a drive letter on a non-Windows client, the client might not be able to locate the file. For example, to remap palettes to a palette library for a specific environment, the path should be written like so:

/USA_DB/environments/<environment name>/palette-library

- The path should not specify a file name. The remapping will be applied to the directory path of each asset, but not to their file names.

The path specified in a remap rule can be a literal path, but can also make use of the following variables:

Variable	Description
%SCENE_FOLDER%	The full path to the scene folder.
%JOB_FOLDER%	The full path to the job folder. In database mode, this points to /USA_DB/jobs/<job name> . For an exported offline scene, this points to ./jobs/Digital from inside the scene folder, as this is where a job's palettes and templates are stored when exporting a scene offline with its job assets.
%ENV_FOLDER%	The full path to the environment folder. In database mode, this points to /USA_DB/environments/<environment name> . For an exported offline scene, this points to ./environments/Digital

Variable	Description
	from inside the scene folder, as this is where an environment's palettes and templates are exported when exporting a scene offline with its environment assets.
%SCENE%	The name of the scene.
%JOB%	The name of the job folder of the scene. When working on an offline (exported) scene, the value of this variable is always Digital .
%ENVIRONMENT%	The name of the environment folder of the scene. When working on an offline (exported) scene, the value of this variable is always Digital .

8. As needed, add options to each `<path>` by adding its name followed by an equal sign and its value between quotes (ie: `option="value"`), separated by spaces, within the opening and closing brackets of the path tag, like so:

```
<path type="palette" value="/path/to/group1/palettes" option="value"
otherOption="value" />
```

Here are the attributes available for the `<path>` tag:

Attribute	Value	Description
type	palette, texture or image	The type of asset to remap with this rule. By default, the path to all assets of the specified type will be remapped to the path specified in the value attribute. <ul style="list-style-type: none"> • palette: Remaps the path to palettes used in the scene, whether in the scene's palette list, an element's palette list or a Colour-Override effect. • texture: Remaps the path to texture files in Colour-Override effects.

Attribute	Value	Description
		<div data-bbox="841 310 1403 510" style="border: 1px solid green; padding: 5px;">  <p>NOTE Since textures in palettes are packaged with their palette, they do not need to be remapped.</p> </div> <ul style="list-style-type: none"> • image: Remaps the path to drawings in linked drawing layers, also known as <i>timing</i> layers.
value	A directory path.	The path to the directory to remap assets to.
root	A directory path.	<p>The path to the root of the assets to apply this rule to. This has two effects:</p> <ul style="list-style-type: none"> • The path of an asset will only be remapped to the specified path if its original path begins with the path specified in root. • If an asset is in a sub-directory of the root directory, it will be remapped to the same sub-directory of the target directory, preserving the folder structure inside the root directory. <p>The root attribute can use the same variables available for the value attribute.</p> <p>For example, if you want to remap everything inside the environment directory to a location on your hard drive, but want to preserve the folder structure of the environment directory, you would set root to this value:</p> <pre>root="%ENV_FOLDER%"</pre> <p>With this parameter, let's say a palette is located in the palette-library sub-directory of your environment, and your remapping rules remaps palettes to <code>/Users/username/Documents/MyEnvironment</code>, the palette will actually be remapped to <code>/Users/username/Documents/MyEnvironment/palette-library</code>, which allows you to store the environment</p>

Attribute	Value	Description
		<p>palettes in your local directory all the while preserving its original folder structure..</p> <p>If no root is specified, assets that get remapped by this rule will always be remapped to the exact path specified in value and not to any of its subfolders.</p>
allowRemapExisting	true or false	<p>By default, assets are not remapped to the specified location if they can be found in their original location. Set this attribute to true to remap the paths to assets even if the assets can be found in their original location.</p> <p>If not specified, this option is disabled.</p>
allowRemapInScene	true or false	<p>By default, only assets sourced from outside of the scene's directory get remapped. Set this attribute to true to subject all assets in the scene to the remapping rule, even if they're inside the scene directory.</p> <p>If not specified, this option is disabled.</p>
filter	A regular expression	<p>A regex filter to check against the original path of the asset. If the full, original directory path for the asset matches the filter, it will be remapped. Otherwise, it will be sourced from its original path.</p> <p>This is useful if you only want the current rule to remap assets that are sourced from specific locations to its target location.</p> <p>The filter attribute can use the same variables available for the value attribute.</p> <p>For example, the following filter will make it so the rule is only applied to asset that are inside the job's directory or in one of its subdirectories:</p> <pre>filter="%JOB_FOLDER%\/*"</pre> <p>%JOB_FOLDER% points to the job's directory, \/* matches a forward slash and .* matches against any string of character after the forward slash.</p> <p>The filter must match against the whole path. Therefore, if</p>

Attribute	Value	Description
		<p>you only want your filter to match against a part of the path, you must surround it with <code>. *</code> wildcards, like so:</p> <p style="text-align: center;">filter=".*keyword.*"</p> <p>Since forward slashes <code>/</code> are special characters in regular expressions, they must be escaped with a backslash <code>\</code> when used as folder separators in a filter, like so <code>:\.</code></p> <div style="border: 1px solid green; padding: 10px; margin-top: 10px;"> <p> NOTE</p> <p>The filters are interpreted using the JavaScript implementation of regular expressions. For more information, refer to the <i>JavaScript RegExp Reference</i> at the following address:</p> <p style="text-align: center;">https://www.w3schools.com/jsref/jsref_obj_regexp.asp</p> </div>

9. If necessary, you can add several `<path>` tags for the same type of asset, each with a different filter or root, so as to determine different paths to remap palettes, textures and drawings to depending on their original location.

For example, after exporting a scene from the database, you would typically want to remap its environment palettes to a different location than where you would remap its job palettes. Otherwise, they will end up in the same directory on your computer, and it will be impossible to determine which one to remap back to the environment directory or to the job directory when importing the scene back to the database. Hence, you need to set one path for the job palettes and one for the environment palettes. Here is an example of how to do this:

```

<path type="palette" root="%ENV_FOLDER%/palette-library"
path="/Users/username/Documents/MyEnvironment/palette-library" />
<path type="palette" root="%JOB_FOLDER%/palette-library"
path="/Users/username/Documents/MyJob/palette-library" />
```

When remapping a scene, each `<path>` tag in the relink rules is executed one after the other, from top to bottom. If two or more `<path>` tags are meant to remap the same assets, then the asset will be remapped multiple times.

10. Remapping makes permanent changes to the paths of assets in your scene. Hence, you will most likely have to create at least one other remapping rule that does the reverse of the rule you just created. For example, if you export a scene and remap its assets to a location on your machine, you will have to remap its assets to their original location on the database when you import it back to

the database, or else the assets will be missing when opening the imported scene from the database. Repeat the previous steps until you have all the filters required for the needs of your workflow.

Remapping Palettes, Textures and Images for an Exported Scene

If you configured remapping presets, you will be prompted to remap assets whenever you open an offline scene, giving you the opportunity to remap assets after having exported a scene.

How to use remapping presets after exporting a scene

1. Export your scene from the database as an offline scene—see [Exporting Scenes from Control Center on page 53](#).
2. Launch Harmony.
3. In the log-in screen, select **Work Offline** and click on the **OK** button.
4. In the Welcome screen, click on the **Open** button.

An Open dialog appears.

5. Browse to the directory where you exported your scene, then to the sub-folder inside it, which is named after the scene's job, then to the sub-folder inside it, named after the scene.
6. Select the **.xstage** file in the scene, then click on **Open**.

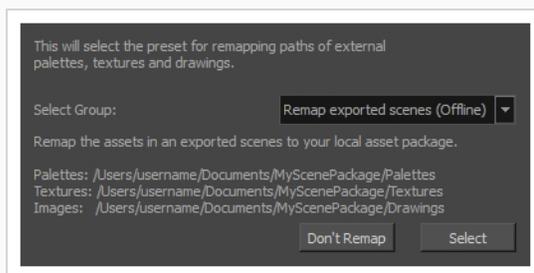


NOTE

If there are several **.xstage** files, select the one with the name of the scene version you want to open in the name. Each **.xstage** file is named after the name of the scene, followed by the scene version and the **.xstage** extension, like so:

sceneName.versionName.xstage.

The Choose the Remapping Group dialog appears.



7. In the **Select Group** drop-down, select the remapping presets group that you want to apply to the scene.
8. Click on **Select**.

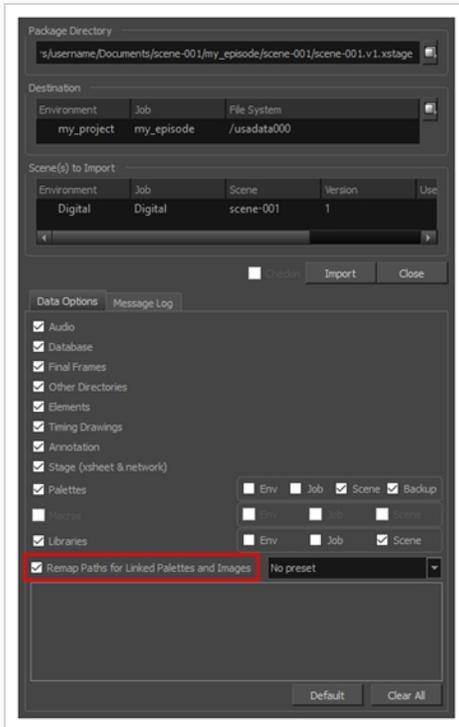
The scene will open in Harmony. All of the rules in the selected remapping rules are already applied to the corresponding assets.

Remapping Palettes, Textures and Images when Importing a Scene

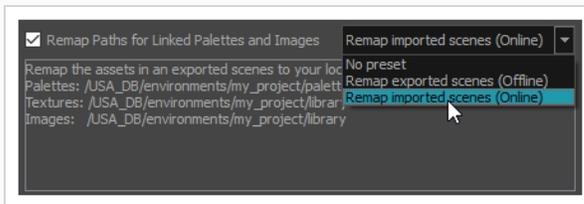
If you configured remapping presets, you can apply one to a scene when importing it Control Center.

Delete this text and replace it with your own content.

1. Launch Control Center.
2. In the top menu, select **Admin > Import**.
3. Right of the **Package Directory** field, click on the Browse  button.
An Open dialog appears.
4. Browse to and select the **.xstage** file for the scene you want to import.
5. Click on **Open**.
6. Right of the **Destination** field, click on the Browse  button.
A File System Selector dialog appears.
7. Select the **Environments**, **Jobs** and **File System** lists, select the environment, the job and the file system to which you want to import the scene.
8. Click on **OK**.
9. In the **Data Options** section, select the types of data you want to import with the scene into the database—see [Importing Scenes to Control Center on page 58](#).
10. Check the **Remap Paths for Linked Palettes and Images** option.



- In the drop-down right of the **Check the Remap Paths for Linked Palettes and Images** checkbox, select the remapping rules group that you want to apply to the scene.



- Click on **Import**.

The selected group of remapping rules is applied to the scene after it is imported. You can open the scene in Harmony to verify that all the assets are mapped to the right paths.

Remapping Palettes, Textures and Images in a Scene on Demand

Harmony will only prompt you to remap assets in a scene when opening the scene in Harmony Stand Alone or when importing it in Control Center. You can however use this feature at any time, for example if you need to remap assets while working on a scene because you forgot to do it when prompted to, or if you have a scene with broken links and have made a remapping rule that can fix it.

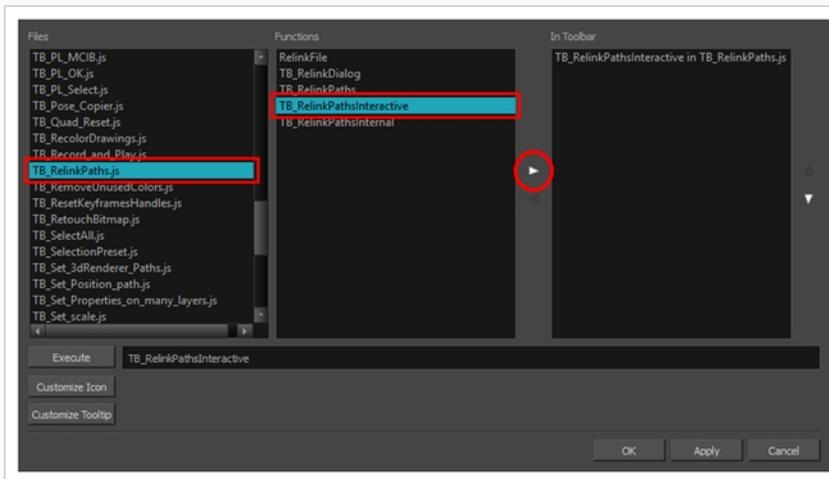
The remapping dialog is a script package with Harmony. Hence, you can invoke it by adding a button for it in the Scripting toolbar.

How to remap scene assets on the currently open scene

1. Add the Scripting toolbar to your workspace by doing one of the following:
 - In the top menu, select **Windows > Toolbars > Scripting**.
 - Right-click on any existing toolbar and select **Scripting**.



2. In the Scripting toolbar, click on the Manage Script  button.
The Script Manager dialog appears.
3. In the **Files** list, select **TB_RelinkPaths.js**.
4. In the **Functions** list, select **TB_RelinkPathsInteractive**.
5. Click on the Add script to toolbar  button.

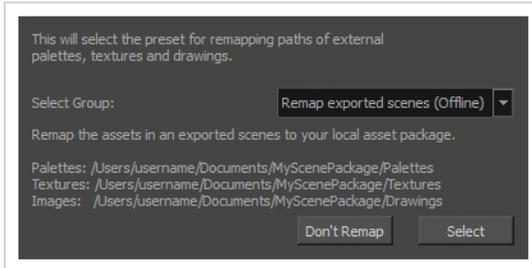


6. Click on the **OK** button.
7. A button  for the Remap dialog is added to the Scripting toolbar.



8. Click on the Remap dialog  button.

The Choose the Remapping Group dialog appears.



9. In the **Select Group** drop-down, select the remapping rules group that you want to apply to your scene.
10. Click on **Select**.

The paths to the assets in your scene are remapped according to the selected rule set.

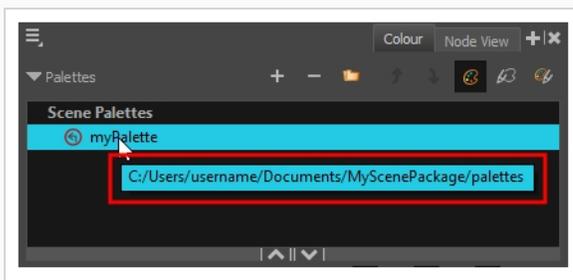
Checking the Path of Palettes, Textures and Linked Drawings After Remapping

If you are having issues remapping or if you want to make sure that it work as expected, there are ways to verify the path from which palettes, linked textures and linked drawings are sourced from within Harmony.

How to check the path of a palette

1. Select any layer in the scene. If you want to check the path of a palette in an element's palette list, select that specific layer.
2. In the **Colour** view, move the mouse cursor over the palette for which you want to check the path and wait for a second.

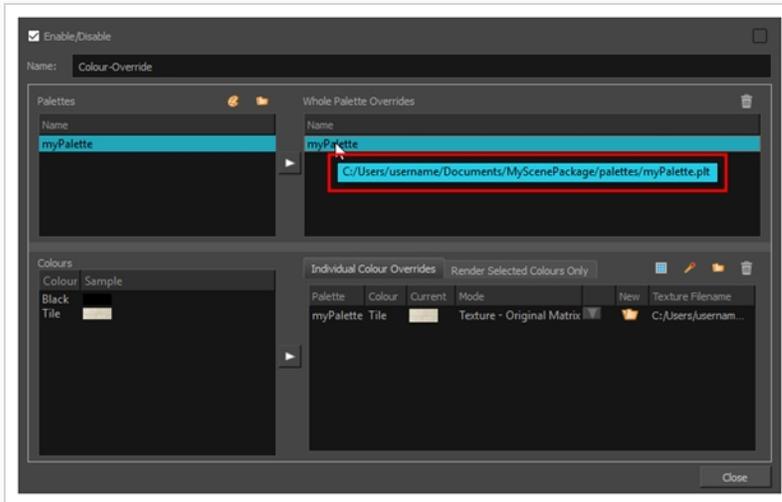
The path to the palette will display in a tool tip.



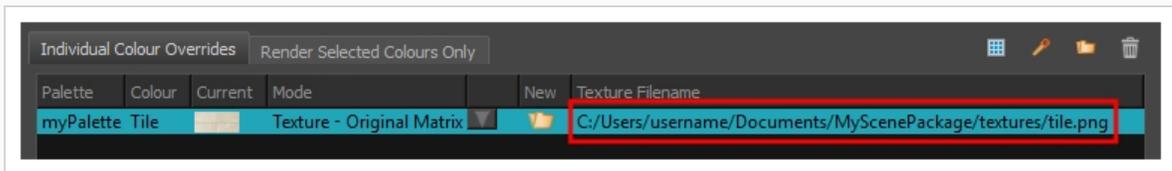
How to check the path of palettes and textures in a Colour-Override effect.

1. Do one of the following:
 - In the Node View, locate the Colour-Override node and click on its  Layer Properties icon.
 - In the Timeline view, right-click on the Colour-Override layer and select Layer Properties.
2. In the Whole Palette Overrides list, move the mouse cursor over the palette for which you want to check the path and wait for a second.

The path to the palette will display in a tool tip.

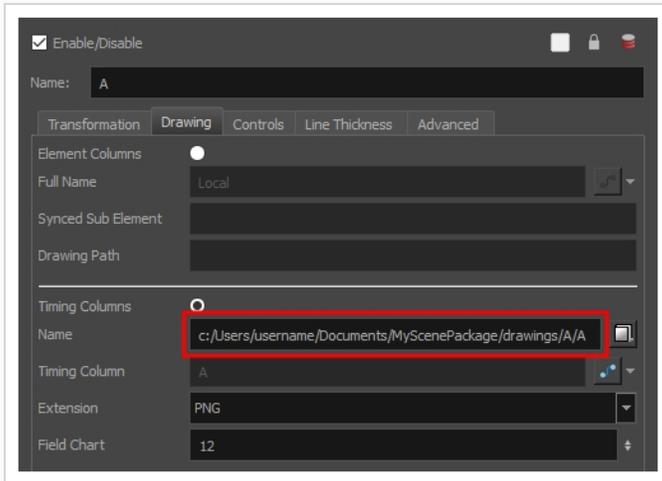


3. In the **Individual Colour Overrides** list, you can see the path to each linked texture in the **Texture Filename** column.



How to check the path of linked drawings

1. Do one of the following:
 - In the Node View, locate the drawing node and click on its **Layer Properties** icon.
 - In the Timeline view, right-click on the drawing layer and select Layer Properties.
2. Open the **Drawing** tab.
3. In the **Timing Columns** section, check the path in the **Name** field.



About Locked and Checked Out Scenes

When working with Harmony Server, all scenes and their data are stored directly on the database; no data is saved or stored on the client machine. The client machines access the database and load the scenes and drawings directly from the server. Each time the user saves a scene, the data is updated directly on the server. There are no upload or download operations done between the server and the clients. However, when working with the WebCC, users must download and upload scenes to the Harmony database.

Harmony has a lock system, referred to as *global lock*, for the different scenes and scene assets. Since all data on the server can be accessed directly and modified from any client machine, by default, scenes are locked and users must get the rights to modify them in order to save their work onto the server. Only one user at a time can modify a scene. Once a scene is opened on a client machine, other users can open the scene in read-only mode if they need to consult it, but they will not be able to save any modifications.

In the WebCC, when a scene is downloaded locally by a user, global locking does not apply as it will be modified in Harmony Stand Alone. To ensure that scenes are not simultaneously modified and causing conflicts, scenes downloaded through the WebCC can be checked out by a user. When scenes are checked out, they can be opened in read-only mode in Harmony Server.

Global lock has several levels:

A Harmony project can be locked at various levels. Its timing, drawings, version and palettes can be locked. Locking means that you have the rights to modify a scene or its assets. Other users cannot modify locked items. If someone tries to open a locked scene, it will be displayed as read-only.

Here are the different lock possibilities:

Lock	Description
Scene or Version Lock	Controls the Xsheet timing, layers, nodes but not the drawing, palettes, palette-lists or templates.
Drawing Lock	Only one user can edit and save a locked drawing.
Palette Lock	Only one user can edit and save a locked palette.
Palette-list Lock	Only one user can edit and save a locked palette-list.
Library Folder lock	Only one user can edit and save into that folder in the Library.

There are several different ways to obtain the rights to modify the scenes. It can be done when the user loads a scene from Harmony, inside the application once the scene is loaded, or when an environment, job or scene is created using the Control Center module.

Chapter 5: Setting the Resolution File for Control Center

When you create a new environment or job, you can create a project resolution list that will appear in Harmony Advanced or Harmony Premium. If you work with a particular resolution, you can insert it in your list so it's available when doing the compositing in Harmony.

You need to copy the **resolution.conf** file at the server, environment or job level. If you insert the file at the environment level, it is not necessary to add one at the job level. All jobs in the environment will use the resolution.conf file at the environment level. If you want all environments to use the same resolution.conf file, place the copy at the server level in the USA_DB folder.

Starting with Harmony Server 11.1, the resolution list is stored in an XML file. The resolution.conf file is still used and it is still the file that you will copy from the **samples** folder. If you modify the resolution list in the Scene Settings dialog box, Harmony will convert the file to an XML file.

The **resolution.conf** file is located here:

- Windows: **Program Files > Toon Boom Animation > Harmony 15.0 [Edition] > resources > samples**
- macOS: **Applications > Harmony 15.0 [Edition] > tba > resources > samples**
- GNU/Linux: **/usr/local/ToonBoomAnimation/harmony [Edition]_15.0/resources/samples**



NOTE

For WebCC, there is a WebCC preview resolution for previewing movies and thumbnails. It should be in the **samples** folder. If it is not, be sure to place a copy in the resolution presets.

Insert the **Resolution.conf** file in the following directory:

Resolutions common to all jobs in the environment.	<code>/USA_DB/environments/environment_name/resolution.conf</code>
Resolutions common to all scenes in the job.	<code>/USA_DB/db_jobs/job_name/resolution.conf</code>
Resolutions common to all scenes and environments.	<code>/USA_DB/resolution/resolution.conf</code>

All scenes found under the environment or job have access to the resolutions stored in that file.

You can simply type new resolutions, modify or delete existing ones from the list. This file can also be sent to other studios with whom you are working.

```

#
# resolution.conf
#
# This files defines the resolution available to the program.
#
# There is a copy of this file in /usa/etc for Harmony/Opus or in
# the <Application Folder>/etc for Solo/Storyboard
#
# You may copy this file in /USA_DB/jobs/your_jobs for job's specific resolutions
# or in /USA_DB/environments/your_environment for environment wide resolutions
# and modify it to add any resolution you need to use in many or all of your
# scenes.
#
#
# syntax:
# resolution <name> <x> <y> [custom] [fps <fps>] [<fov>]
#
# The "custom" keyword means that this resolution was created by a user.
# The "fps" keyword can be followed by an integer to specify the number of
# frames per second.
# <fov> can be an angle in degrees, "V" to signify vertical fitting, or "H" to
# signify horizontal fitting. If unspecified, horizontal fitting is used.
#

default NTSC
resolution HDTV      1920 1080 fps 24 H
resolution film-1.33 2048 1536 fps 24 H
resolution film-1.66 2048 1234 fps 24
resolution NTSC      720  540 fps 24 V
resolution PAL        768  576 fps 25 V
resolution low        360  270 fps 24 41.112

```

Below is the resolution.xml file created by Harmony.

```

1  <!DOCTYPE resolutions>
2  <!--This file defines the scene resolutions available to the program.-->
3  <!--The default version of this file can be found in "<Application Folder>/etc" -->
4  <!--You may copy this file to /USA_DB/jobs/your_job for job specific resolutions-->
5  <!--or /USA_DB/environments/your_environment for environment wide resolutions.-->
6  <!--You may add any resolution to this file that you frequently use in your scenes.-->
7  <!-->
8  <!--The syntax follows standard xml format, which each tag followed by its value.-->
9  <!--The "custom" keyword means that this resolution was created by a user.-->
10 <!--The "FPS" keyword specifies the number of frames per second.-->
11 <!--The "fovFit" specifies the field of view. It is either vertical, horizontal, or custom, with the latter expressed-->
12 <!--as an angle in degrees that specifies a custom field of view. If unspecified, horizontal fitting is used.-->
13 <!--The "projectionType" is either "perspective" or "orthographic". If unspecified, a perspective projection is used.-->
14 <resolutions>
15   <default name="MyTest"/>
16   <resolution FPS="24" fovFit="horizontal" projectionType="perspective" resX="1920" resY="1080" name="HDTV"/>
17   <resolution FPS="24" fovFit="vertical" projectionType="perspective" resX="1920" resY="1080" name="HDTV_Vertical"/>
18   <resolution FPS="24" fovFit="horizontal" projectionType="perspective" resX="2048" resY="1536" name="film-1.33"/>
19   <resolution FPS="24" fovFit="horizontal" projectionType="perspective" resX="2048" resY="1234" name="film-1.66"/>
20   <resolution FPS="24" fovFit="vertical" projectionType="perspective" resX="2048" resY="1234" name="film-1.66_Vertical"/>
21   <resolution FPS="24" fovFit="vertical" projectionType="perspective" resX="720" resY="540" name="NTSC"/>
22   <resolution FPS="25" fovFit="vertical" projectionType="perspective" resX="768" resY="576" name="PAL"/>
23   <resolution FPS="24" fovFit="custom" customFov="41.112" projectionType="perspective" resX="360" resY="270" name="low"/>
24   <resolution custom="true" FPS="24" fovFit="horizontal" projectionType="perspective" resX="1920" resY="1080" name="MyTest"/>
25 </resolutions>
26

```


Chapter 6: Troubleshooting in Control Center

If you have any problems exporting in Harmony, review the instructions to make sure you have followed them completely. If you continue to have problems, consult the following list to troubleshoot common import and export problems.

Problem: Import or Export Not Successful

If the transfer is not successful, an error dialog box appears to describe the problem. The most common reason for a failed transfer is due to your current network permissions. See your system administrator for help.

If the transfer fails in the middle of the process, the files that were imported or exported may be corrupt or incomplete.

- For a failed import, use Control Center to delete the scene.
- For a failed export, manually delete the incomplete export folder.

If you click the Message Log tab, you can see more detailed descriptions, including error messages.

Chapter 7: Control Center Commands

Command	Action	Access Methods
About Toon Boom Harmony	macOS: Displays product, version, licensing and copyright information.	
Quit	macOS: Closes the Control Center window and ends the current session.	⌘ + Q.

File Commands

The File menu commands let you access the Log file and exit the application on Windows/Linux.

Command	Action	Access Methods
Exit	Windows/Linux: Closes the Control Center window and ends the current session.	Ctrl + Q
View Log	Lets you view errors and warning messages related to your actions during the current Control Center session.	

Environment Commands

The Environment menu commands let you manage the environments and queues.

Command	Action	Access Methods
Create	Opens a Create Environment dialog box, where you can enter a name for a new environment.	Right-click on the Environments list and select Create .
Delete	Lets you delete an environment from the database. You cannot delete an environment unless it is empty; delete all of the environment's scenes and jobs before activating this command.	Right-click on the Environments list and select Delete .
Change Asset	Enables or disables the automatic Global	Right-click on the selected environment in

Lock	Lock on the scenes under the selected Environment.	the Environments list and select Change Asset Lock .
Vectorize Queue	Opens the Vectorize Queue dialog box where you can display the progress and prioritize the drawings that the system is converting to the TVG vector file format.	Right-click on the Environments list and select Vectorize Queue .
Render Queue	Opens the Render Queue dialog box where you can monitor and prioritize the progress of the drawings that the system is rendering.	Right-click on the Environments list and select Render Queue .

Job Commands

The Job menu commands let you manage the jobs and their state.

Command	Action	Access Methods
Create	<p>Opens the Create Job dialog box where you can add a new job to the selected environment.</p> <p>Your job must have a name that is unique to the animation database (for example, you cannot have two jobs with the same name even if they exist in different environments; they are all in the same database).</p>	Right-click on the Environments list and select Create .
Delete	<p>Removes a job from the selected environment. When a job is deleted, its scenes, elements, drawings, palette library, and database information are permanently removed. If you want to archive a job, you should only delete the job after you have used the command to create the archive.</p> <p>Before you activate this command, verify that the selected jobs are not currently in use.</p>	Right-click on the Jobs list and select Delete .
Change Stage	Opens the Change Stage of Jobs dialog box where you can record the current stage of the environment's jobs in the production	Right-click on the Jobs list and select Change Stage .

	process. You can change the job from In Production to Completed , or from Completed back to In Production if you need to perform further work.	
Change Priority	Opens the Choose New Priority dialog box where you can set the priority of the rendering and vectorizing tasks for one or more jobs. The priority is set using a sliding scale where 0 is the highest priority and 10 is the lowest.	Right-click on the Jobs list and select Change Priority .

Scene Commands

The Scene menu commands let you manage the scenes.

Command	Action	Access Methods
Create	<p>Opens the Create Scene dialog box where you can add one or more scenes to the selected job. You can also choose to:</p> <ul style="list-style-type: none"> • Add a scene from another file system and add it to your job. • Choose the position the scene will take within the job. 	Right-click on the Scenes list and select Create .
Copy	Opens the Copy Scene dialog box where you can copy a scene's exposure sheet into another scene. You can select a source and destination scene in which to copy the Xsheet data.	Right-click on the Scenes list and select Copy .
Delete	<p>Removes a scene from the database. Before you activate this command, make sure all users are logged out of Toon Boom Harmony and that no files are currently in use.</p> <p>When a scene is deleted, its exposure sheet, elements, drawings, palette library and database information are permanently removed. If you want to archive a scene, you should only delete the scene after you have used the command to create the archive.</p>	Right-click on the Scenes list and select Delete .

	<p>Before you activate this command, verify that the selected scenes are not currently in use.</p>	
Move	<p>Opens the Move Scene dialog box where you can move one or more scenes and their associated files to a file location of your choice. The Move Scene command allows you to select one or more scenes and calculate the amount of space you will need at the new location to accommodate the moved scene.</p> <p>Before you activate this command, make sure all users are logged out of Toon Boom Harmony and that no files are currently in use.</p>	<p>Right-click on the Scenes list and select Move.</p>
Rename	<p>Opens the Rename Scene dialog box where you can enter a new name for the selected scene. Before you activate this command, verify that no users are using the scene, all users are logged out of Toon Boom Harmony and that no files are currently in use.</p>	<p>Right-click on the Scenes list and select Rename.</p>
Force Unlock	<p>Unlocks a scene was locked in Harmony. Generally, a scene unlocks when it is closed by a user. However, if a computer crashes while a scene is locked and in use, a scene may remained locked even if it is not open.</p> <p>An unlock confirmation message appears detailing the consequences of using this option.</p> <p>If you activated this command for more than one scene, you will be prompted for confirmation to unlock each scene separately.</p>	<p>Right-click on the Scenes list and select Force Unlock.</p>
Force Unlock Version	<p>Unlocks a version of a scene that has been locked by Harmony. Generally, a scene unlocks when it is closed by a user, however if a computer crashes while a scene is locked and in use, a scene may remained locked even if it is not open.</p>	<p>Right-click on the Scenes list and select Force Unlock Version.</p>

	<p>An unlock confirmation message appears detailing the consequences of using this option.</p> <p>If you activated this command for more than one scene, you will be prompted for confirmation to unlock each scene separately.</p>	
Force Checkin	<p>Checks in a scene that was checked out, but not checked back in.</p> <p>Use this command only in extreme cases. Otherwise, two versions of the same scene will be in use, which will cause conflicts.</p>	
Checkin	Checks in a scene that you checked out.	
Checkout	Checks out a scene. If a scene is already checked out, it is available as read-only and you cannot make any changes to it.	
Change Priority	<p>Opens the Choose New Priority dialog box where you can set the priority of the rendering and vectorizing tasks for one or more scenes. The priority is set using a sliding scale where 0 is the highest priority and 10 is the lowest.</p> <p>Activating this command affects all subsequent scenes you create. You can change the priority of a scene already sent to the batch processing queue by using the Change Priority button in the queue.</p>	Right-click on the Scenes list and select Change Priority .
Change Stage	<p>Opens the Change Scene Stage dialog box where you can record the current stage of progress in a scene in an environment or a production.</p> <p>This command is inactive if the scene's approval policy has been set to Manual in the Change Approval Policy dialog box.</p>	Right-click on the Scenes list and select Change Stage .
Reorder	Opens the Reorder Scenes dialog box where you can change the sequence of the scenes in a job.	Right-click on the Scenes list and select Reorder .

Clear	<p>Deletes a scene's exposure sheet. Only exposure sheet files are deleted from the database, not image files.</p> <p>A delete confirmation message appears, detailing the consequences of using this option and requests that you contact your Technical Director if you are unclear about this procedure.</p> <p>Before you activate this command, make sure that all users are logged out of Toon Boom Harmony and that no files are currently in use.</p>	Right-click on the Scenes list and select Clear .
Send to Vectorize	Converts the Send to Vectorize command to convert the selected drawings to the TVG vector file format.	Right-click on the Scenes list and select Send to Vectorize .
Send to Unvectorize	Opens the Send Scenes to Unvectorize dialog box where you can convert a scene's vector drawings into bitmap drawings.	Right-click on the Scenes list and select Send to Unvectorize .
Send to Rendering	Opens the Composite dialog box where you can add one or more scenes to the rendering queue.	Right-click on the Scenes list and select Send to Rendering .

Element Commands

The Element menu commands let you vectorize and unvectorize the elements.

Command	Action	Access Methods
Send to Unvectorize	Opens the Send Elements to Unvectorize dialog box and converts an element's vector drawings into bitmap drawings.	Right-click on the Elements list and select Send to Unvectorize .
Send to Vectorize	Converts the drawings for the selected elements to the TVG vector file format.	Right-click on the Elements list and select Send to Vectorize .

Drawing Commands

The Drawing menu commands let you vectorize and unvectorize the drawings.

Command	Action	Access Methods
Send to Unvectorize	Opens the Send Drawings to Unvectorize dialog box and converts selected vector drawings into bitmap drawings.	Right-click on the Drawings list and select Send to Unvectorize .
Send to Vectorize	Vectorizes the selected drawings.	Right-click on the Drawings list and select Send to Vectorize .

Admin Commands

The Admin menu commands let you import and export scenes, and manage the users and approval policy.

Command	Action	Access Methods
Users	Opens the User List dialog box where you can display all valid Toon Boom Harmony users in the network. You can add, delete, or modify users in this list.	
Change Approval Policy	Opens the Change Approval Policy dialog box where you can select a manual or automatic approval of the production status at each stage of each scene.	
Vectorize Style	Opens the Vectorization Styles dialog where you can select the vectorization style you want to apply to drawings before sending them to the vectorization queue.	
Export	Opens the Export Scenes dialog box where you can transfer copied data from the database to a different directory. You can also export scenes to Stage (offline version) by selecting Export Offline.	
Import	Opens the Import Scenes dialog box where you can transfer copied data from another directory into the database.	
Lock When	No Lock, Scene Lock, Version Lock, Asset	

Command	Action	Access Methods
Opening Scene	Lock options	
Database Lock Manager		
Allow Unicode Names	Lets you use up to 120 ASCII characters for names of environments, jobs and scenes. This means you can use characters for languages, such as Japanese, Chinese, French, Spanish, and others, characters for names in your database setup.	

Help Commands

The Help menu commands let you access the Help files and Control Center About information when using Windows/Linux.

Command	Action	Access Methods
Help	Lets you view the Control Center integrated help system.	F1
Customer Improvement Experience Program	<p>The Customer Experience Improvement Program allows Toon Boom to collect usage information. The data does not contain any personally identifiable information and cannot be used to identify you. The data will consist of a basic hardware description, a project summary and usage information. The information is used only for software improvement purposes, as well as for sharing with third parties for the same reason.</p> <p>This program is enabled by default but is voluntary. If you prefer not to participate, you can opt out when you first launch the software, by using a global preference, or by a command line argument.</p>	
About	Windows/Linux: Displays product, version,	

Command	Action	Access Methods
	licensing and copyright information.	