USER MANUAL FOR
SR-5400C STANDALONE INTEGRATED MEDIA BLOCK™

Version 19.2

October 31st, 2023

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Thank you for purchasing a GDC SR-5400C Standalone Integrated Media Block™ from GDC Technology Limited.

To ensure proper operation and to maximize value of the SR-5400C, please review this User Manual. It will guide you through all the features and benefits of the new SR-5400C Standalone Integrated Media Block™.

COPYRIGHT NOTICE

MANUAL DISCLAIMER

This manual is made with version 19.2 and there might be slight differences depending on the software version the IMB is running. The contents, features and specifications stated in this manual are subject to change without notice due to continuous product development and improvements. In no other event shall GDC Technology Limited be liable for any loss of profit or any other commercial damages, including but not limited to special, consequential, or other damages.

FCC COMPLIANCE STATEMENT

This device installed in a Christie Series 4 projector complies with Part 15, Subpart B of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A - Unintentional Radiators digital device, pursuant to Part 15, Subpart B of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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1 INTRODUCTION

The **SR-5400C Standalone Integrated Media Block™** from GDC is to be used with Christie CineLife+ Series Projector. The SR-5400C is capable of playing DCP content in 4K 3D and up to 4K@96 fps.

1.1 About This Manual

This manual provides instructions on how to use and manage the GDC SR-5400C Standalone Integrated Media Block™. The SR-5400C has a web-based user interface (Web UI). The Web UI functionality can be broken down into five main sections: **Dashboard, Playback, Automation, Content** and **Configuration**. This manual will describe each of these in different sections.

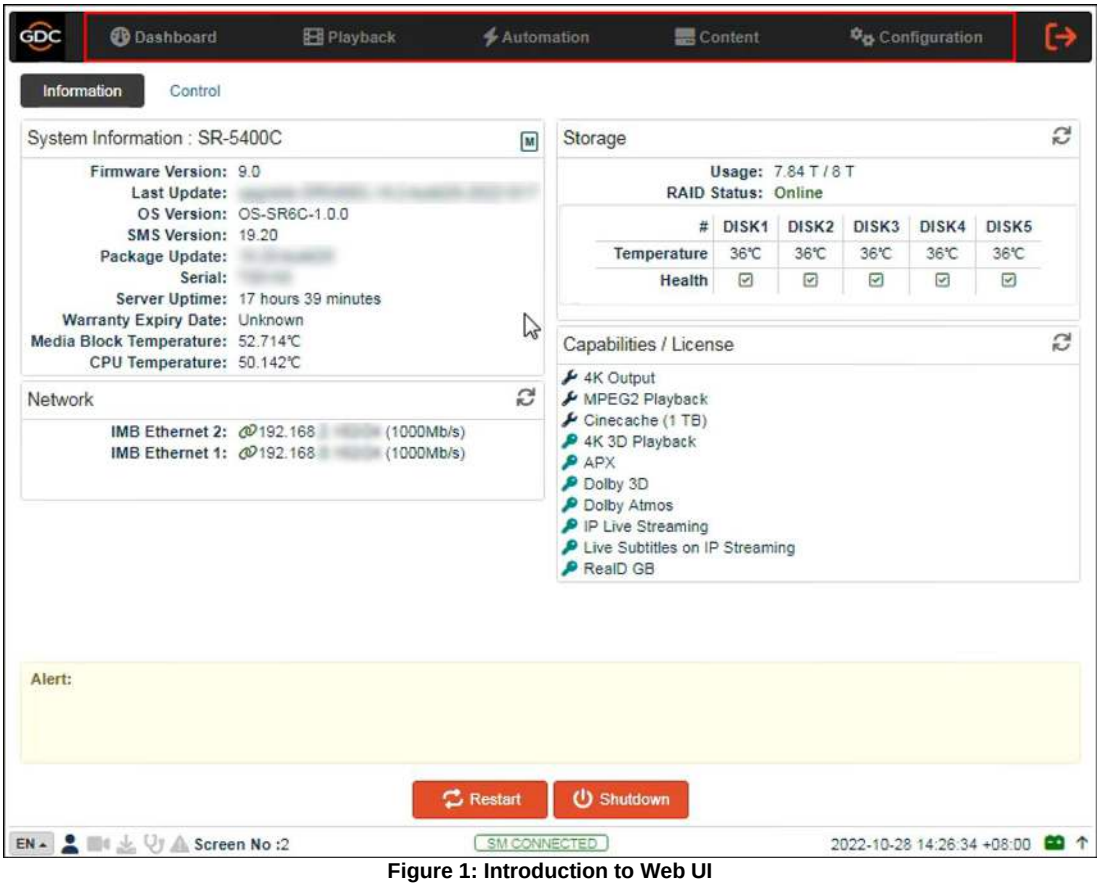


Figure 1: Introduction to Web UI

1.2 Safety Instructions

1.2.1 General Safety Instructions

- The SR-5400C is intended for installation in a Christie DCI-compliant Digital Cinema Projector featuring CineLife+ electronics.
- The operational temperature required should be within 0ºC - 40ºC (32ºF - 104ºF). 250 LFM airflow must always be present over the IMB from right to left (looking from the front of the IMB) when powered on.
- The operating humidity should be within 20% to 90%, non-condensing.
- Before operating the SR-5400C, please read this manual thoroughly and retain it for future reference.
- Installation and preliminary adjustments should be performed by qualified GDC Technology personnel.
- All warnings on the SR-5400C mentioned in this documentation manual should be adhered to.
- All instructions for operating and maintaining the SR-5400C must be followed closely.

1.2.2 Electrical Safety

Safety Warning

- Do not expose the SR-5400C to rain or moisture, to prevent fire or electrical shock hazard.
- Consult GDC Technical Support for servicing or maintaining the SR-5400C.
- You are cautioned that any change or modification not expressly approved in this manual or approved in writing by an authorized representative of GDC Technology could void your warranty and/or authority to operate the SR-5400C.

2 THE SR-5400C WEB USER INTERFACE (Web UI)

The SR-5400C has a web-based user interface (Web UI). The following steps show how to access the SR-5400C Web UI:

1. Connect the **IMB Ethernet 1** network port on the IMB to a Laptop/PC using a network cable. Configure the Laptop/PC to the same network as the SR-5400C.
2. The SR-5400C Web UI can be accessed via a web browser (Google Chrome™ or Mozilla Firefox™ are recommended).
3. Enter the IP address of the SR-5400C in the web browser to access the login page on the Web UI. The default IP address of the SR-5400C is 192.168.1.12.
4. There are three levels of users available (**User/Technician/Maintenance**). Select the required access level (see **Section 2.1** for more details) and enter the corresponding password to login to the Web UI.
5. You can also select the preferred UI language by clicking on the corresponding flag icon, as indicated in **Figure 2**.

Figure 2: Web UI Login screen

2.1 Access Levels

On the login interface, select the user-level and enter the corresponding correct **Password** to access the SR-5400C Web UI.

Different users will have different access levels on the Web UI's **Configuration** tab.

Access Level	Available Access
User	**Dashboard, Playback, Automation, Content and Configuration*** tabs. *(* Only System sub-tab under Configuration menu is accessible)*
Technician	**Dashboard, Playback, Automation, Content and Configuration#** tabs. *(# Only System and Maintenance sub-tabs under Configuration menu are accessible)*
Maintenance	**Dashboard, Playback, Automation, Content and Configuration** tabs.

Figure 3: User Accounts

2.2 General Notes on the SR-5400C Web UI

2.2.1 Recommended web browsers

The SR-5400C Web UI has been tested with **Google Chrome™** and **Mozilla Firefox™** web browsers. These web browsers are recommended for use while accessing the SR-5400C Web UI.

2.2.2 Single User Access

The SR-5400C Web UI allows single-user access, by default. When a second user logs in using the same or a higher access level, the second user is allowed to choose whether to take over the first user's session. Clicking on **Continue** will terminate the first user's session and allow the second user to log in.

However, if the 'Multi-user mode' option is enabled (refer to **Section 7.1**); multiple users will be allowed to concurrently login to the Web UI.

Figure 4: Single User Access

3 DASHBOARD

In the SR-5400C Web UI, the dashboard menu displays basic information related to the SR-5400C, such as *System Information, Network Information, Storage Information, Capabilities* and *System Alerts*.

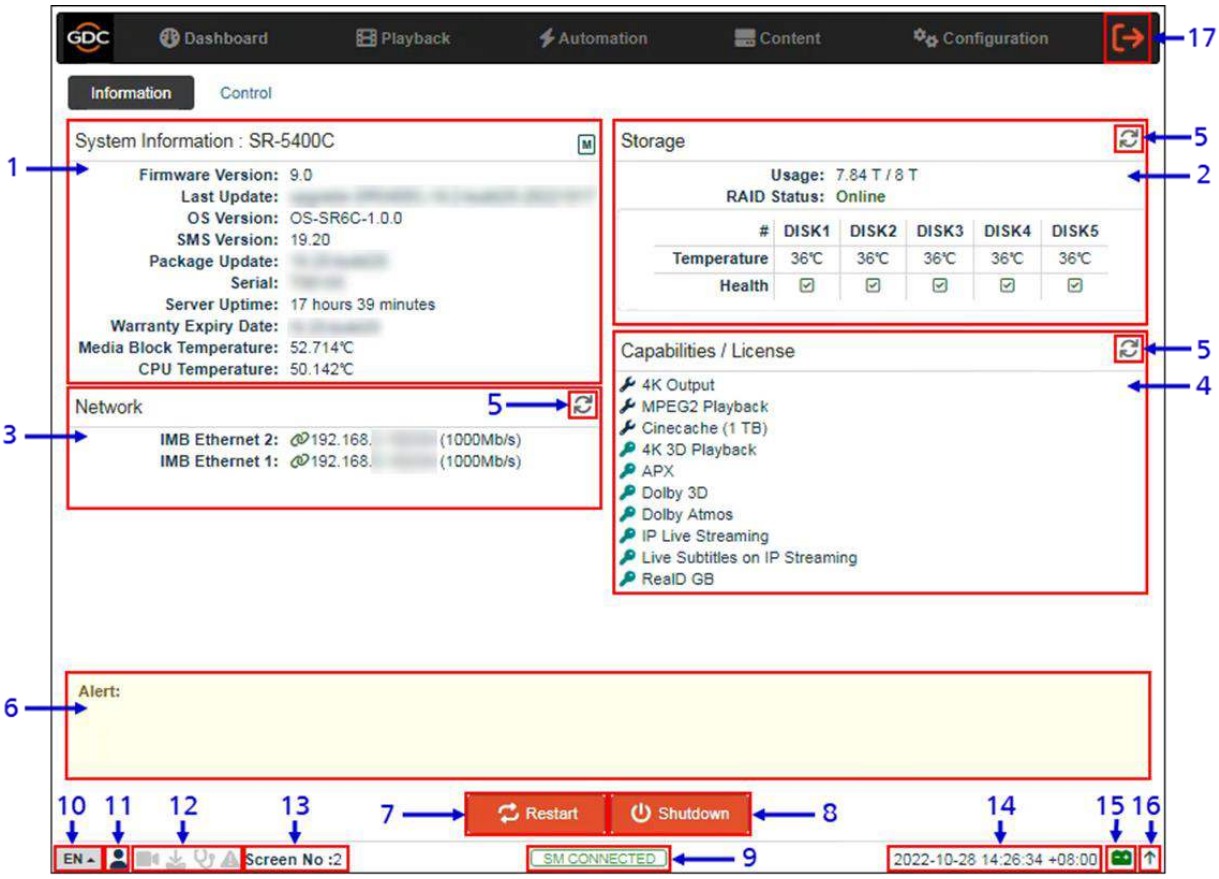
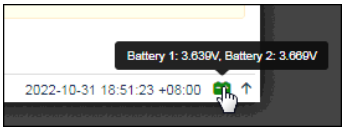


Figure 5: Dashboard

S.N.	Function Name	Description
1	[System Information]	Displays SR-5400C system information.
2	[Storage Information]	Displays storage status on the SR-5400C.
3	[Network Information]	Displays the current network settings and network status of the SR-5400C network interfaces
4	[Capabilities/Licenses]	Displays all the licenses that are installed on the SR-5400C as well as the supported features or capabilities of the SR-5400C.

5	[Refresh]	Refreshes the information on the respective sections.
6	[Alert]	System alerts are displayed here.
7	[Restart]	To restart the server, press **Restart**. A pop-up window will be displayed. Click **OK** to confirm restart. 
8	[Shutdown]	To shutdown the server, press **Shutdown**. A pop-up window will be displayed. Click **OK** to confirm shutdown. 
9	[SM Connection Status]	Displays the connection status of the SM or Security Manager. The SM should always be connected & the **'SM CONNECTED'** status should be highlighted in Green color. In case the SM is disconnected or the status appears in Red color, please contact GDC Technical Support.
10	[Language Select]	Indicates the current language in which the SR-5400C Web UI is displayed. To change the language, click on this icon and select the desired language from the list.
11	[User]	Indicates the access-level with which the current user is logged-in to the SR-5400C Web UI. Place the mouse pointer over this icon to view the access-level of the current user.
12	[Playback, Ingest Verify and Alert status]	These icons will start blinking individually in case content playback/ content ingest/ content verification is in-progress or any system alerts are shown. Otherwise, these icons will remain greyed-out. Clicking on these icons will redirect the user to the respective sub-tabs within the SR-5400C Web UI.
13	[Screen No:]	Displays the auditorium name and number which has been set for the SR-5400C which has been set under **SNMP Configuration → System Information** section (refer to **Section 7.1.1.2** for more details)
14	[Date and Time]	Indicates the system date and time as per the timezone set on the SR-5400C.

15		Displays the battery voltage levels for both IMB batteries of the SR-5400C when the mouse pointer is placed over it. 
16		Moves the Status bar to the top of the Web UI screen. To bring the Status bar back to its original position, click on the icon.
17	[Logout]	Logs out the current user from the SR-5400C Web UI.

4 PLAYBACK

4.1 Playback

The **Playback** sub-tab displays playback progress and allow the operator to control playback.

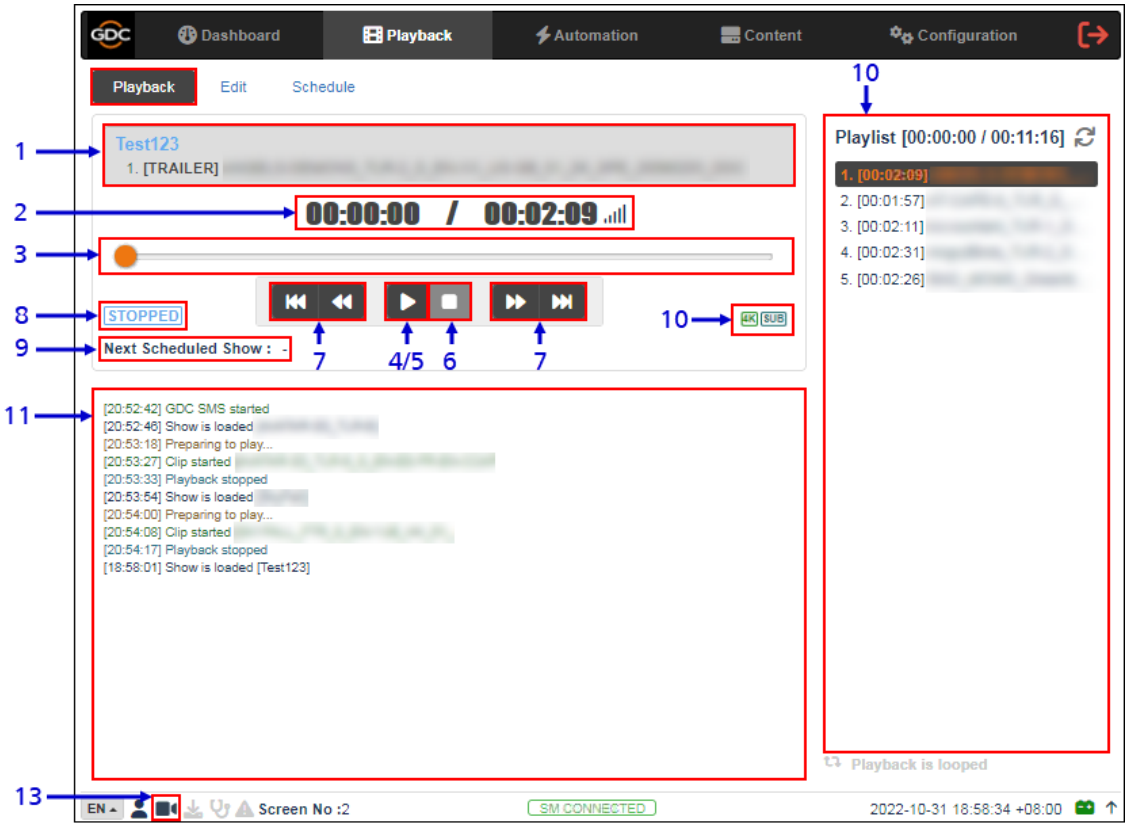
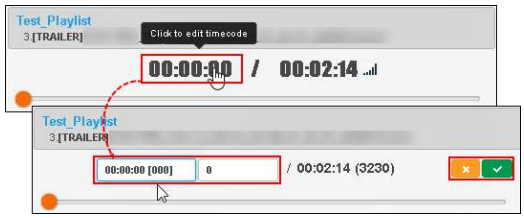


Figure 7: Playback → Playback

SN	Function Name	Description
1	[Clip Name Display]	Displays the name of the current loaded show and currently playing clip.
2	[Clip Playback Time]	Displays the duration of the current clip played and total duration of the clip. Click on the icon to toggle between current playback time and remaining playback time for the clip. When playback is paused, the playback position within the clip can be changed by clicking on the current playback timecode.

		 Enter the preferred time code or frame number within the clip, for playback to resume when unpaused and click on the ✔ button. Click the ✖ button to exit the timecode editor.
3	[Playback Progress Bar]	This bar will start advancing to show playback progress. Press [►] to start a playback. When [■] is pressed, the Playback Progress Bar will stop and return to its starting point. When playback is paused, the slider on the Playback Progress Bar can be dragged to the left/right to seek within the clip. Alternately, the slider position can be changed by clicking on Playback Progress Bar to seek to a new playback position within the clip.
4	[►]	Play button. The [►] button starts playback when pressed.
5	[‖]	Pause button. The [‖] button pauses or resumes playback when paused.
6	[■]	Stop button. The [■] button stops playback when pressed.
7	[|◄◄] [◄] [►] [►►|]	Move to the previous clip Rewind (move back) by 20 frames Forward (move forward) by 20 frames Move to the end of the clip. **Note**: These buttons will remain disabled when playback is in progress and will be enabled when playback is paused or stopped.
8	[Playback Status Display]	Displays the current playback status: *Playing, Paused, Stopped or Preparing.*
9	[Next Scheduled Show]	Displays the name of the next scheduled show and the time remaining for next scheduled show.
10	[Clip Format]	Displays information on the clip format.
11	[Status Display]	Displays the playback status of the system. The display shows the name of the active playlist, and the name of the clip currently being played. Information and errors encountered during playback will also be displayed here.

12	[Playlist]	Displays the name and duration of all the clips within the current show playlist. Additionally, the elapsed time for the playlist and the total duration of the playlist are displayed as well.
13		If this icon is continuously flashing, it indicates that playback on the system is either in progress OR has been paused. If this icon is greyed out, it indicates that playback on the system has been stopped. Clicking on this icon will redirect the user to the **Playback** sub-tab.

4.2 Edit

The **Edit** sub-tab is used to create & edit show playlists or SPLs.

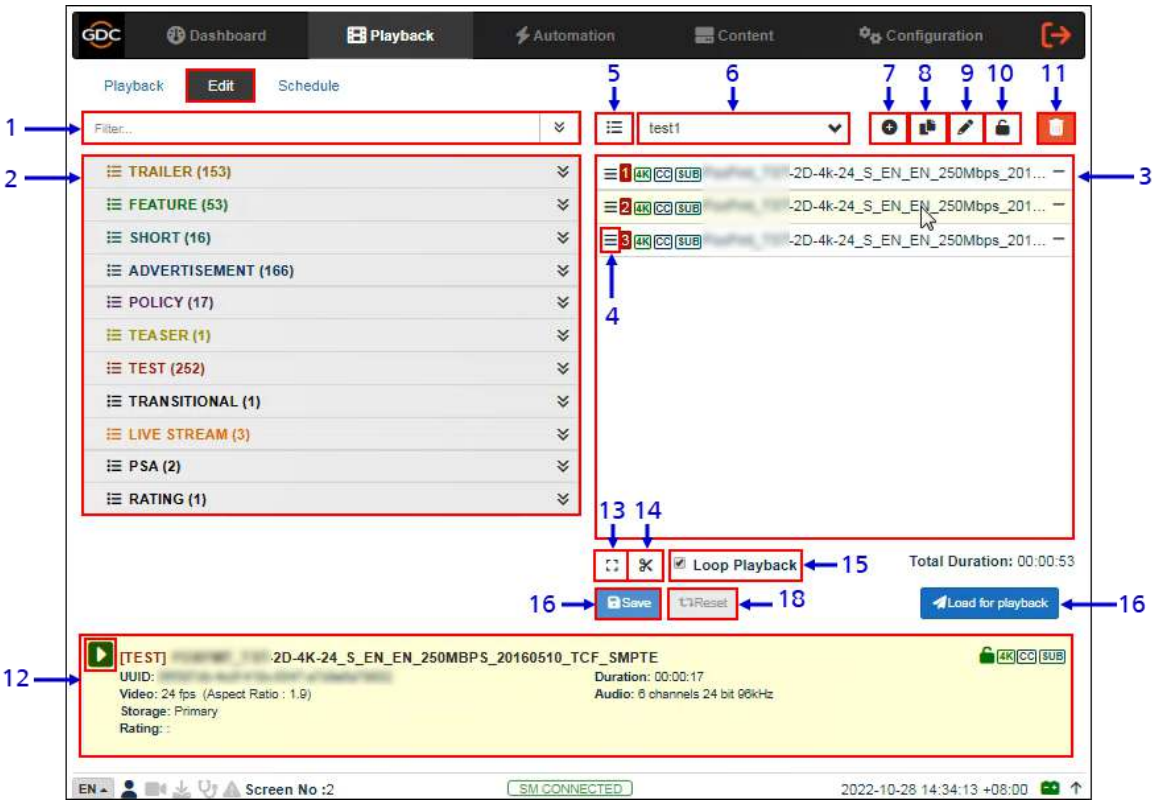
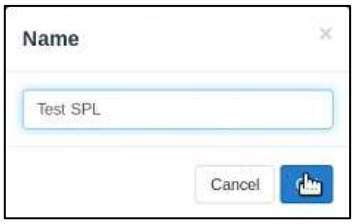


Figure 9: Playback → Edit

SN	Function Name	Description
1	[Filter]	Filter the content list based on content name.
2	[Content List]	Available content on the SR-5400C storage is listed here. Use the arrow to expand each category and list all the clips under the selected category. Content can be dragged and dropped between [Content List] and [Playlist Editor].
3	[Playlist Editor]	The contents of the playlist being currently edited are displayed. Click the '–' button towards the right end of a clip, to remove it from the playlist. Clips can be dragged and dropped within the playlist to change playback order.

4	[Edit Props]	Clicking on button against a particular clip in the playlist opens a pop-up window to edit properties of the selected clip. Refer to **Section 4.2.2** for details on editing the CPL properties.
5	[Manage Playlist]	A pop-up window will be displayed, and show all the playlists with options to delete, rename, copy or filter the show playlists.
6	[Show List]	List of playlists available on the SR-5400C. The selected playlist content will be shown in the [Playlist Editor]. **Note**: A playlist that is currently playing cannot be edited.
7	[+ Add New playlist]	Create a new playlist. A name must be specified for the playlist.  Refer to **Section 4.2.1** for details on creating a new playlist.
8	[Copy Playlist]	Duplicate currently selected playlist. Enter the name of the new playlist in the pop-up window and click OK.
9	[Rename Playlist]	Rename the selected playlist. **Note**: A playlist that is currently playing cannot be renamed.
10	[Lock Playlist]	Lock the selected playlist. When a playlist is locked, actions like drag/drop, editing CPL properties and deleting CPLs will be disabled for it. To unlock the selected playlist, click again on the Lock Playlist button. The mouse cursor in the Playlist Editor will change when the selected playlist is unlocked.
11	[Delete Playlist]	Delete the selected playlist. **Note**: A playlist that is currently playing cannot be deleted.
12	[Clip Information Display]	Displays the information related to the selected clip. It also includes the 'Quick Play' feature which can be used to test playback for a particular clip without adding it to the current playlist. To use this feature, select a clip from the [Content List] and click on the button next to the clip name (displayed under the [Clip Information Display] section) to play the selected clip.

13	[Standard/Timeline View]	Use the  button to toggle between 'Standard' and 'Timeline' view of the [Playlist Editor]. 
14	[Add Intermission]	Use this feature to add intermissions. Select a clip from the playlist and click on the  button. Refer to **Section 4.2.3** for details on adding an intermission.
15	[Loop Playback]	Enable playback of the current playlist in loop.
16	[Save]	Save the playlist currently being edited.
17	[Reset]	Reset any changes to the playlist currently being edited.
18	[Load for playback]	Load the selected playlist into the player for playback.

4.2.1 Creating/Editing a New Show Playlist

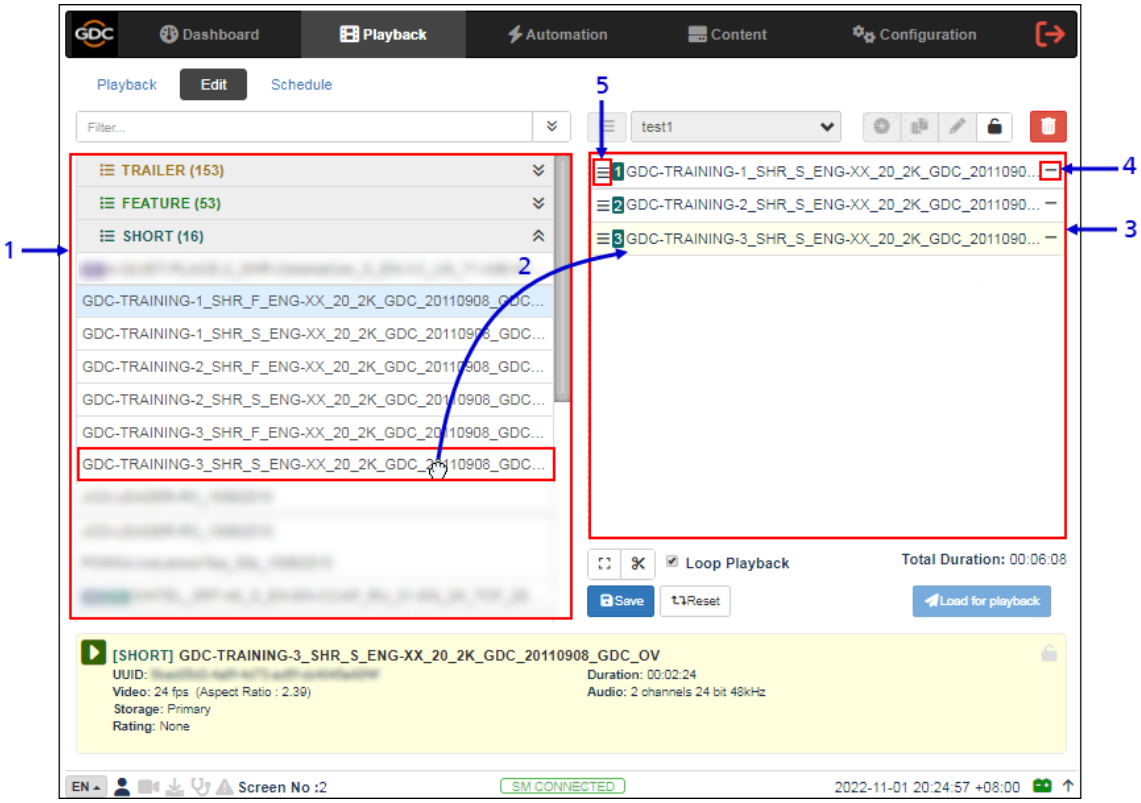


Figure 11: Creating a New Playlist

SN	Function Description
1	All compositions stored are listed in the Content List on the left. The content is shown in alphabetical order grouped by type [*Trailer, Feature, Advertisement*, etc.].
2	Drag & drop the composition that needs to be added from the Content List to the Playlist Editor. Repeat the same step to add other compositions (e.g., trailers or advertisements) to the playlist
3	The order of the compositions in the playlist may also be changed by dragging & dropping them to the desired position.
4	You can remove compositions from the Playlist Editor column by pressing the '—' button on the right end of that particular entry.
5	Clicking on ≡ button against a particular clip in the playlist opens a pop-up window to edit CPL properties of the selected clip. Refer to **Section 4.2.2** for details.

4.2.2 Edit CPL Properties

Additional functions can be applied to each composition by editing the CPL properties. The 'Edit CPL Properties' pop-up will open up by clicking ≡ button (Edit Props) button shown against any clip in the Playlist Editor.

Note: The Edit Props button will be hidden if the selected playlist is locked.

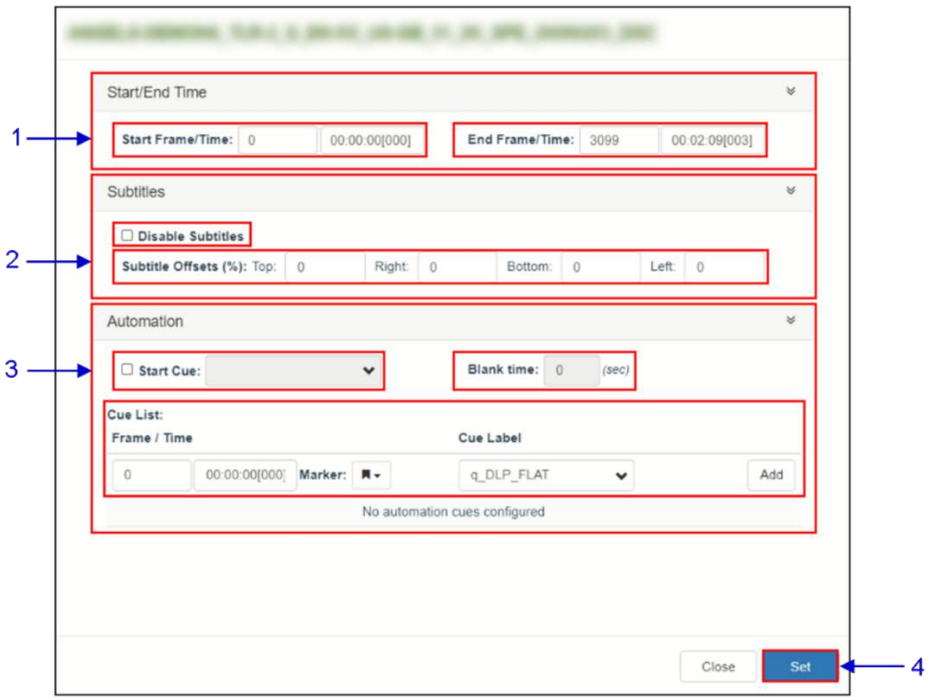


Figure 12: Edit CPL Properties

SN	Function Name and Description	
1	[Start/End Time]	
	Start Frame/Time	Set the time code/frame number where playback of the clip starts.
	End Frame/Time	Set the time code/frame number where playback of the clip ends.
2	[Subtitles]	
	Disable Subtitles	You can disable subtitles for the clip by selecting the Disable Subtitles checkbox.
	Subtitle Offsets (%)	Set the Top, Right, Bottom and Left values to adjust the position of the subtitles projected.

3	[Automation]	
	Start Cue	When the Start Cue checkbox is selected, the automation cue to be executed at the start of the clip can be set.
	Blank time	This is enabled when the Start Cue option is selected. The time interval between the end of the start cue and the start of the clip playback can be set.
	Cue List	Sets automation cues to execute during playback. Select the Cue label from the dropdown list, enter the Frame/Time and click the + button to add the selected cue to the list. The Cue List will display the all the automation cues that have been added to the clip. To remove a cue from the list, click the **–** button against that particular cue.
4	**Set**	Save the changes to the CPL.

4.2.3 Adding an Intermission

An Intermission can be added to a feature CPL on the SR-5400C, by using the 'Add Intermission' feature.

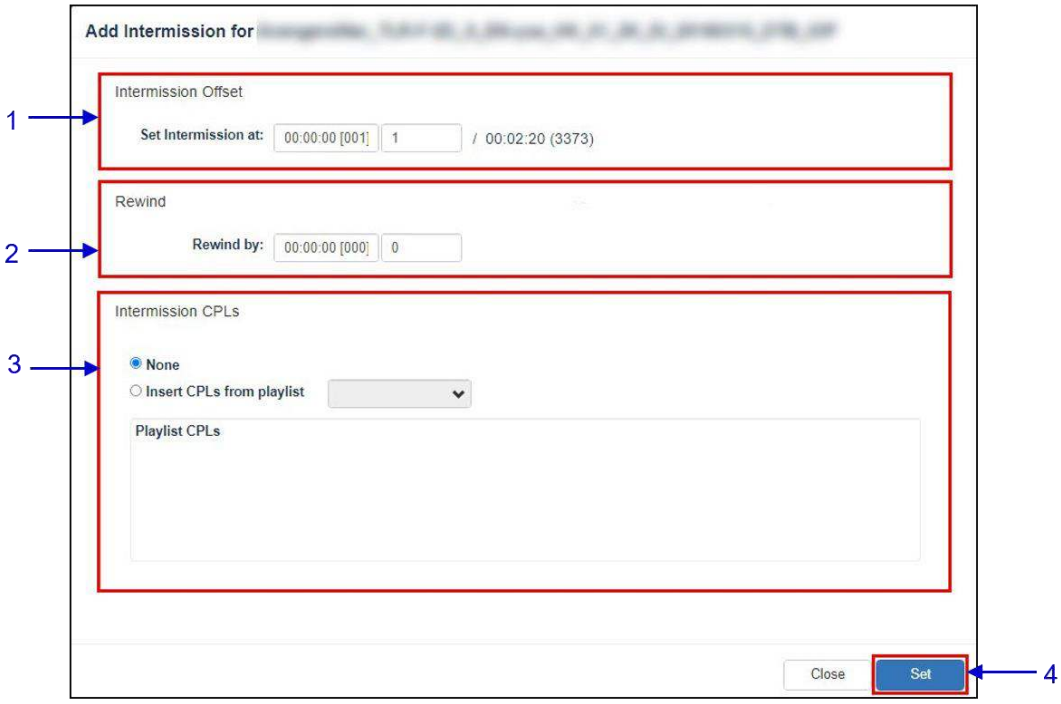


Figure 13: Adding an Intermission

SN	Function Name and Description	
1	[Intermission Offset]	
	Set Intermission at:	Set the preferred time code or frame number where the intermission cut position should be set for the selected CPL.
2	[Rewind]	
	Rewind by:	Set the amount of time or number of frames to rewind the selected CPL before the intermission cut position, once the intermission playlist ends.
3	[Intermission CPLs]	Choose the Insert CPLs from playlist option and select the desired Intermission playlist from the drop-down. **Note**: The Intermission playlist needs to be created and saved prior to adding the intermission to the feature CPL.

4.2.4 Saving the Show Playlist

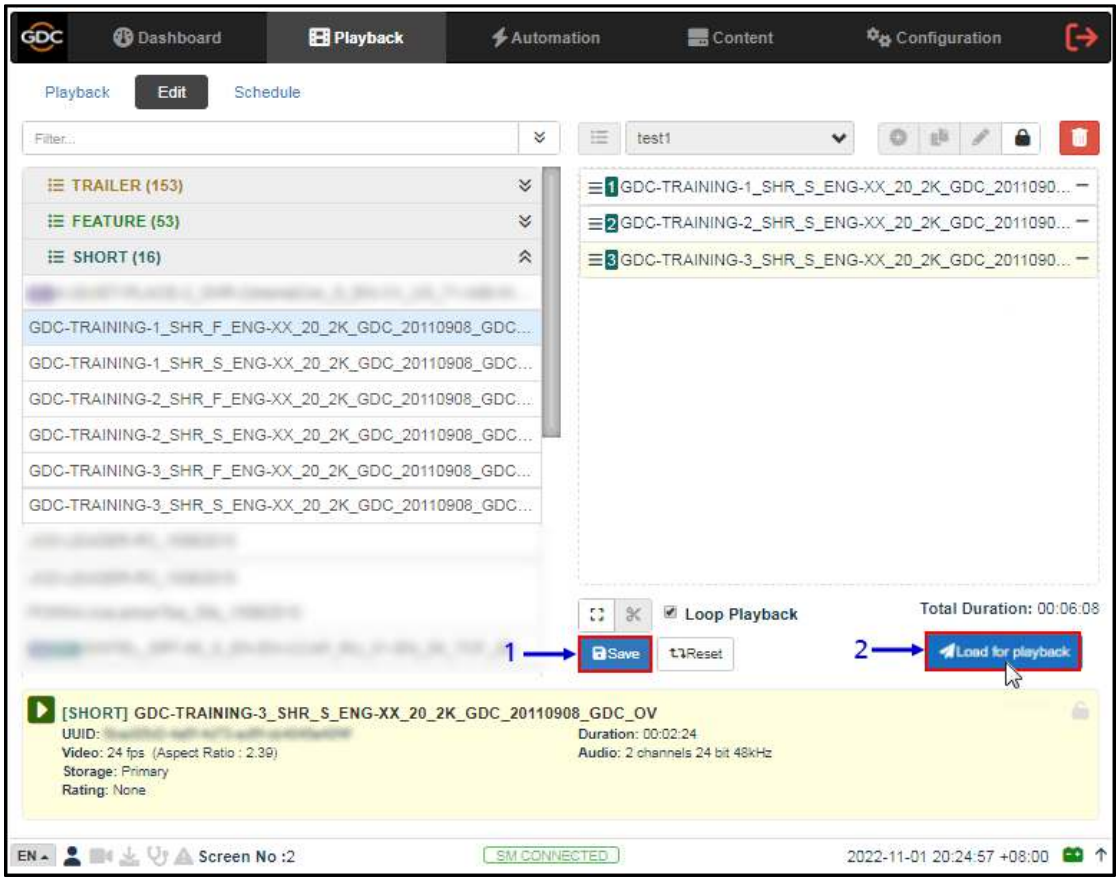


Figure 14: Saving the Playlist

SN	Function Name and Description
1	Click on the Save button to save the playlist. This ensures any changes to playlist will not be lost.
2	Click on the Load for Playback button to load the newly created playlist to the Playback interface. **Note**: This button will remain disabled until the playlist is saved, by clicking on the Save button.

4.3 Schedule

The **Schedule** sub-tab is used to schedule playback.

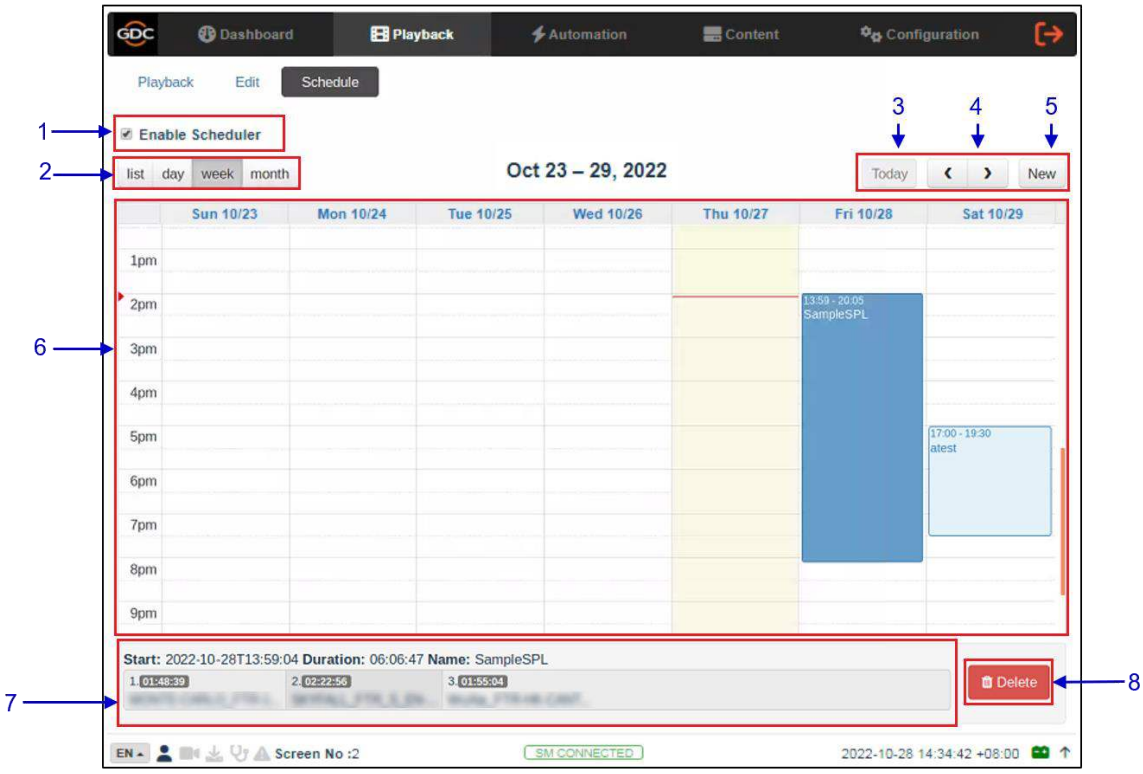
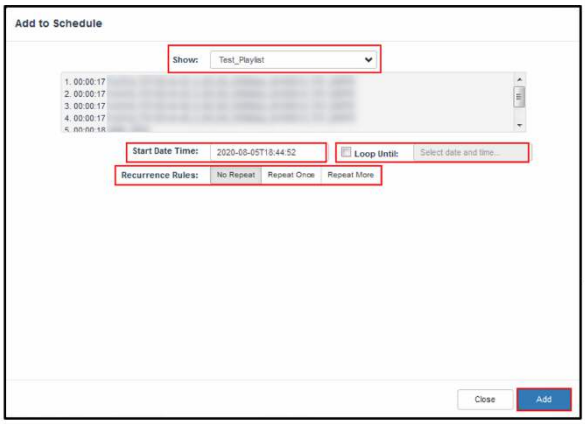


Figure 15: Playback → Schedule

SN	Function Name	Description
1	[Enable Scheduler]	Enable or disable the scheduler function. It is recommended to keep the scheduler enabled.
2	[List, Day, Week, Month]	Select to display the schedules on the SR-5400C in a list; per day, per week or per month.
3	[Today]	Switch back to current day in month or week view.
4	[< Previous / > Next]	Displays the schedules of the previous or next day, week or month.

5	[New]	Add a new schedule. Select the Show and Start Date Time. Recurrence Rules by default is selected as 'No Repeat'. User can select 'Repeat Once' or 'Repeat More' and further enter details. Click the Add button to add the schedule. 
6	[Schedules]	Schedules are displayed here. The display will change according to what is selected in [2].
7	[Schedule Details]	Displays the details of the selected show. **Note**: Only the selected schedule details will be displayed here.
8	[Delete]	Delete the selected schedule.

5 AUTOMATION

This tab is used to set up automation and input triggers. Scheduling and manual triggering of automation cues can be done here.

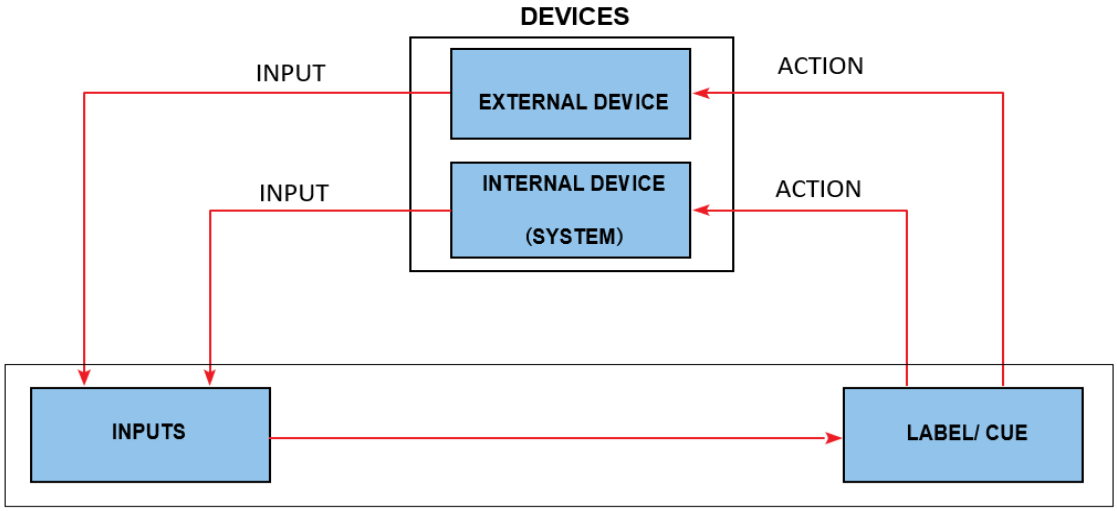


Figure 16: GDC Automation Workflow

5.1 Trigger

The **Trigger** sub-tab is used manually trigger automation cues and commands for configured devices.

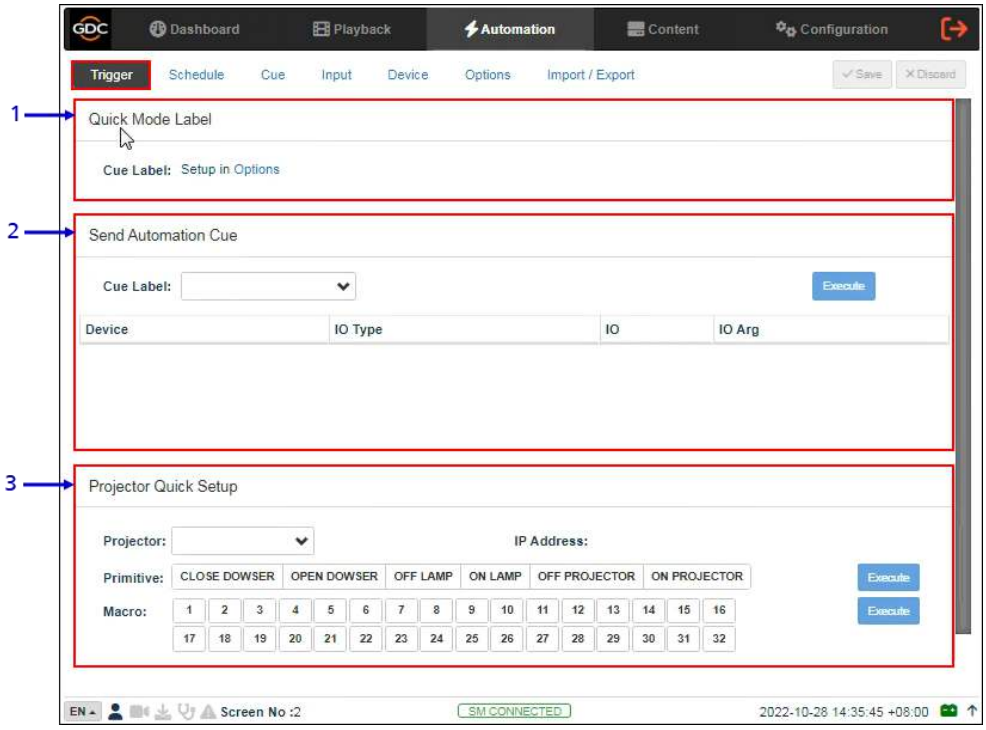


Figure 17: Automation → Trigger

SN	Function Name	Description
1	[Quick Mode Label]	An automation label can be configured to be easily triggered here. This label can be set in Automation → Option tab. Refer to **Section 5.6** for more details. Click the Execute button to execute the automation cue.
2	[Send Automation Cue]	This section is used to manually execute a configured automation label. Select a label and click the Execute button to execute the automation label manually.
3	[Projector Quick Setup]	This section is used to manually send an automation command to a configured projector. Select the projector *Primitive* or *Macro* to be executed and click the Execute button to send the command to the projector.

5.2 Schedule

The **Schedule** sub-tab is used to schedule automation cues to execute at the specified date and time.

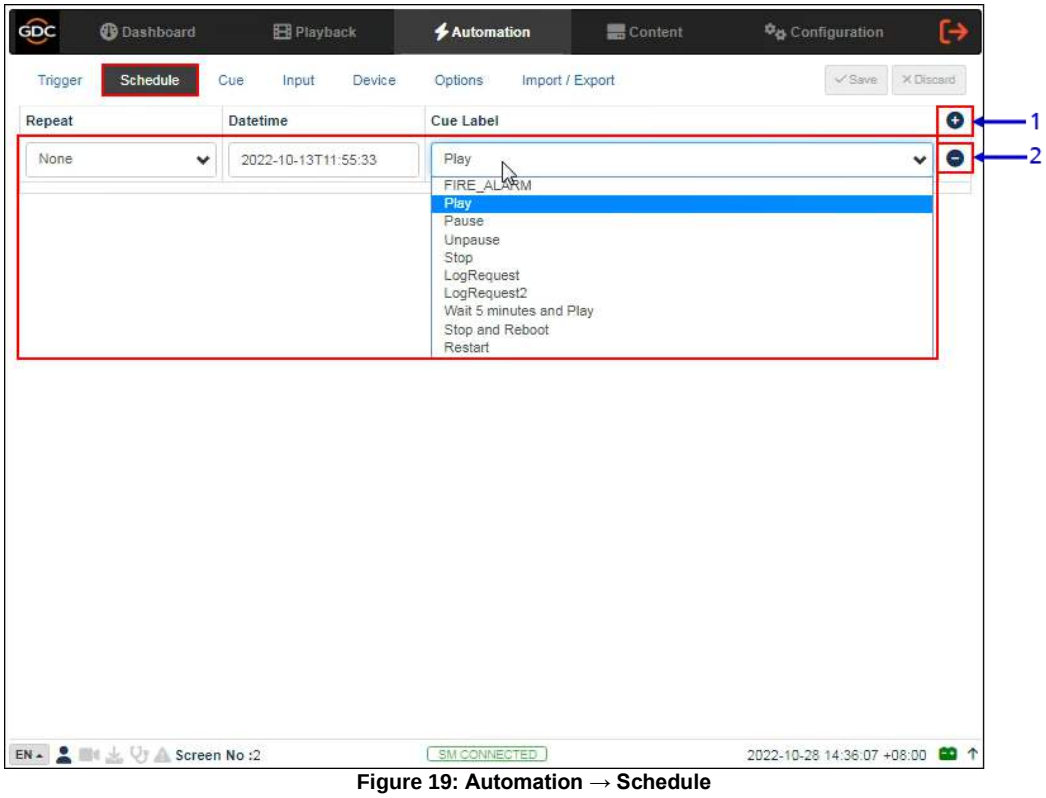


Figure 19: Automation → Schedule

SN	Function Name	Description
1	[+ New Schedule]	Click + to add a new schedule. Schedules can be set to repeat daily. Select the schedule *Datetime*, and the *Cue Label* to be executed. Click Save to save the added schedule or click Discard to remove.
2	[– Remove Schedule]	Click – to remove the selected scheduled automation cue.

5.3 Cue

The **Cue** sub-tab shows the automation cues configured on the SR-5400C. New automation cues can be added and configured here.

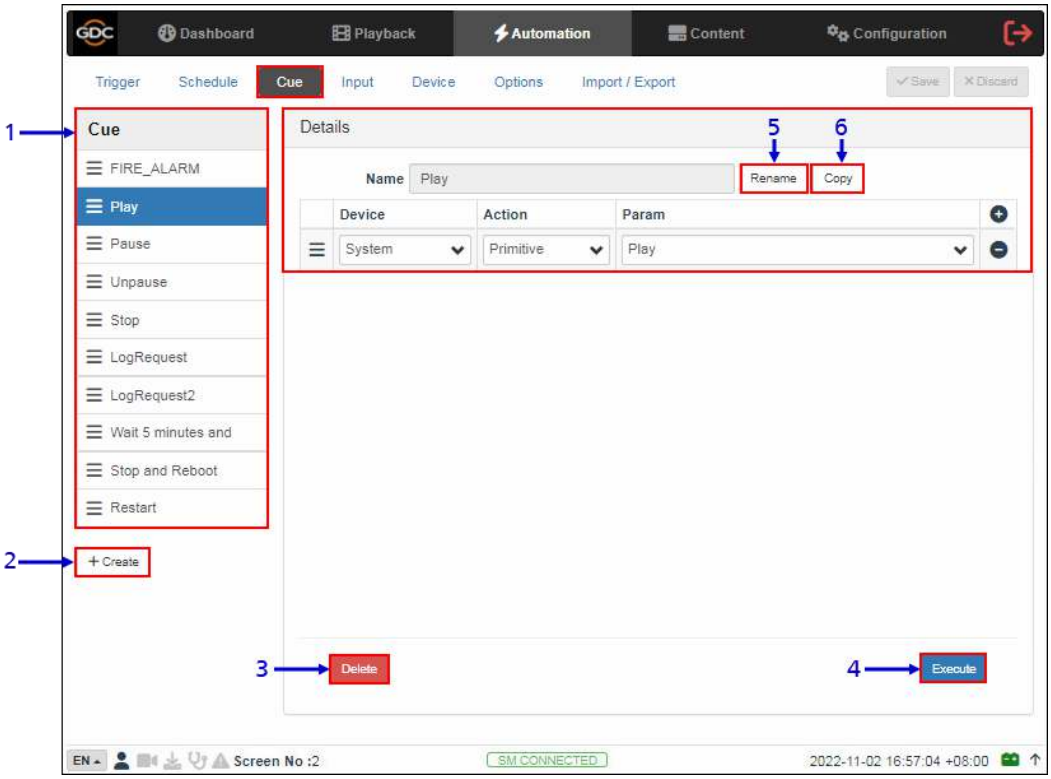
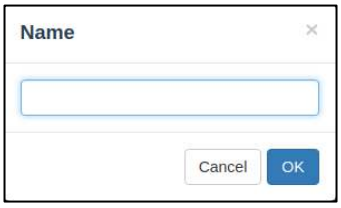


Figure 20: Automation → Cue

SN	Function Name	Description
1	[Cue]	A complete list of configured cues is displayed here. Cues can be rearranged by dragging and dropping. When a cue is selected from the list, the cue details are displayed. Click + to add actions or click – to remove actions. Click Execute to manually execute this automation cue.
2	[+Create]	Click +Create to create a new cue. A pop-up window will be shown. Enter the name of the cue and click OK.  Refer to **Section 5.3.1** for more details regarding adding a new automation cue.

3	[Delete]	Deletes the selected cue.
4	[Execute]	Executes the selected cue. This can be used to test the cue.
5	[Rename]	Rename the selected cue.
6	[Copy]	Copies all the actions of the selected cue into a new cue with an alternate name.

5.3.1 Adding a new Cue

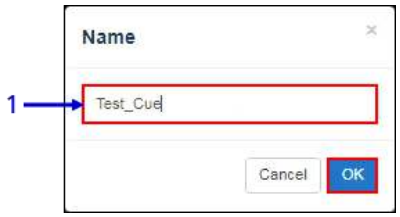


Figure 21: Adding a new cue

SN	Function Description
1	Type in the name that needs to be assigned to the new cue being added & click on OK.

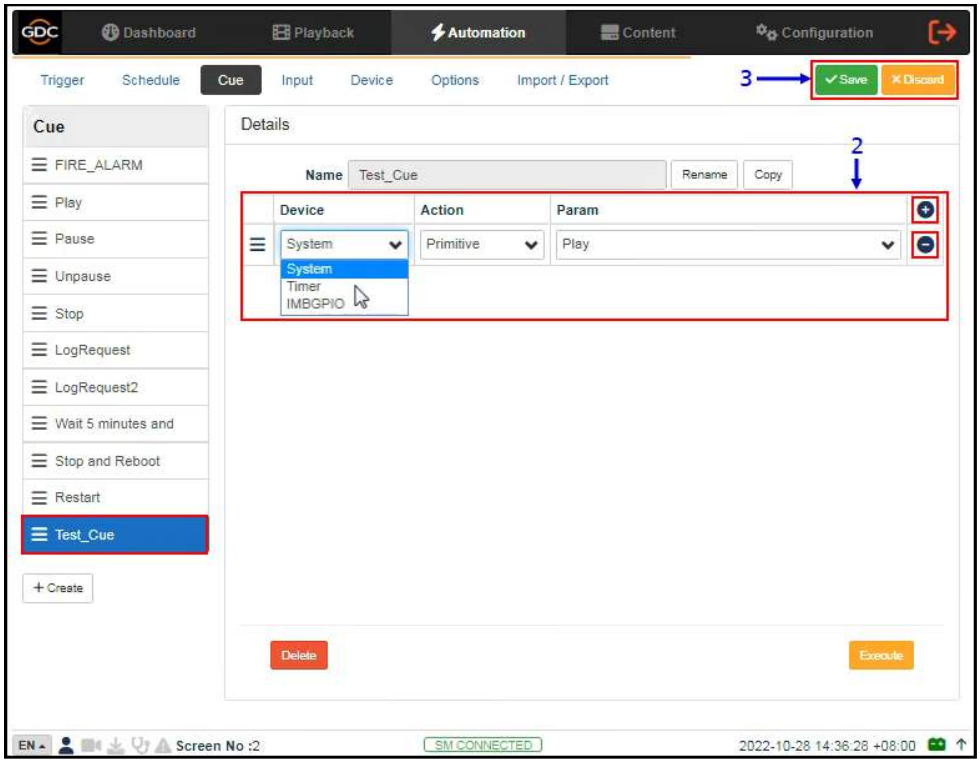


Figure 22: Automation Cue details

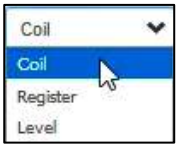
2	Click + to add actions or click – to remove actions. Select a device from the dropdown list as seen below. New devices can be added to the list from the Device tab (Refer to **Section 5.5** for more details)  a) If the selected Device is 'System', the Action type will be 'Primitive' or 'Switch Source'. 

i. If 'Primitive' is selected as the Action type, select the desired Param value from the drop-down as shown below:

b) If the selected Device is 'Timer', then the Action type will be 'Delay (ms)'.

The user can specify the value (in *milliseconds*) under the Param option. This can be used to create a time delay between two consecutive actions within the cue.

c) If the selected Device is an 'IMBGPIO', the Action type can be 'Coil', 'Register' or 'Level'.



i. If 'Coil' is selected as the Action type, only one pin can be selected at a time from the Param option:

ii. If 'Register' or 'Level' is selected as the Action type, multiple pins can be selected from the Param option. The number of pins selected (left section) will be the number of pins shown as enabled (right section). The user may select multiple pins (right section) based on the number of pins selected (left section).

3	Click on the Save button to add the new cue or click Discard to remove.

Note: In order to create a quick access button for a particular automation cue which can be accessed from the **Control** sub-tab under **Dashboard**; insert the prefix **"q_"** before the actual cue name while creating a new automation cue (For cues which already exist on the Server, select the cue name & use the Rename option).

Save the changes by clicking on the Save button. A new quick access button should be created under the **Control** sub-tab, as shown in **Figure 23**.

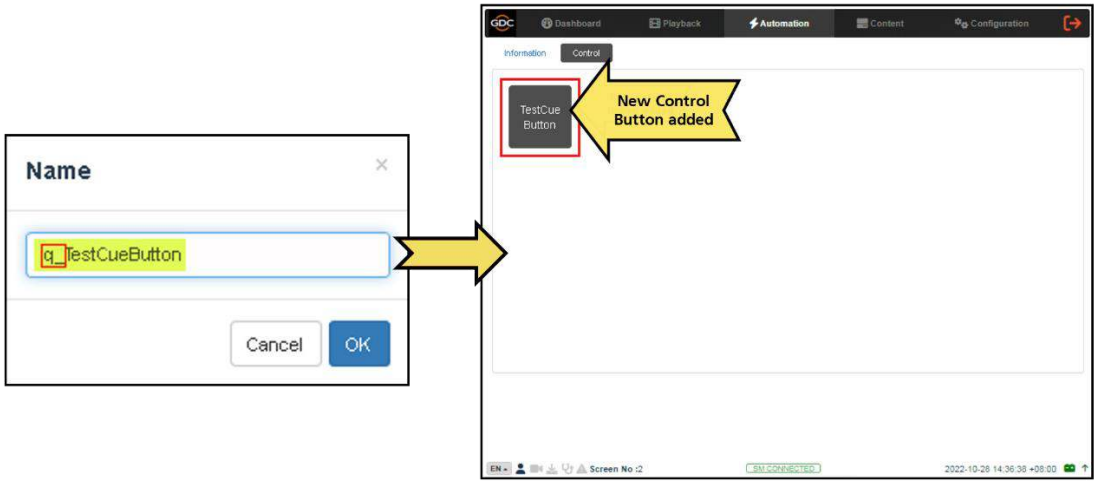


Figure 23: Quick Access button for Automation Cue

5.4 Input

The **Input** sub-tab is used to configure input automation triggers on the SR-5400C. When input is detected on supported devices, the configured automation cues will be triggered on the SR-5400C.

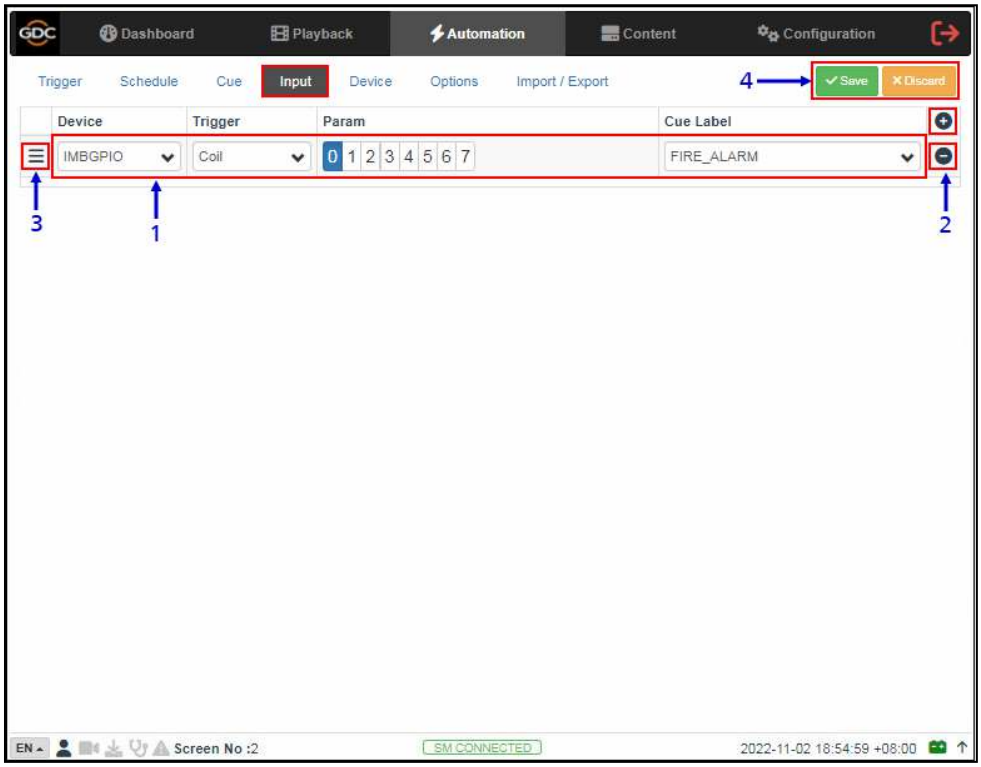
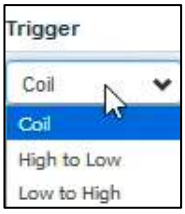
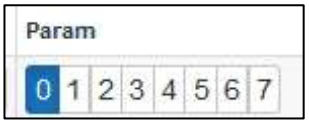


Figure 24: Automation → Input

SN	Function Name	Description
1	[+ Add Trigger]	Click + to add an input trigger. **Note:** Only devices capable of sending a signal to the SR-5400C can be added under Input. a) Select a Device from the list for the input trigger that needs to be set. b) Select a Trigger type, which can be 'Coil', 'High to Low' or 'Low to High' for the selected device: 

		c) Select the Param value from '0 to 7'. Only one pin can be selected at a time.  d) Select an automation Cue Label that should be triggered for the selected device based on the selected trigger value: 
2	[– Delete Trigger]	Click – to remove the selected input trigger.
3	[☰]	Click ☰ to reorder the input triggers using drag-and-drop.
4	[Save]/[Discard]	Click on the Save button to add the new input trigger or click Discard to remove.

5.5 Device

The **Device** sub-tab is used to configure the SR-5400C to communicate with external automation devices.

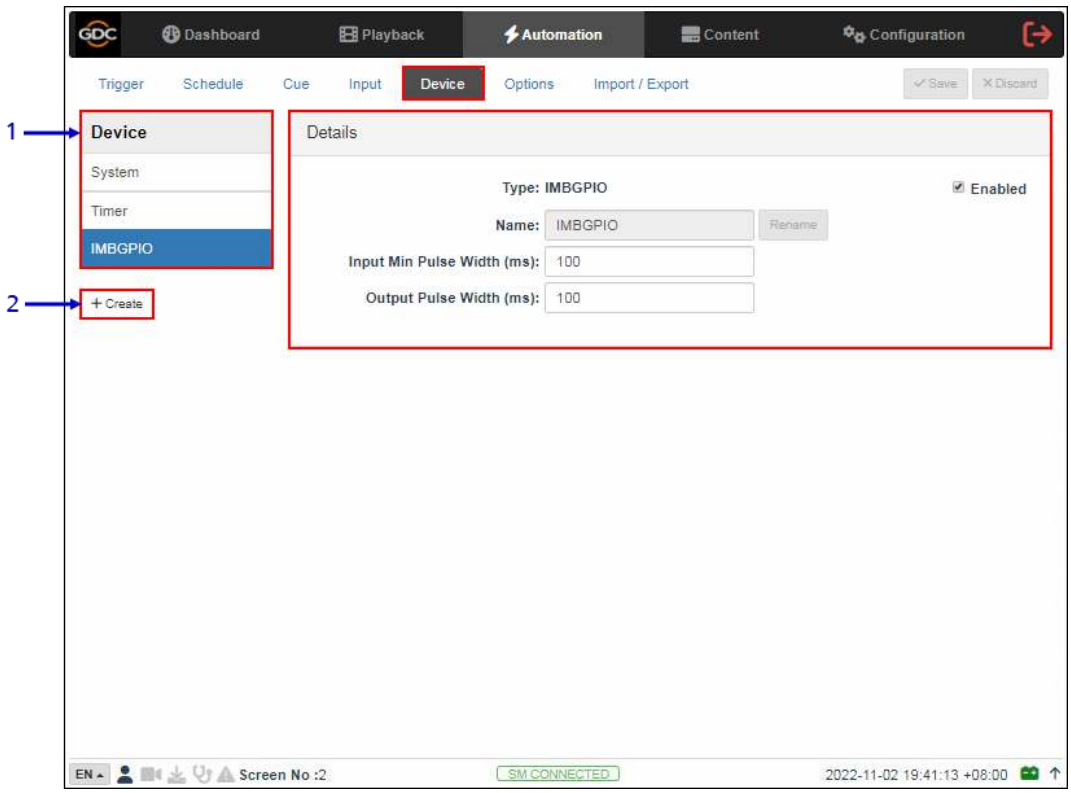


Figure 25: Automation → Device

SN	Function Name	Description
1	[Device]	This is a list of configured automation devices on the SR-5400C. When a device is selected from the list, device details are displayed under the Details section.

2	[+Create]	Click +Create to create a new device. Enter Device Name and select the device Type. Click OK to confirm or click Cancel to cancel adding devices.  Refer to **Section 5.5.1** for more details on creating a new automation device.

5.5.1 Creating a new Automation Device

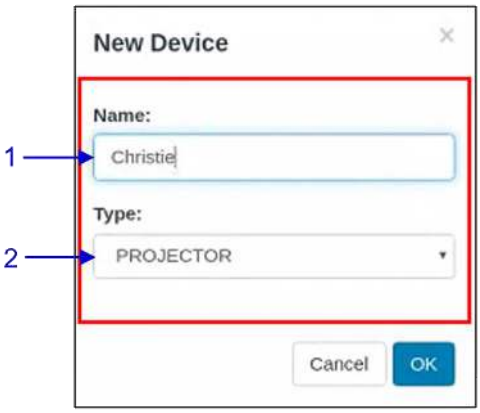
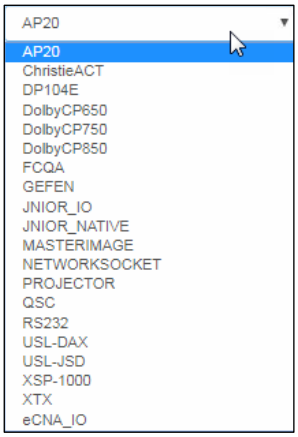


Figure 26: Adding a new Automation Device

SN	Function Name	Description
1	[Name]	Type in the name that needs to be assigned to the new device being added.

2	[Type]	After adding the device name, assign the type of device you want to use. Select from a dropdown list as seen below: 

5.5.1.1 When Device Type is 'PROJECTOR'

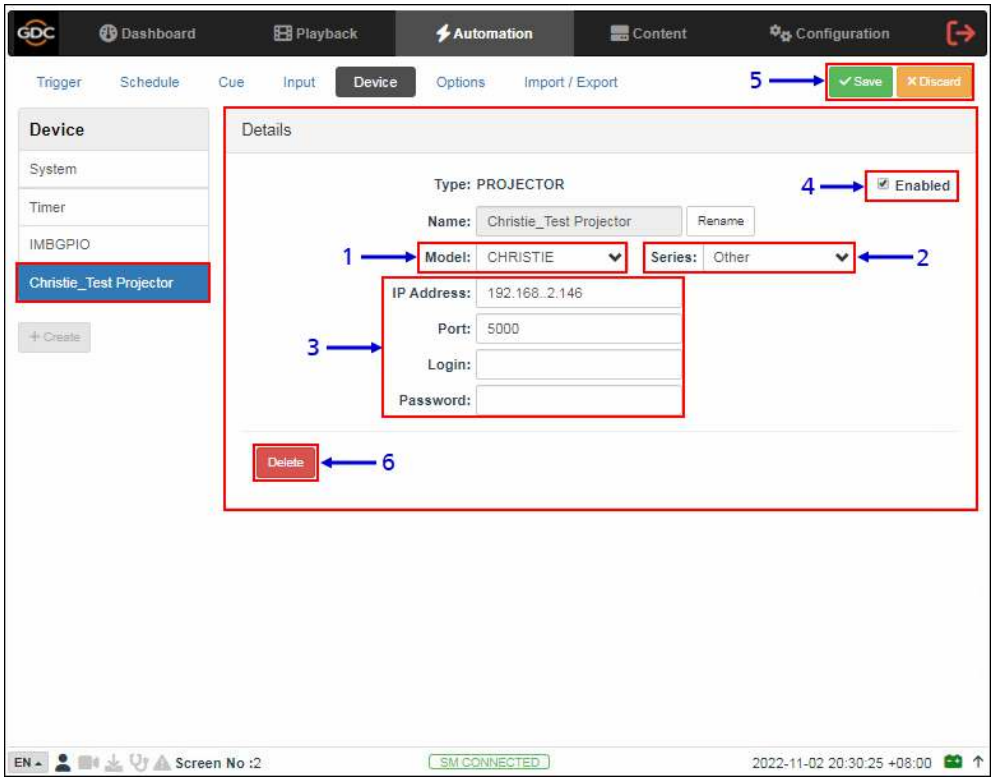


Figure 27: Adding a Projector Device

SN	Function Description
1	Select the projector Model from the dropdown list: 
2	If 'CHRISTIE' is selected as the projector Model; the following options will be available under the projector Series dropdown: 
3	The status of the device can be enabled or disabled by using this checkbox.
4	Set the parameters such as IP address, Port, Login and Password with respect to the projector device being added.
5	Click on the Save button to add the new device or click Discard to remove.
6	Click on the Delete button to delete the selected device.

5.6 Option

The **Option** sub-tab is used to configure automation cues that will be triggered on SR-5400C boot-up and when playback errors occur.

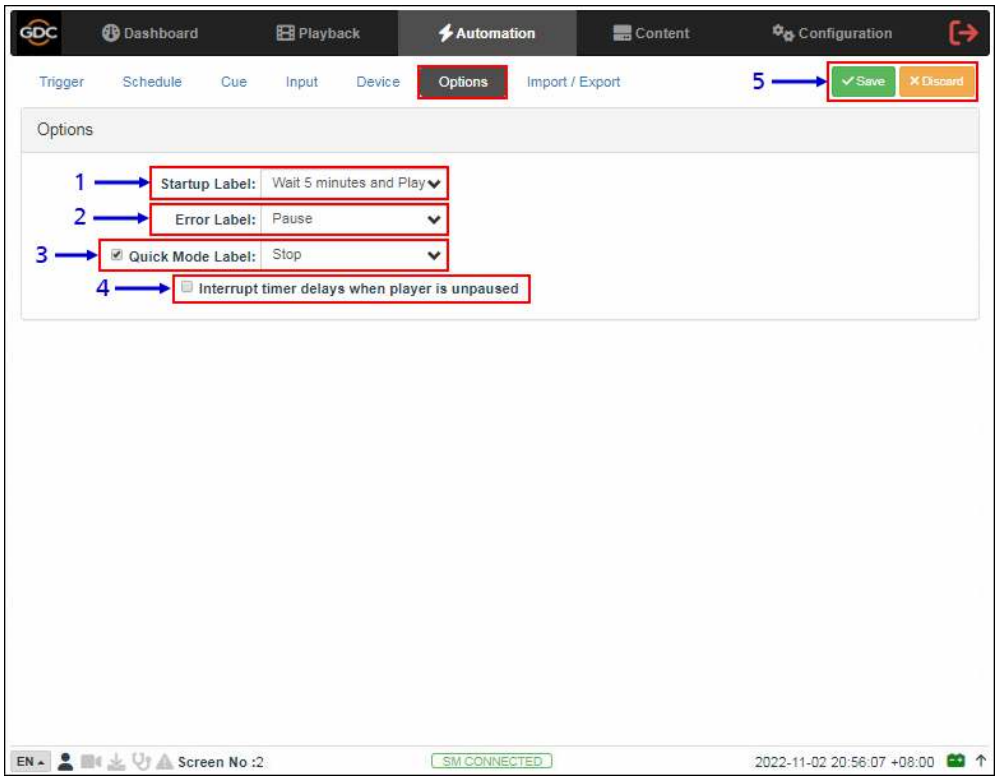


Figure 28: Automation → Option

SN	Function Name	Description
1	[Startup Label]	Select a specific automation cue which will be executed when the server fully boots up
2	[Error Label]	Select a specific automation cue which will be executed whenever a playback error occurs.
3	[Quick Mode Label]	Enables selection of a specific automation cue which can be triggered quickly using the Execute button under **Quick Mode Label →Trigger** sub-tab.
4	[Interrupt timer delays when player is unpaused]	When this option is selected and the user clicks Unpause button on the player, the next action in the automation cue will be executed immediately without waiting for the Timer delay to complete.
5	[Save/Discard]	Click on the Save button to save the configuration or click Discard to remove.

5.7 Import/ Export

The **Import/Export** sub-tab allows the import and export of automations cues which have been setup on the SR-5400C.

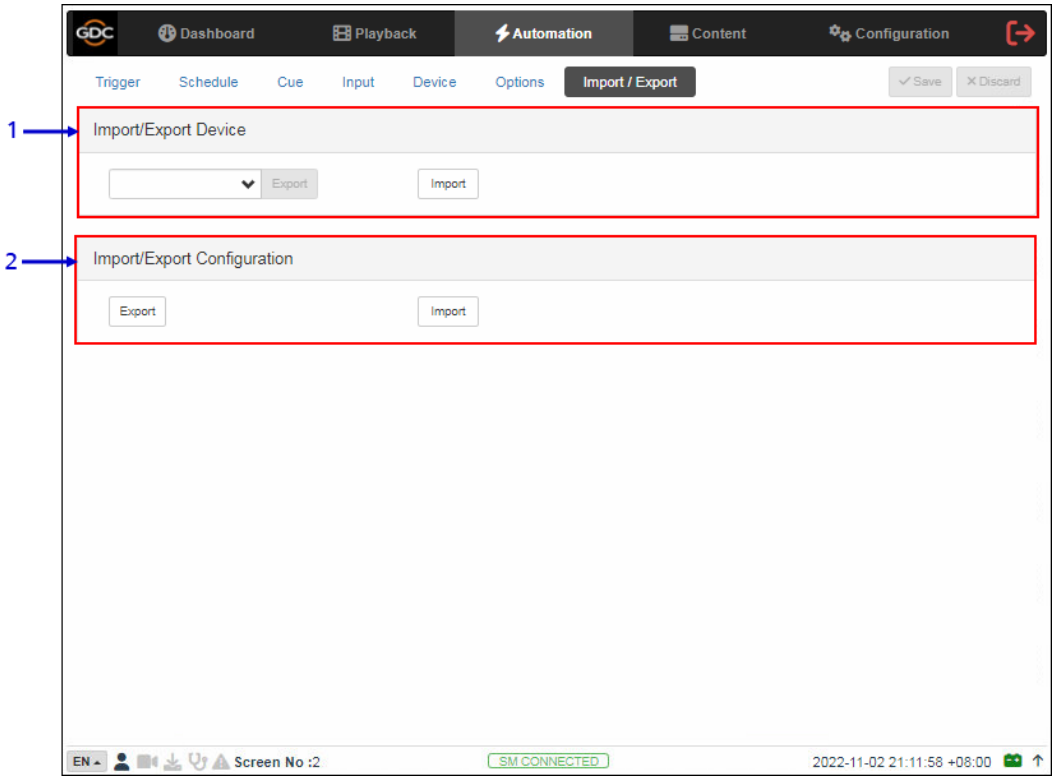


Figure 29: Automation → Import/Export

SN	Function Name	Description
1	[Import/Export Device]	Import opens a pop-up window which allows the user to select a configuration file for the selected automation device. Export automatically saves the configuration file for the selected automation device to your web browser's default download location.
2	[Import/Export Configuration]	Import allows user to select configuration file containing all automation cues from an alternate server Export automatically saves the configuration file containing all automation cues to your web browser's default download location.

6 CONTENT

The **Content** tab is used to manage the content, keys and licenses on the SR-5400C. It allows the user to perform the actions listed below:

1. Ingest content from disk or network source.
2. Ingest Key Delivery Messages (KDMs) required for playing encrypted content.
3. Ingest License Delivery Messages (LDMs).
4. Delete content from IMB storage.
5. Verify content on IMB storage.

6.1 Summary

The **Summary** sub-tab shows a summary of the content and the storage space.

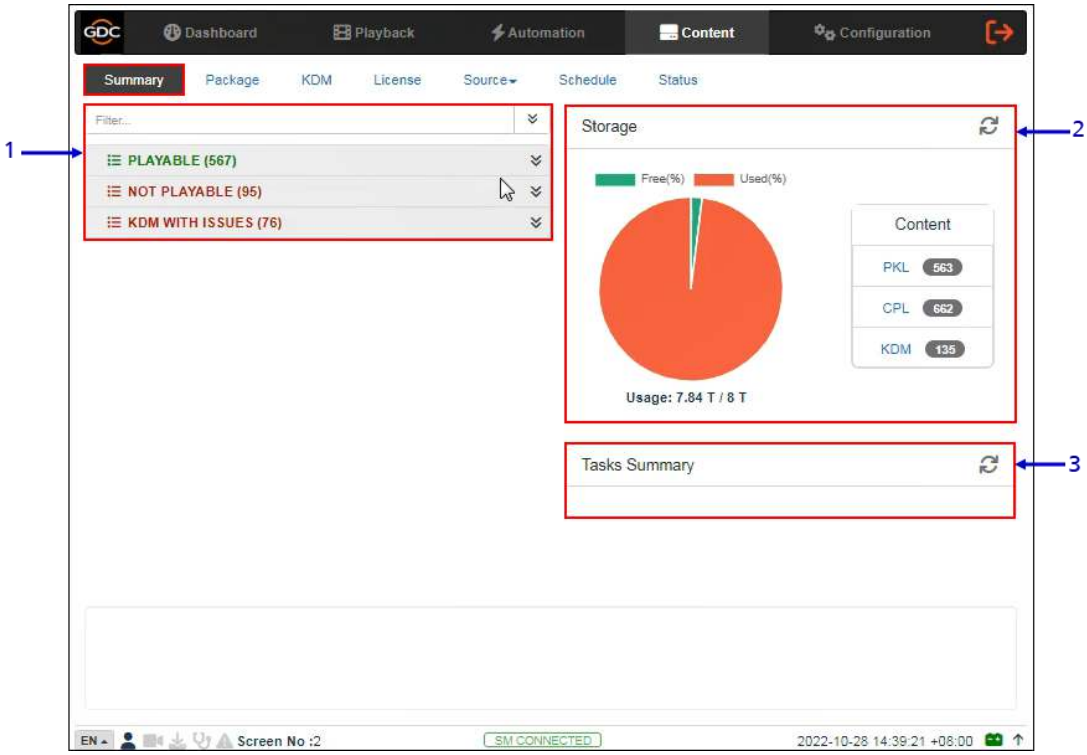
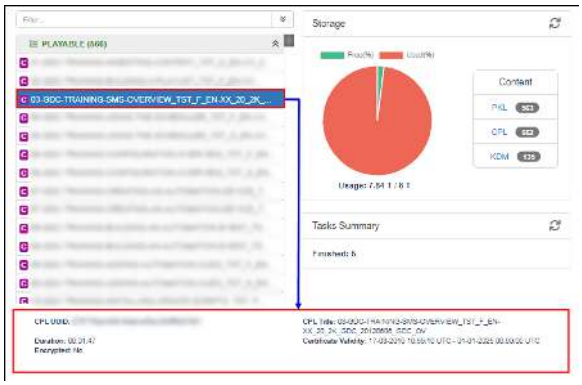


Figure 30: Content → Summary

SN	Function Name	Description
1	[Playable/Not Playable/KDM with Issues List]	Displays a list of playable and non-playable content which are currently present on the SR-5400C, along with the list of KDMs with issues. Use the » arrow to expand each category and list all the clips under the selected category. The Filter option can be used to search for a particular clip based on the text entered.

		Selecting a clip from the list will display CPL information such as *UUID, title, duration, certificate validity, etc.* 
2	[Storage]	Shows a graphical overview of the number of PKL, CPL, KDM present on the SR-5400C. It also displays Storage Usage and Capacity. Click the  Refresh button to update the displayed information.
3	[Tasks Summary]	Displays the summary of all content-related tasks on the SR-5400C.

6.2 Package

The **Package** sub-tab shows the content available on the SR-5400C.

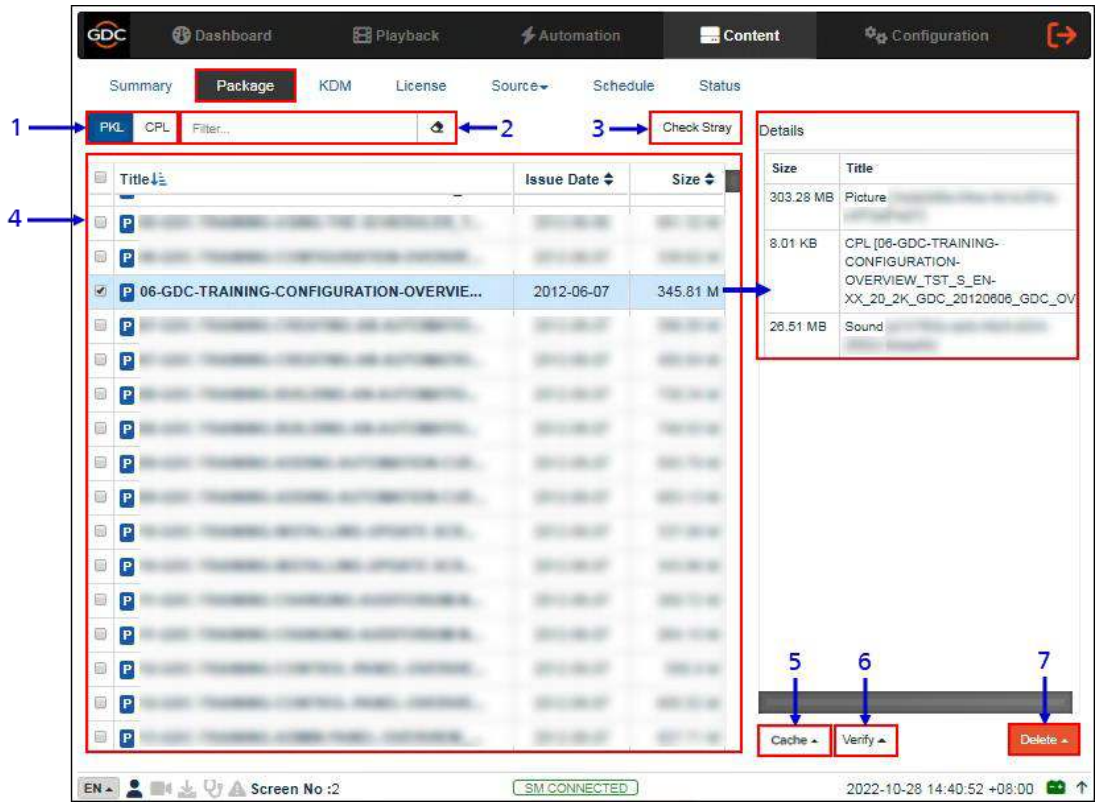


Figure 31: Content → Package

SN	Function Name	Description
1	[PKL/CPL]	Toggles the Content List by displaying either CPLs or PKLs.
2	[Filter…]	Filters the Content List by the text entered here. Click Clear Filter button to clear the search text.
3	[Check Stray]	Click Check Stray to detect and delete any of the stray files from deleted PKLs and CPLs.
4	[Content List]	Displays the list of CPLs or PKLs which have been ingested into the SR-5400C storage. When a particular item is selected from this list, details related to the selected PKL or CPL are displayed under the Details panel. 1) Content name displayed in Green indicates the content is available in both the Primary as well as the Secondary storage. 2) Content name displayed in Black indicates it is available only in the Primary storage.

5	[Cache]	Copies the selected content from Primary Storage to Secondary storage of the SR-5400C. There are two options available: 'Immediately Cache' & 'Schedule Cache'. Refer to **Section 6.2.1** for more details. **Note**: This option will be enabled only when Secondary storage is enabled on the SR-5400.
6	[Verify]	Verifies the integrity of the selected content. There are three options available: **'**Quick Verify', 'Immediately Verify' & 'Schedule Verify'. Refer to **Section 6.2.2** for more details
7	[Delete]	Delete the selected content from the SR-5400C storage. There are two content delete options are available: 'Immediately Delete' & 'Schedule Delete'. Refer to **Section 6.2.3** for more details

6.2.1 Caching Content

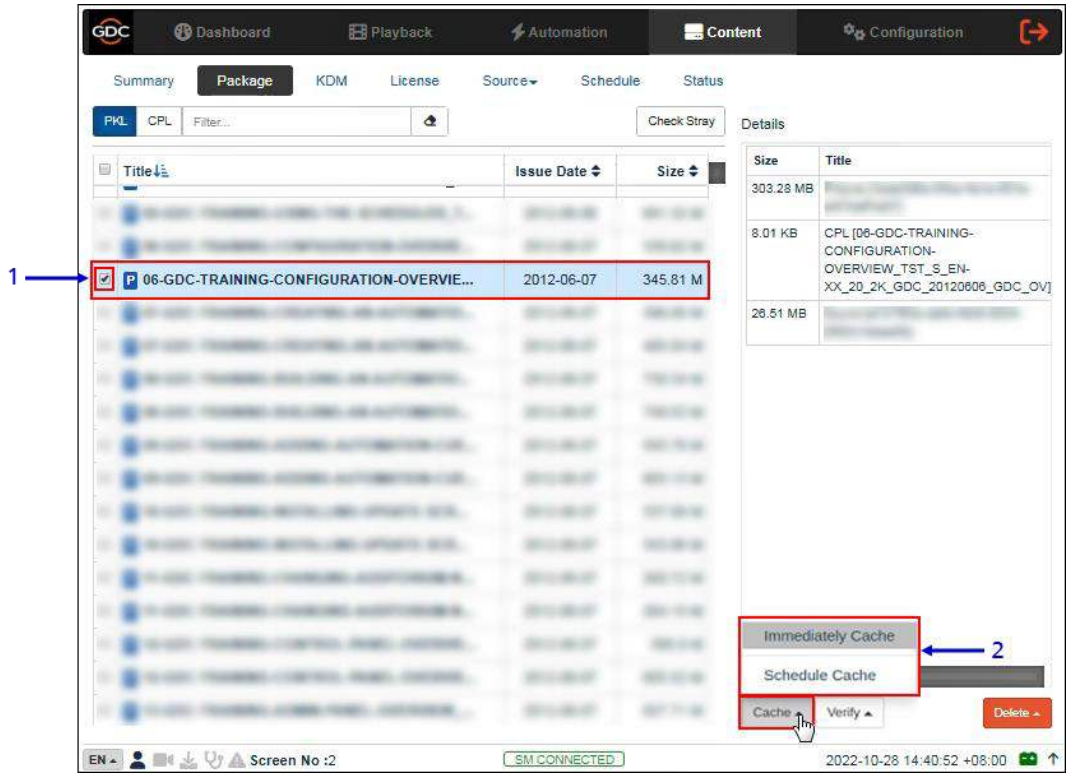
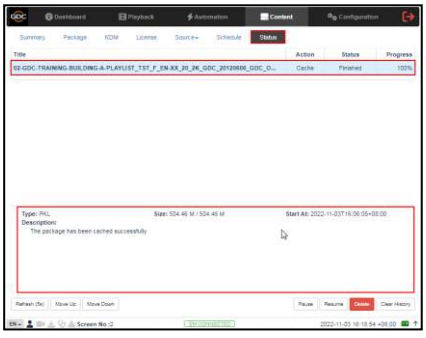


Figure 32: Content Caching options

SN	Function Description
1	To import/copy a particular package or CPL from Primary storage to the Secondary storage, go to the **Package** tab and select the checkbox against the package or CPL that needs to be cached. The PKL/CPL details will be displayed under the Details section on the right.
2	Click on the Cache button. There are two ways in which content can be cached: a) **Immediately Cache**: The selected content will immediately be copied to the Secondary storage. The progress will be displayed under the **Status** tab.  b) **Schedule Cache:** Please note that this feature will be made available in future releases.

6.2.2 Checking Content Integrity

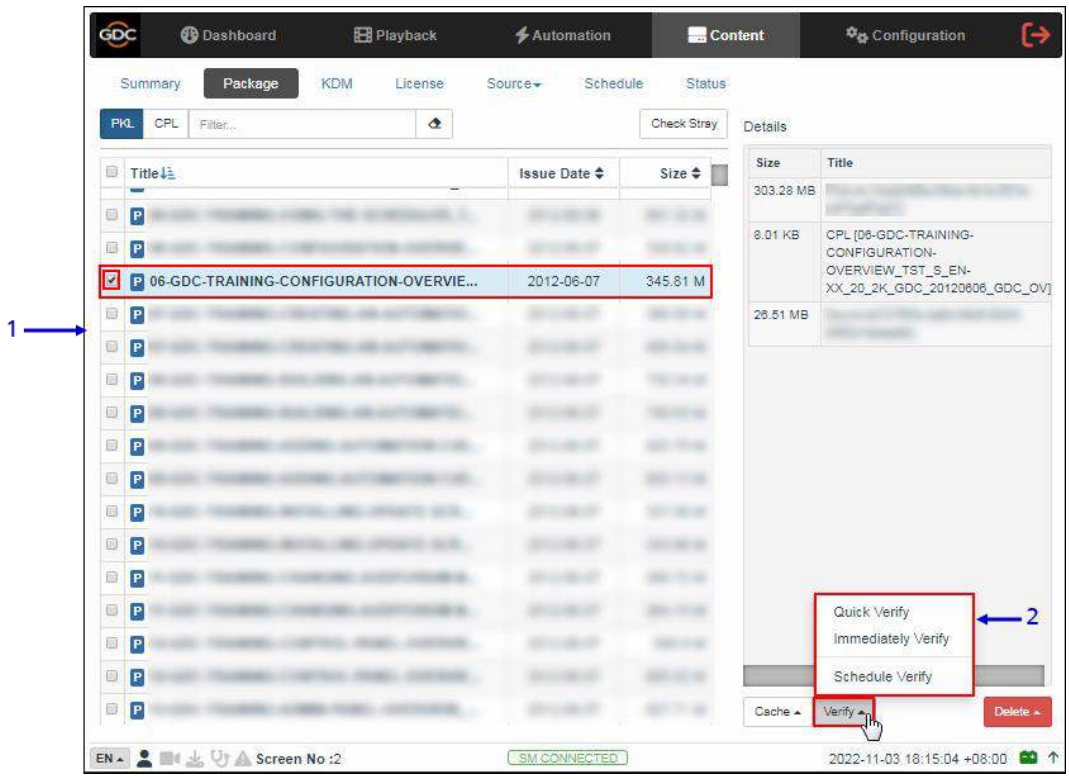
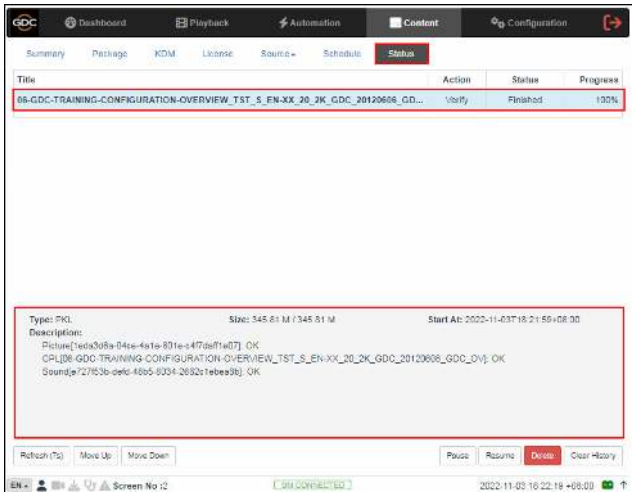


Figure 33: Content Verification options

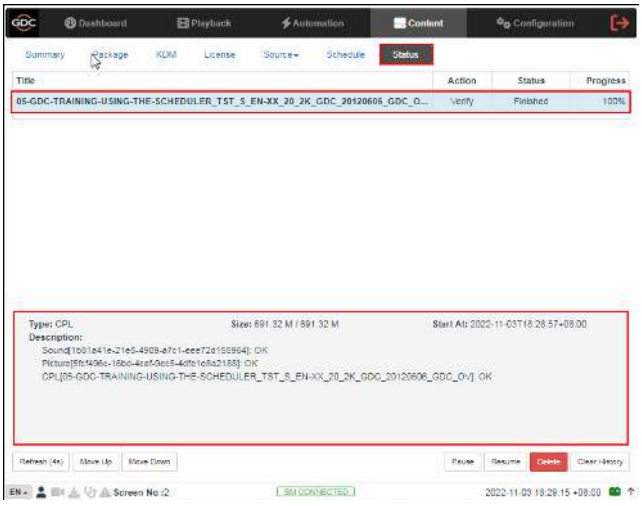
SN	Function Description
1	To verify the integrity of a package or CPL, go to the **Package** tab and select the checkbox against the package or CPL that needs to be verified. The PKL/CPL details will be displayed under the Details section on the right.

2 Click on the Verify button. There are three ways in which content can be verified:

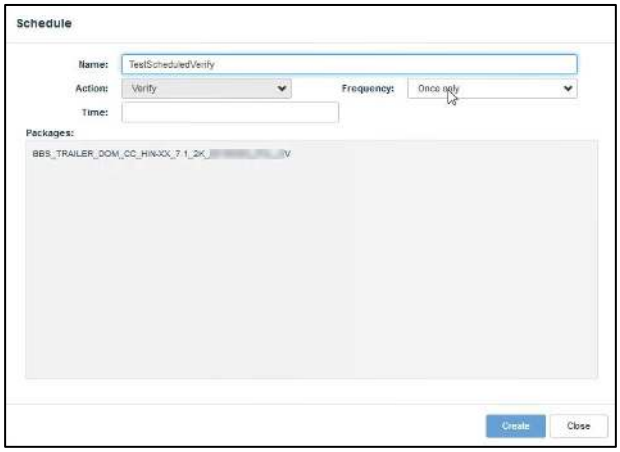
a) **Quick Verify**: The selected content gets quickly verified. The Verification status will be displayed under the **Status** tab. The Green OK indicates no error is found. Otherwise, the description of the error will be shown.



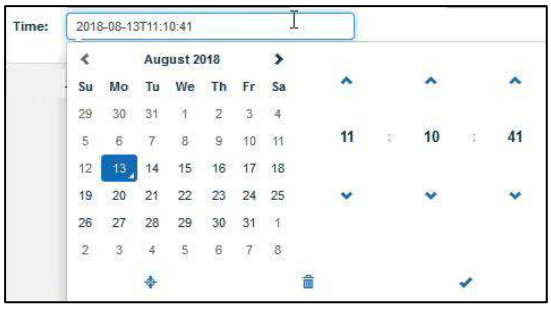
b) **Immediately Verify**: Immediate full verification of the selected CPL/PKL. The Verification status will be displayed under the **Status** tab.



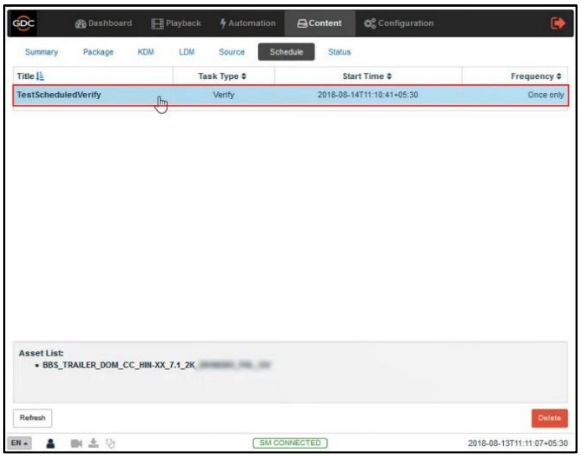
c) **Schedule Verify**: Set a date and time for full verification of the selected CPL/ PKL. A pop-up window will be shown to provide details for the schedule. Provide a Name for the schedule being created.



Select the Frequency and Time for the schedule



Click on the Create button to schedule the verification. The scheduled verification will be displayed under the **Schedule** tab, as shown below. To delete this schedule, click on the Delete button.



Note: If there is an error in the selected package, it will indicate 'Failed' under the **Status** column.

6.2.3 Deleting Content

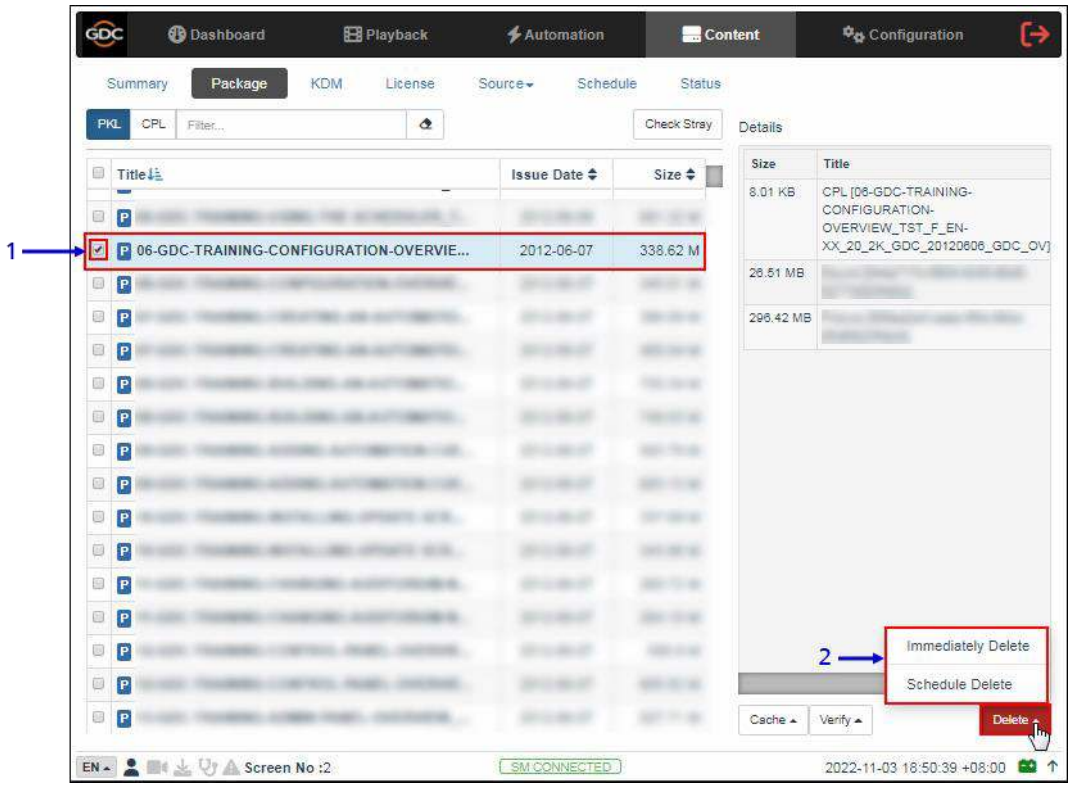
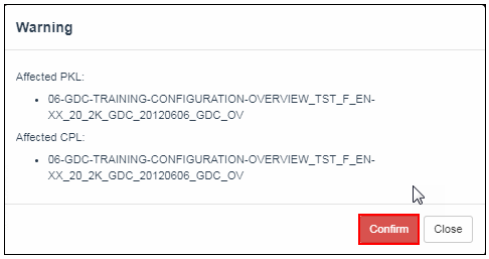
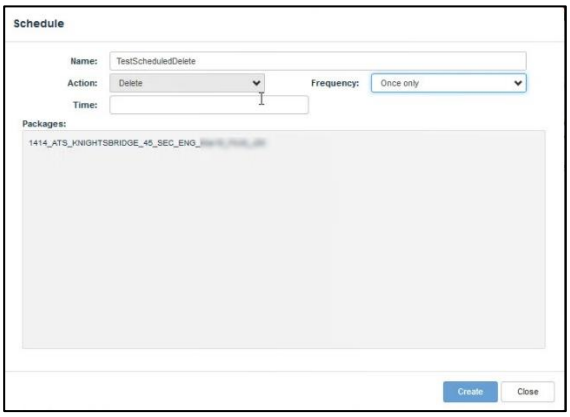
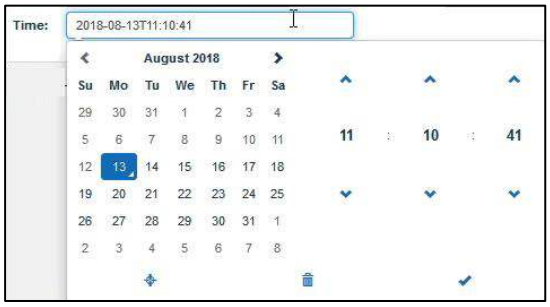
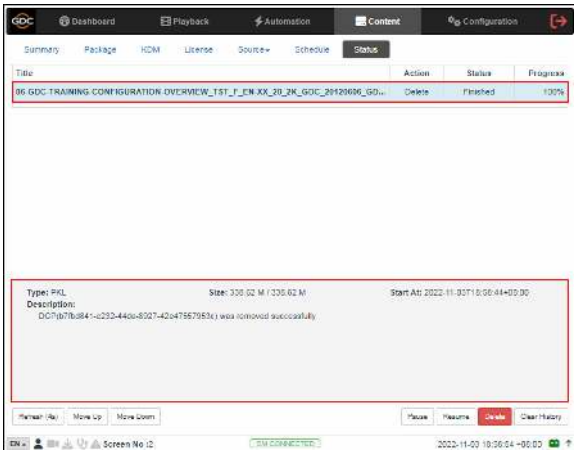


Figure 34: Content Deletion options

SN	Function Description
1	To delete a package or CPL, go to the **Package** tab and select the checkbox against the package or CPL that needs to be deleted. The PKL/CPL details will be displayed under the Details section on the right.
2	Click on the Delete button to delete the selected package or CPL. You can either choose 'Immediately Delete' or 'Schedule Delete'. a) **Immediately Delete**: This option can be used to immediately delete the selected PKL/CPL. A pop-up window is shown to confirm the deletion of the package. Click on Confirm to delete content or click Close to cancel. The deletion status will be displayed under the **Status** tab.  b) **Schedule Delete**: Set a date & time to delete the selected PKL/CPL. A pop-up window will be shown to provide details for the schedule. Provide a Name for the schedule being created.  Select the Frequency and Time for the schedule 



Click on the Create button to schedule the deletion. The scheduled deletion will be displayed under the **Schedule** tab, as shown below. To delete this schedule, click on the Delete button.



6.3 KDM

The **KDM** sub-tab displays all the KDMs present on the SR-5400C

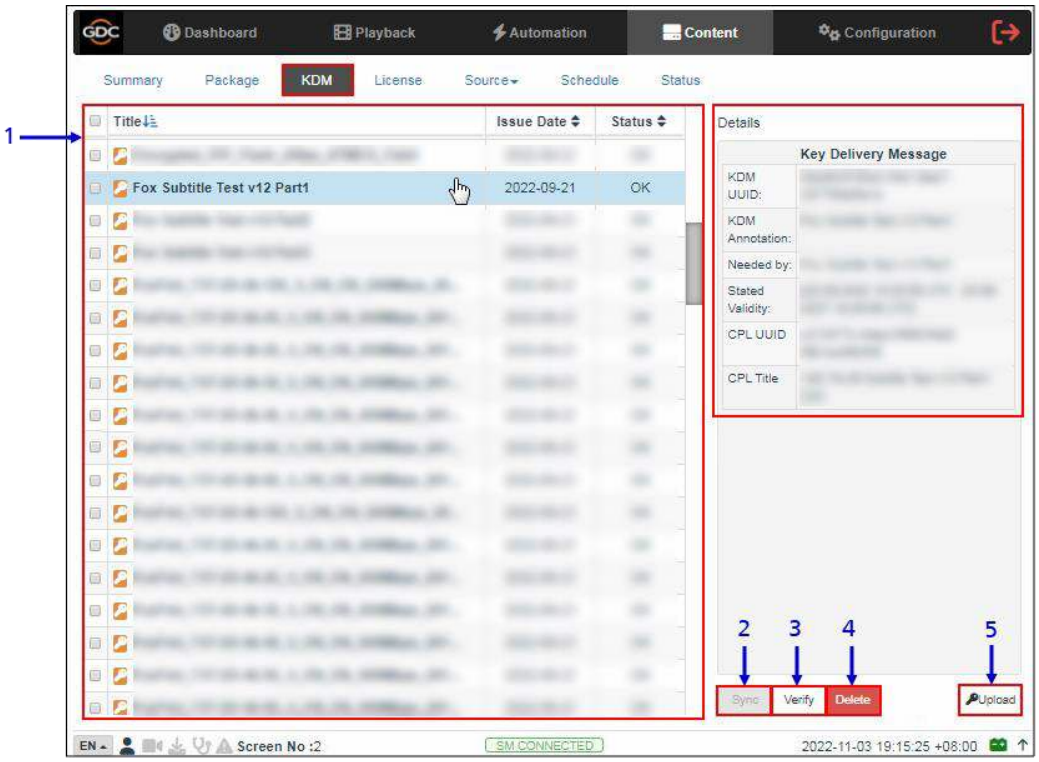
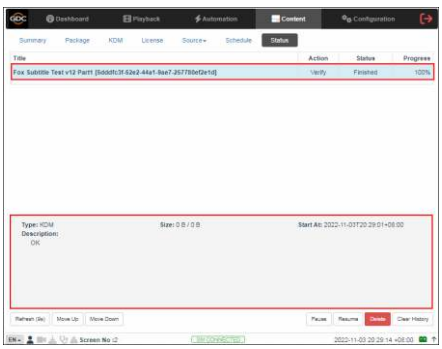
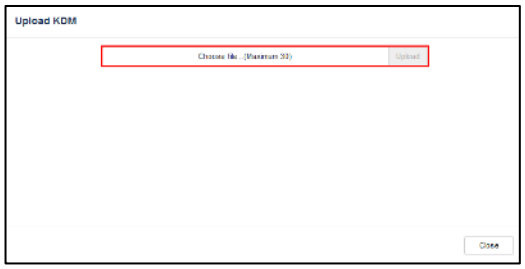


Figure 35: Content → KDM

SN	Function Name	Description
1	[KDM List]	Displays a list of the KDMs on the SR-5400C. When a KDM is selected from the list, KDM details are displayed under the Details panel.
2	[Sync]	When the status displays ‘Not in SM”, click the Sync button to synchronize the KDM to the SM.
3	[Verify]	Verify the selected KDM. The verification status will be displayed under the **Status** tab. 

4	[Delete]	Delete the selected KDM.
5	[Upload]	Upload KDM files directly using the Web UI. A pop-up window is shown. Click on the Choose file button to select the KDM file(s) from the folder where it has been downloaded and click on Open. 

6.4 License

The **License** sub-tab displays the list of capabilities of the SR-5400C IMB.

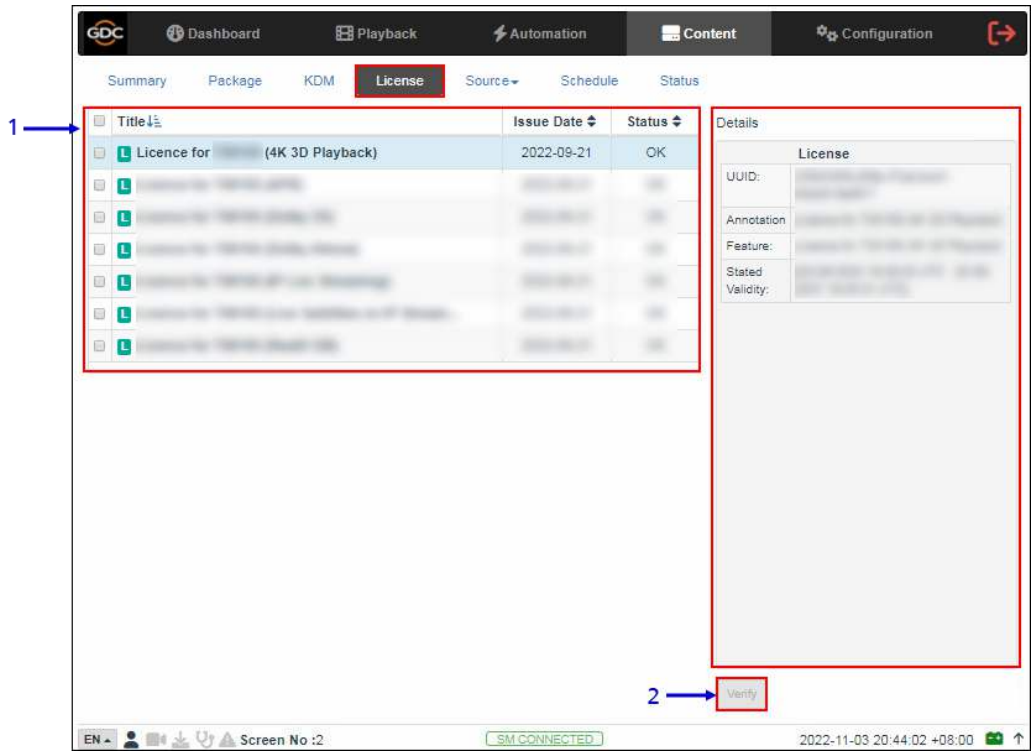


Figure 36: Content → License

SN	Function Name	Description
1	[LDM List]	Displays a list of capabilities installed on the SR-5400C. When an LDM is selected from the list, LDM details are displayed on the right panel.
2	[Verify]	Verify that the LDM is valid. Any errors found will be displayed. The Verification status will be displayed under the **Status** tab.

6.5 Source

The **Source** sub-tab is used to configure and manage the content ingest sources on the SR-5400C. There are two options available under this sub-tab: **Ingest** and **Manage**.

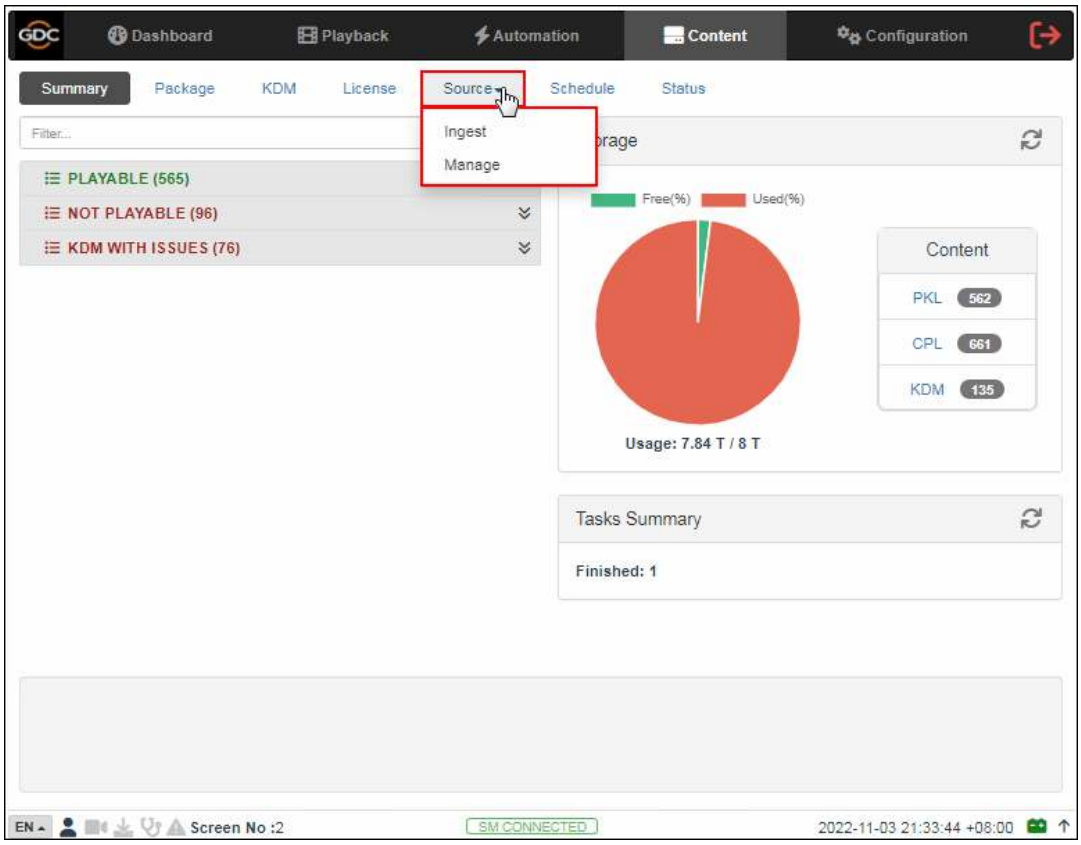


Figure 37: Content → Source options

6.5.1 Ingest Source

The **Ingest** screen displays the list of sources from which the user can choose to ingest content. The options listed under this screen should be used to perform ingest operations on a daily basis.

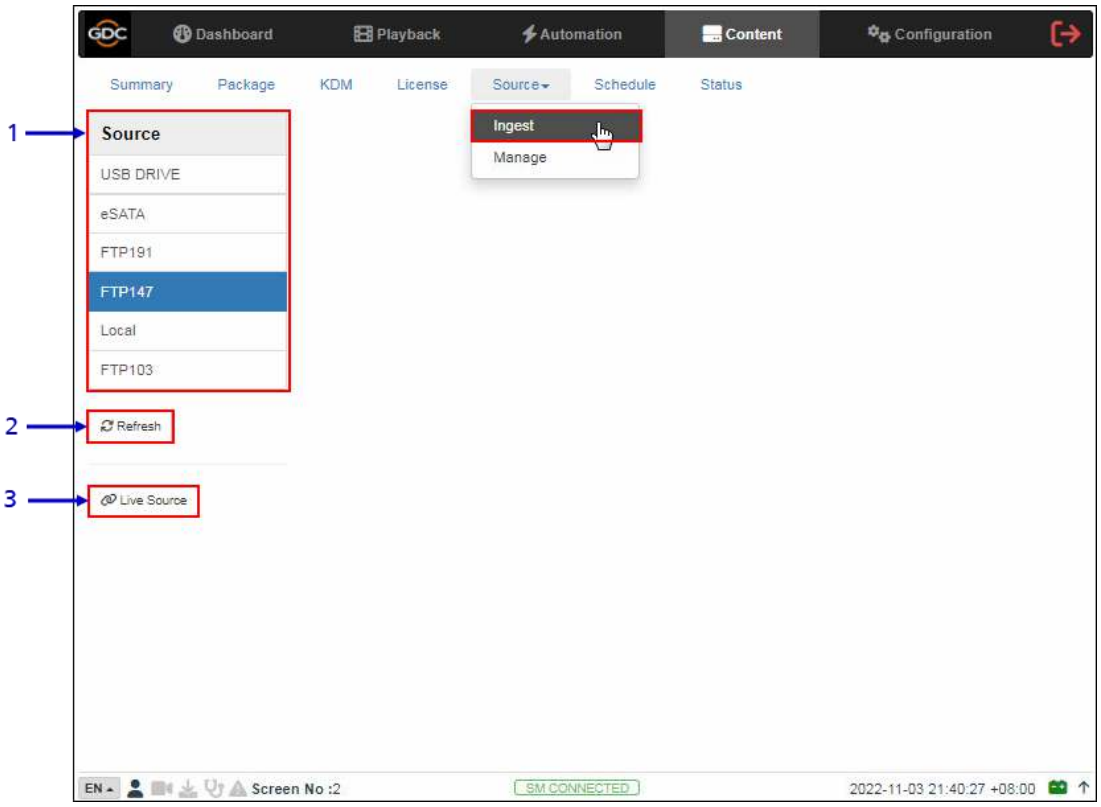


Figure 38: Ingest Source

SN	Function Name	Description
1	[Source]	Displays a list of configured content ingest sources on the SR-5400C.
2	[Refresh]	Click Refresh to refresh the list of content ingest sources
3	[Live Source]	Displays the list of content for Live Play (Refer to **Section 6.5.1.3** for details.)

6.5.1.1 Ingesting Content from USB Disk

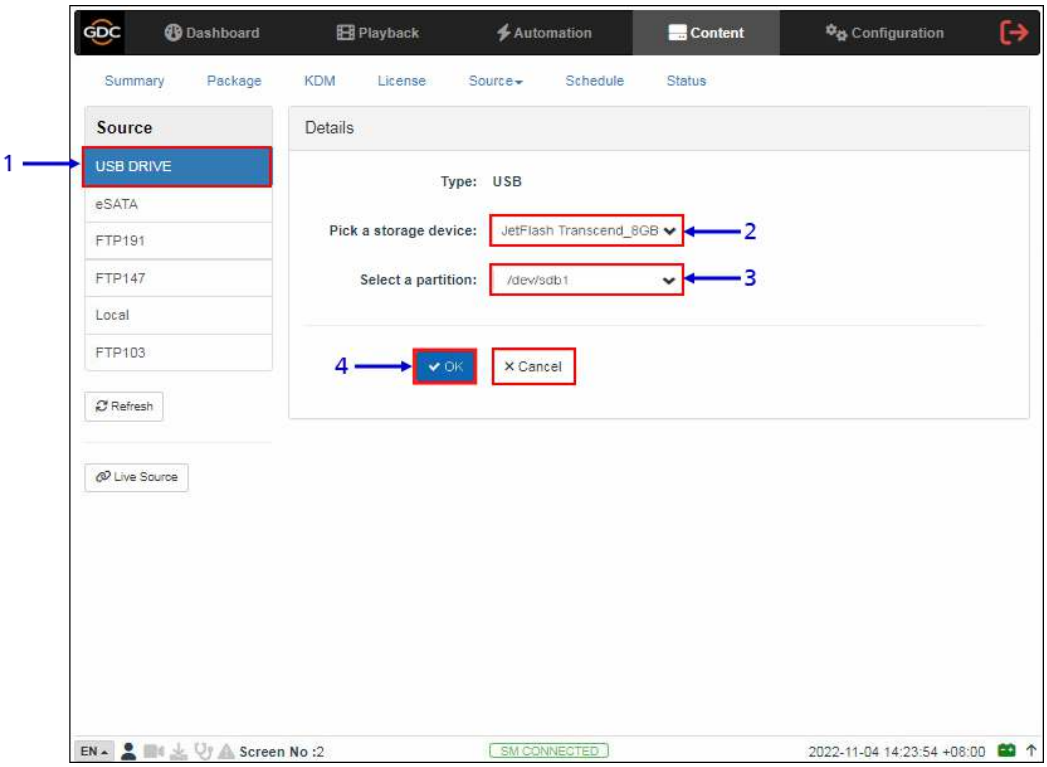


Figure 39: Ingesting Content from USB Disk (1)

SN	Function Description
1	Select USB DRIVE from Source list.
2	Under the Details section; select the drive name assigned to the USB Disk, from the Pick a storage device: drop-down
3	Select the drive partition assigned to the USB Disk by the SR-5400C from the Select a partition: drop-down
4	Click OK to mount the content ingest source and select the content to be ingested.

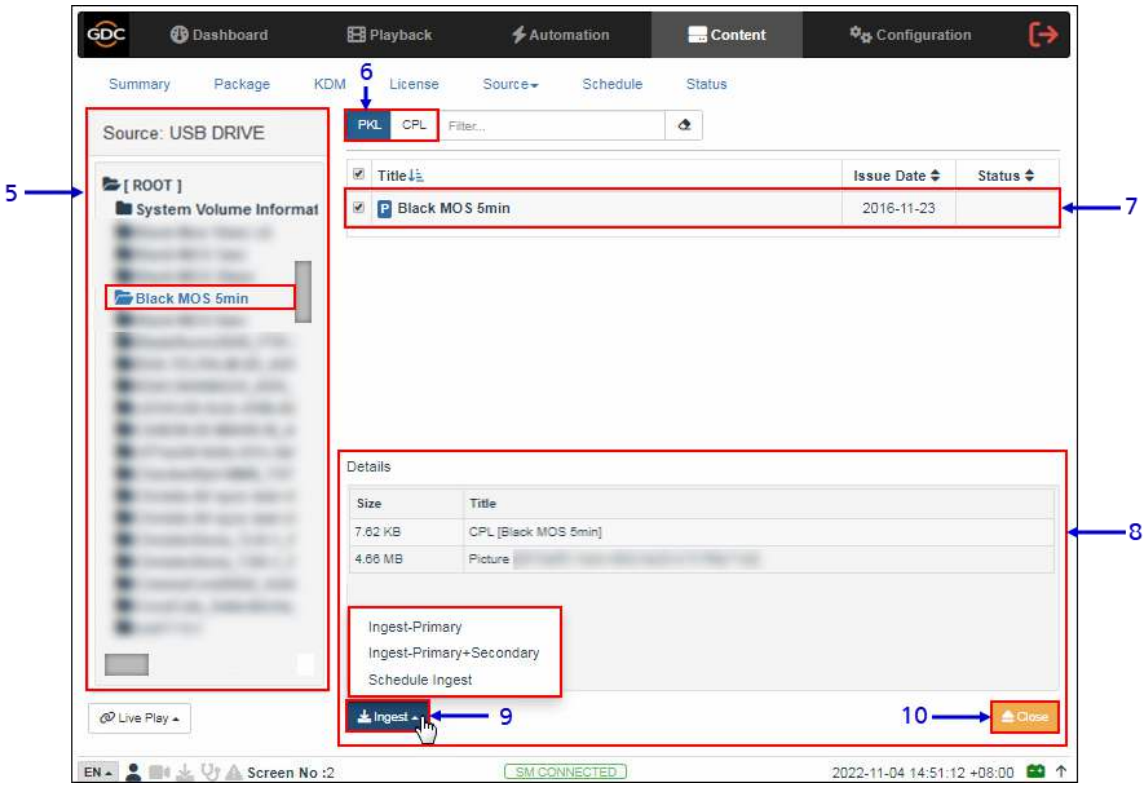
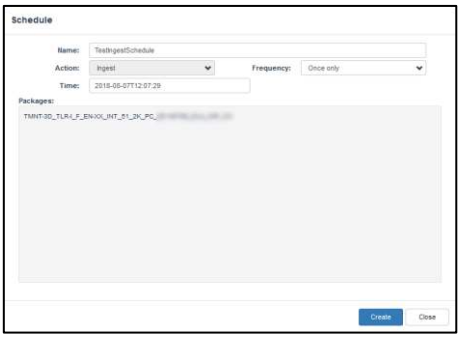


Figure 40: Ingesting Content from USB Disk (2)

5	Browse the selected source and select the directory where the package is located. The list of packages in the directory will be displayed in the top right section of the screen.
6	This button can be used to toggle between the PKL/CPL list displayed in the top right section of the screen.
7	Select the package or CPL you wish to ingest using the checkbox on the left of that particular entry in the PKL/CPL list. You can select multiple PKL's or CPL's.
8	Information about the selected package or CPL, including the file size, is shown in the section below the PKL/CPL list.

9	Click on the Ingest button & select the Ingest option to queue downloading of the PKL/CPL. (To bypass ingestion for direct playback you can click on Live Play instead. Refer to **Section 6.5.1.3** for details). For SR-5400C with CineCache™, if the Secondary Storage has been enabled under **Configuration → Storage**, you will be given an option to either ingest to the Primary storage or to both the Primary & Secondary storage at the same time, as shown below:  You may also ingest the selected content by creating a schedule, using the Schedule Ingest option:  To check on the download status of the ingested content, go to the **Status** sub-tab. Refer to **Section 6.7** for more details.
10	When done selecting the package(s), click on the Close button. **IMPORTANT:** Always press Close after you are done starting the download of content. You can monitor the progress of ingest from the **Status** tab. Refer to **Section 6.7** from more details about the **Status** tab.

6.5.1.2 Ingesting KDMs

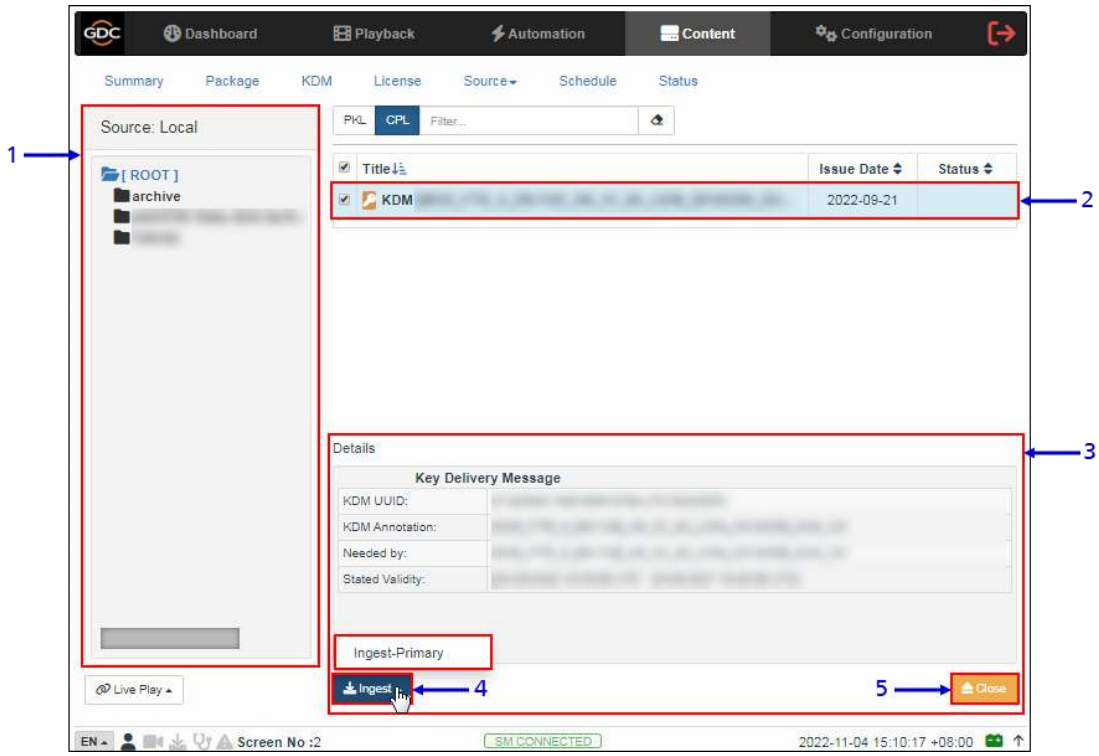
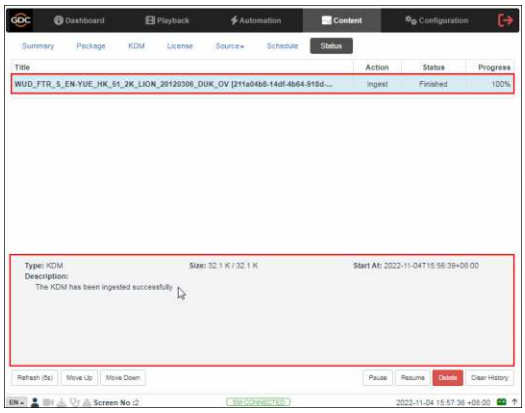


Figure 41: Ingesting KDMs

SN	Function Description
1	Browse the selected source and select the directory where the KDM is located. The list of KDMs in the directory will be displayed in the top right section of the screen.
2	Select the KDM you wish to ingest, using the checkbox on the left of that particular entry from the displayed list. You can also select multiple KDMs.
3	Information about the selected KDM, including *Needed by CPL* & *Stated Validity* are shown in this section.

4	Click on the Ingest button & select the Ingest option to queue downloading of the KDM. To check on the download status of the ingested KDM, go to the **Status** tab. 
5	When done selecting the KDM(s), click on the Close button.

Note: As mentioned in **Section 6.3**, KDM files can also be directly from the Web UI using the Upload option under the **KDM** sub-tab.

6.5.1.3 Live Play

Live Play allows playback from content ingest source without ingesting.

- **Live Play** is supported for USB/ eSATA sources only.
- Content should always be ingested before playback whenever possible.

Note: Playback of HFR content is NOT recommended using Live Play.

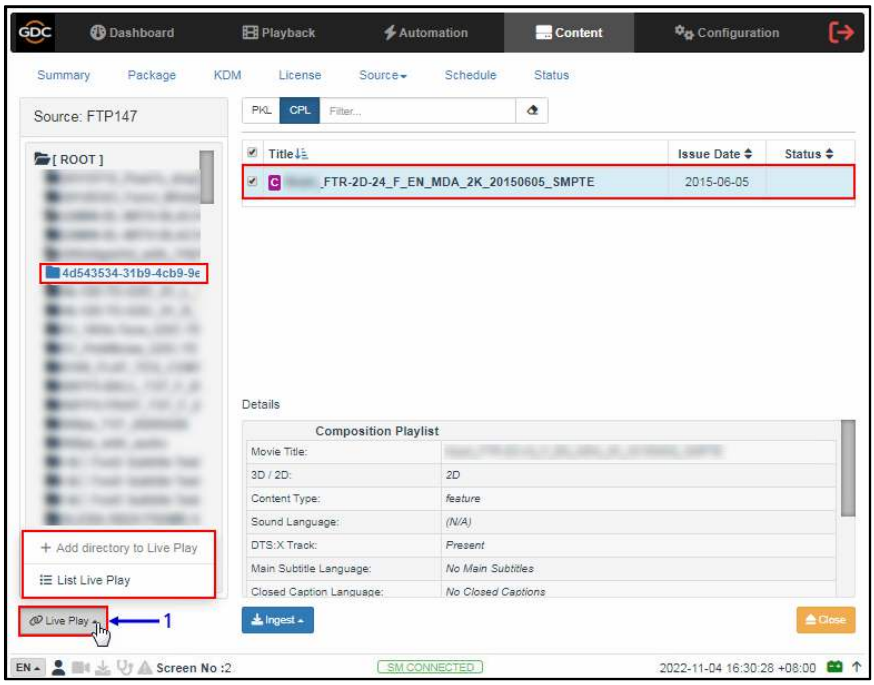


Figure 42: Live Play

SN	Function Name	Description
1	[Live Play]	Two options are available when the Live Play button is clicked: • **Add to Live Play:** Add the selected content as a Live Play Source • **List Live Play:** A pop-up window will be shown to display the list of Live Play Sources. The Live Play sources can be listed by clicking on the Live Source button under the **Ingest** or **Manage** screen.  A Live Play source can be unmounted by clicking on the ⏏ button shown alongside the listed source.

6.5.2 Manage Source

The **Manage** screen provides advanced options to create as well as edit the sources from which the user can choose to ingest content.

Note: This screen should **ONLY** be used either to create an ingest source during setup or to edit an existing ingest source.

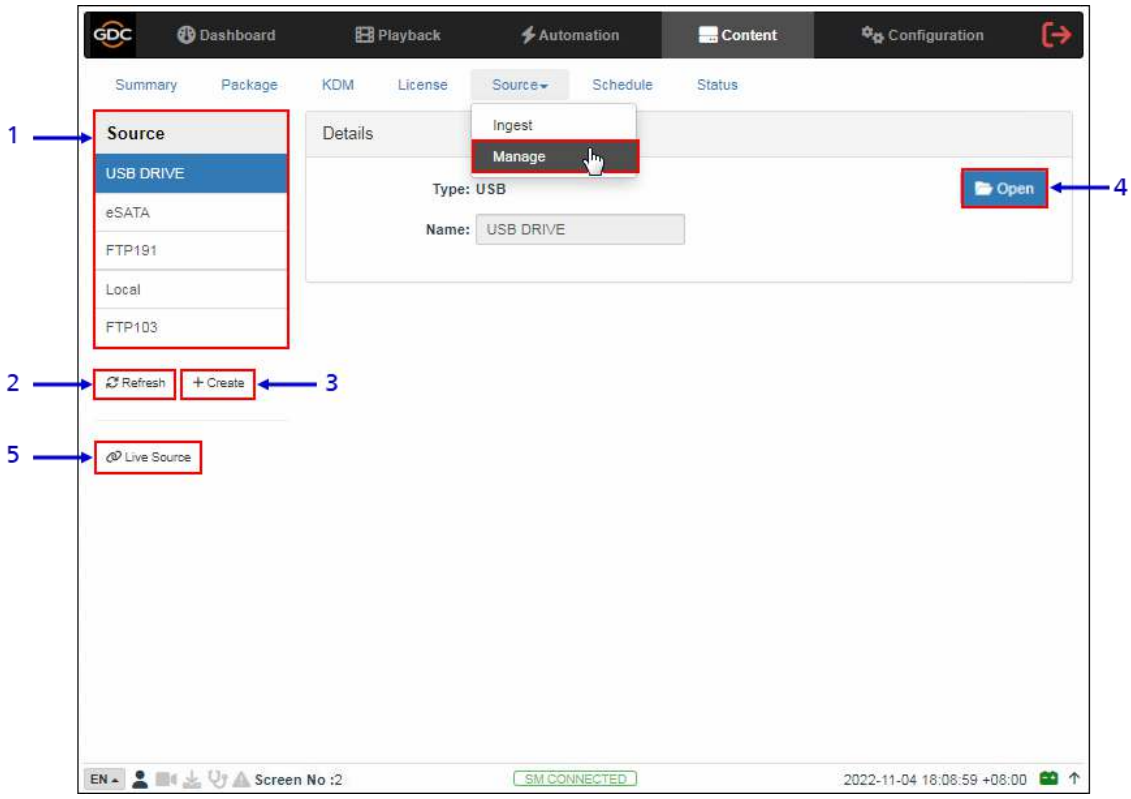
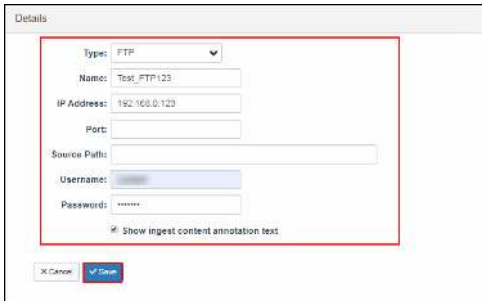
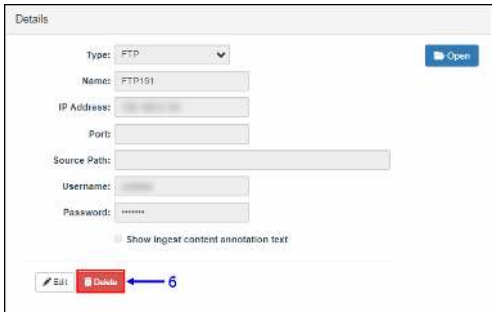


Figure 43: Manage Ingest Sources

SN	Function Name	Description
1	[Source]	Displays a list of configured content ingest sources on the SR-5400C.
2	[Refresh]	Click Refresh to refresh the list of content ingest sources
3	[+Create]	Click +Create to add a new content ingest source. Fill in the details for the content ingest source and click Save to save the changes.

		
4	[Open]	Click Open to mount the content ingest source and select the content to be ingested.
5	[Live Source]	Displays the list of content for Live Play (Refer to **Section 6.5.1.3** for details.)
6	[Delete]	Click Delete to delete the selected content ingest source.  **Note**: Delete and Edit buttons only available on Created Sources

6.5.2.1 Adding an FTP Ingest Source

An FTP ingest source for screen-to-screen transfer can be added from the **Manage** screen, by following the steps depicted in

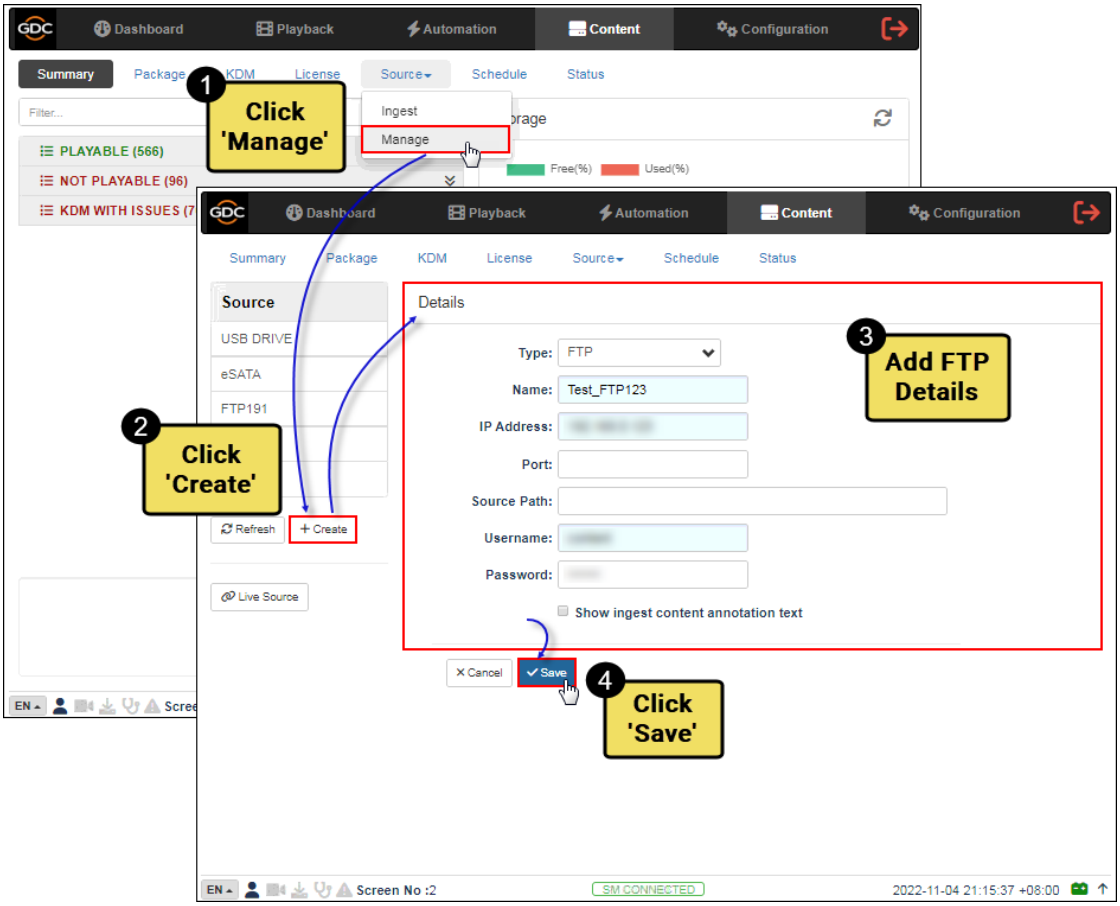


Figure 44: Creating an FTP Ingest Source

6.6 Schedule

The **Schedule** sub-tab shows the scheduled content ingest and verification tasks.

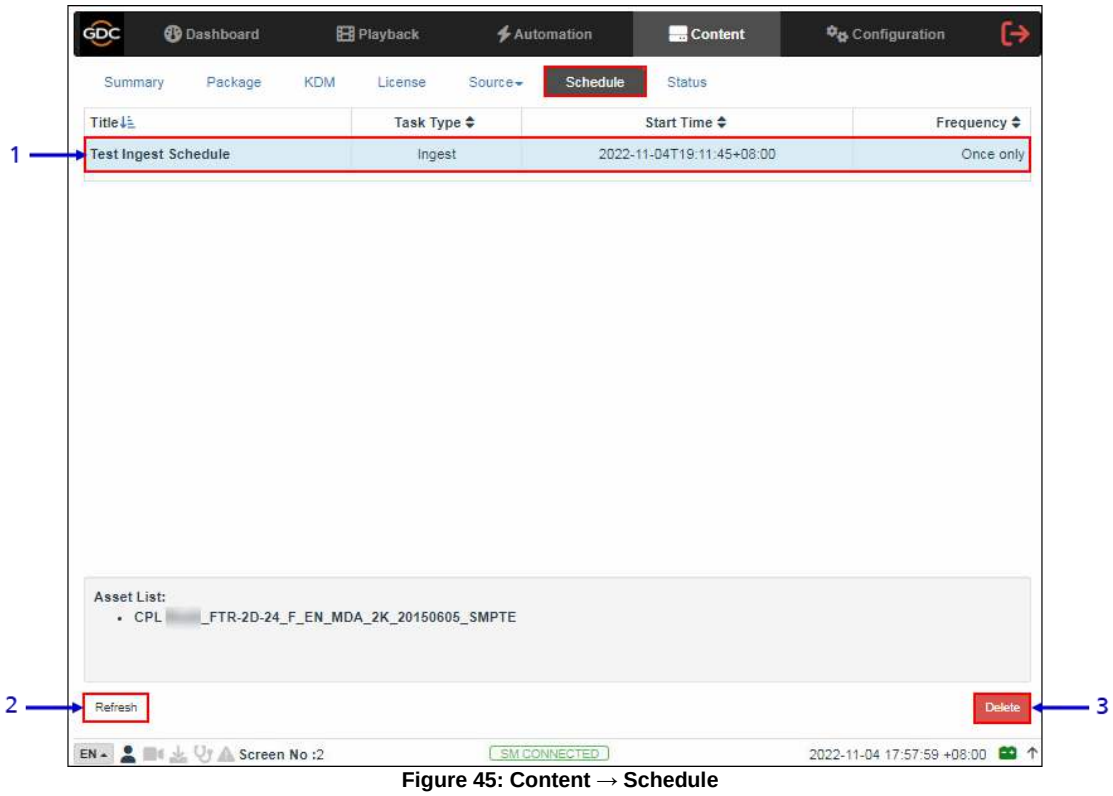


Figure 45: Content → Schedule

SN	Function Name	Description
1	[Schedule]	Displays a list of scheduled content ingest tasks.
2	[Refresh]	Click Refresh to refresh the list of schedules.
3	[Delete]	Click Delete to delete a selected schedule.

6.7 Status

The **Status** sub-tab shows content ingest and verification status.

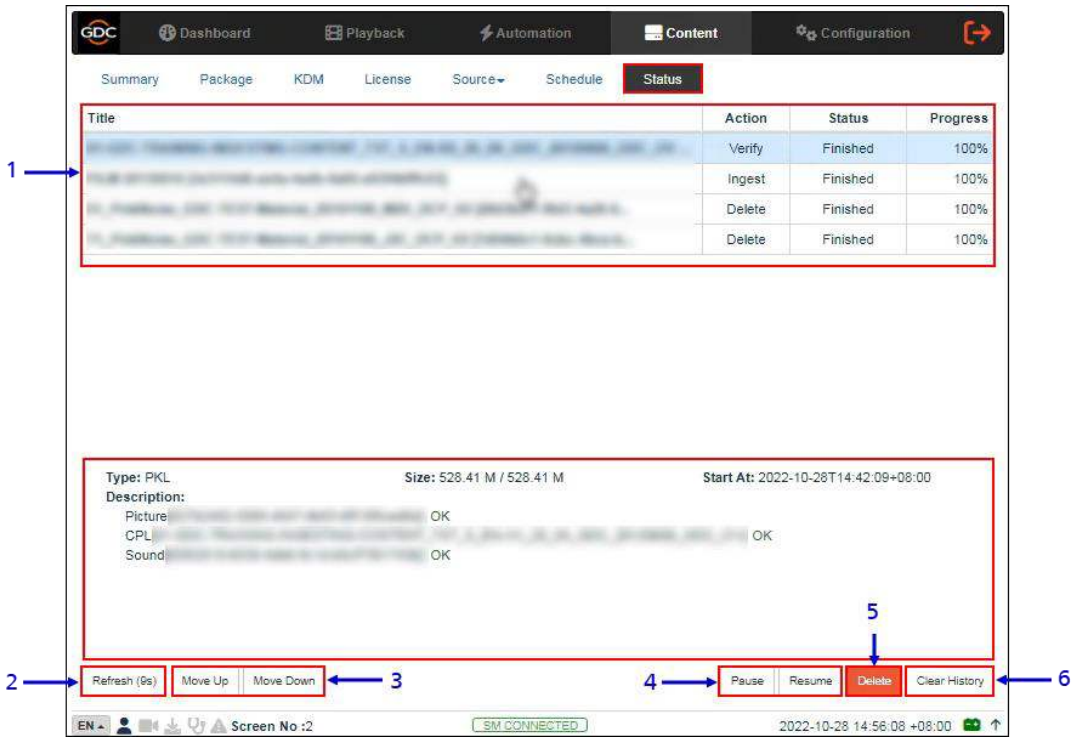


Figure 46: Content → Status

SN	Function Name	Description
1	[Status list]	Displays the list of content ingest, delete and verify tasks.
2	[Refresh]	Click Refresh to refresh the list of tasks
3	[Move Up/Move Down]	Press Move Up or Move Down to shift the position of the selected task within the displayed list.
4	[Pause/Resume]	Press Pause to temporarily stop the selected task. When the Pause button is clicked, the Resume button will be enabled and can be used to resume the selected task
5	[Delete]	Click Delete to cancel the selected task.
6	[Clear History]	Click Clear History to clear all the finished tasks from the displayed list.

7 CONFIGURATION

The configuration tab is used to change SR-5400C settings and configure aspects of SR-5400C operation. SR-5400C configuration consists of five categories: **General, Playback, Storage, System** and **Maintenance**.

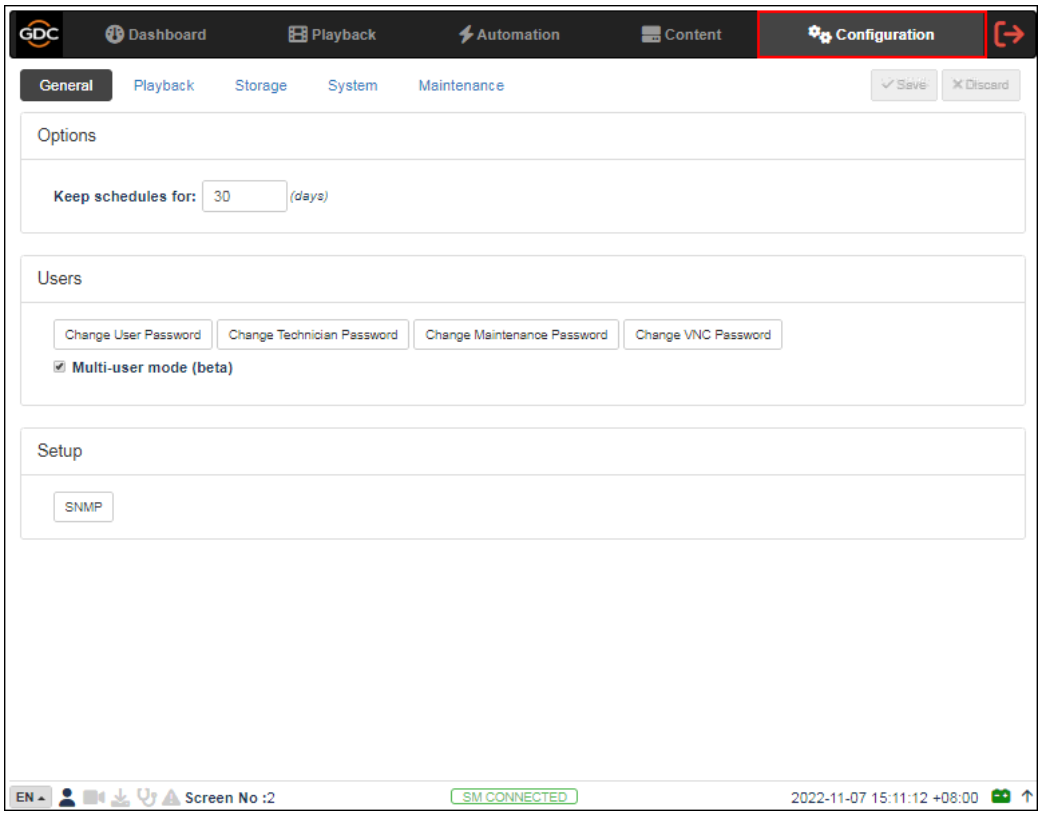


Figure 47: Configuration options

7.1 General

The **General** sub-tab is used to configure general options for the SR-5400C.

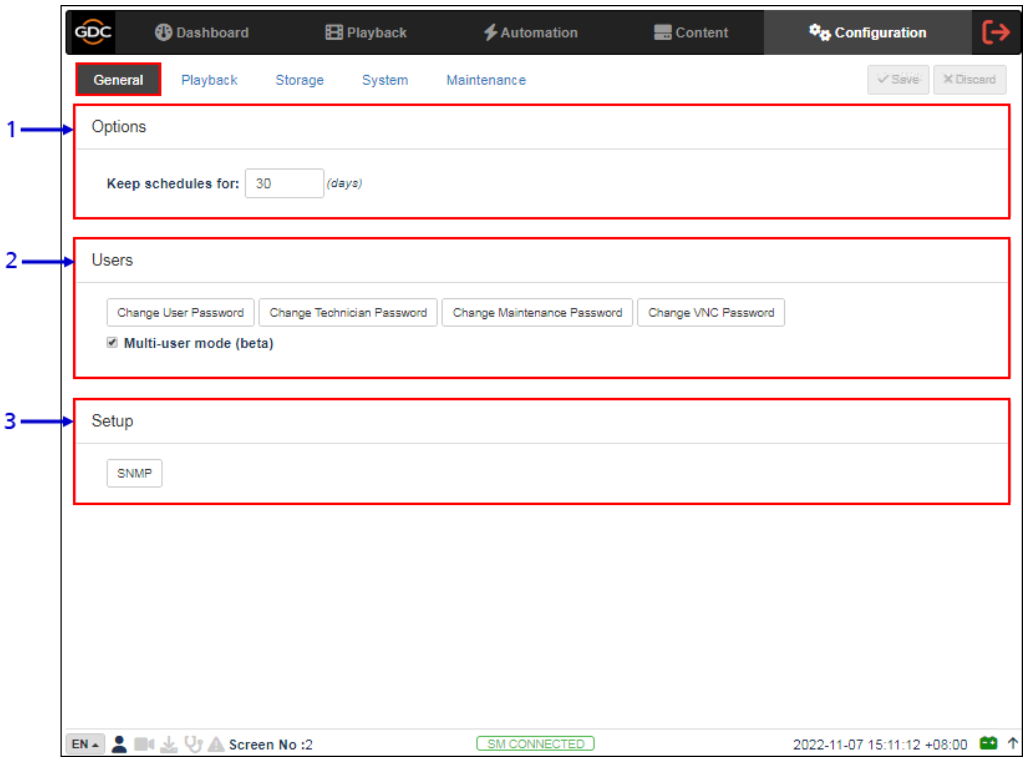


Figure 48: Configuration → General

SN	Function Name and Description	
1	[Options]	
	Keep schedules for	Set the number of days that expired schedules are kept for.
2	[Users]	
	Change User Password	Change the password for User level
	Change Technician Password	Change the password for Technician level
	Change Maintenance Password	Change the password for Maintenance level
	Change VNC Password	Change the password for remote VNC login
	Multi-user mode	Enabling this option allows multiple users to concurrently log in to the Web UI. **Note**: **Multi-user mode** may not cater to all conditions. Users are advised to use this feature with care.

3	[Setup]	
	SNMP	Set up SNMP monitoring and reporting. (Refer to **Section 7.1.1** for details.) Click Save to save the settings or Close to cancel the changes.

7.1.1 SNMP Configuration

The SNMP feature is an option on the SR-5400C that enables the use of SNMP to monitor the IMB. The SNMP interface contains many useful SNMP traps and is easy to configure.

A SNMP configuration pop-up window is shown with the following sections: **General**, **System Information**, **System Setting**, **Encrypt**, **Storage**, **Sensors**, and **Ethernet**. Clicking on each section will expand it.

7.1.1.1 General

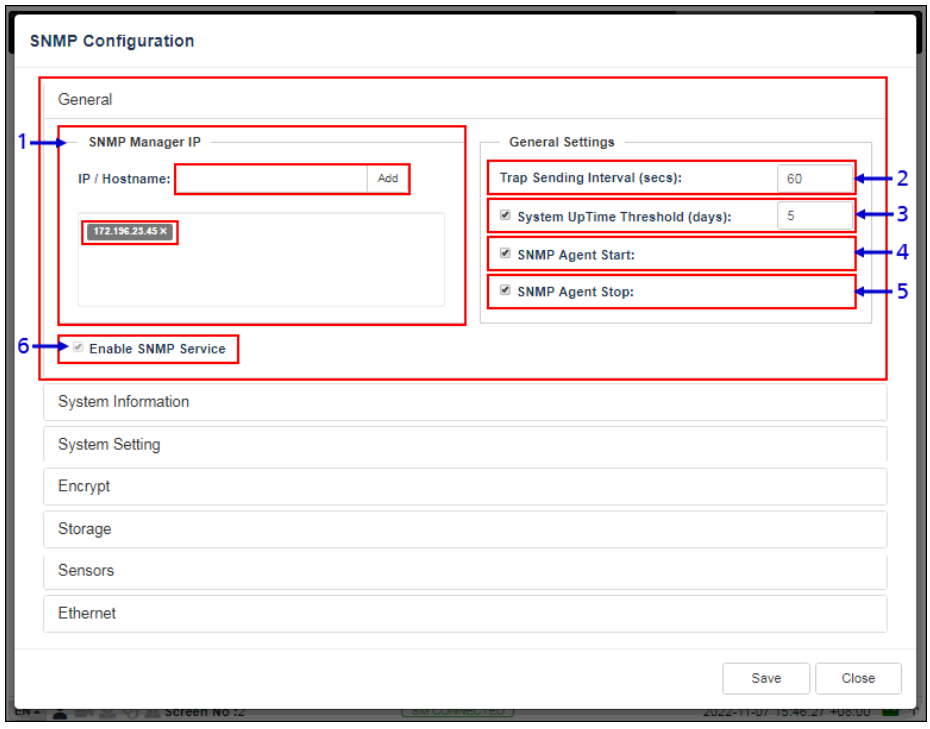


Figure 49: SNMP Configuration → General

SN	Function Name	Description
1	[SNMP Manager IP]	Indicate the IP address of the SNMP Manager where traps are to be sent. To add an SNMP Manager, Enter the IP Address of the SNMP Manager and click Add. Click the 'x' next to the IP address to remove it.
2	[Trap Sending Interval]	Indicate the time interval in seconds after which a trap should be resent to the SNMP Manager. The trap will continue to be resent only as long as the error condition exists.
3	[System UpTime Threshold]	Indicate the threshold time in days. **Note**: When Trap is On, a trap will be sent if the System UpTime exceeds the threshold value.
4	[SNMP Agent Start]	Check SNMP Agent Start to activate the Trap. Un-check the SNMP Agent Start to deactivate the Trap. **Note**: When Trap is On, a trap is sent when the SNMP Agent is started.
5	[SNMP Agent Stop]	Check SNMP Agent Stop to activate the Trap. Un-check the SNMP Agent Stop to deactivate the Trap. **Note**: When Trap is On, a trap is sent when the SNMP Agent is stopped.
6	[Enable SNMP Service]	Enable or disable SNMP monitoring and reporting. Click Save to save the settings or Close to cancel the changes.

7.1.1.2 System Information

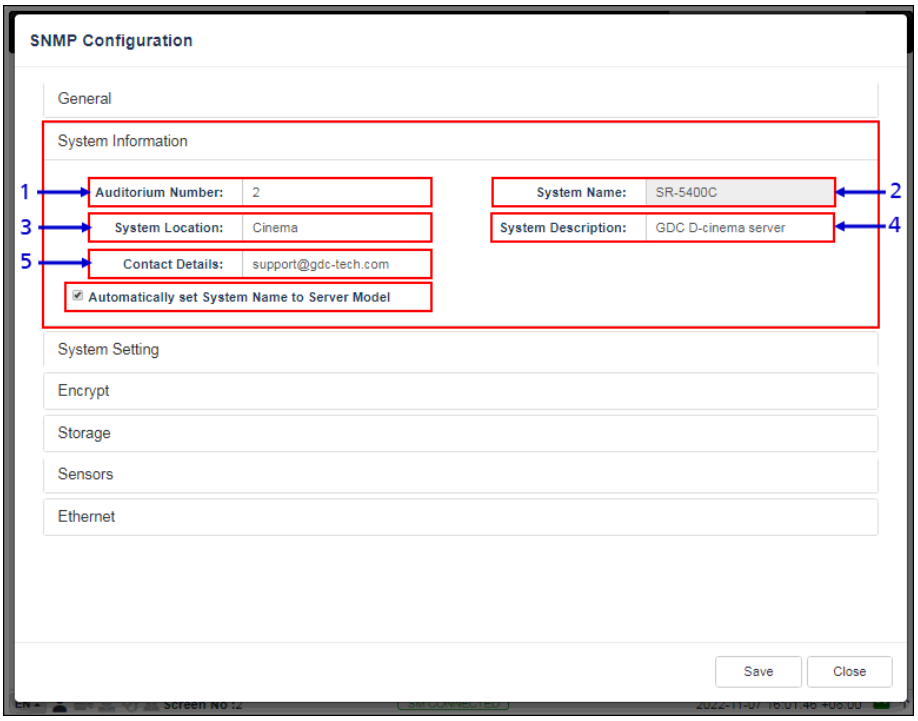


Figure 50: SNMP Configuration → System Information

SN	Function Name	Description
1	[Auditorium Number]	The auditorium name and number where the SR-5400C is installed. This value will be displayed when SNMP information is queried. The auditorium name and number are also displayed in the Web UI Status bar as well as in the title of the web browser tab being used to access the Web UI.
2	[System Name]	The name of the server. This value will be displayed when SNMP information is queried. This will be automatically set to the server model if the Automatically set System Name to Server model option is enabled.
3	[System Location]	The location where the server is installed. This value will be displayed when SNMP information is queried.
4	[System Description]	A brief description of the server. This value will be displayed when SNMP information is queried.
5	[Contact Details]	The contact details of the Cinema where the server is installed. This value will be displayed when SNMP information is queried.

7.1.1.3 System Setting

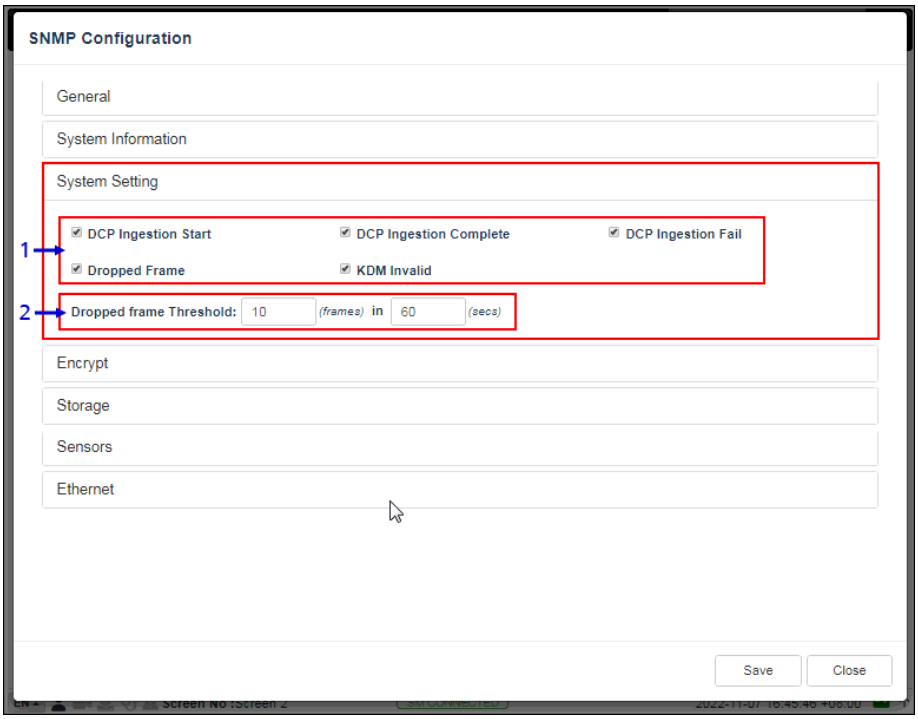


Figure 51: SNMP Configuration → System Setting

SN	Function Name	Description
1	[Ingestion Start]	When this option is checked, an SNMP trap will be generated when a DCP ingest starts.
	[Ingestion Complete]	When this option is checked, an SNMP trap will be generated when a DCP ingest is completed.
	[Ingestion Fail]	When this option is checked, an SNMP trap will be generated when a DCP ingest fails.
	[Dropped Frame]	When this option is checked, an SNMP trap will be generated when the playback has dropped frames
	[KDM Invalid]	When this option is checked, an SNMP trap will be generated when we try to play a playlist containing CPL without a valid KDM
2	[Dropped Frame Threshold]	Set a threshold limit based on the number of frames dropped in the specified time period (in seconds).

7.1.1.4 Encrypt

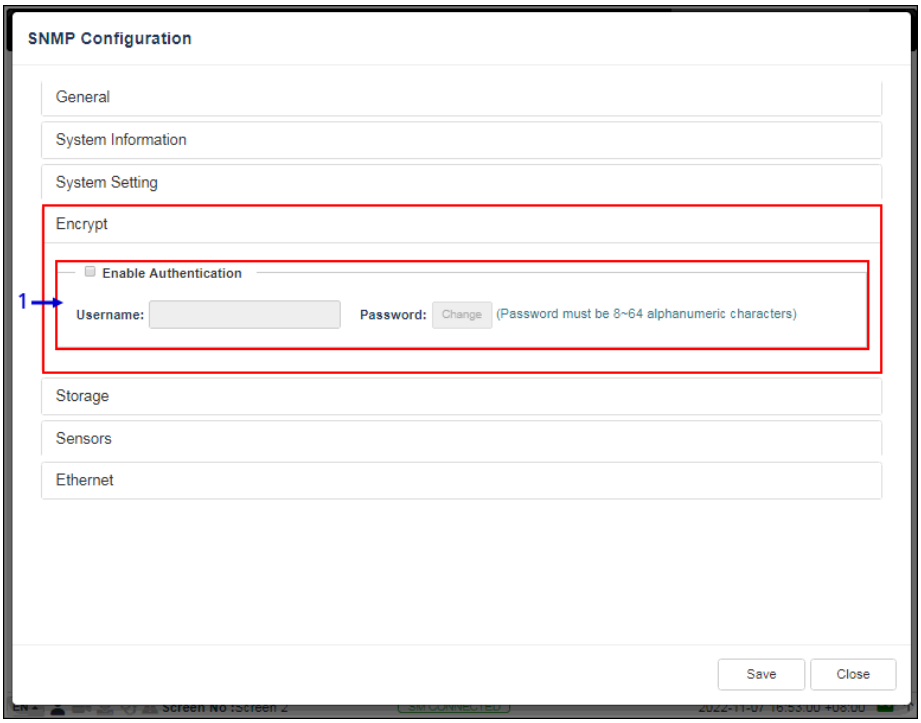


Figure 52: SNMP Configuration → Encrypt

SN	Function Name	Description
1	[Enable Authentication]	Allows user to enable SNMP Authentication by providing Username. The default Password can be changed using the Change button. **Note**: The new password should be alphanumeric and 8 to 64 characters long.

7.1.1.5 Storage

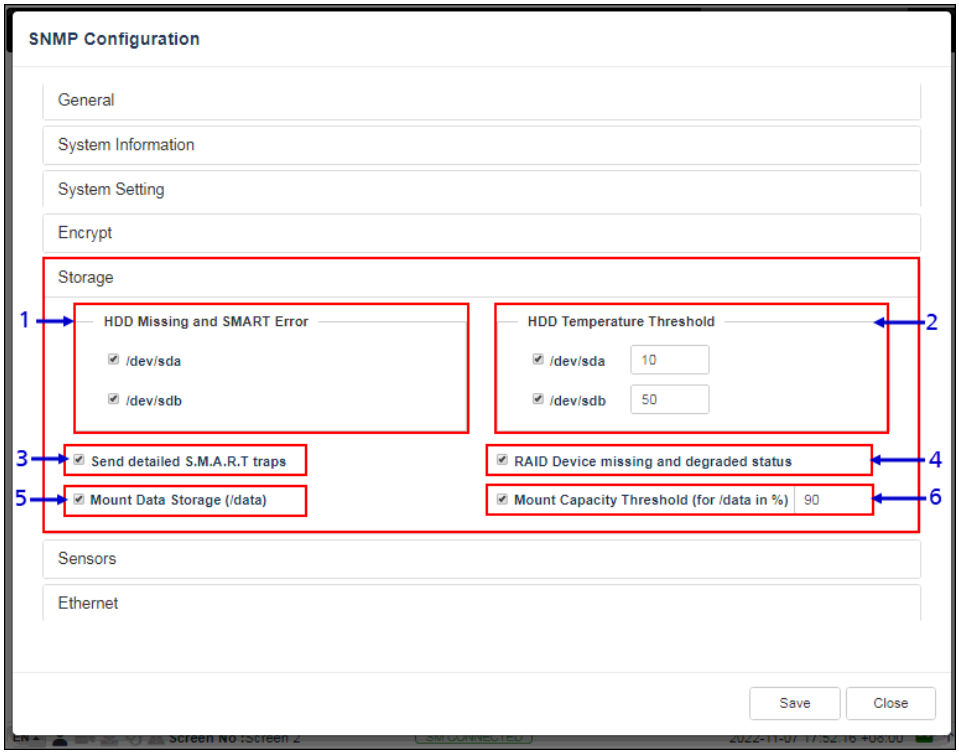


Figure 53: SNMP Configuration → Storage

SN	Function Name	Description
1	[HDD Missing and SMART Error]	Check the corresponding storage devices to activate the Trap. **Note**: When Trap is On, a trap will be sent to the SNMP Manager if the system cannot detect the specified device.
2	[HDD Temperature Threshold]	Set the desired threshold temperature for respective storage device by using the [▲] and [▼] buttons. Check the corresponding storage devices to activate the Trap. **Note**: When Trap is On, a trap will be sent to the SNMP Manager when the threshold temperature is reached.
3	[Send detailed S.M.A.R.T. traps]	Enables the sending of SNMP traps when specific hard disk S.M.A.R.T. attributes change
4	RAID Device missing and degraded status] [	Check RAID Device missing and degraded status to activate the Trap. **Note**: When Trap is On, a trap will be sent if the RAID Device is missing or degraded.
5	[Mount Data Storage]	Check Mount Data Storage to activate the Trap. **Note**: When Trap is On, a trap will be sent if the data storage is not mounted on the system.

6	[Mount Capacity Threshold (for data in %)]	Set the mount capacity threshold value for data (in percentage) **Note**: When Trap is On, a trap will be sent if the mount capacity threshold value is reached.

7.1.1.6 Sensor

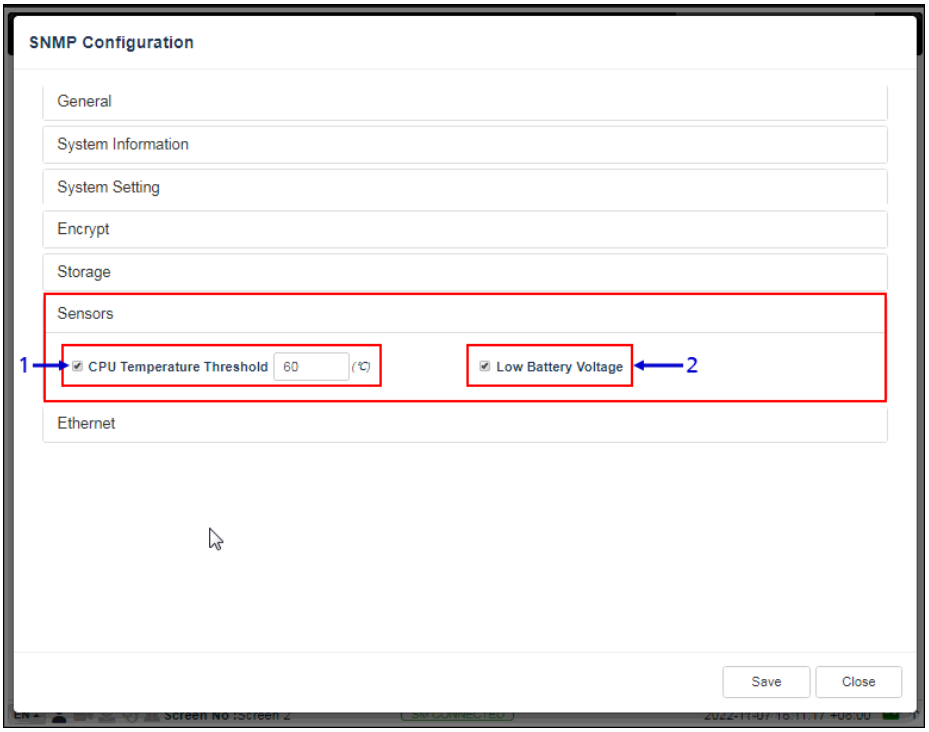


Figure 54: SNMP Configuration - Sensor

SN	Function Name	Description
1	[CPU Temperature Threshold]	Set the threshold temperature required for the CPU sensors by typing in the field or using an on-screen keyboard. Check CPU Temperature Threshold to activate the Trap. **Note**: When Trap is On, a trap is sent if the CPU temperature exceeds the maximum threshold temperature.
2	[Low Battery Voltage]	Check Low Battery Voltage to activate this trap. **Note**: When Trap is On, a trap is sent if the IMB battery voltage falls below the minimum voltage limit.

7.1.1.7 Ethernet

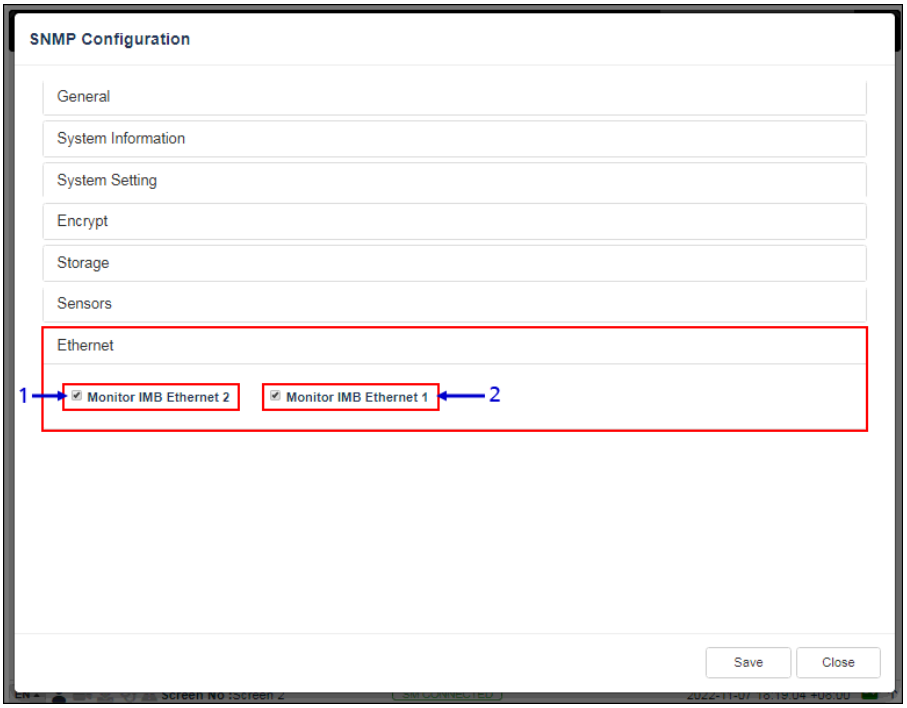


Figure 55: SNMP Configuration → Ethernet

SN	Function Name	Description
1	[Monitor IMB Ethernet 2]	Enables sending an SNMP trap if the system detects that the **IMB Ethernet 2** network interface is down.
2	[Monitor IMB Ethernet 1]	Enables sending an SNMP trap if the system detects that the **IMB Ethernet 1** network interface is down.

7.2 Playback

The **Playback** sub-tab is used to configure video, audio, subtitles and other playback-related settings on the SR-5400C.

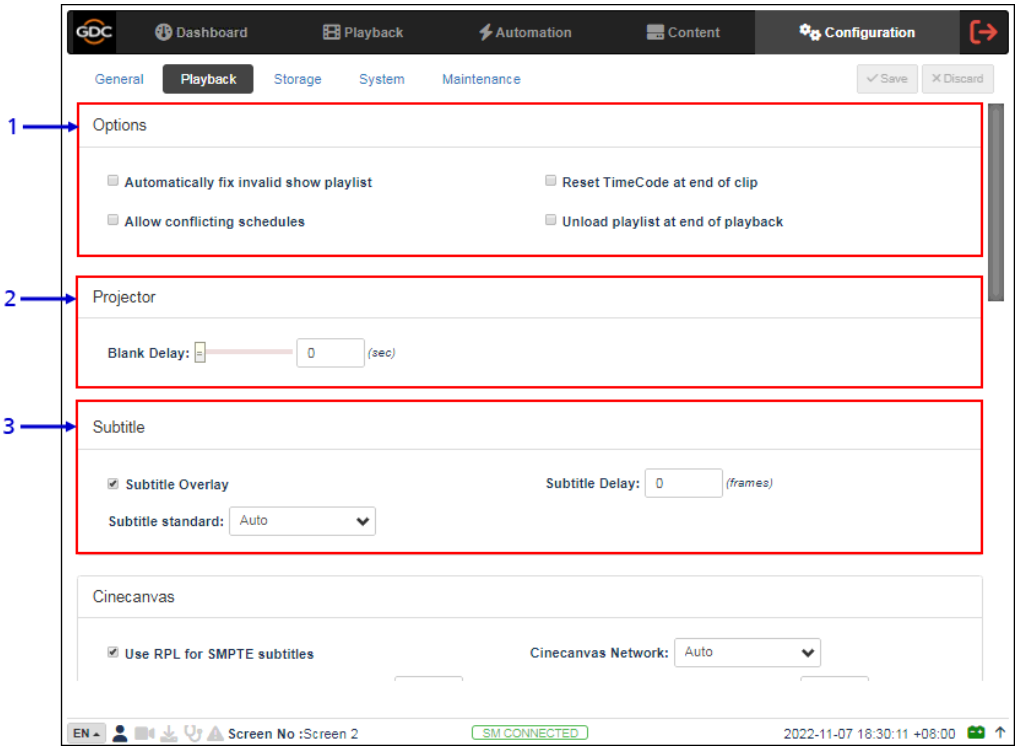


Figure 56: Configuration → Playback (1)

SN	Function Name and Description	
1	[Options]	
	Automatically fix invalid show playlist	If this option is enabled, non-playable CPLs in a show playlist will be skipped during playback.
	Allow conflicting schedules	Enabling this option allows adding of schedules with overlapping start or end times.
	Reset TimeCode at end of clip	Enabling this option resets LTC to 0 at end of each CPL.
	Unload playlist at end of playback	Enabling this option automatically unloads the SPL at the end of playback.

2	[Projector]	
	Blank Delay	This feature delays both video and audio output by the set amount of time (in sec) to allow the projector/display to sync with the video output of the IMB
3	[Subtitle]	
	Subtitle Overlay	When this option is enabled, subtitles are displayed using server rendering. When this option is disabled, CineCanvas is used for subtitle display.
	Subtitle Delay:	Enter a Subtitle Delay in number of frames, entering a negative number will advance the subtitles by that number of frames.
	Subtitle standard:	This drop-down provides the following subtitle rendering options for subtitle overlay: • ***Auto*** • ***SMPTE 428-7*** • ***Legacy***

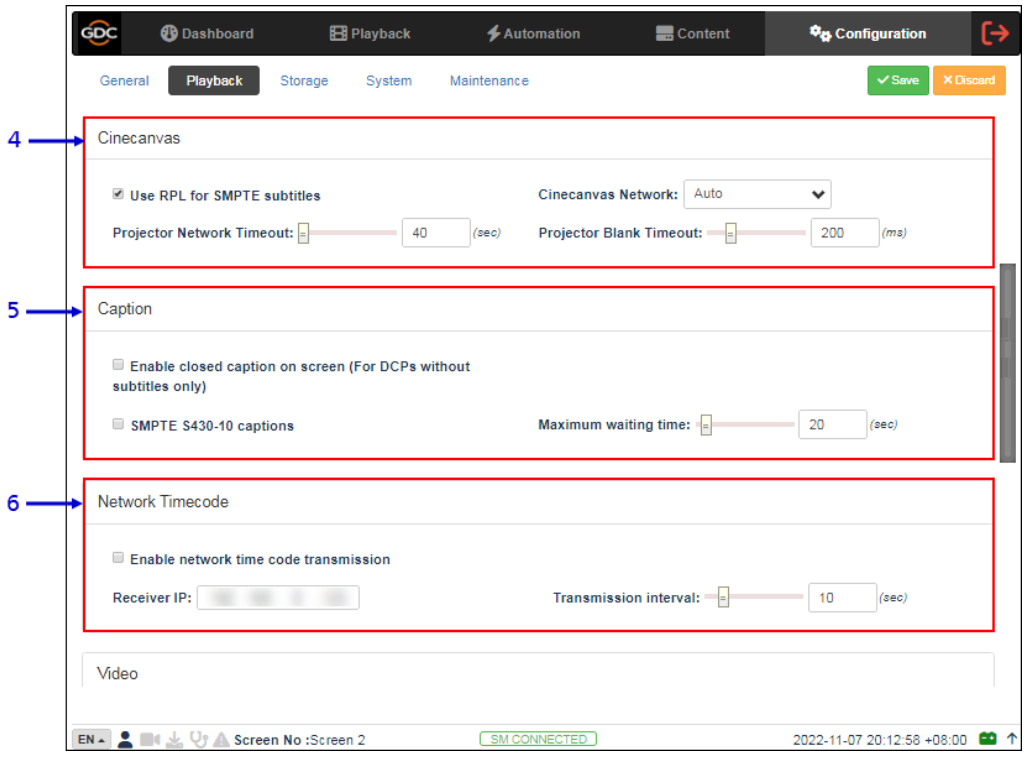


Figure 57: Configuration → Playback (2)

4	[CineCanvas]	
	Use RPL for SMPTE subtitles	Send a SMPTE-compatible Resource Presentation List (RPL) instead of an Interop-compatible Subtitle Presentation List to the projector for CineCanvas subtitles. This is only enabled when SMPTE subtitles are available for the CPL.
	Cinecanvas Network	This drop-down allows selection of the network interface which should be used for providing CineCanvas subtitles to the Projector. The following network interfaces are available: • ***Auto*** • ***Internal*** • ***IMB Ethernet 2*** • ***IMB Ethernet 1*** By default; the ***Auto*** option is selected, which should work in most cases.
	Projector Network Timeout	Timeout in seconds for communication with the projector.
	Projector Blank Timeout	Select the blank time of the projector during change of PCF or format. This is to prevent noise when the PCF or format is changed.
5	[Caption]	
	Enable closed caption on screen (For DCPs without subtitles only)	Enabling this option will display subtitles on-screen, if the CPL doesn't have any subtitles
	SMPTE S430-10 captions	Enable communication with a closed caption device that supports SMPTE 430-10 (USL CCE-100, etc.). **Note:** the closed caption device must be configured to connect to the SR-5400C.
	Maximum waiting time	Specifies the maximum time to wait for the closed caption device to report it is ready, before starting playback.
6	[Network Timecode]	
	Enable network time code transmission	Activate transmission of playback time-code over UDP.
	Receiver IP	Enter the IP of the receiver of time-code transmission of UDP.
	Transmission interval	Indicates the time interval between transmissions

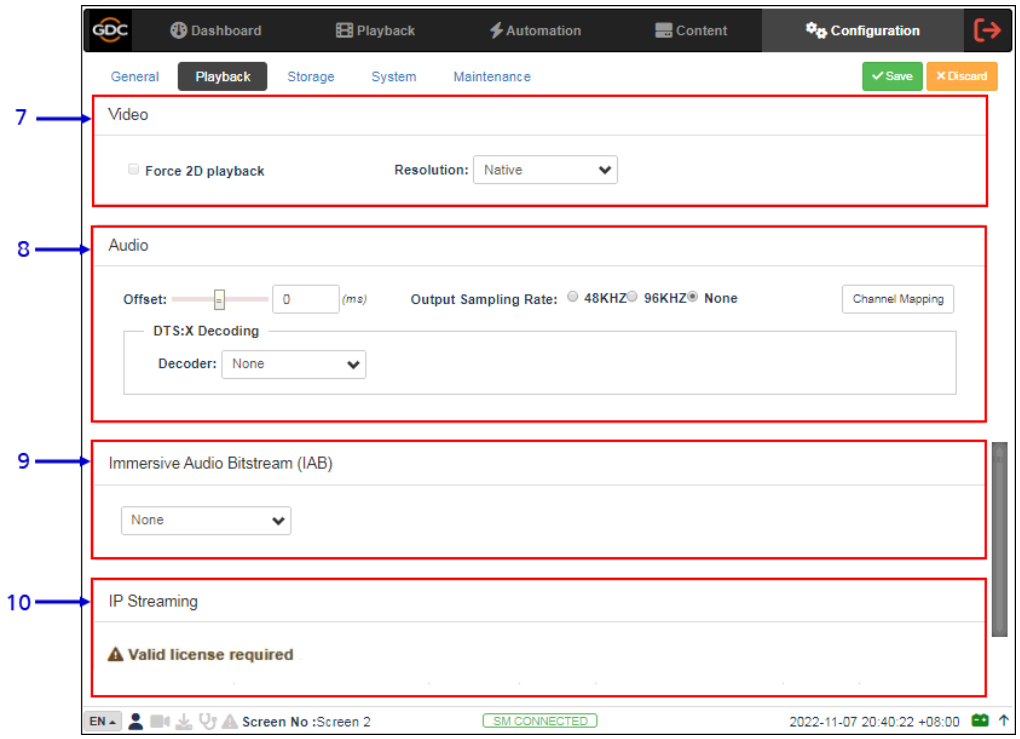


Figure 58: Configuration → Playback (3)

7	[Video]	
	Force 2D playback	Force 2D playback for 3D content. A valid license is required to enable this option.
	Resolution	The resolution is set to 'Native', by default
8	[Audio]	
	Offset	Specify an audio delay during playback. A negative audio delay will cause audio to be played ahead of video. A positive audio delay will cause audio to be played behind video.
	Output Sampling Rate	Change audio output sampling rate. Output audio sampling rate can be fixed at 48kHz or 96kHz for all content, or it can match the content's audio sampling rate (option 'None'). If the output sampling rate is set to a fixed value (48kHz or 96kHz), content audio is re-sampled if it does not match the output sampling rate.
	Channel Mapping	Use the audio channel mapping interface to map content audio channels to different audio output channels. Refer to **Section 7.2.1** for details related to **Audio Channel Mapping.**

	DTS:X Decoding **Decoder**	Configure the SR-5400C to work with an external DTS:X™ decoder by selecting the '**External'** option. A valid license is required to enable DTS:X™ support on the SR-5400C By default, the **'None'** option is selected.
9	[Immersive Audio Bitstream (IAB)]	Configure the SR-5400C for Immersive Audio Bitstream or IAB decoding. Immersive Audio Bitstream content can be decoded by selecting either '**Dolby Atmos (External)**' or **'APX (External)'**. • If **Dolby Atmos (External)** is selected; the SR-5400C can be configured to decode IAB content via an external Dolby Atmos® Cinema Processor, such as the CP850. A valid license is required to enable Dolby Atmos® support on the SR-5400C. For more details, please contact GDC Technical Support. • If **APX (External)** is selected; the SR-5400C can be configured to decode IAB content via an external Barco APX AuroMax® Audio Processor. A valid license is required to enable Barco APX® support on the SR-5400C. For more details, please contact GDC Technical Support. By default, the **'None'** option is selected.
10	[IP Streaming]	A valid license is required for **IP Streaming** settings.

7.2.1 Audio Channel Mapping

Using Audio Channel Mapping, audio output from the SR-5400C can be re-mapped to appear on different audio channels.

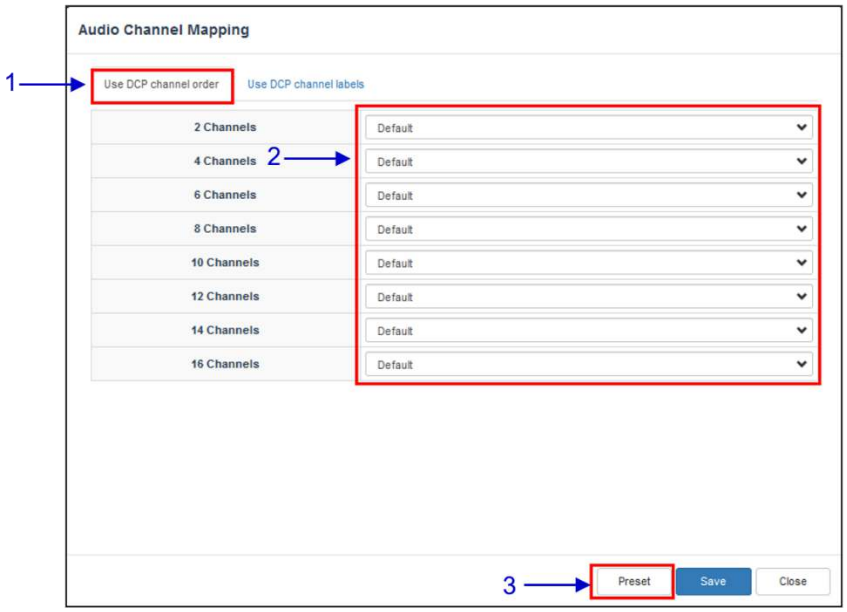


Figure 59: Using DCP Channel order

SN	Function Description
1	Audio output based on the number of audio channels in the audio track of the DCP can be configured in this tab.
2	The preset for the number of audio channels in the audio track can be changed here.
3	Use the Preset button to configure audio presets. Refer to **Section 7.2.1.1** for details

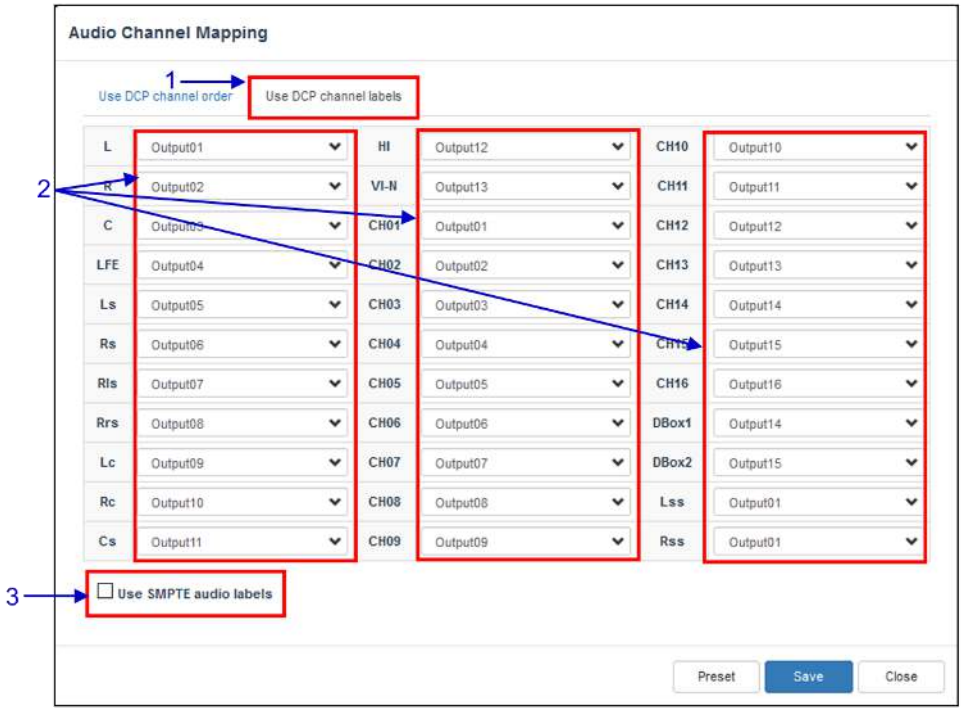


Figure 60: Using DCP Channel labels

SN	Function Description
1	Audio output based on SMPTE audio channel configuration labels can be configured in this tab,
2	Audio output for individual SMPTE audio channel labels can be changed here.
3	Check the Use SMPTE audio labels checkbox to route audio output based on SMPTE audio channel configuration labels.

7.2.1.1 Preset

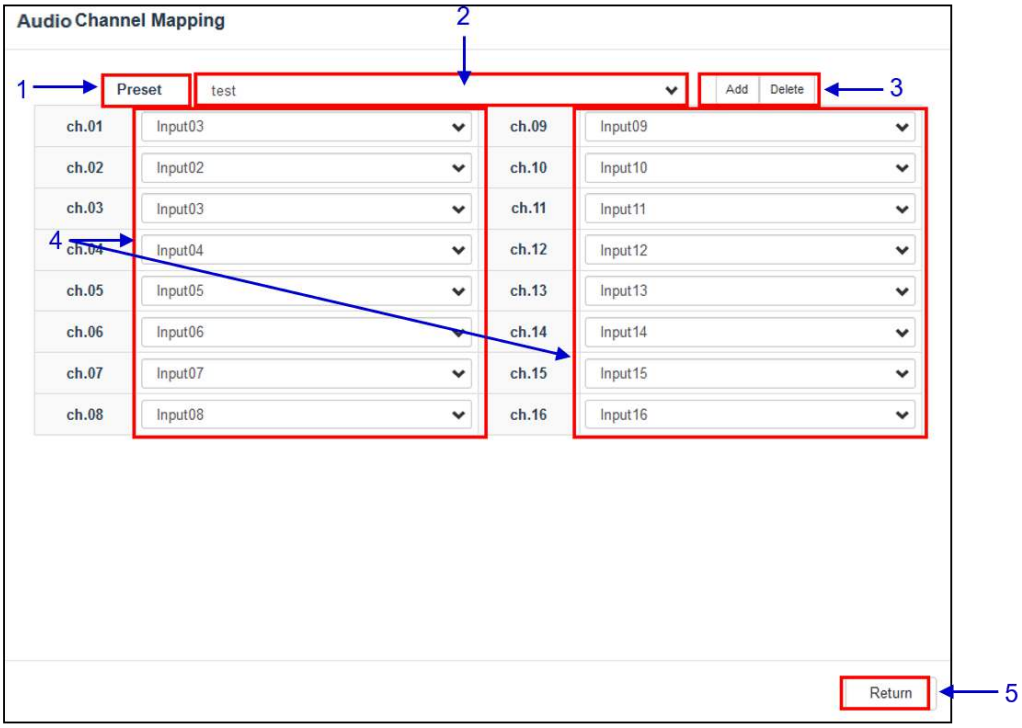


Figure 61: Preset

SN	Function Description
1	Audio channel output presets can be configured in this tab.
2	Select a preset to view or change preset settings
3	Add a new preset or delete the current preset.
4	Audio configuration for an audio preset can be changed here.
5	Click Return to return to **Audio Channel Mapping** configuration.

7.3 Storage

The **Storage** sub-tab is used to configure the storage settings on the SR-5400C.

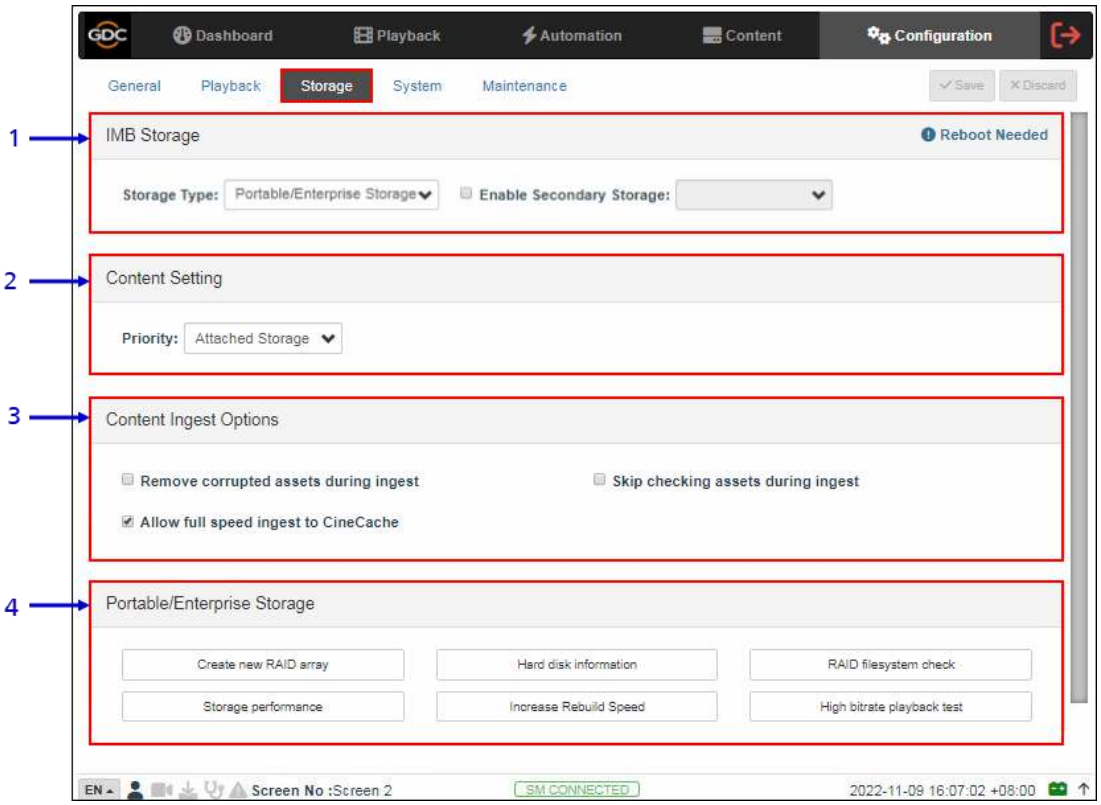


Figure 62: Configuration → Storage

SN	Function Name and Description	
1	[IMB Storage]	
	Storage Type	Configure the primary storage for the SR-5400C. • **NAS:** Configure a Network-Attached Storage (NAS) as data storage. • **CineCache™:** Select this option to use the built-in CineCache™ as storage. • **Portable/Enterprise Storage:** Configure the SR-5400C to use Portable or Enterprise Storage **Note**: A system reboot is needed after the Storage Type is changed.
	Enable Secondary Storage	For any SR-5400C with CineCache™, you can setup a fallback mechanism for the primary Storage Type by checking the Enable Secondary Storage option & selecting the storage type from the drop-down

		 As shown above, the **'Portable/Enterprise Storage'** is set as the Primary storage while the **'CineCache'** is set as the Secondary storage. Fallback to Secondary storage will occur under the following conditions: 1. Primary storage becomes unavailable (*e.g., eSATA cable unplugged, powered off, hardware error*). 2. Dropped frames are detected during playback from Primary storage. If Secondary storage is enabled, you are given an option during content ingest to either ingest content to the Primary or to both the Primary & Secondary storage at the same time, as mentioned earlier in **Section 6.5.1.1**. **Note**: **'NAS'** cannot be set as secondary storage and no other Secondary storage option will be available when **'NAS'** is chosen as Primary storage.
2	[Content Setting]	
	Priority	Set the storage priority used for playback • **Attached Storage:** Playback will use attached storage (live play) for playback. If there are issues with live play, playback will fall back to local storage. This setting should be selected for centralized playback with SCL Servers+. • **IMB Storage:** Playback will use local storage for playback. **Note**: For **GDC Cinema Automation 2.0** (CA 2.0) setup with Centralized Playback; please choose **'CineCache'** as the Primary storage in Storage Type along with Priority as 'Attached Storage'. For a non-CA 2.0 setup; please choose either **'Portable/Enterprise Storage', CineCache'** or **'NAS'** as the Primary storage in Storage Type along with the Priority as 'IMB Storage'.
3	[Content Ingest Options]	
	Remove corrupted assets during ingest	With this option enabled any corrupted assets encountered during ingestion are removed.
	Skip checking assets during ingest	With this option enabled the Digital Cinema Package assets will not be checked for integrity during download. This option will reduce ingestion time but decrease the reliability of the ingestion.
	Allow full speed ingest to CineCache	With this option enabled, content ingest to the CineCache will take place at full speed.

		Note: This option should ONLY be used when **'CineCache'** is chosen as the primary storage in Storage Type. In case the Storage Type chosen is **'Portable/Enterprise Storage'**, content ingest will take place at normal speed
4	[Portable/Enterprise Storage]	
		The following actions can be performed: **1. Create new RAID array** **2. Hard disk information** **3. RAID filesystem check** **4. Storage performance** **5. Increase Rebuild Speed** **6. High bitrate playback test** (Refer to **Section 7.3.1** for details.)

** SCL or Streaming Content Library Servers, which are used in the GDC Cinema Automation 2.0 environment.*

7.3.1 Actions of Portable/Enterprise Storage

7.3.1.1 Create new RAID array

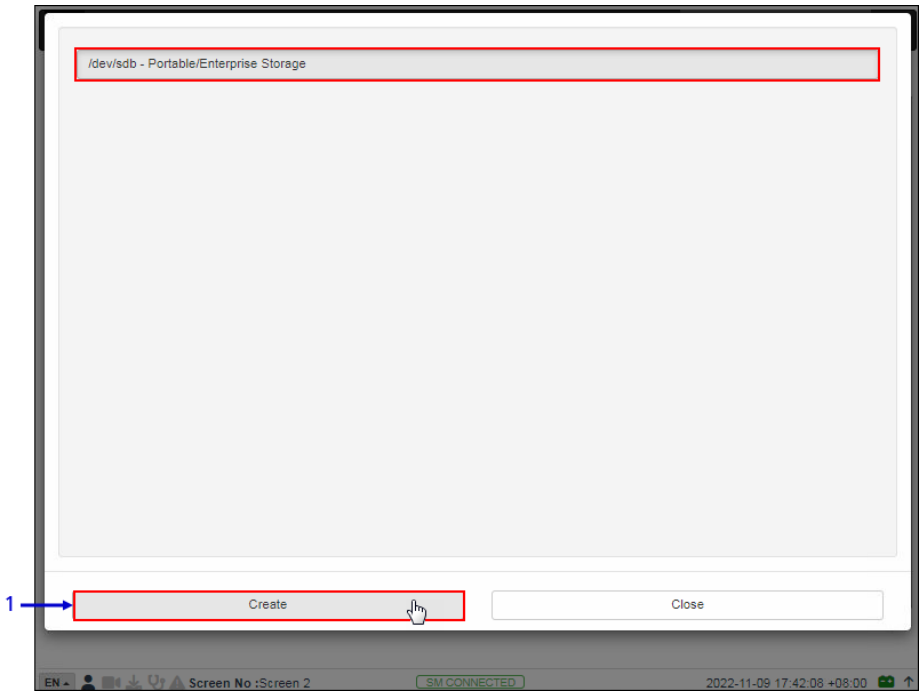


Figure 63: Create new RAID Array

SN	Function Name	Description
1	[Create new RAID array]	Clicking on the Create new RAID array option opens a pop-up window. Select the drive name and click on Create. The RAID creation process will be initiated and the progress will be shown. Once complete, click on Close to return to the **Storage** sub-tab**.**

7.3.1.2 Hard disk information

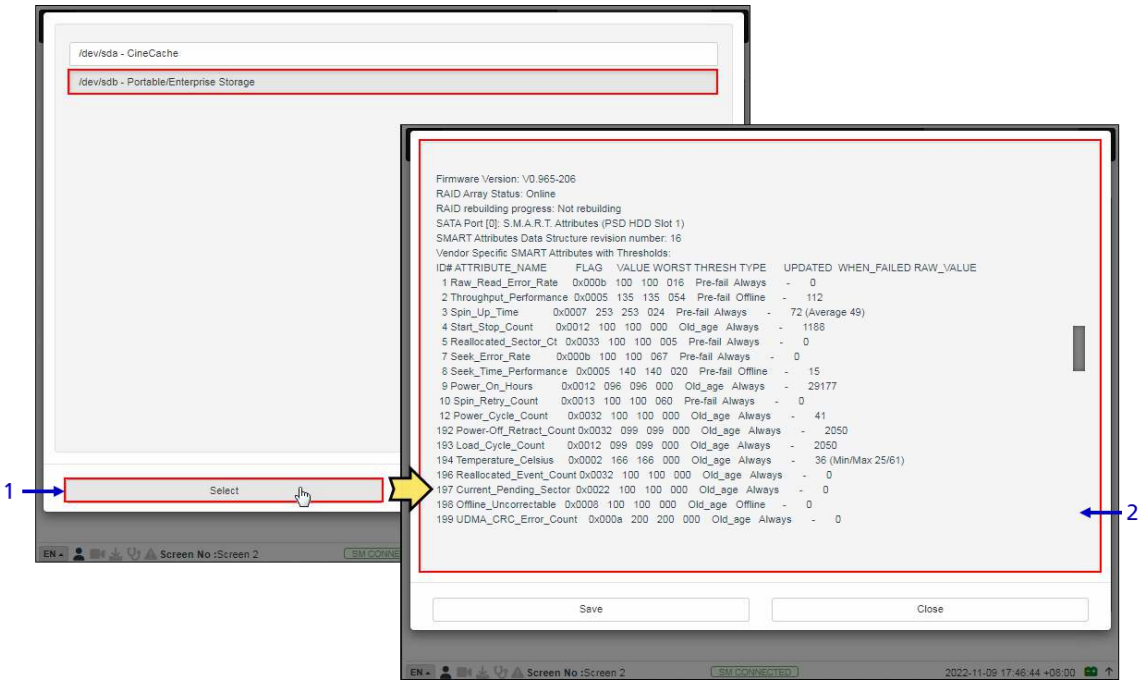


Figure 64: Hard Disk Information

SN	Function Name	Description
1	[Select Storage]	Clicking on the Hard Disk information option opens a pop-up window. Select the '/dev/sdb – Portable/Enterprise Storage' option and click on Select.
2	[Hard disk information]	Information about the selected disk will be displayed on-screen. Click on Save to save the results to the local computer/ laptop (in the form of a .txt file). Click on Close to return to the **Storage** sub-tab.

7.3.1.3 RAID filesystem check

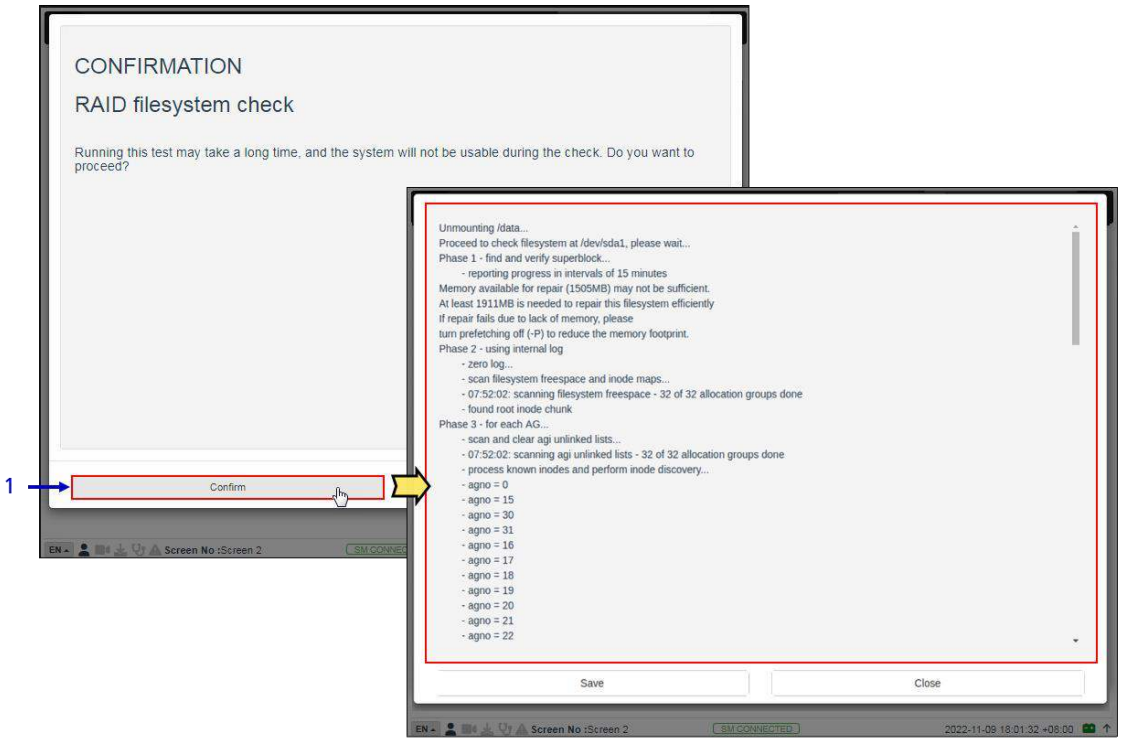


Figure 65: RAID Filesystem check

SN	Function Name	Description
1	[RAID Filesystem check]	Clicking on the RAID Filesystem check option opens a pop-up window to confirm the file system check process. Click on Confirm to begin the process. Information about the filesystem check progress will be displayed on screen. Click on Save to save the results to the local computer/ laptop (in the form of a .txt file). Click on Close to return to the **Storage** sub-tab.

7.3.1.4 Storage Performance

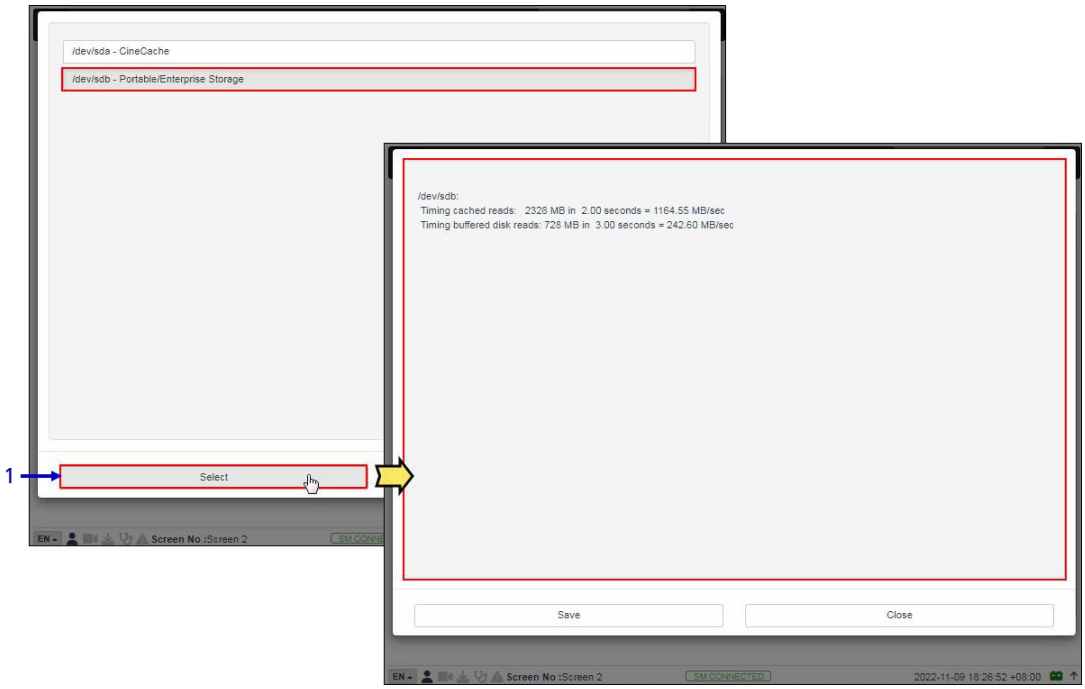


Figure 66: Storage Performance

SN	Function Name	Description
1	[Storage performance]	Clicking on the Storage Performance option opens a pop-up window. Select the '/dev/sdb – Portable/Enterprise Storage' option and click on Select. Information about the hard disk performance will be displayed on screen. Click on Save to save the results to the local computer/ laptop (in the form of a .txt file). Click on Close to return to the **Storage** sub-tab.

7.3.1.5 Increase Rebuild Speed

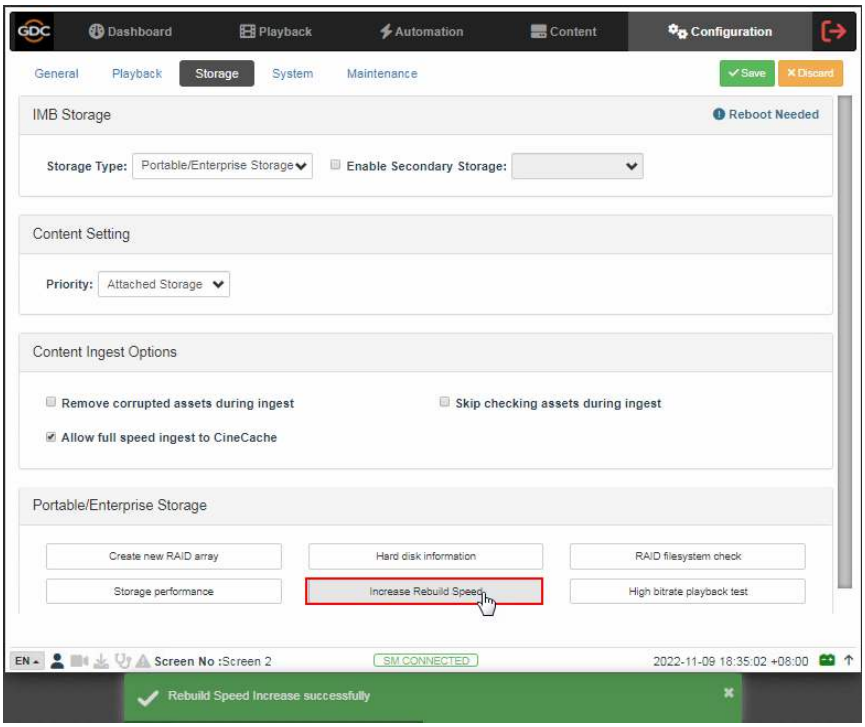


Figure 67: Increase Rebuild Speed

SN	Function Name	Description
1	[Increase Rebuild Speed]	If the RAID array is being rebuilt during playback, the rebuild speed will slow down significantly. To resume highest rebuild speed after playback is finished, click on Increase Rebuild Speed. This will immediately set RAID array to rebuild at highest speed.

7.3.1.6 High bitrate playback test

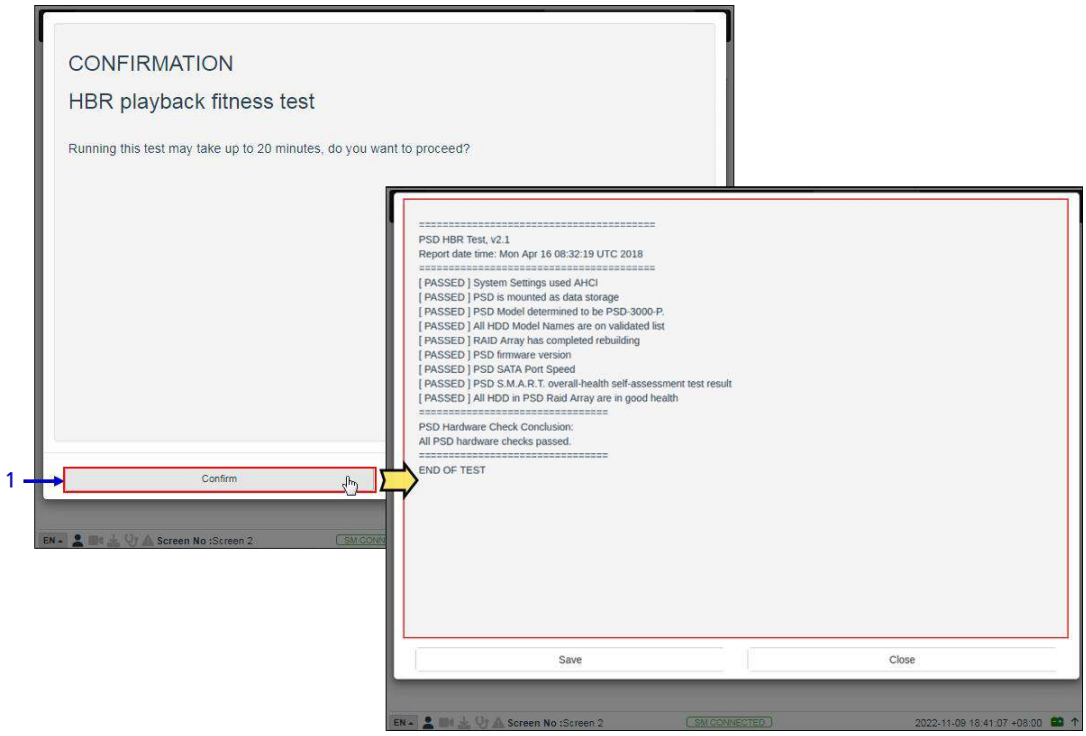


Figure 68: HBR Playback fitness test

SN	Function Name	Description
1	[High bitrate playback test]	Clicking on the High bitrate playback test option opens a pop-up window. Click on Confirm to initiate the test. The progress will be displayed on-screen Once complete, click on Save to save the results to the local computer/ laptop (in the form of a .txt file). Click on Close to return to the **Storage** sub-tab.

7.4 System

The **System** sub-tab is used to configure the system settings on the SR-5400C.

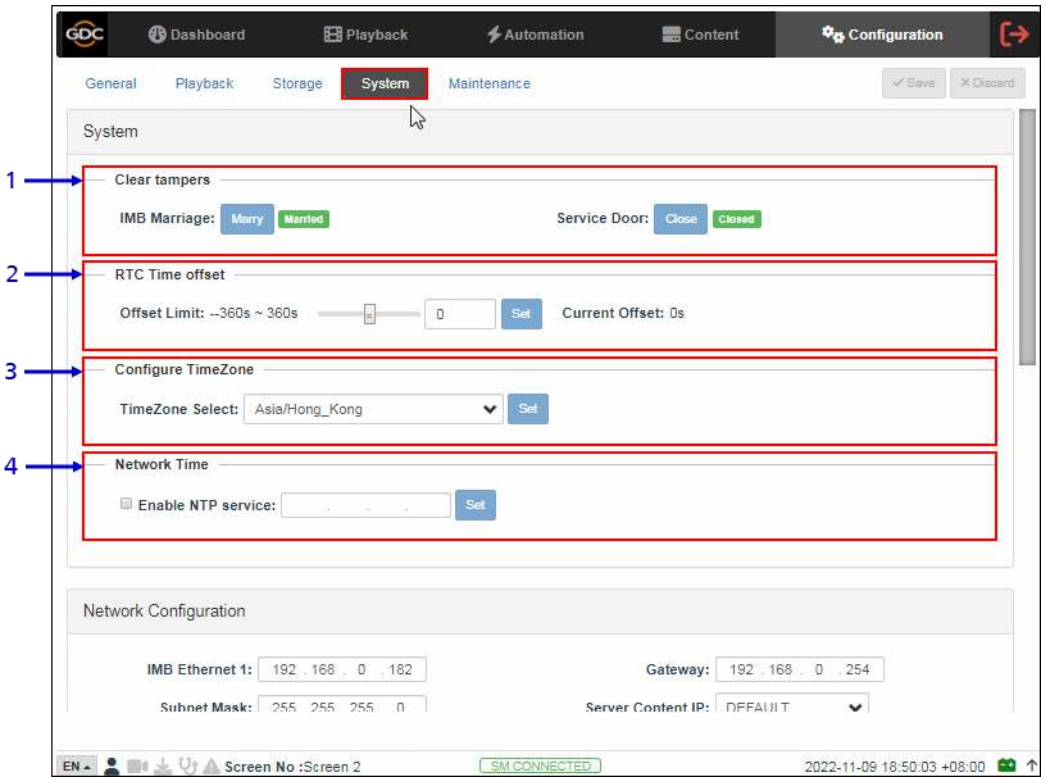
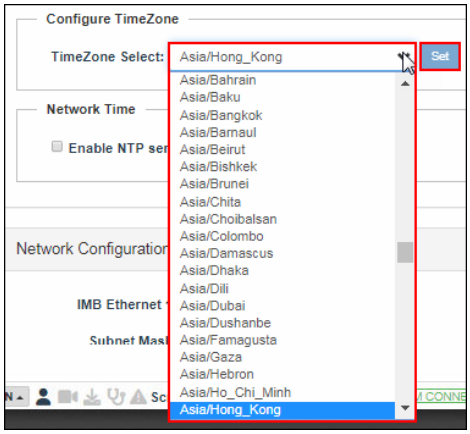


Figure 69: Configuration → System (1)

SN	Function Name and Description	
1	[Clear IMB tampers]	
	IMB Marriage **Service Door**	Displays the Marriage and Service Door tamper status of the IMB. Click the Marry button to clear the Marriage Tamper. Click the Close button to clear the Service Door tamper. **Note**: The SR-5400C will not allow playback if these tampers are not cleared. For IMB Marriage; refer to the SR-5400C Installation Manual.

2	[RTC Time offset]	
	Offset Limit	Make adjustments to the time on the IMB. **Note**: In accordance with DCI specifications, the SR-5400C allows a time offset from -360s to +360s which is plus or minus 6 minutes per calendar year.
3	[Configure TimeZone]	
	TimeZone Select	Select specific area/country from the dropdown list and click Set to configure the timezone. 
4	[Network Time]	Sync the IMB time to an external NTP server. Select Enable NTP service**.** Enter the specified time server's IP address and click Set to start using the NTP server.  **Note**: Time adjustments will be limited in accordance with DCI specifications (+/-360 seconds).

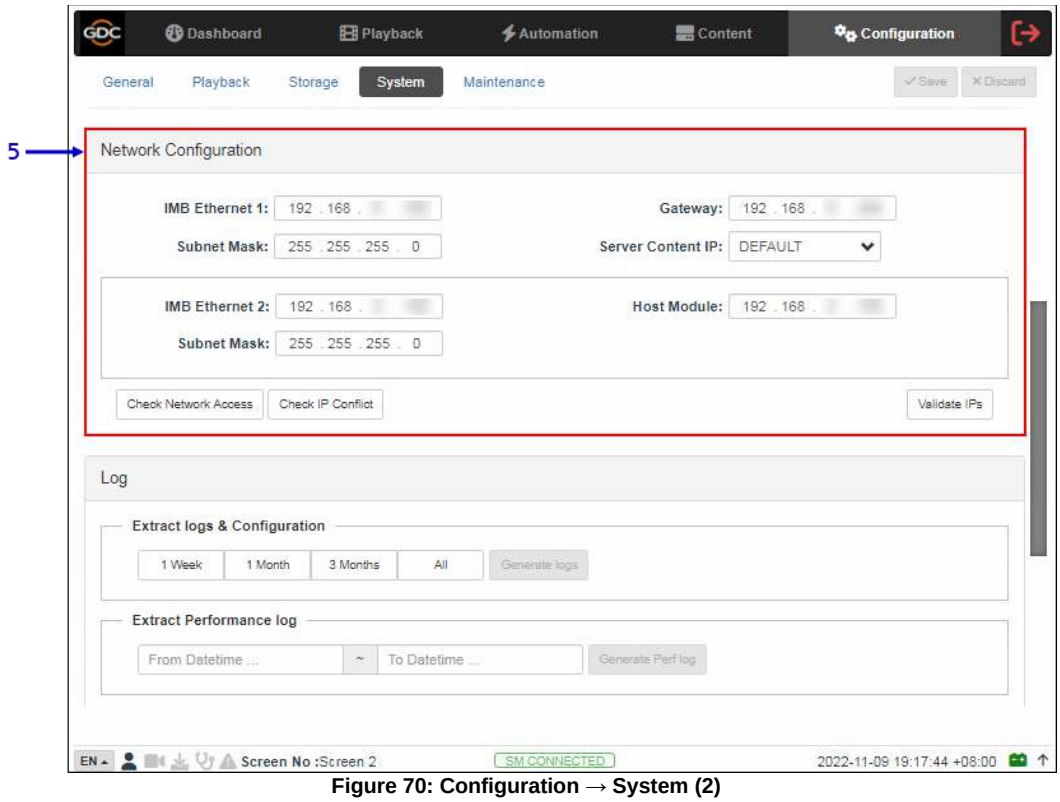
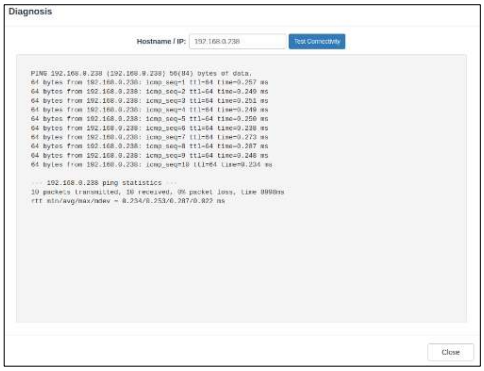


Figure 70: Configuration → System (2)

5	[Network Configuration]	
	Subnet Mask	Specify the subnet mask.
	Gateway	Specify the network gateway for the SR-5400C.
	Server Content IP	Select the network which should be used for content transfer. The following network interfaces are available: • ***DEFAULT*** • ***IMB Ethernet 2*** • ***IMB Ethernet 1***
	IMB Ethernet 1	This is the main IP address of the SR-5400C. The Web-UI interface can be reached at this IP address. The default IP is 192.168.1.12.
	IMB Ethernet 2	Can be used to set up a secondary network on the SR-5400C. This is usually connected to a Content network. The Subnet Mask can also be set. The **IMB Ethernet 2** and the **IMB Ethernet 1** IP addresses should belong to different subnets.
	Host Module	Specifies the IP Address of the Host Module of the SR-5400C. The **IMB Ethernet 2** and the **Host Module** IP addresses should belong to the same subnet.
	Validate IP's	After setting the above network configurations, click Validate IP's to check the correctness of the IPs entered. A pop-up opens displaying the result.

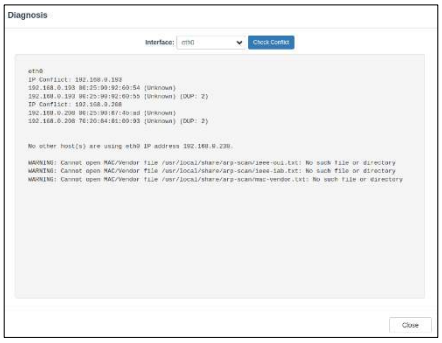
Check Network Access

Click to open the pop-up window. Enter the Hostname / IP value and click Test Connectivity.



Check IP Conflict

Click to open the pop-up window. Select Interface from dropdown and click Check Conflict.



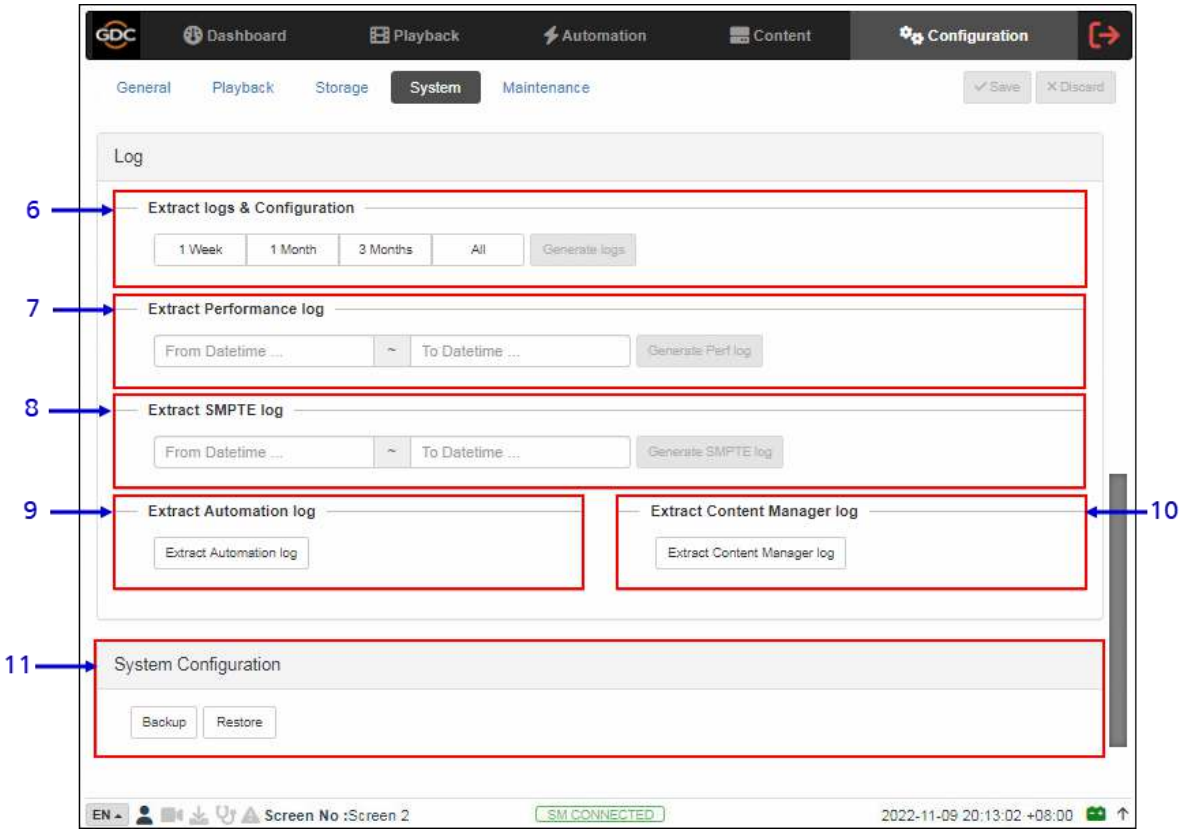


Figure 71: Configuration → System (3)

6	[Extract logs and Configuration]	This allows the operator to extract debug logs from the SR-5400C for analysis by GDC personnel. Time duration includes 1 Week, 1 Month, 3 Months *and* All. After selecting the time duration, Generate logs button will be enabled. A pop-up window will be shown to display the log extraction progress. After log generation, a pop-up window will be shown to save or open the extracted file.
7	[Extract Performance Log]	This allows the operator to extract performance logs from the SR-5400C. After selecting the Date/Time, Generate Pref Log button will be enabled. A pop-up window will be shown to display the log extraction progress. After log generation, a pop-up window will be shown to save or open the extracted file.
8	[Extract SMPTE Log]	This allows the operator to extract SMPTE audit logs from the SR-5400C. After selecting the Date/Time, Generate SMPTE Log button will be enabled. A pop-up window will be shown to display the log extraction progress. After log generation, a pop-up window will be shown to save or open the extracted file.

9	[Extract Automation Log]	Extract automation logs from the SR-5400C. After clicking Extract Automation Log button, a pop-up window will be shown to save the file.
10	[Extract Content Manager Log]	Extract Content Management logs from the SR-5400C. After clicking Extract Content Manager Log button, a pop-up window will be shown to save the file.
11	[System Configuration]	
	Backup **Restore**	Backup and Restore options are available. The Backup option saves the IMB configuration to a backup file. A pop-up window will be shown to save the configuration file. The Restore option will restore the IMB configuration from a backup file. Users can upload the configuration files.

7.5 Maintenance

The **Maintenance** sub-tab is used to install software upgrades on the system. Warranty information is also displayed in this section.

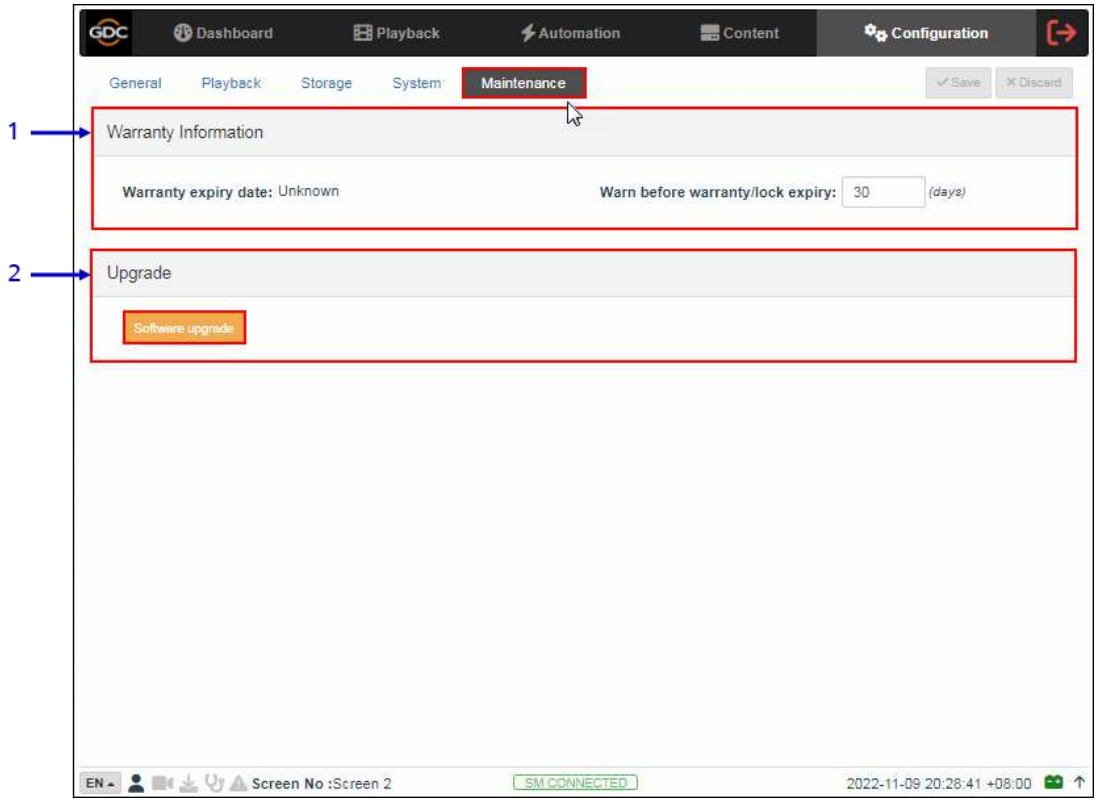
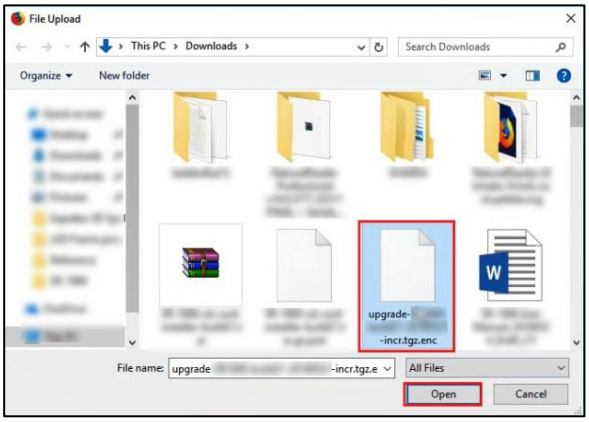


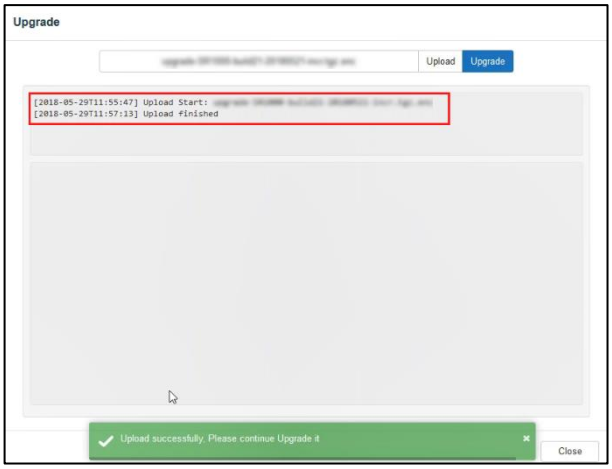
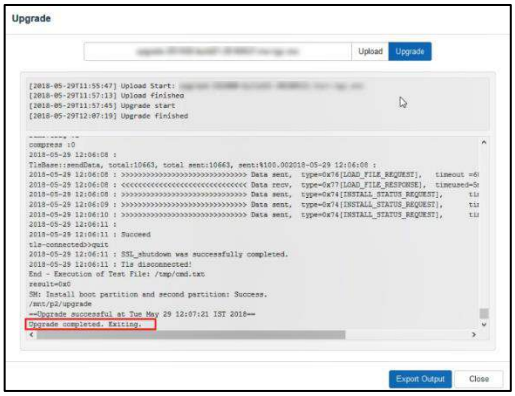
Figure 72: Configuration → Maintenance

SN	Function Name and Description	
1	[Warranty Information]	
	Warranty expiry date	Warranty expiry date is shown.
	Warn before warranty/lock expiry	The number of days in advance to issue a warning before warranty/lock expiry can be set.
2	[Upgrade]	
	Software Upgrade	When this button is clicked, a pop-up window will be shown with an option to choose and upload any GDC issued upgrade files. Refer to **Section 7.5.1** for more details.

7.5.1 Software Upgrade

Figure 73: Select and Upload Upgrade file

SN	Function Description
1	In order to initiate the software upgrade process, the relevant upgrade file needs to be downloaded to the laptop or PC which is being used to access the Web UI interface. Upon clicking on the Software Upgrade button, the Upgrade screen will be displayed. Click on Choose file to select the upgrade file from the folder where it has been downloaded & click on Open. 

2	Once the upgrade file has been selected, the Upload button will be enabled. Click on the Upload button to upload the file to the SR-5400C. The console window will display the status of the file upload, as shown. An 'Upload Successful' message will be shown after the file upload is complete. 
3	After the upload is complete, click on the Upgrade button to begin the upgrade process. A pop-up window will be shown asking for the password for the upgrade package.  Please contact GDC Technical support in case you do not know the password for the upgrade file. Click on the OK button, after entering the correct password.
4	The Upgrade process will be initiated. The console window will display the progress of the upgrade process. Once the upgrade is complete, the console window will display *Upgrade completed* message. The Export Output option can be used to export & download the console logs in the form of a .txt file. 

5	In order to complete the upgrade process, the SR-5400C IMB needs to be rebooted. A pop-up message will be displayed which allows the user to reboot the system, by clicking on the Reboot Now button. 

8 OPERATION NOTES

8.1 Power Up Sequence

Always power up any Enterprise Storage before powering up the Projector. The Enterprise Storage must be powered up first to be correctly identified by the SR-5400C.

8.2 Power Down Sequence

Always power down the SR-5400C and Projector with the following steps:

1. Power down the SR-5400C by using the Shutdown button on the Web UI Dashboard.
2. Power down the Projector after the SR-5400C is powered down.
3. Power down the Enterprise Storage attached to the SR-5400C.

GDC Technology manufacturing facility is ISO 9001:2015 certified.