USER MANUAL FOR
SR-5520 STANDALONE INTEGRATED MEDIA BLOCK™

Version 19.4

March 21st, 2025

TABLE OF CONTENTS

Thank you for purchasing a GDC SR-5520 Standalone Integrated Media Block™ from GDC Technology Limited.

To ensure proper operation and to maximize value of the SR-5520, kindly review this User Manual. It will guide you through all the features and benefits of the new SR-5520 Standalone Integrated Media Block™.

COPYRIGHT NOTICE

MANUAL DISCLAIMER

This manual is made with software version 19.4 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 complies with Part 15 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.

CONTACTS AND OFFICES

Website

Contact Us

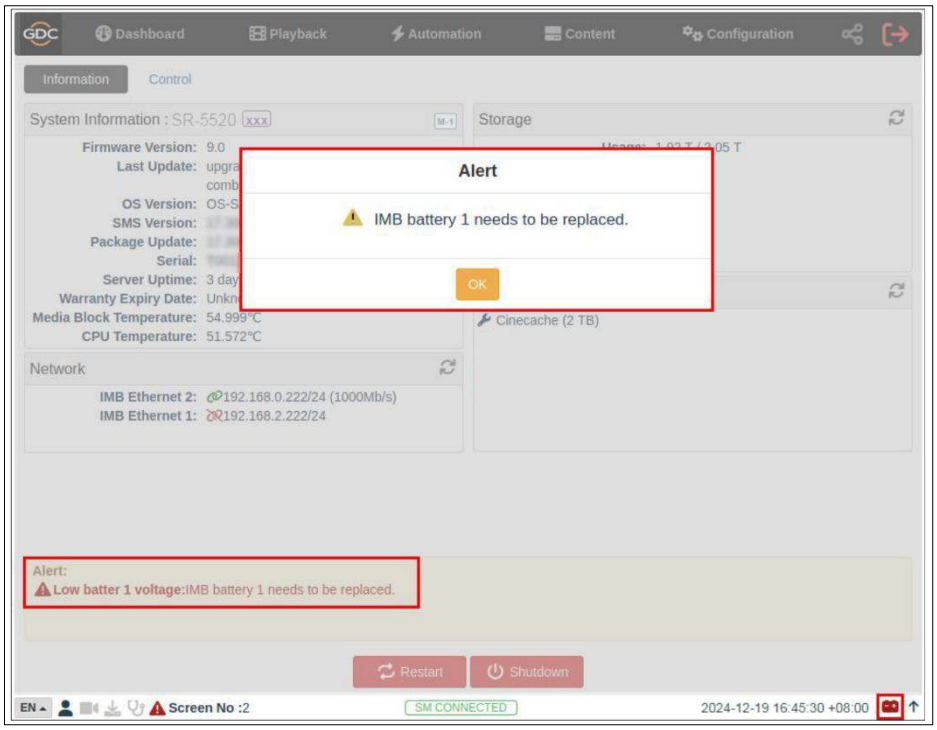
Worldwide Offices

24/7 Support

⚠ NOTICE ON IMB BATTERIES ⚠

THE GDC SR-5520 CONTAINS TWO BATTERIES WHICH ARE ESSENTIAL FOR PRESERVING CRITICAL SECURITY INFORMATION IN THE IMB. THESE BATTERIES HAVE A FINITE OPERATIONAL LIFESPAN AND IT IS CRUCIAL TO REPLACE THEM EITHER BEFORE THEY REACH THE END OF THEIR EXPECTED LIFE OR IMMEDIATELY UPON RECEIVING A 'LOW BATTERY' ALERT ON THE USER INTERFACE (REFER TO SCREENSHOT BELOW).

WARNING: FAILURE TO REPLACE THE IMB BATTERIES IN TIME WILL RESULT IN THE SR-5520 BECOMING INOPERABLE IN THE FIELD AND IT WILL NEED TO BE REPLACED.



FOR IMB BATTERY REPLACEMENT INSTRUCTIONS, REFER TO THE GDC TECHNICAL BULLETIN ON '*BATTERY REPLACEMENT PROCEDURE FOR SR AND SZ-SERIES SERVERS*'.

1 INTRODUCTION

The **GDC SR-5520 Standalone Integrated Media Block™** integrates seamlessly with the world's leading direct view cinema displays*. The SR-5520 IMB supports High Frame Rate (HFR) playback of DCP content in 4K @ 96 fps (2D) and 4K @ 48 fps per eye (3D).

1.1 About This Manual

This manual provides instructions on how to use and manage the GDC SR-5520 Standalone Integrated Media Block™. The SR-5520 has a web-based user interface or Web UI. The Web UI functionality can be broken down into five main menus: **Dashboard, Playback, Automation, Content** and **Configuration**. This manual will describe each of these menus in different sections.

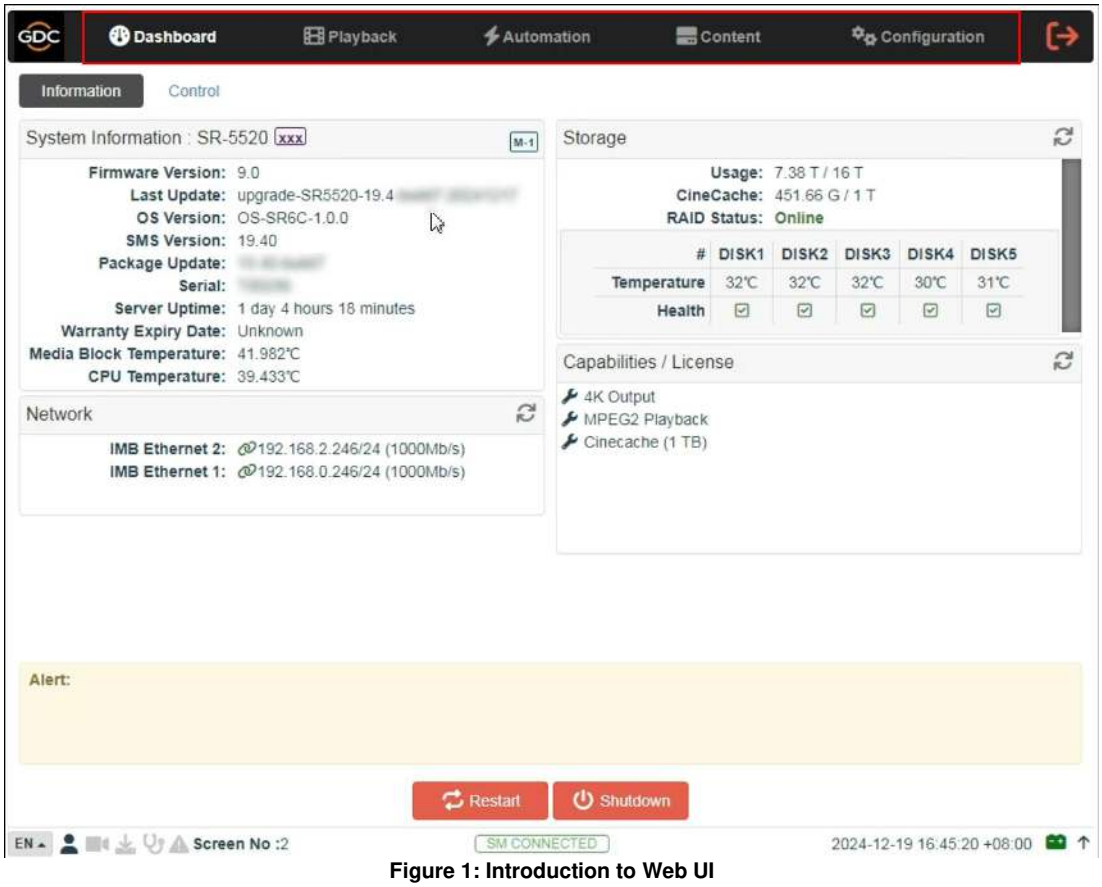


Figure 1: Introduction to Web UI

** Contact GDC for the latest list of cinema displays compatible with the SR-5520 IMB.*

1.2 Safety Instructions

1.2.1 General Safety Instructions

- The SR-5520 is intended for installation in a direct view cinema display*. In this manual, the term 'display' refers to LED and other screen technologies.
- Prior to installation, refer to the 'IMB Physical and Environmental Specifications'. Approved LED manufacturers should make sure all requirements are adhered to and approved by GDC during integration of the SR-5520 IMB to the display.
- Before operating the SR-5520, make sure to read this user manual and retain it for future reference.
- Installation and preliminary adjustments should be performed by qualified GDC Technology personnel.
- All warnings on the SR-5520 mentioned in this documentation manual should be adhered to.
- All instructions for operating and maintaining the SR-5520 must be followed closely.

1.2.2 Electrical Safety

Safety Warning

- Do not expose the SR-5520 to rain or moisture, to prevent fire or electrical shock hazard.
- Consult GDC Technical Support for servicing or maintaining the SR-5520.
- 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-5520.

** Contact GDC for the latest list of cinema displays compatible with the SR-5520 IMB.*

2 THE SR-5520 WEB USER INTERFACE (Web UI)

The SR-5520 has a web-based user interface (Web UI). The following steps show how to access the SR-5520 Web UI:

1. Assuming the SR-5520 is using its default IP Address, which is 192.168.1.12, connect a laptop/PC to the **GIGABIT 1** network port of the IMB and configure the laptop/PC to have the same network as the SR-5520.
2. Open a web browser (Google Chrome™ or Mozilla Firefox™ are recommended).
3. Enter the IP address of the SR-5520 in the web browser to access the login page on the Web UI.
4. There are three levels available for users: **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. Select the preferred UI language by clicking on the corresponding flag icon on the login page (as shown in **Figure 2)** or from the **Dashboard** screen.

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-5520 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-5520 Web UI

2.2.1 Recommended web browsers

The SR-5520 Web UI has been tested with **Google Chrome™** and **Mozilla Firefox™** web browsers. These web browsers are recommended for use while accessing the SR-5520 Web UI.

2.2.2 Single User Access

The SR-5520 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. A list of 'Currently Active Users:' will also be displayed on the Web UI login page.

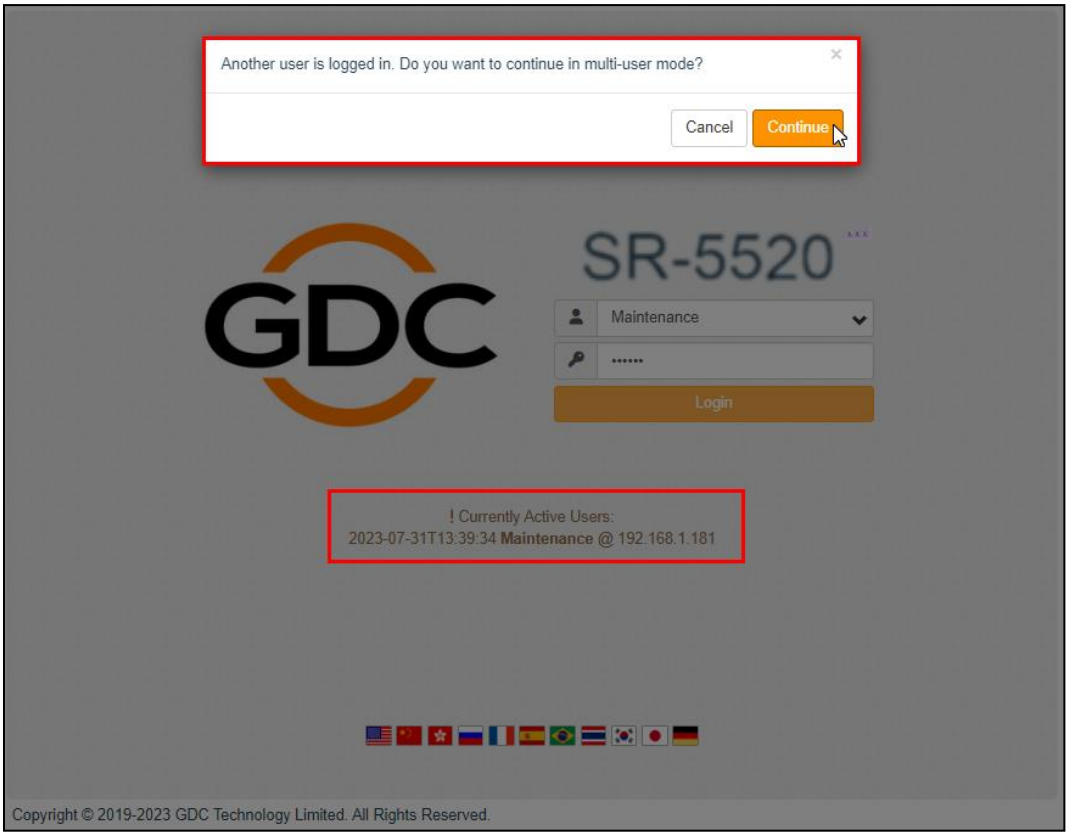


Figure 4: Single User Access

3 DASHBOARD

In the SR-5520 Web UI, the **Dashboard** menu displays basic information related to the SR-5520, such as *System Information, Network Information, Storage Information, Capabilities/License* and *System Alerts*.

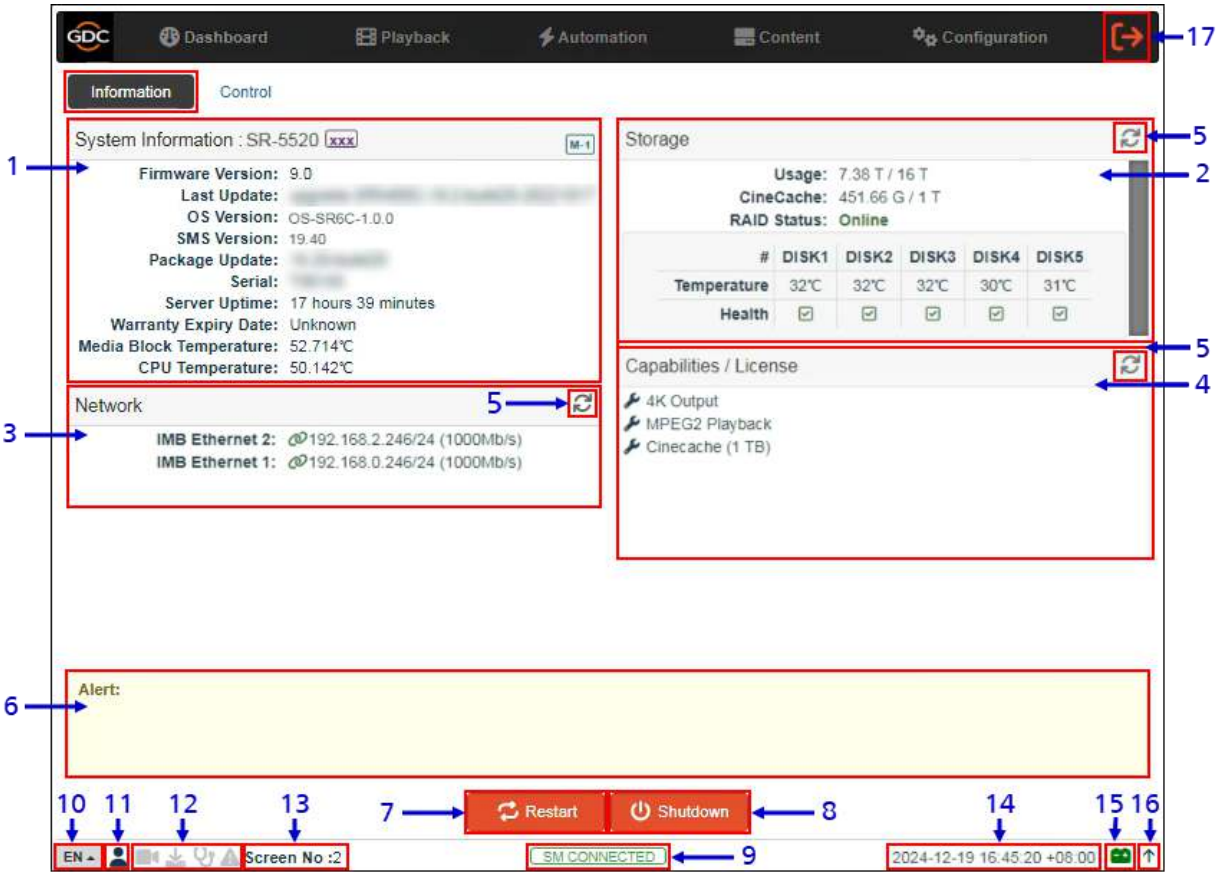
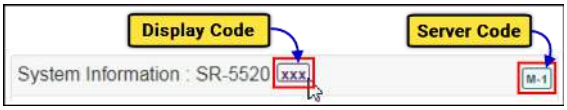


Figure 5: Dashboard Menu

S.N.	Function Name	Description
1	[System Information]	Displays SR-5520 system information along with the **Display Code** and **Server Code** (as indicated below).  The **Display Code** indicates which display the IMB is configured for (also displayed on Web UI login page). **Note**: Please ensure that the **Display Code** matches with the type of display in which the IMB is being installed. Contact GDC for the complete list of Display Codes.

		The **Server Code** indicates the system identification code for the IMB. **Note**: Please provide the IMB **Server Code** when requesting service support.
2	[Storage Information]	Displays storage status and information on the SR-5520
3	[Network	Displays the current network settings and network status of the SR-5520 network interfaces
4	[Capabilities/License	Displays the supported features or capabilities of the SR-5520 as well as the licenses which are installed on the Server.
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 shut down 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, contact GDC Technical Support.
10	[Language Select and Dark/Light Mode Switch]	Indicates the current language in which the Web UI is displayed. To change the language, click on this icon and select the desired language from the list.

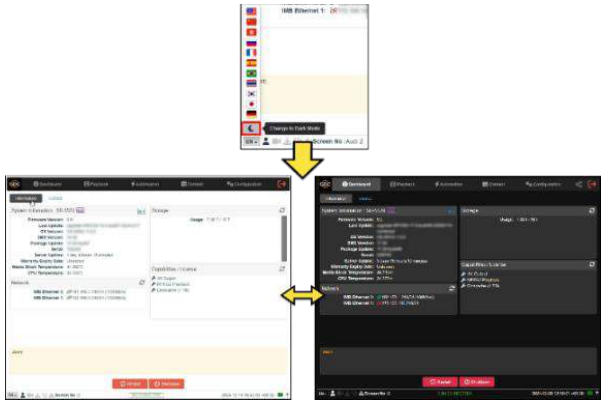
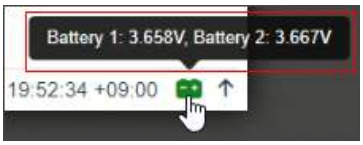
		The **Dark/Light Mode#** toggle button lets users switch between the 'Dark' and 'Light' themes for the Web UI. 'Dark Mode' enhances readability in low-light environments by reducing glare and enhancing visual comfort. 
11	[User]	Indicates the access-level with which the current user is logged-in to the SR-5520 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-5520 Web UI.
13	[Screen No:]	Displays the auditorium name and number 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 time zone set on the SR-5520 (refer to **Section 7.4** for more details).
15		Displays the battery voltage levels for both IMB batteries of the SR-5520 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-5520 Web UI.

Table 1

 # This feature is only available on newer firmware versions for the SR-5520.

4 PLAYBACK

4.1 Playback

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

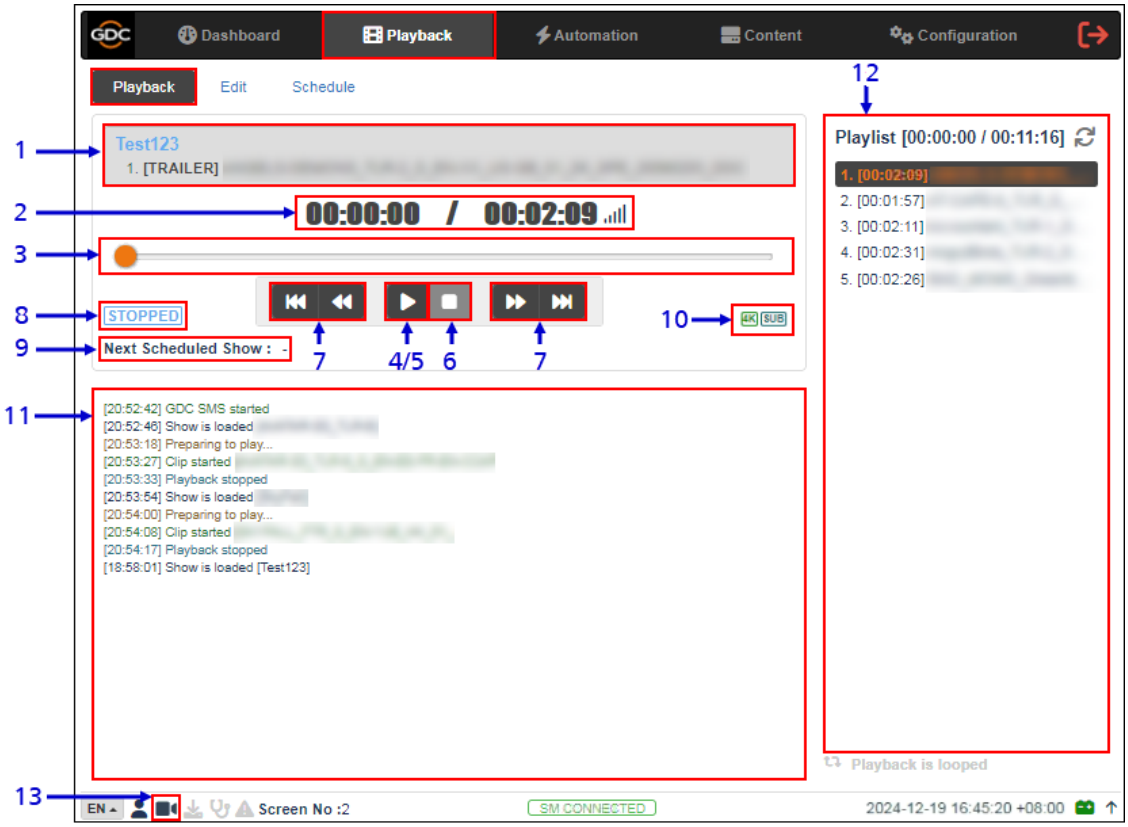
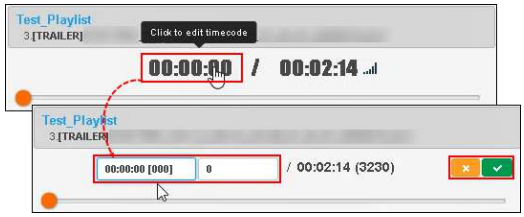


Figure 6: Playback → Playback

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 timecode 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 is displayed when the playback is stopped or paused. Clicking this button will resume or start playback.
5	[‖]	Pause button. The [‖] button is displayed only when playback is in progress. Clicking this button will pause playback.
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 Prepare.*
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.

Table 2

4.2 Edit

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

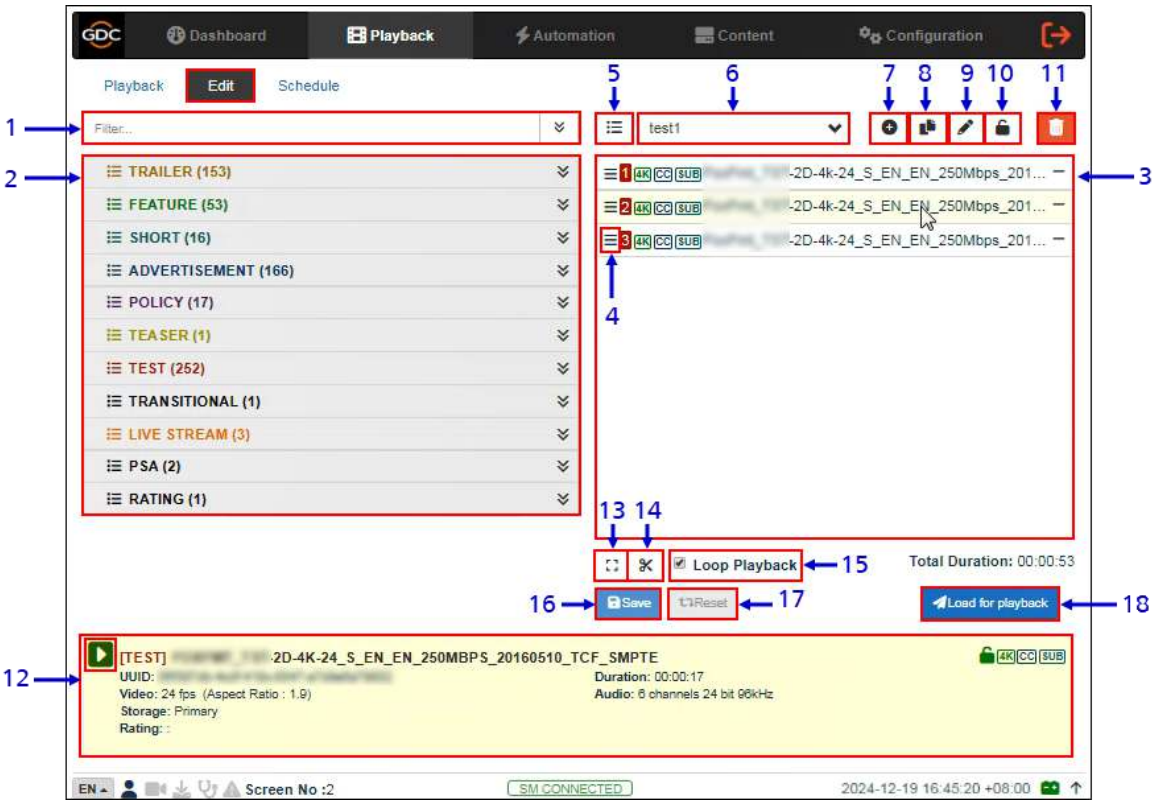
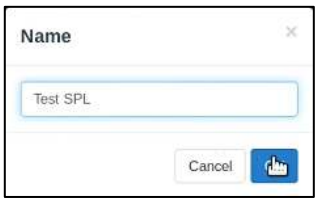


Figure 7: Playback → Edit

SN	Function Name	Description
1	[Filter]	Filter the content list based on the keyword entered. Use the ⌄⌄ icon to expand and list the clips under all categories displayed within the [Content List].
2	[Content List]	Available content on the SR-5520 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 against any listed 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]	Clicking on button will display a pop-up window and show all the playlists with options to Delete, Rename, Copy or Filter the playlists.
6	[Show List]	Click the icon to open the drop-down of all playlists available on the SR-5520. 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.

Table 3

4.2.1 Creating/Editing a New Show Playlist

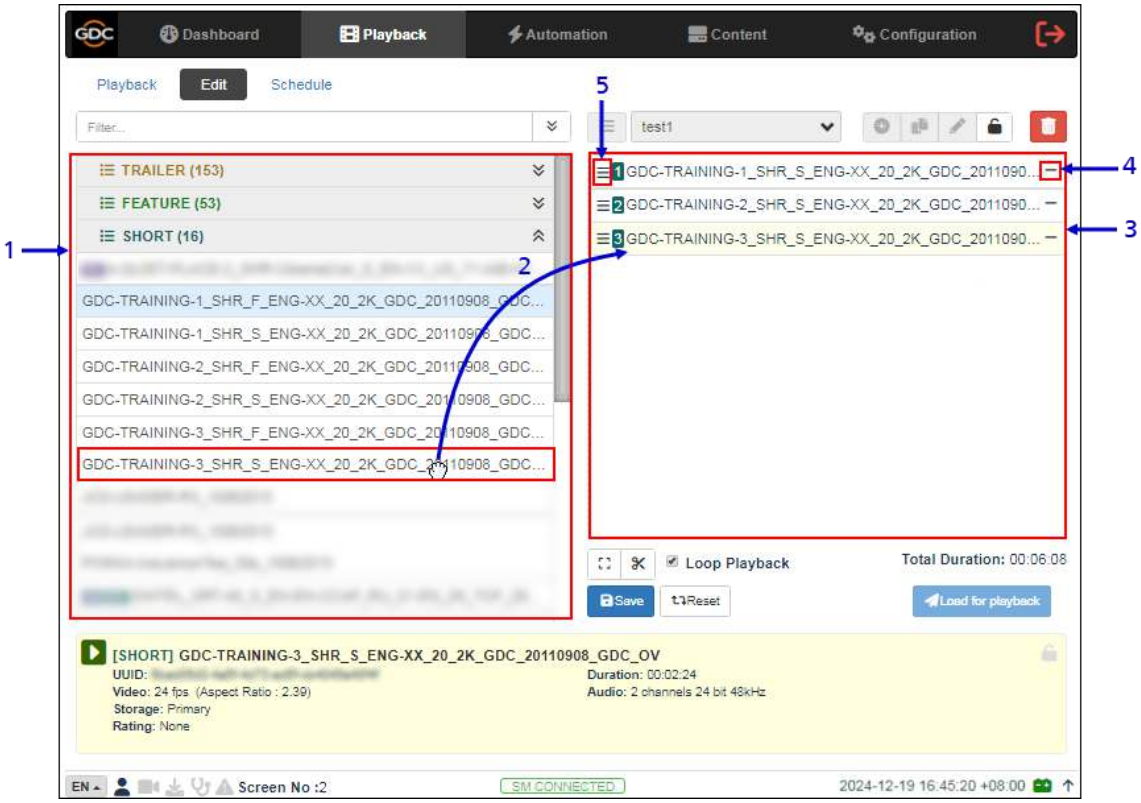


Figure 8: Creating a New Playlist

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.

Table 4

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.

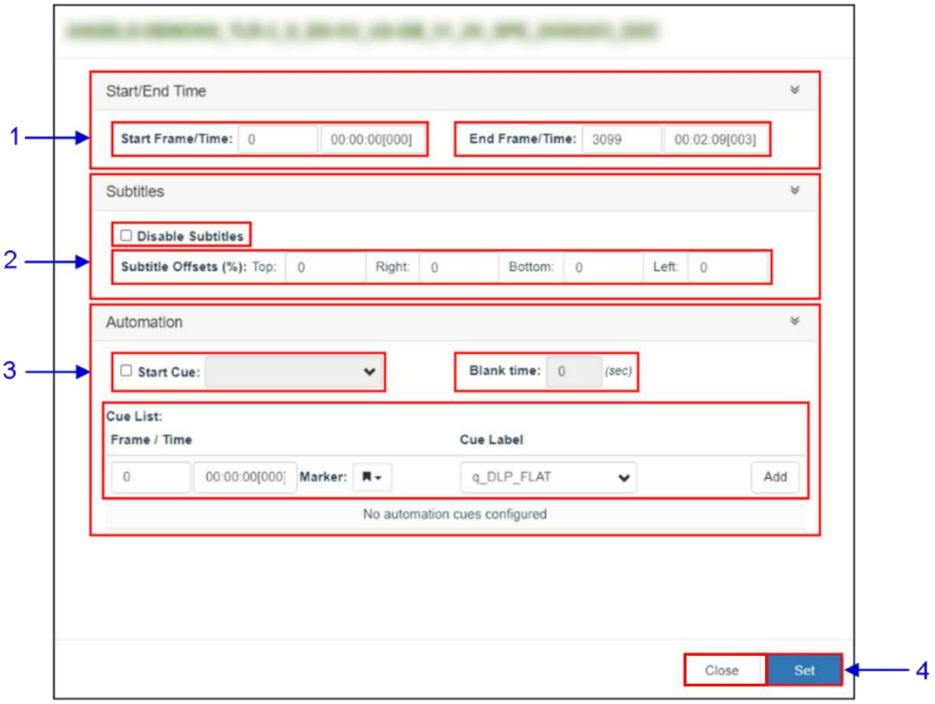


Figure 9: Edit CPL Properties

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 displayed.

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**	Click the Set button to save the changes to the CPL. Click the Close button to close the Edit Props window.

Table 5

4.2.3 Adding an Intermission

An Intermission can be added to a feature CPL on the SR-5520, by using the **Add Intermission** feature.

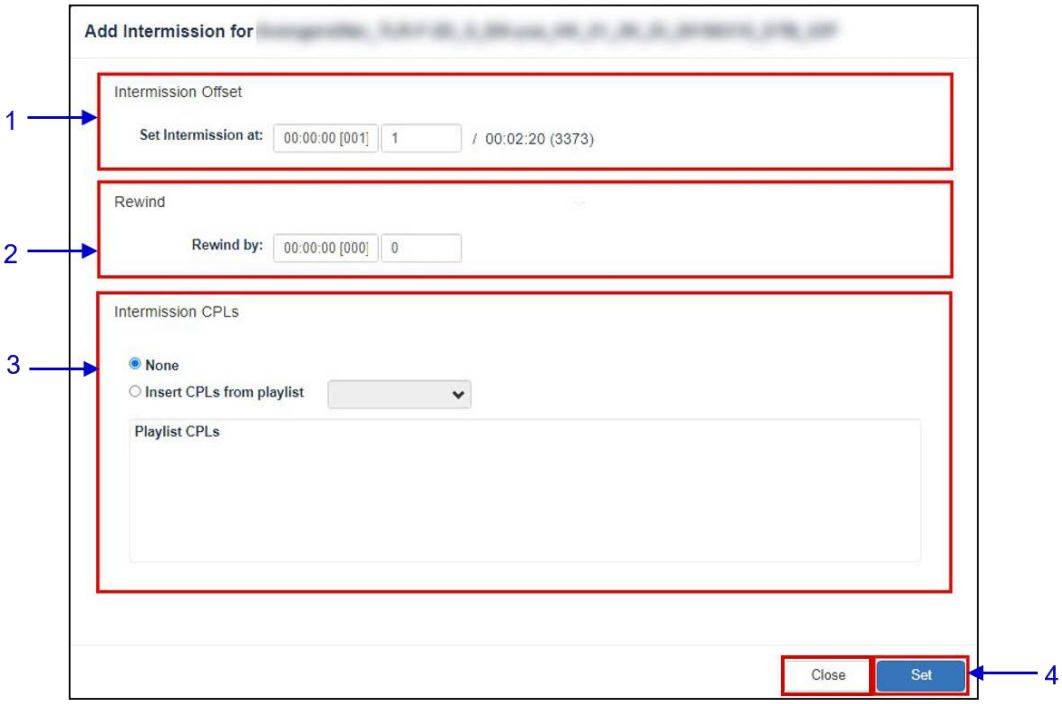


Figure 10: Adding an Intermission

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	[Set/Close]	Click the Set button to add the intermission to the feature CPL. Click the Close button to close the Add Intermission window.

Table 6

4.2.4 Saving the Show Playlist

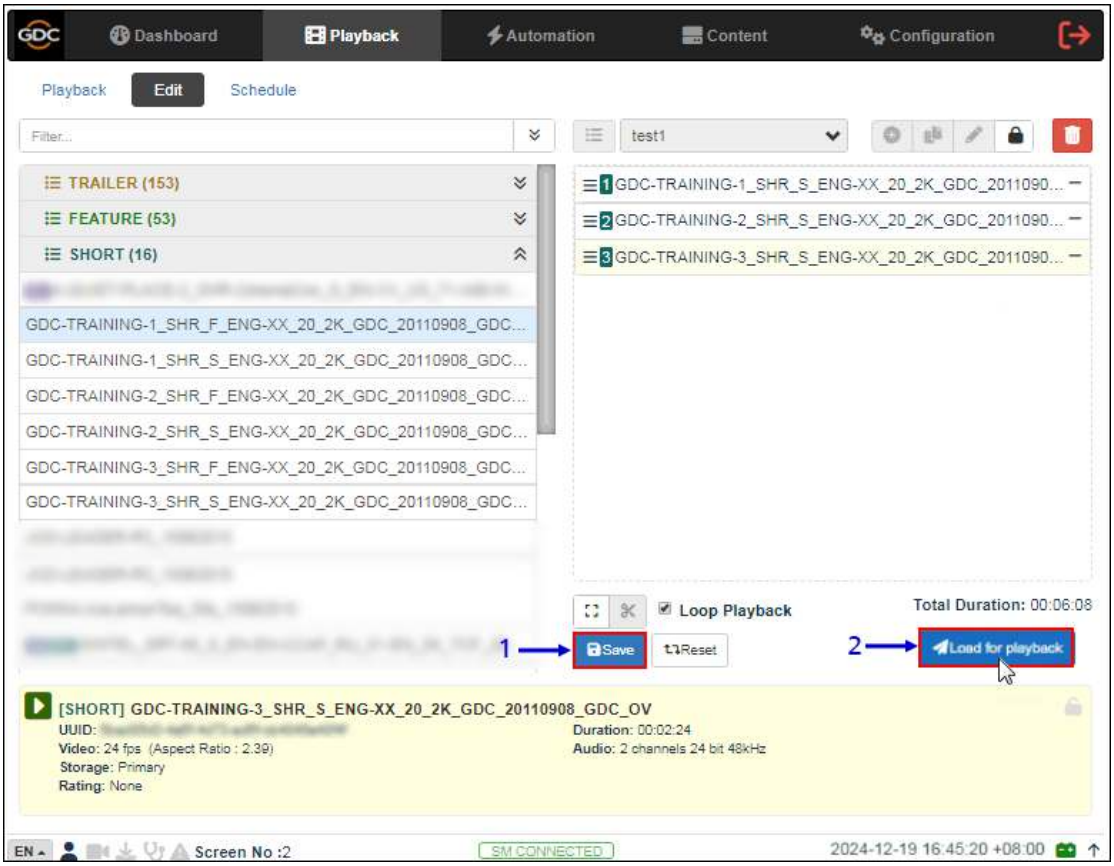


Figure 11: Saving the Playlist

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.

Table 7

4.3 Schedule

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

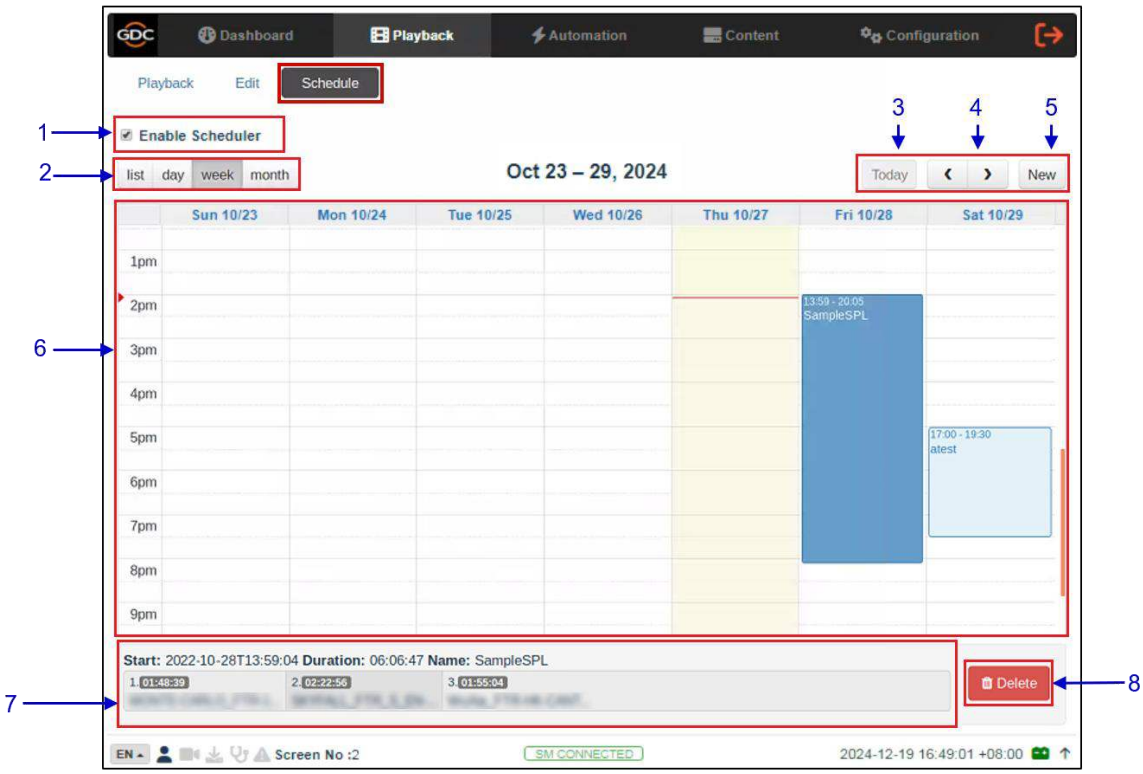


Figure 12: Playback → Schedule

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-5520 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.

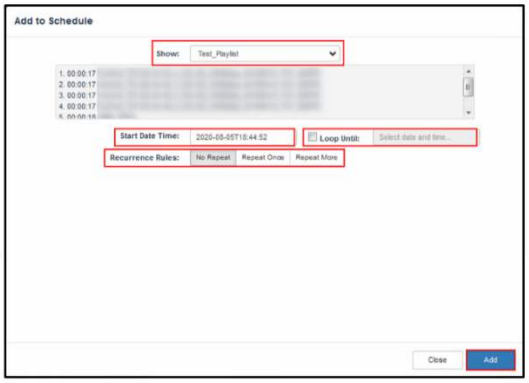
5	[New]	Add a new schedule. Select the Show and Start Date Time. Recurrence Rules by default is selected as 'No Repeat'. User can select 'Repeat Once' or 'Repeat More' and further enter details. Click the Add button to add the schedule. 
6	[Schedules]	Schedules are displayed here. The display will change 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.

Table 8

5 AUTOMATION

The **Automation** menu is used to set up automation and input triggers. Scheduling and manual triggering of automation cues can be done here.

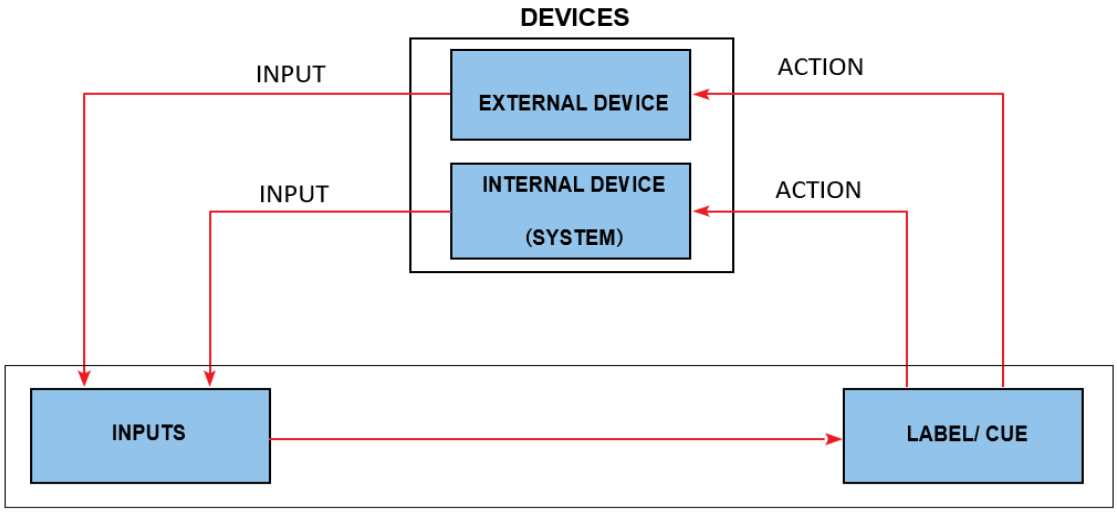


Figure 13: GDC Automation Workflow

5.1 Trigger

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

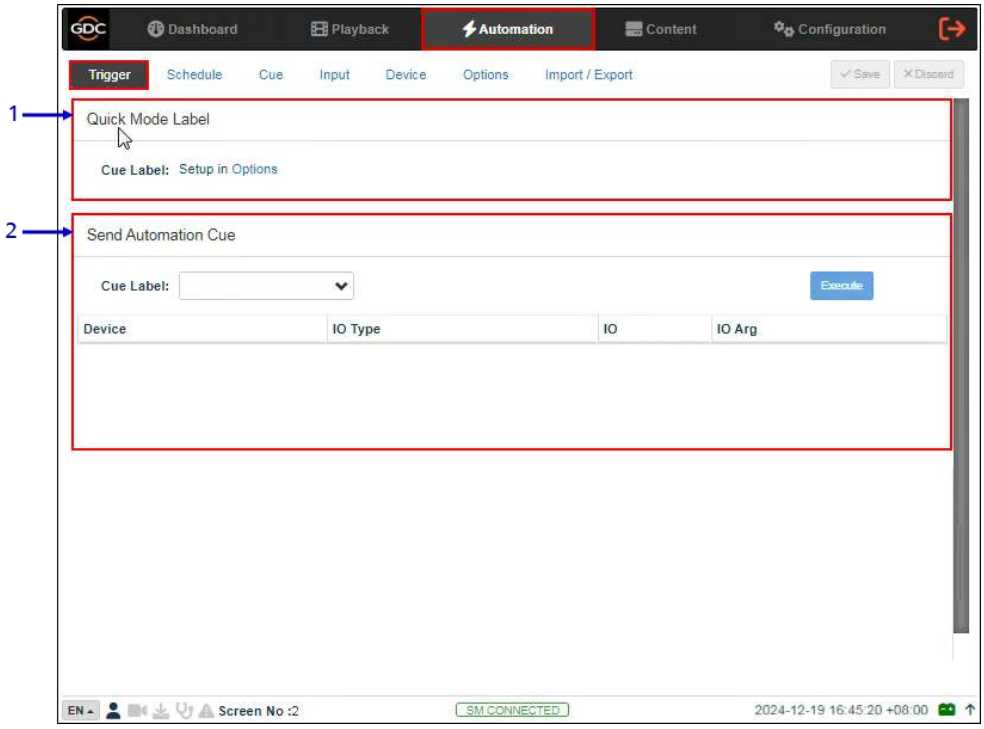


Figure 14: Automation → Trigger

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.

Table 9

5.2 Schedule

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

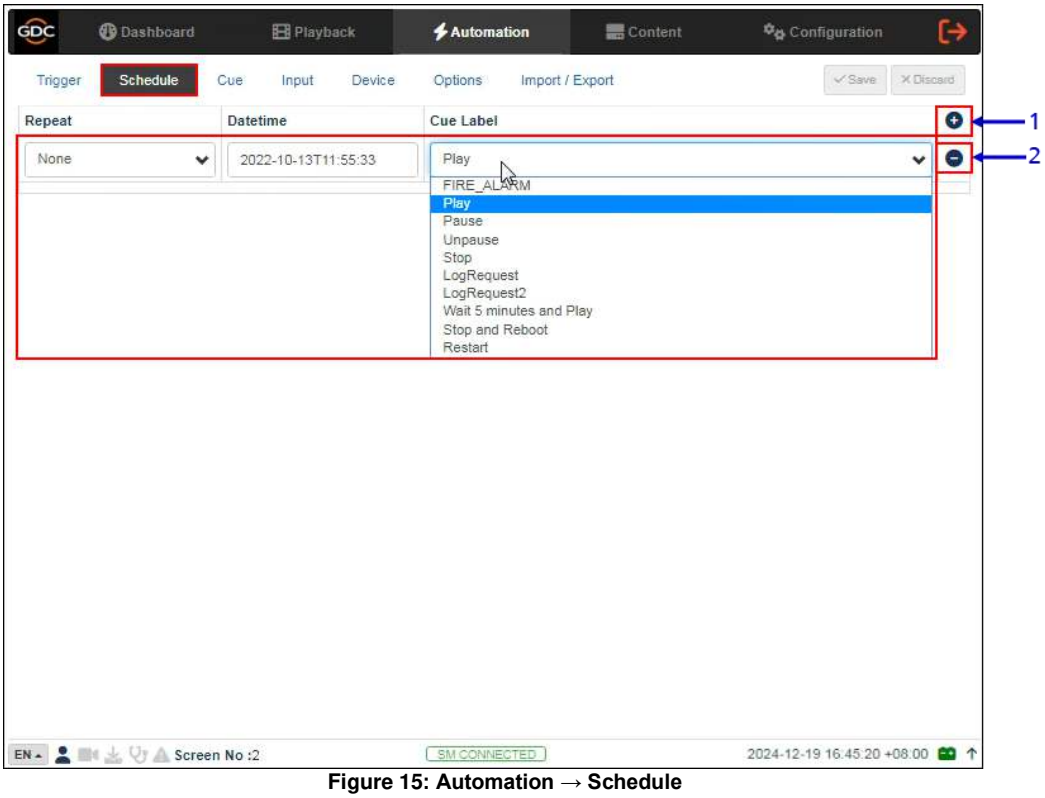


Figure 15: Automation → Schedule

SN	Function Name	Description
1	[+ New Schedule]	Click + to add a new schedule. • Repeat: Choose between 'None' or 'Daily'. • Datetime: Select specific datetime for the automation cue to be executed. • Cue Label: The first cue in cue list is added by default. Select from drop down list to change to another cue. Click Save to save the added schedule or click Discard to remove.
2	[– Remove Schedule]	Click – to remove the selected scheduled automation cue.

Table 10

5.3 Cue

The **Cue** sub-tab shows the automation cues configured on the SR-5520. New automation cues can be added and configured here.

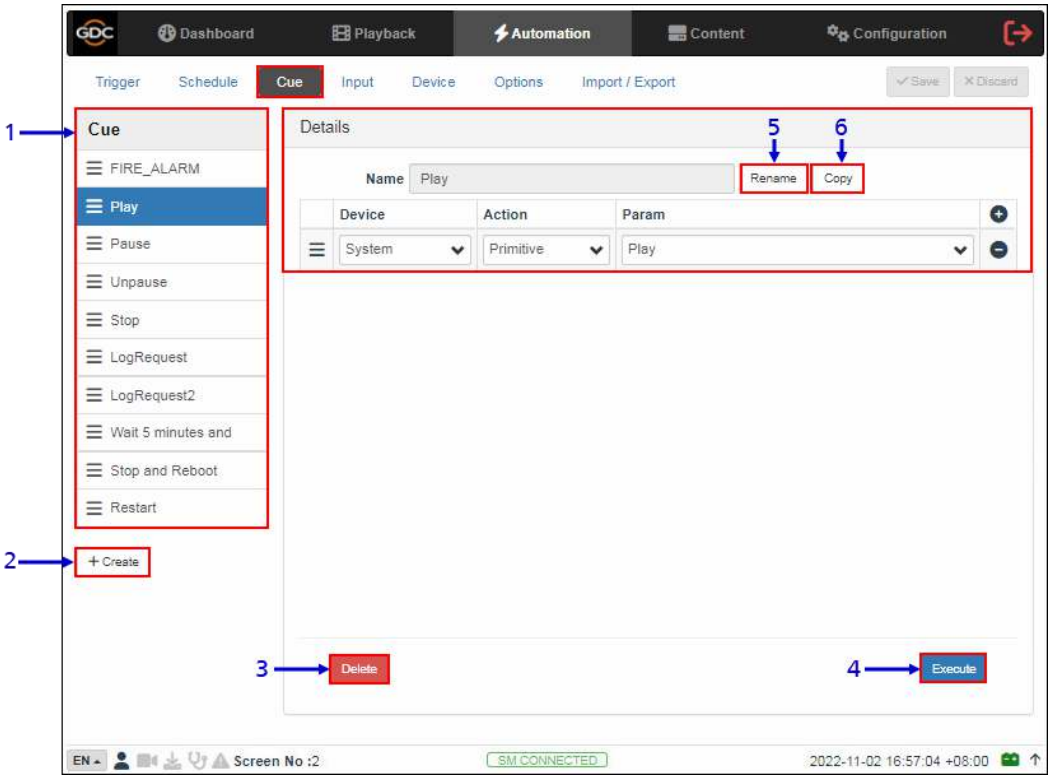


Figure 16: Automation → Cue

SN	Function Name	Description
1	[Cue]	A complete list of configured cues is displayed here. Cues can be re-arranged by dragging and dropping. When a cue is selected from the list, the cue details are displayed. Click ⊕ icon to add actions and click ⊖ icon to remove actions. Click the Rename button to rename the selected cue. Click the Copy button to copy all the actions of the selected cue to a new automation cue.

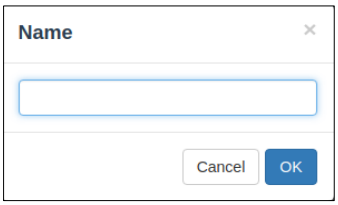
2	[+Create]	Click +Create to create a new cue. A pop-up window will be shown. Enter the name of the cue and click OK.  Refer to **Section 5.3.1** for more details regarding adding a new automation cue.
3	[Delete]	Deletes the selected cue.
4	[Execute]	Executes the selected cue. This can be used to test 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.

Table 11

5.3.1 Adding a new Automation Cue

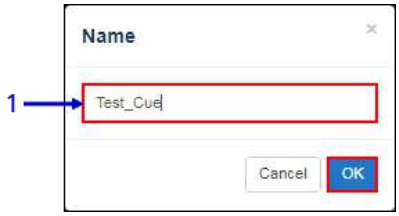


Figure 17: Adding a new cue

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

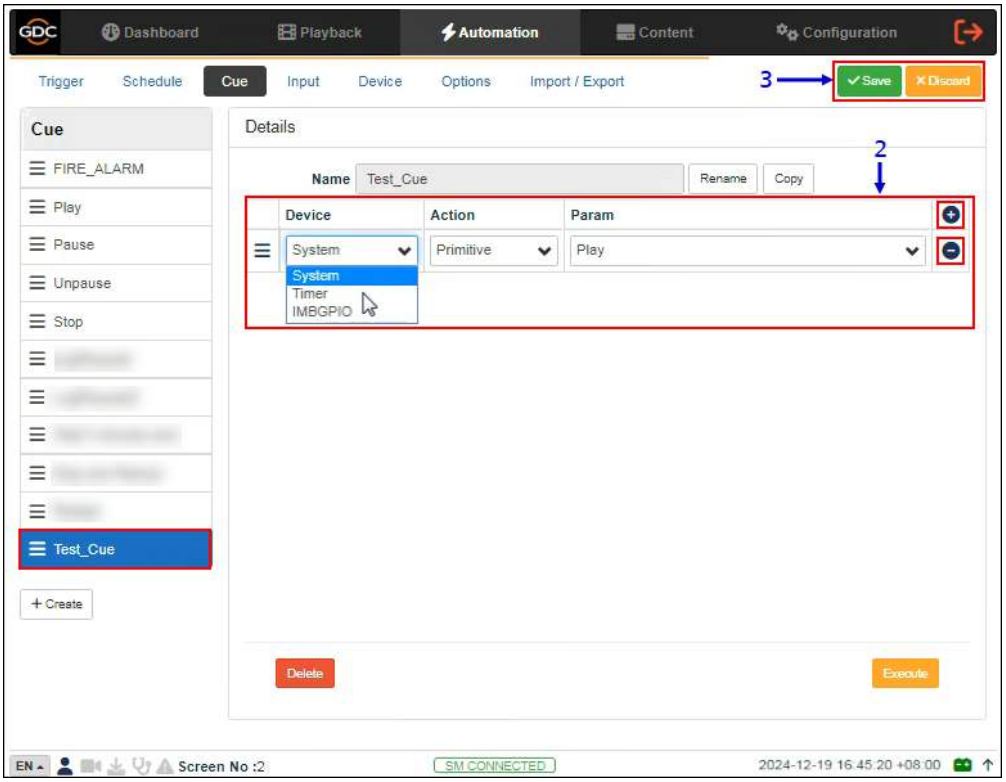


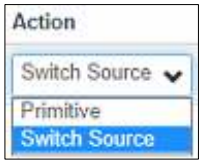
Figure 18: Automation Cue details

2

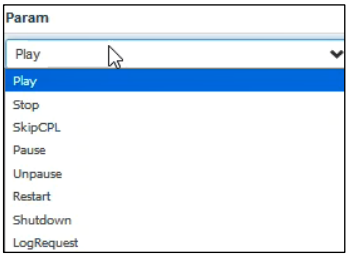
Click + to add actions or click – to remove actions.

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:



ii. If 'Switch Source' 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.

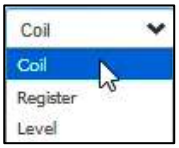
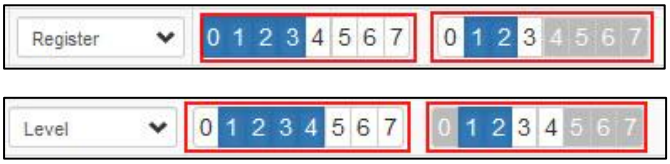
	c) If the selected Device is an 'IMBGPIO', the Action type can be 'Coil', 'Register' or 'Level'.  i. If 'Coil' is selected as the Action type, only one pin can be selected at a time from the Param option:  ii. If 'Register' or 'Level' is selected as the Action type, multiple pins can be selected from 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.

Table 12

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 19**.

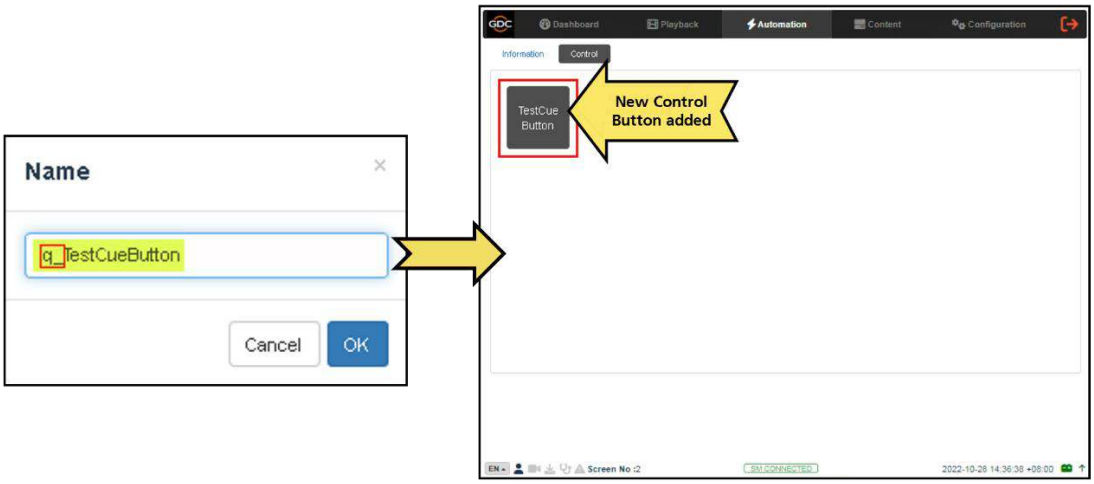


Figure 19: Quick Access button for Automation Cue

5.4 Input

The **Input** sub-tab is used to configure input automation triggers on the SR-5520. When input is detected on supported devices, the configured automation cues will be triggered on the SR-5520.

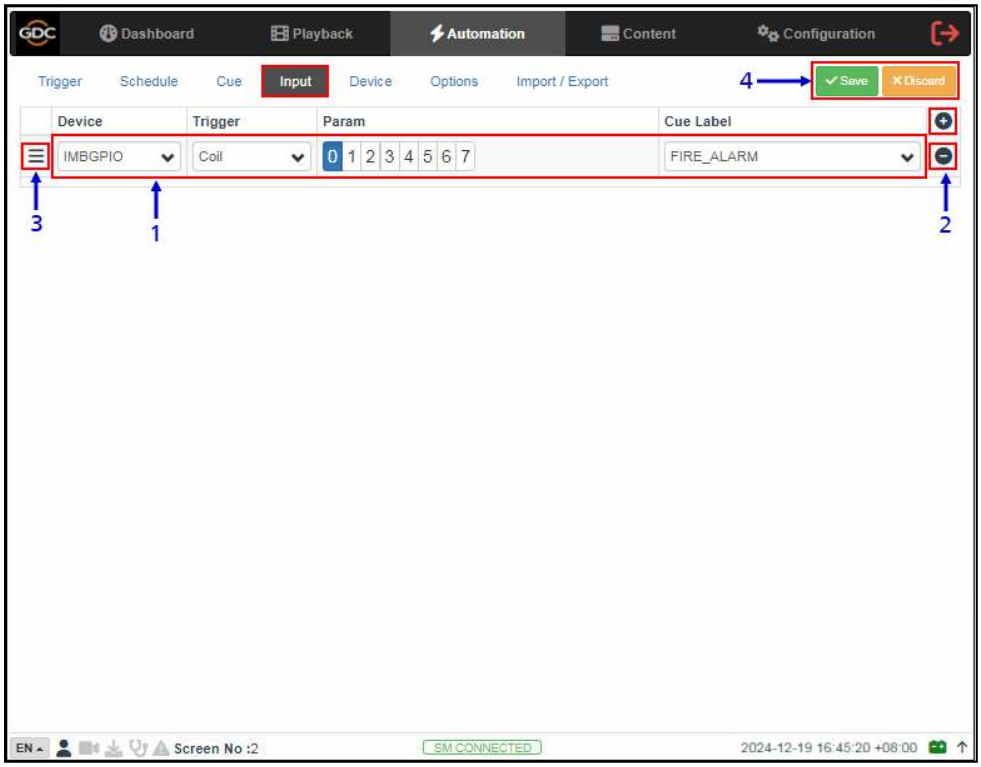
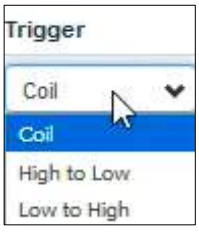


Figure 20: Automation → Input

SN	Function Name	Description
1	[+ Add Trigger]	Click ⊕ to add an input trigger. **Note:** Only devices capable of sending a signal to the SR-5520 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: 

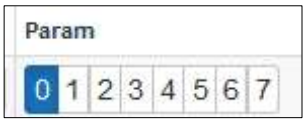
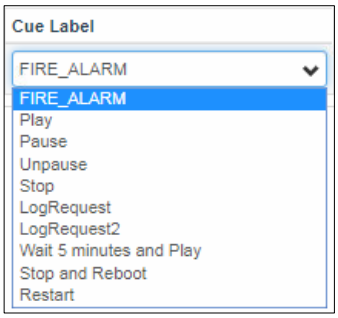
		c) Select the Param value from '0 to 7'. Only one pin can be selected at a time.  d) Select an automation Cue Label that should be triggered for the selected device based on the selected trigger value: 
2	[– Delete Trigger]	Click ⊖ to remove the selected input trigger.
3	[☰]	Click ☰ to reorder the input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

Table 13

5.5 Device

The **Device** sub-tab is used to configure the SR-5520 to communicate with external automation devices.

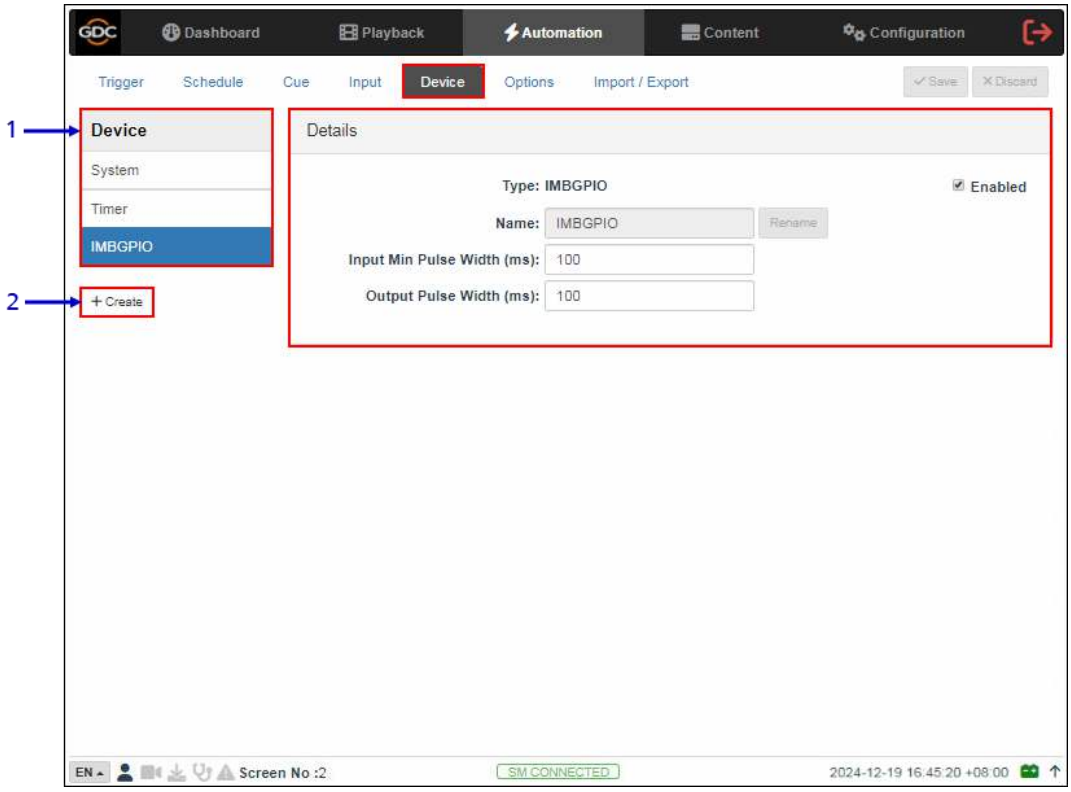


Figure 21: Automation → Device

SN	Function Name	Description
1	[Device]	This is a list of configured automation devices on the SR-5520. 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.

Table 14

5.5.1 Creating a new Automation Device

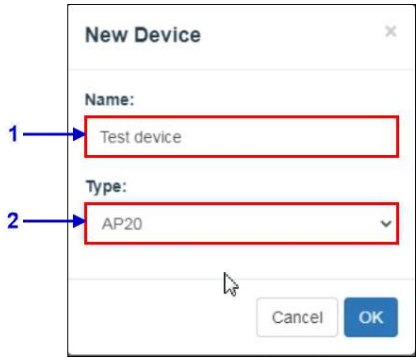


Figure 22: Adding a new Automation Device

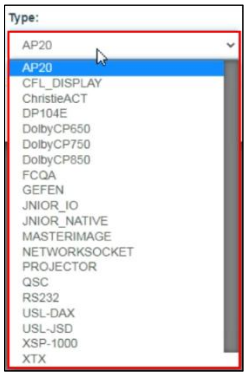
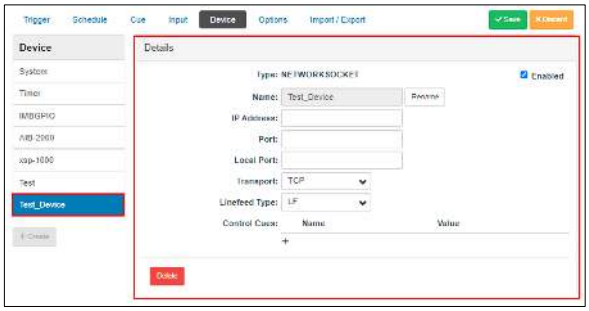
SN	Function Name	Description
1	[Name]	Type in the name that needs to be assigned to the new device being added.
2	[Type]	After adding the device name, assign the type of device you want to use. Select from a dropdown list as seen below:  After clicking the OK button, the device is registered and added to device list. But it may not be properly configured yet. Select the device from the device list, fill in all required parameters under the device Details section to complete device configuration. 

Table 15

5.6 Option

The **Option** sub-tab is used to configure automation cues that will be triggered on SR-5520 boot-up and when playback errors occur.

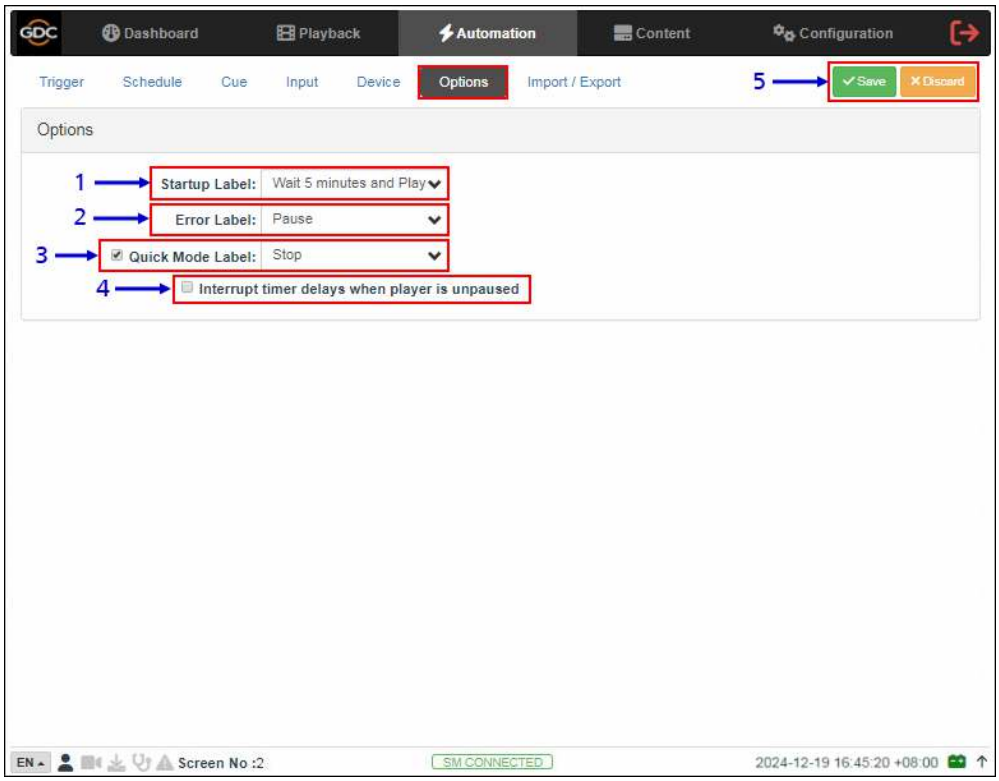


Figure 23: Automation → Option

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' section under the **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.

Table 16

5.7 Import/ Export

The **Import/Export** sub-tab allows the import and export of automations cues which have been setup on the SR-5520.

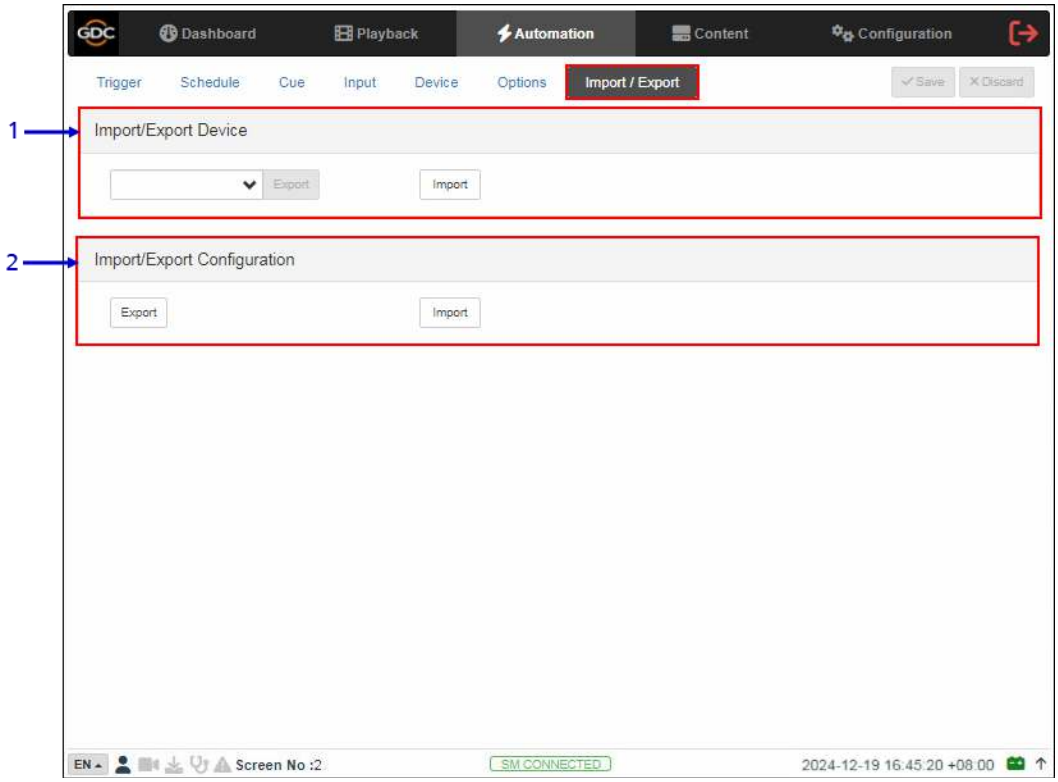


Figure 24: Automation → Import/Export

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.

Table 17

6 CONTENT

The **Content** tab is used to manage the content, keys and licenses on the SR-5520. 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 Licenses required for unlocking optional features.
4. Delete content from Server storage.
5. Verify content on Server storage.

6.1 Summary

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

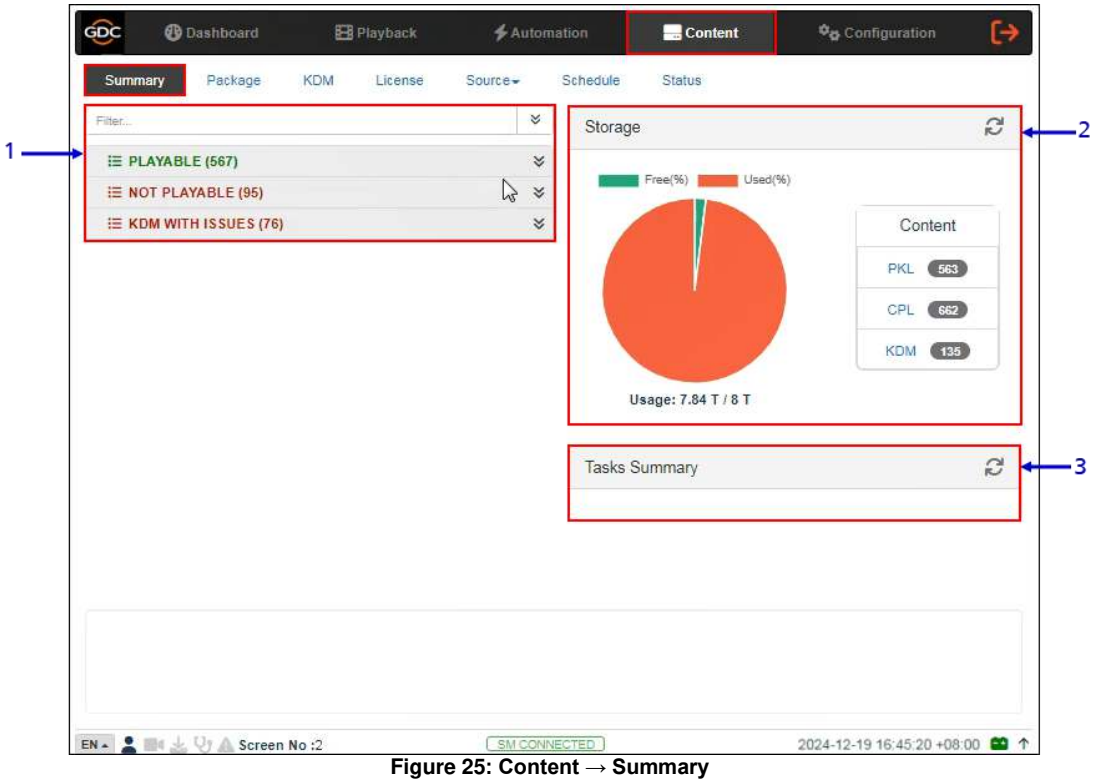


Figure 25: Content → Summary

SN	Function Name	Description
1	[Playable/Not Playable/KDM with Issues List]	Displays a list of *playable* and *non-playable* content as well as KDMs with issues which are currently present on the SR-5520, 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.

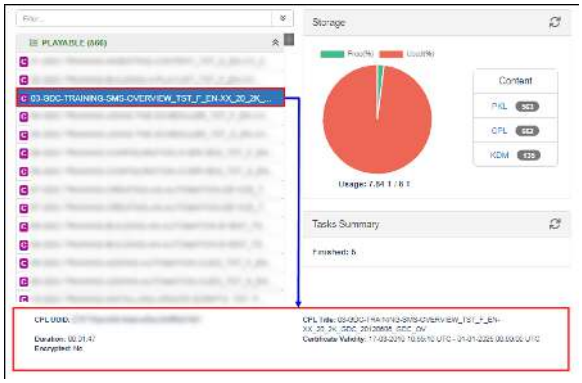
		Selecting a clip from the list will display CPL information such as *UUID, title, duration, certificate validity, etc.* 
2	[Storage]	Shows a graphical overview of the number of PKL, CPL, KDM present on the SR-5520. It also displays Storage Usage and Capacity. Click the Refresh button to update the information displayed under this section.
3	[Tasks Summary]	Displays the summary of all content-related tasks on the SR-5520. Click the Refresh button to update the information displayed under this section.

Table 18

6.2 Package

The **Package** sub-tab shows the content which has been ingested into the SR-5520.

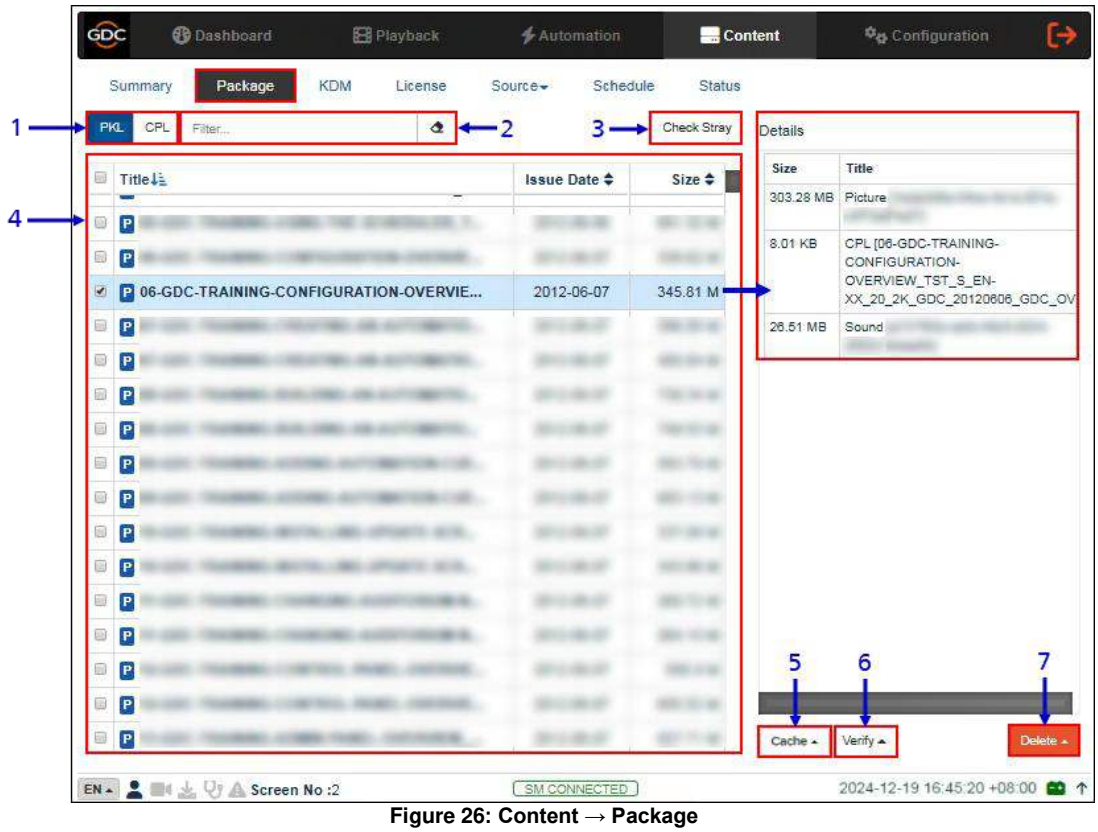


Figure 26: Content → Package

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-5520 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-5520. 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-5520.
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-5520 storage. There are two content delete options are available: 'Immediately Delete' & 'Schedule Delete'. Refer to **Section 6.2.3** for more details

Table 19

6.2.1 Caching Content

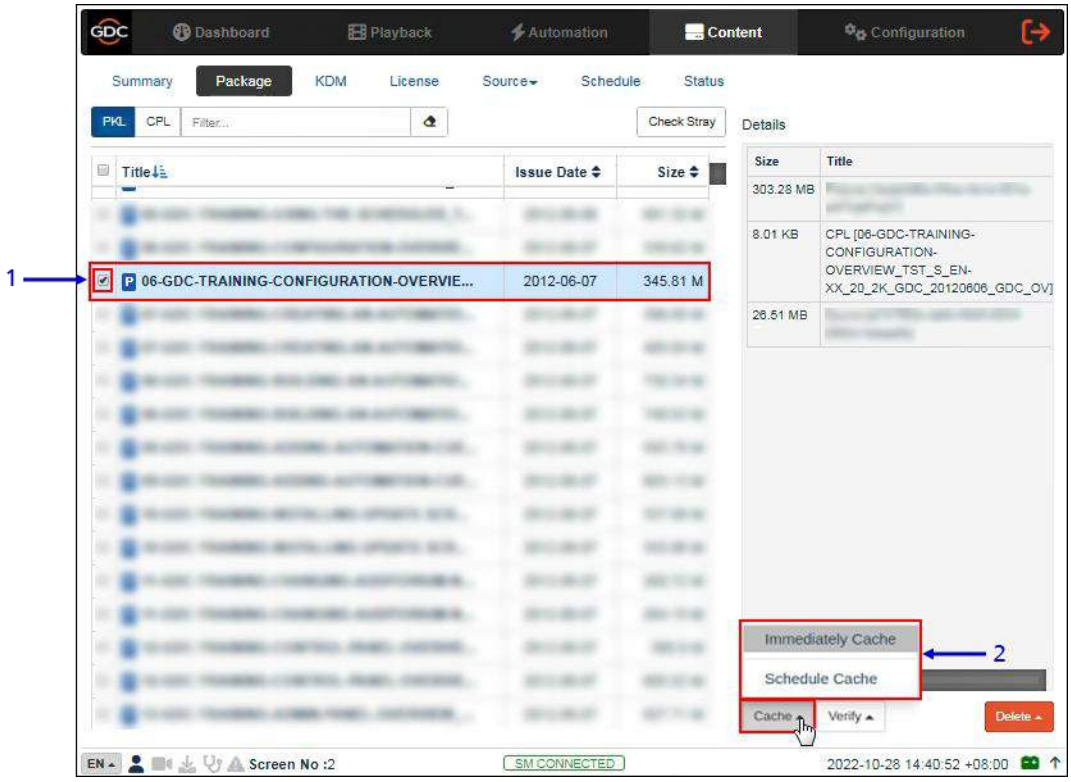


Figure 27: Content Caching options

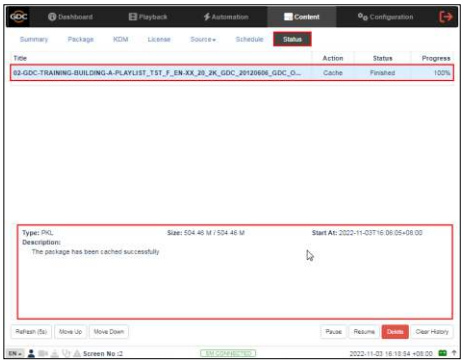
SN	Function Description
1	To import/copy a particular package or CPL from Primary storage to the Secondary storage, go to the **Package** sub-tab and select the checkbox against the package or CPL that needs to be copied. The PKL/CPL details will be displayed under the Details section on the right. Refer to **Section 7.3.1** for more details.
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:** *This feature will be made available in future releases.*

Table 20

6.2.2 Checking Content Integrity

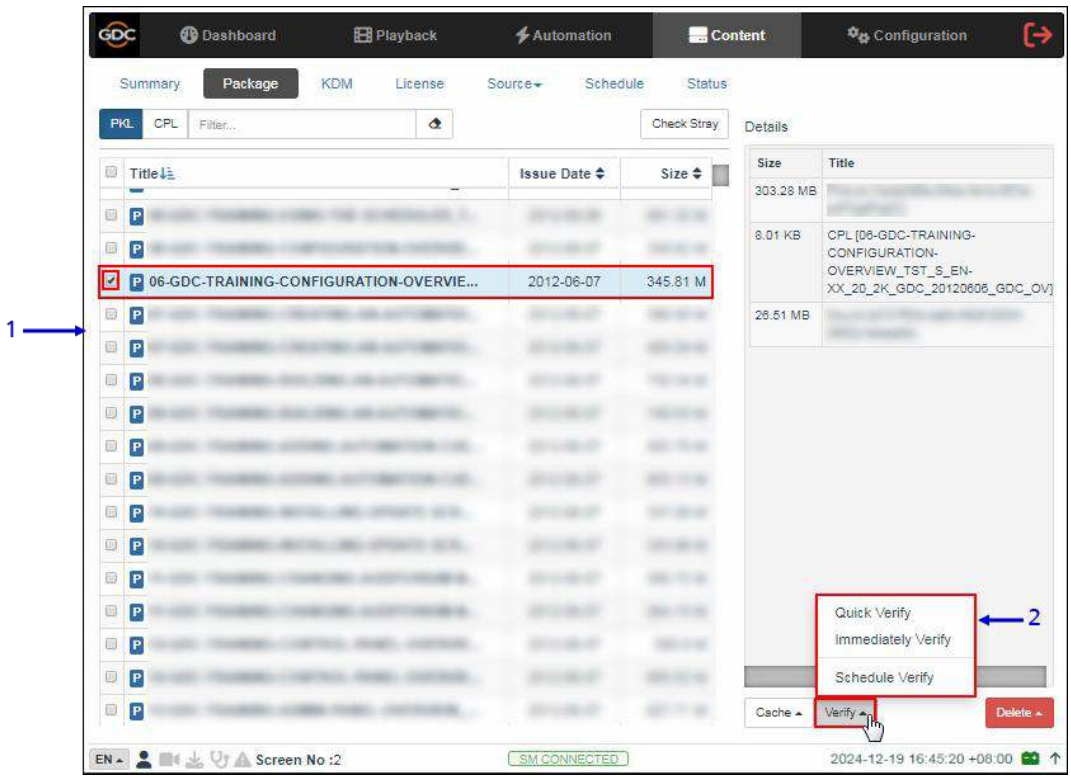
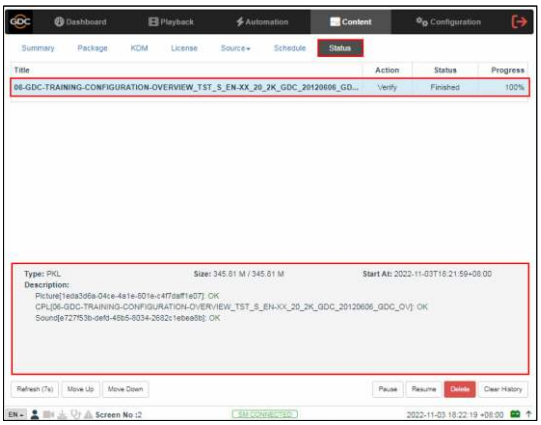


Figure 28: Content Verification options

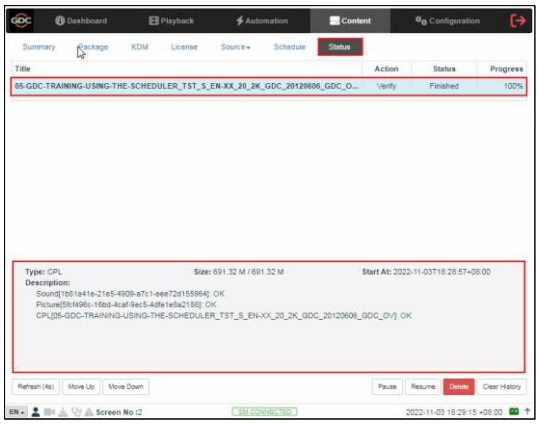
SN	Function Description
1	To verify the integrity of a package or CPL, go to the Package tab and select the checkbox against the package or CPL that needs to be verified. The PKL/CPL details will be displayed under the Details section on the right.

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

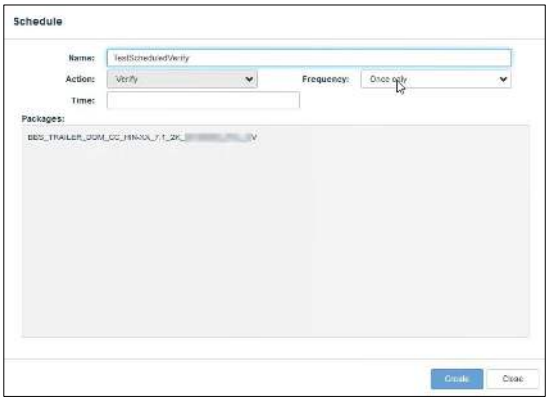
a) **Quick Verify**: The selected content gets quickly verified. The Verification status will be displayed under the **Status** tab. The Green OK indicates no error is found. Otherwise, the description of the error will be shown.



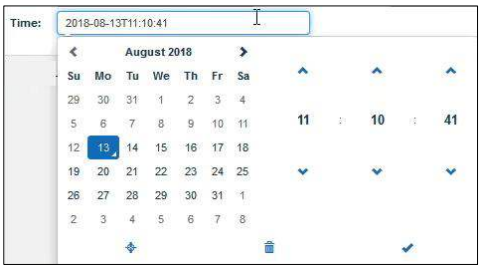
b) **Immediately Verify**: Immediate full verification of the selected CPL/PKL. The verification status will be displayed under the **Status** tab.



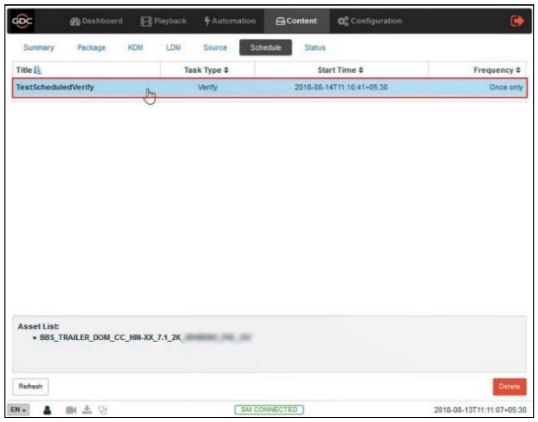
c) **Schedule Verify**: Set a date and time for full verification of the selected CPL/ PKL. A pop-up window will be shown to provide details for the schedule. Provide a Name for the schedule being created.



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.

Table 21

6.2.3 Deleting Content

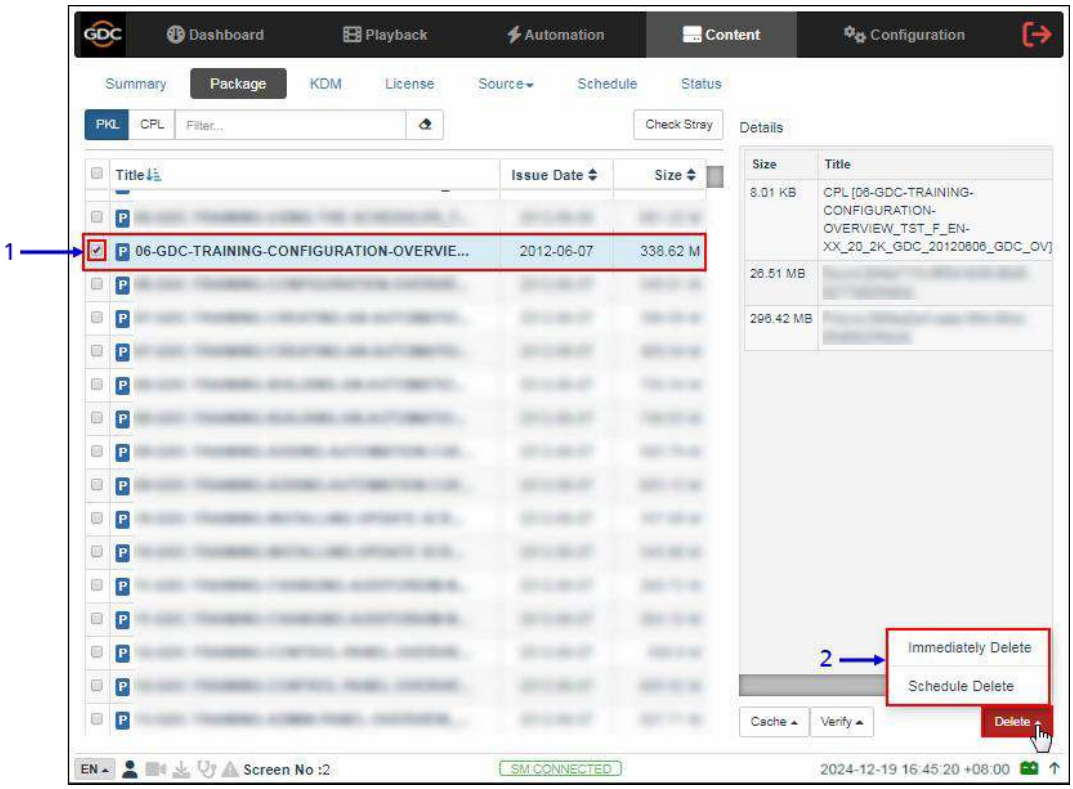
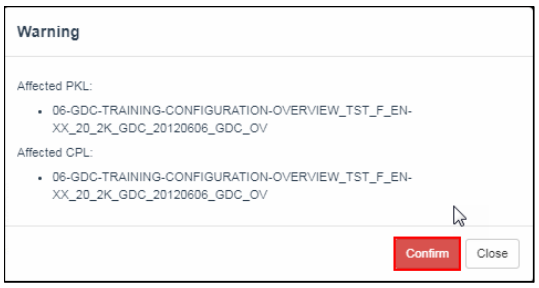
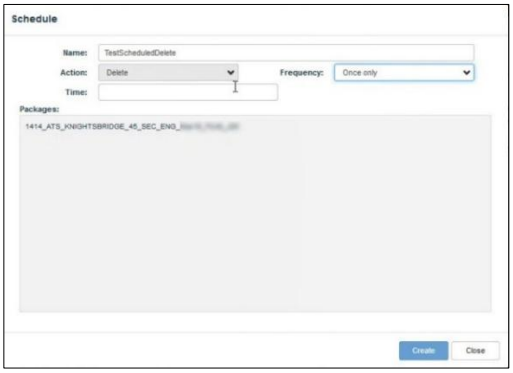


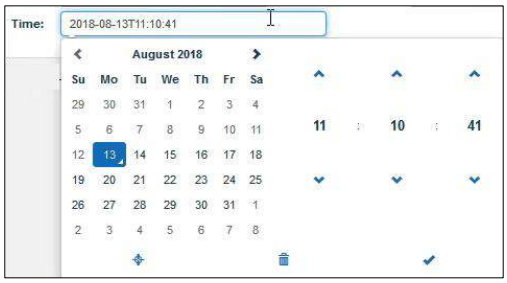
Figure 29: Content Deletion options

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** sub-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** sub-tab, as shown below. To delete this schedule, click on the Delete button.

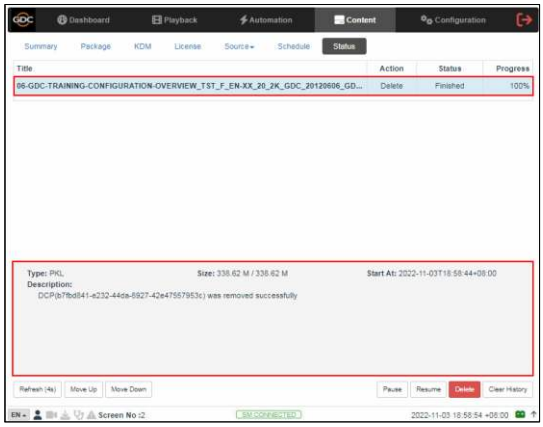


Table 22

6.3 KDM

The **KDM** sub-tab displays all the KDMs present on the SR-5520.

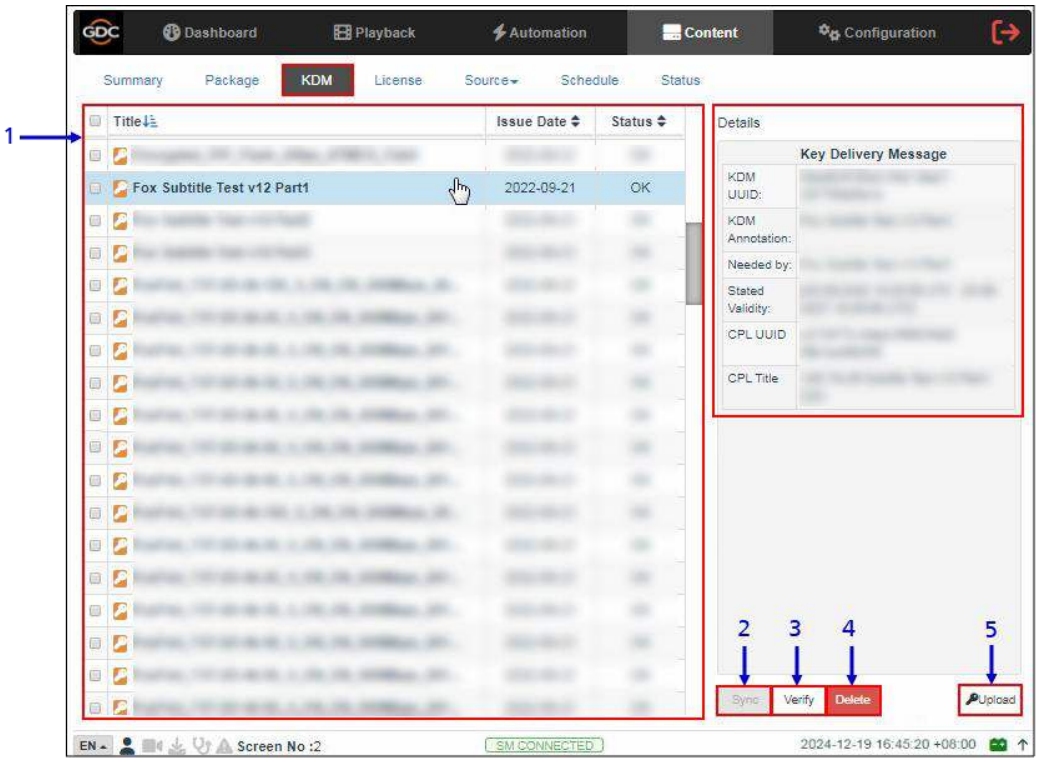
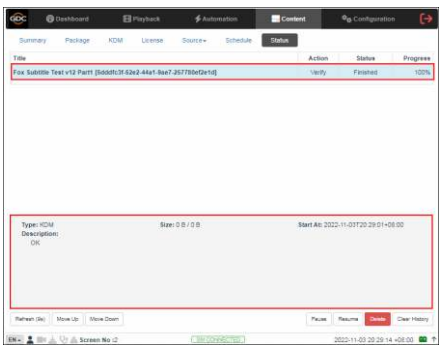


Figure 30: Content → KDM

SN	Function Name	Description
1	[KDM List]	Displays a list of the KDMs on the SR-5520. 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 of the Server.
3	[Verify]	Verify the selected KDM. The verification status will be displayed under the **Status** sub-tab. 

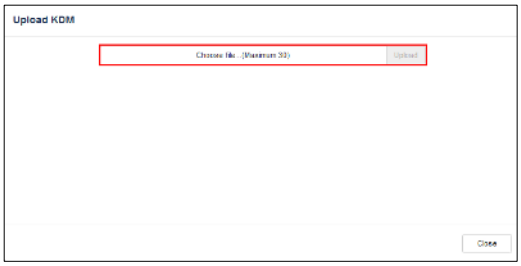
4	[Delete]	Delete the selected KDM.
5	[Upload]	Upload KDM files directly using the Web UI. A pop-up window is shown. Click on the Choose file button to select the KDM file(s) from the folder where it has been downloaded and click on Open. Once the KDM file(s) is selected, click the Upload button to upload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

Table 23

6.4 License

The **License** sub-tab displays the list of licenses on the SR-5520 IMB.

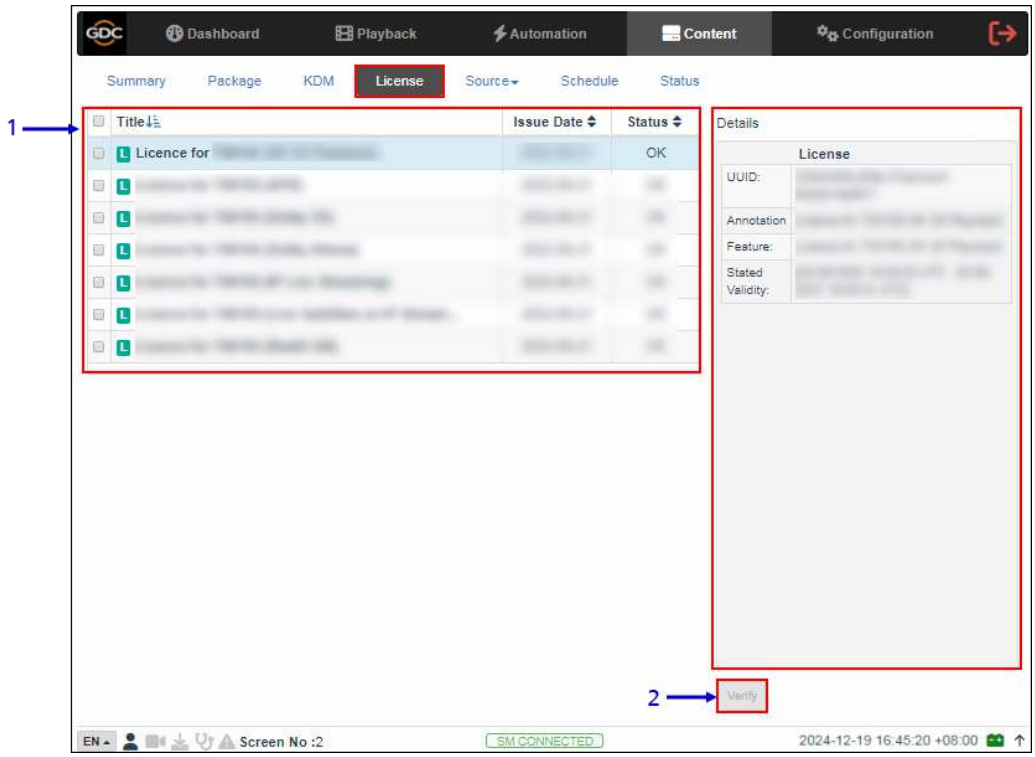


Figure 31: Content → License

SN	Function Name	Description
1	[License List]	Displays a list of licenses on the SR-5520. When a license is selected from the list, corresponding details are displayed under the Details section on the right.
2	[Verify]	This option checks whether the selected license is valid. Any errors found will be displayed. The verification status will be displayed under the **Status** sub-tab.

Table 24

6.5 Source

The **Source** sub-tab is used to configure and manage the content ingest sources on the SR-5520. There are two options available under this sub-tab: **Ingest** and **Manage**.

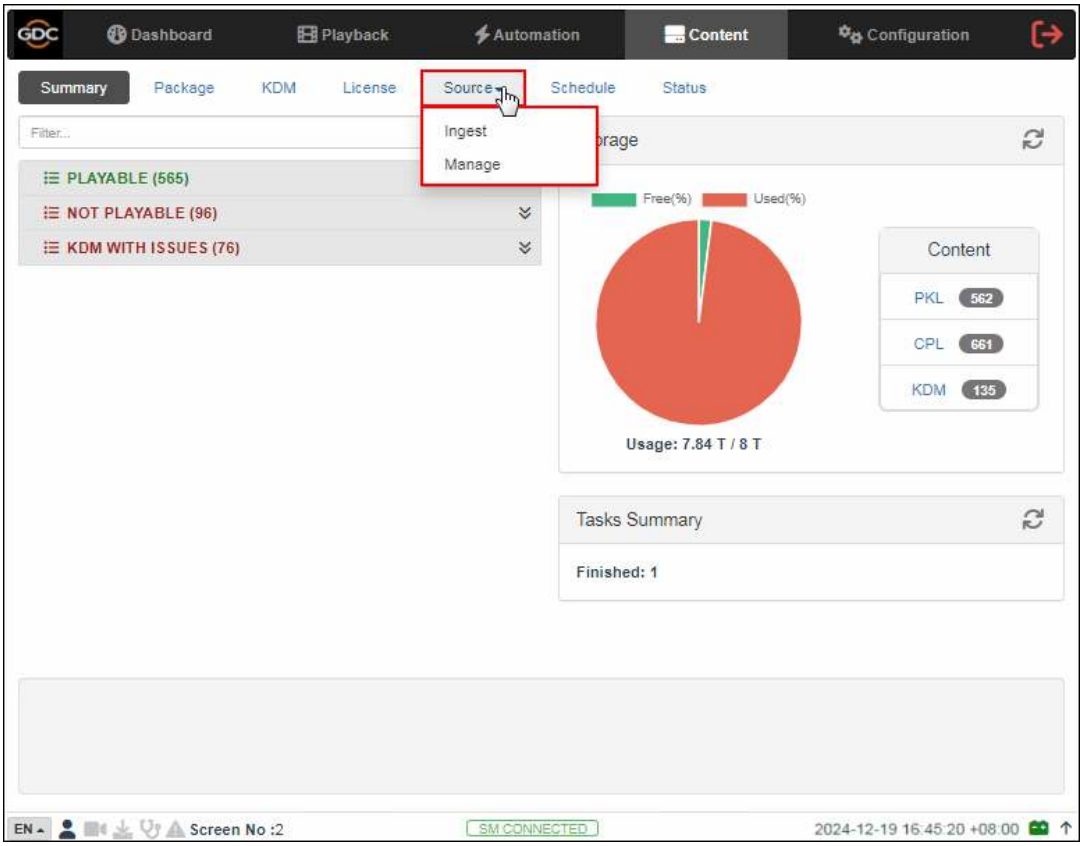


Figure 32: Content → Source options

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.

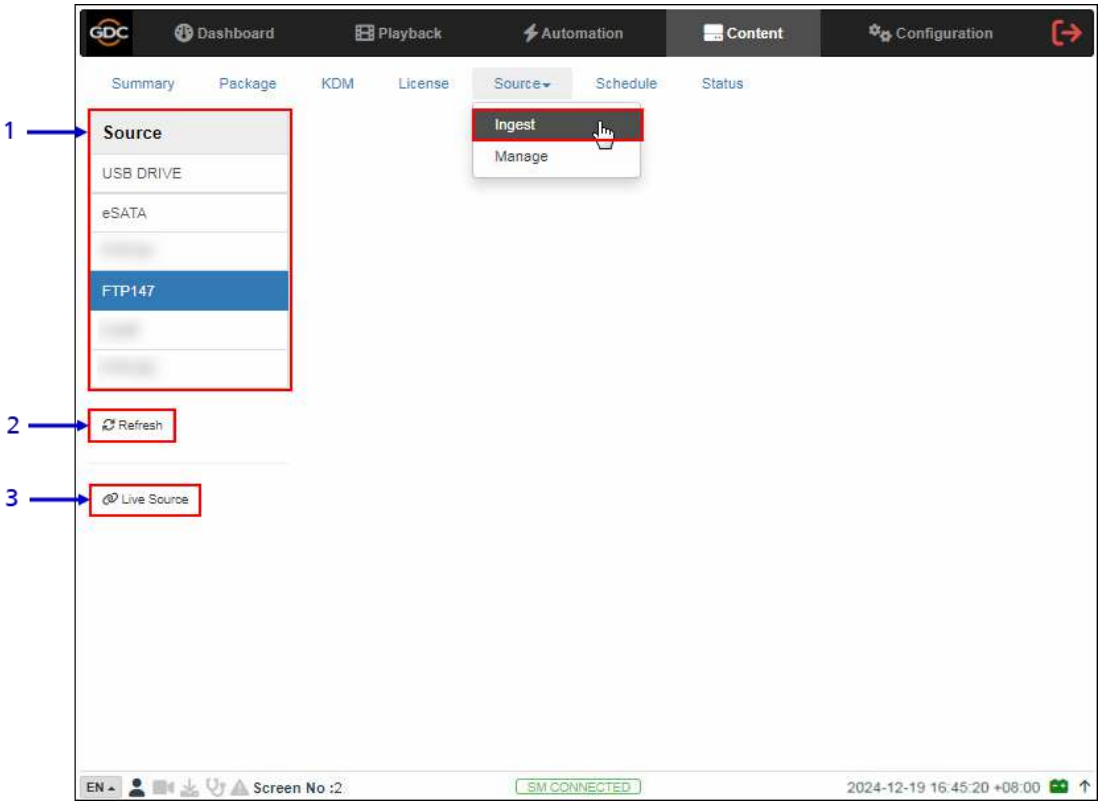


Figure 33: Ingest Source

SN	Function Name	Description
1	[Source]	Displays a list of configured content ingest sources on the SR-5520.
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.)

Table 25

6.5.1.1 Ingesting Content from USB Drive

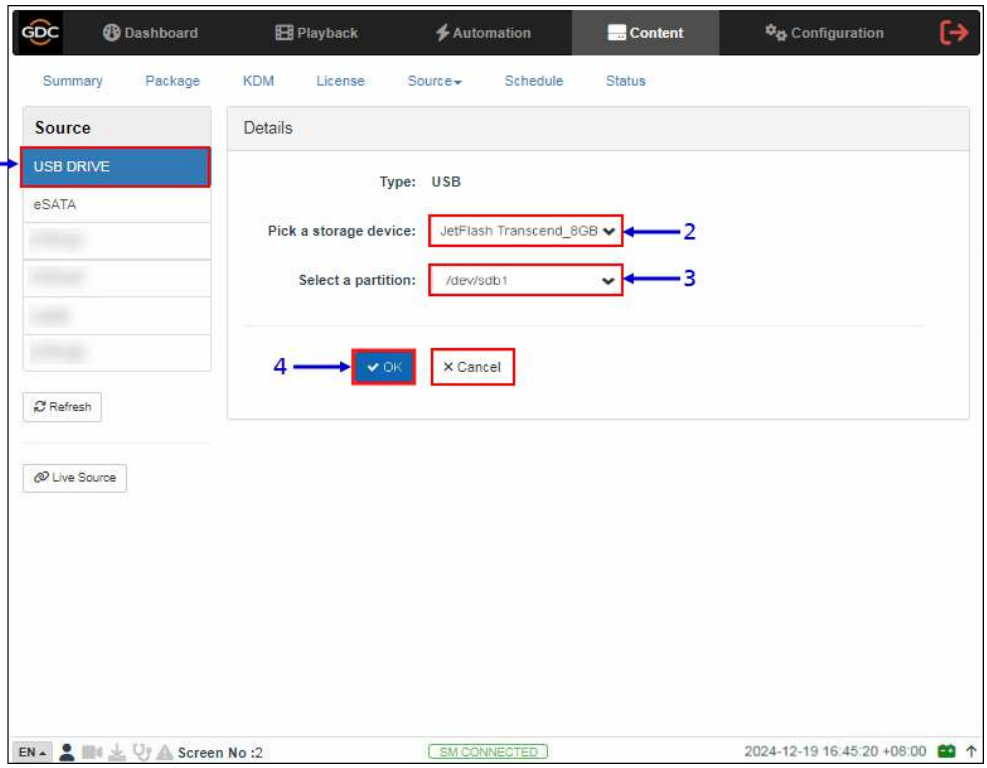


Figure 34: Ingesting Content from USB Disk (1)

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-5520 from the Select a partition: drop-down
4	Click OK to mount the content ingest source and select the content to be ingested.

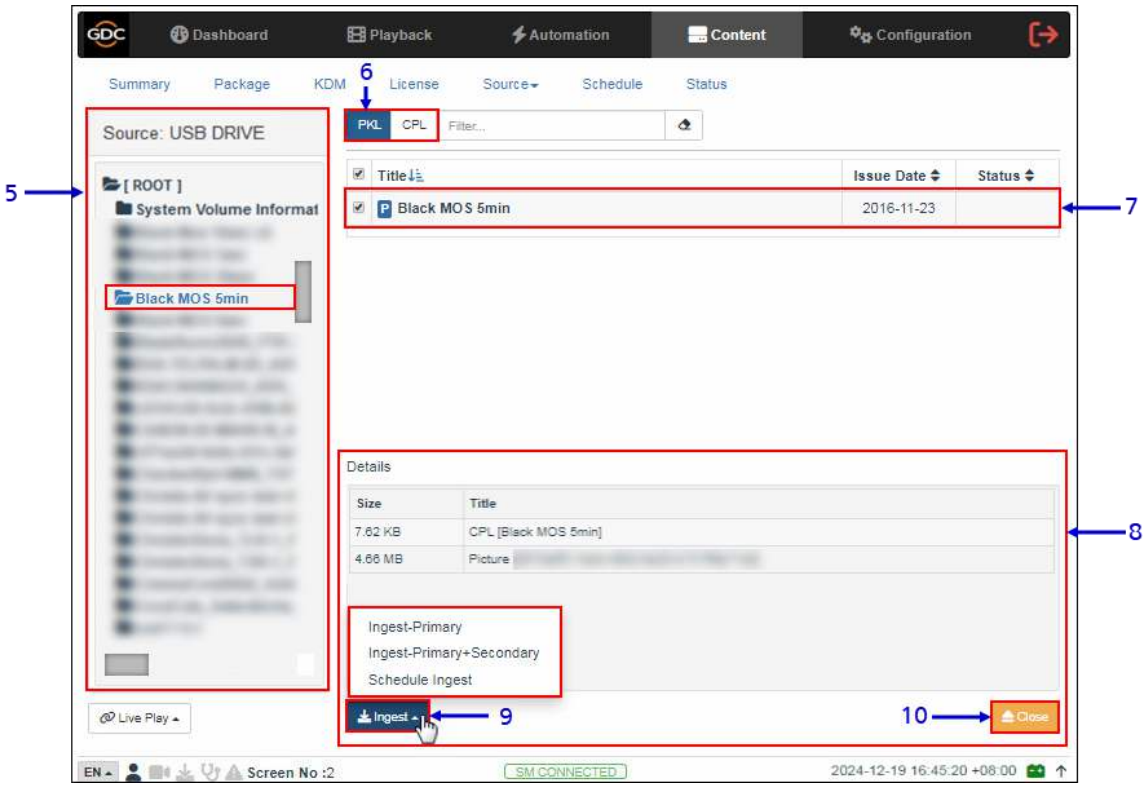


Figure 35: Ingesting Content from USB Disk (2)

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 below. The Filter option can also be used to search for a particular PKL/CPL within the selected directory.
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.

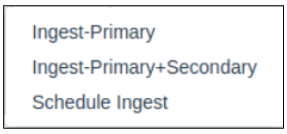
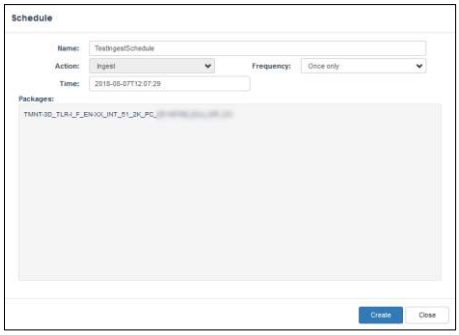
9	Click on the Ingest button & select the Ingest option to queue downloading of the PKL/CPL. (To bypass ingestion for direct playback you can click on Live Play instead. Refer to **Section 6.5.1.3** for details). **Note**: For SR-5520 with CineCache™, if the Secondary Storage has configured under **Configuration → Storage** sub-tab, an option will be provided to either ingest to the Primary storage or to both the Primary as well as the 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** sub-tab.

Table 26

6.5.1.2 Ingesting KDMs

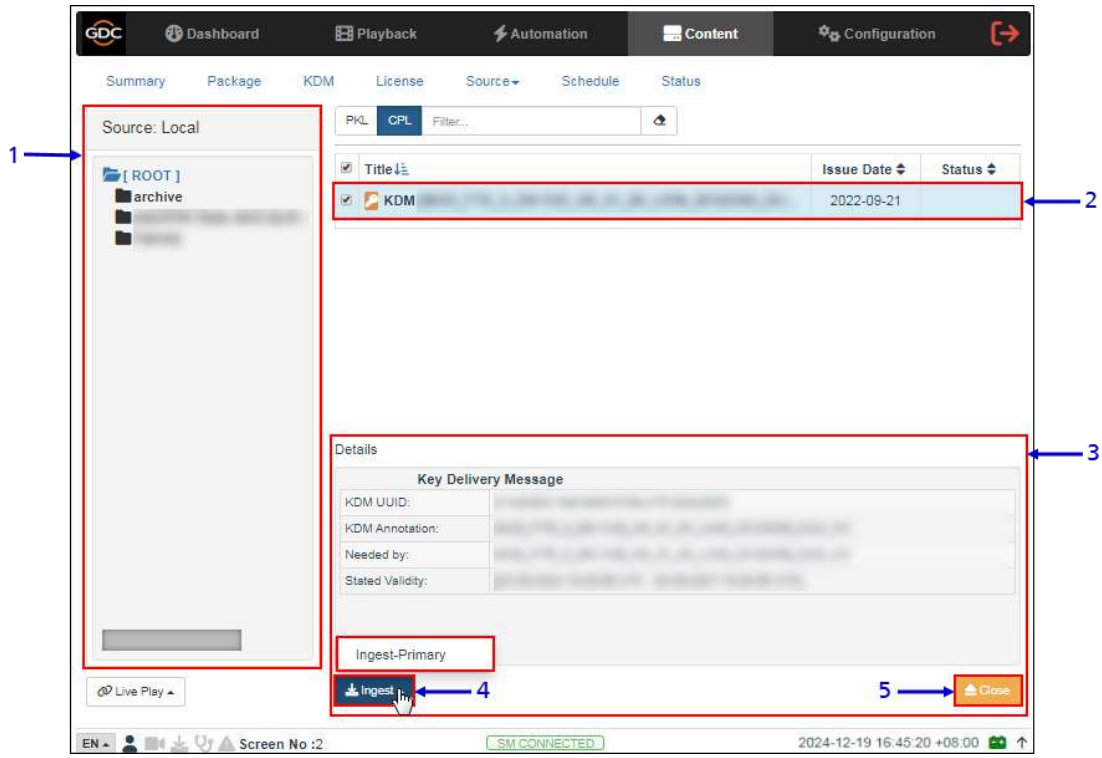


Figure 36: Ingesting KDMs

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. Multiple KDMs can also be selected.
3	Information about the selected KDM, including *Needed by CPL* and *Stated Validity* are shown in this section.

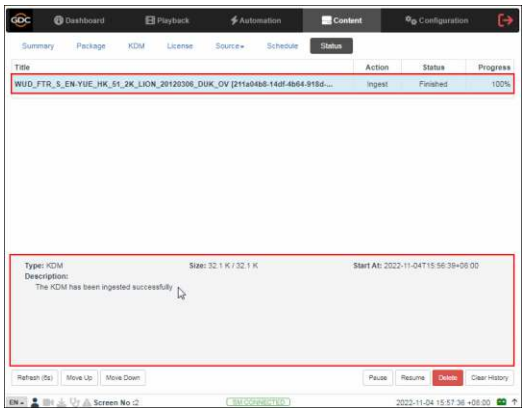
4	Click on the Ingest button and select the 'Ingest-Primary' option to queue downloading of the KDM. To check on the download status of the ingested KDM, go to the **Status** sub-tab. Refer to **Section 6.7** for more details. 
5	When done selecting the KDM(s), click on the Close button.

Table 27

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.
The SR-5520 only supports Live Play from ingest sources which use 'Ext2/3/4' File System format.

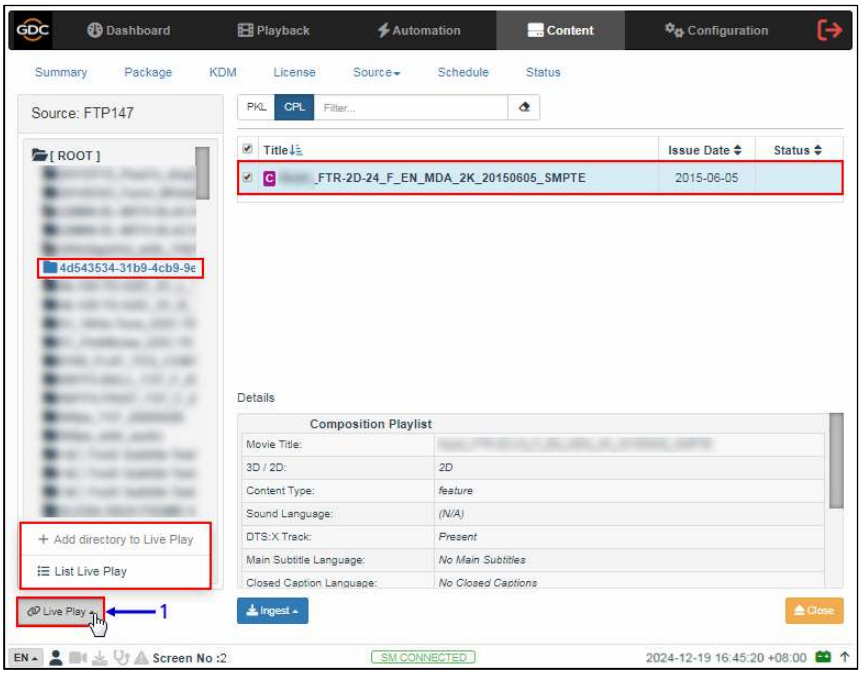


Figure 37: Live Play

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.

Table 28

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.

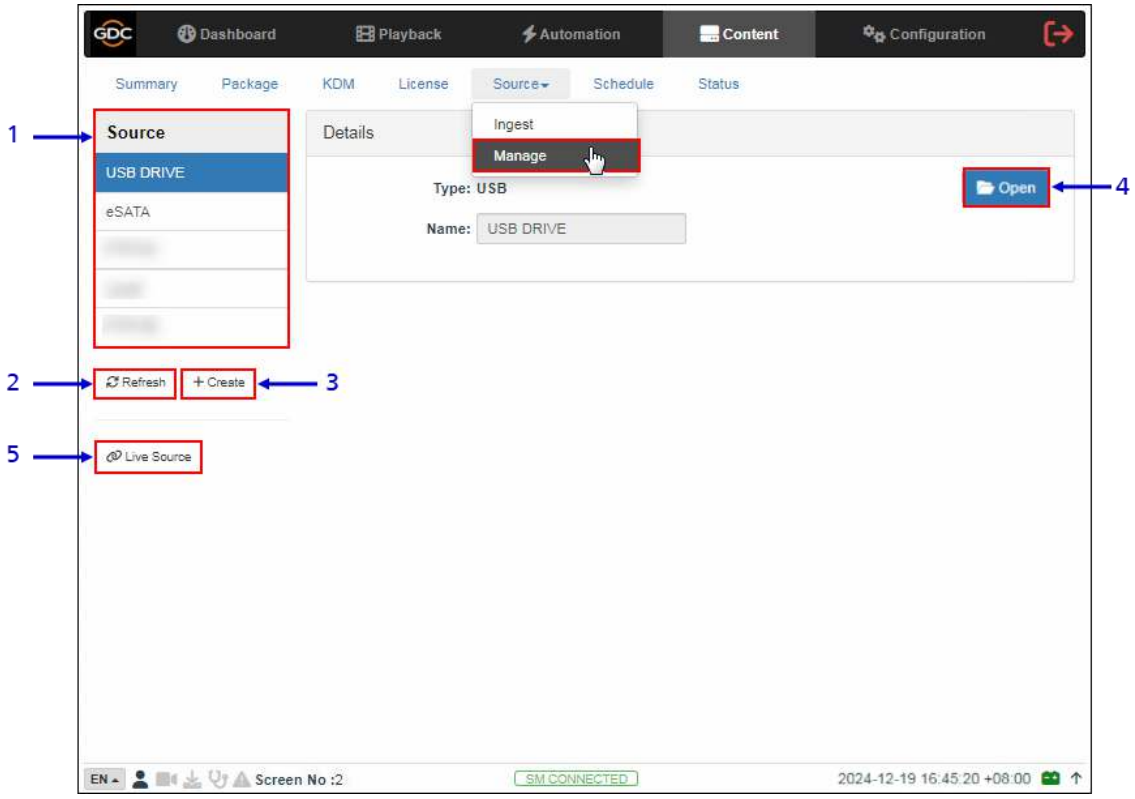


Figure 38: Manage Ingest Sources

SN	Function Name	Description
1	[Source]	Displays a list of configured content ingest sources on the SR-5520.
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.)

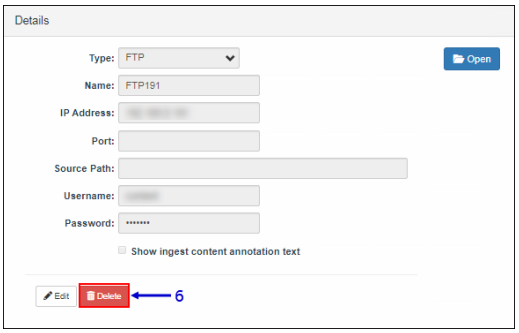
6	[Delete]	Click Delete to delete the selected content ingest source.  **Note**: Delete and Edit buttons are only available for Created Sources

Table 29

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 39**.

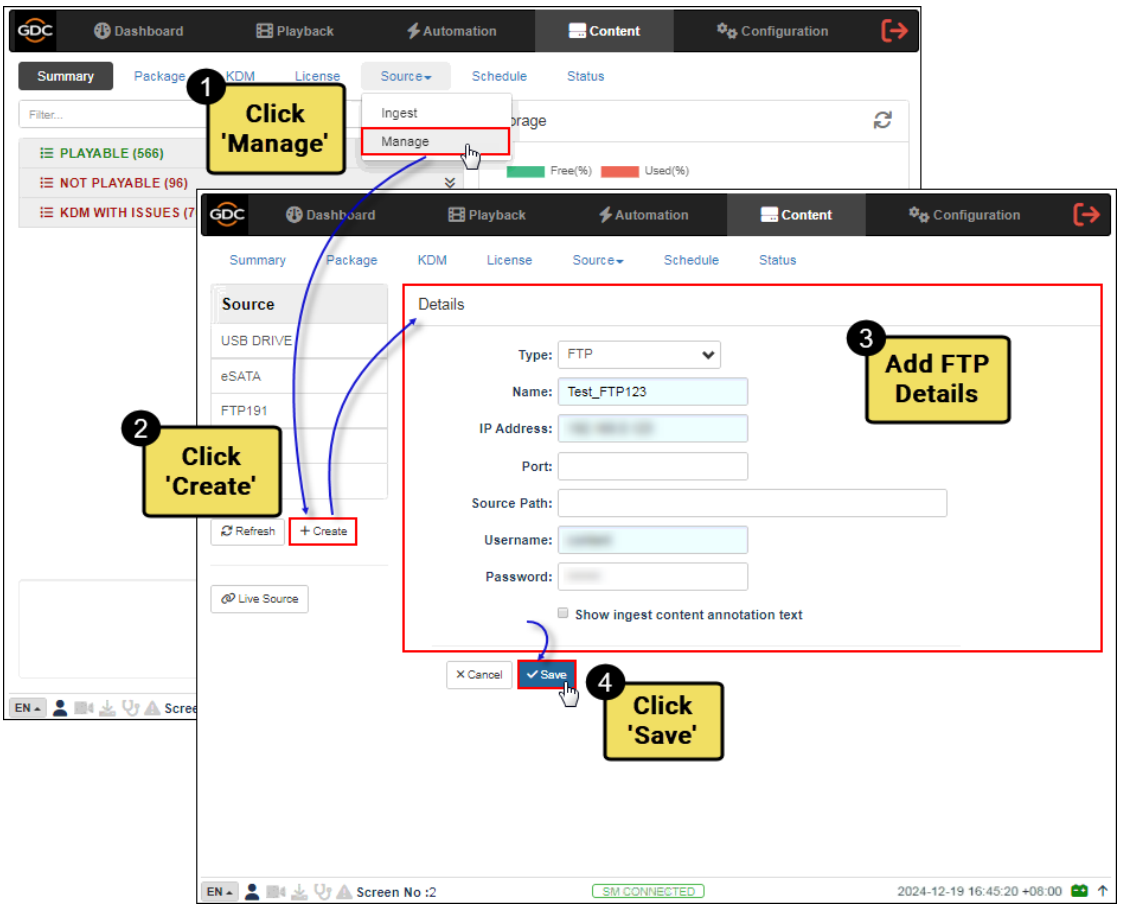


Figure 39: Creating an FTP Ingest Source

6.6 Schedule

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

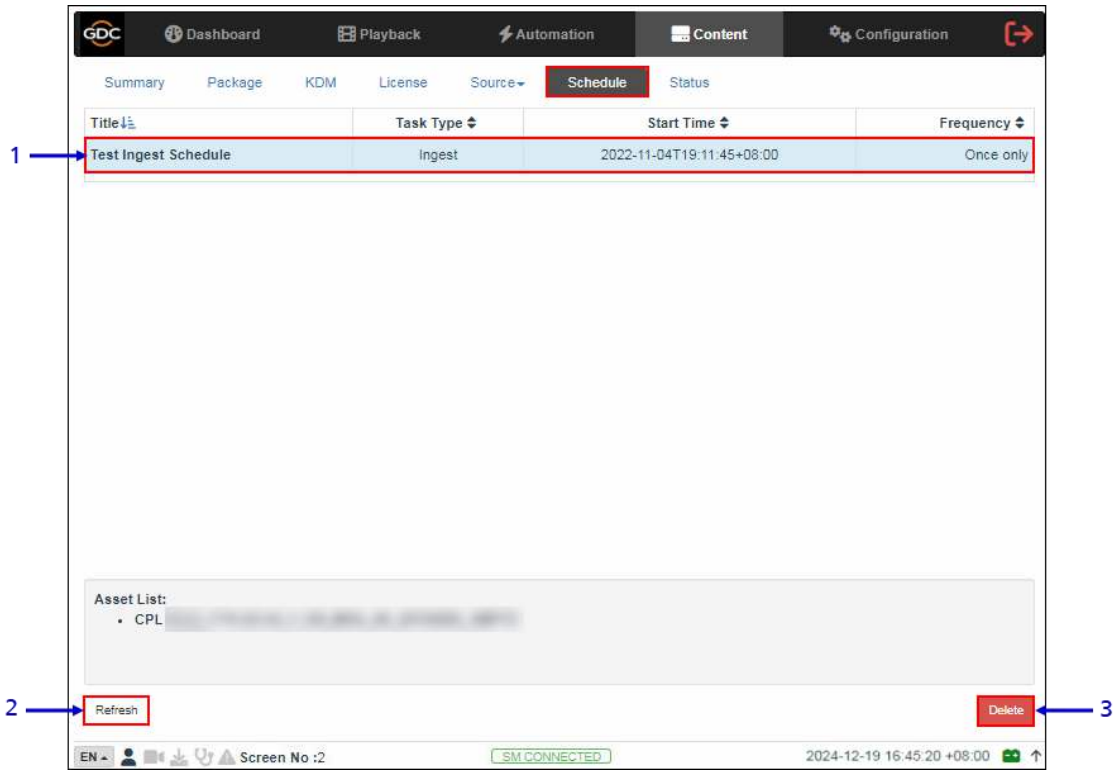


Figure 40: Content → Schedule

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.

Table 30

6.7 Status

The **Status** sub-tab shows content ingestion, deletion and verification status.

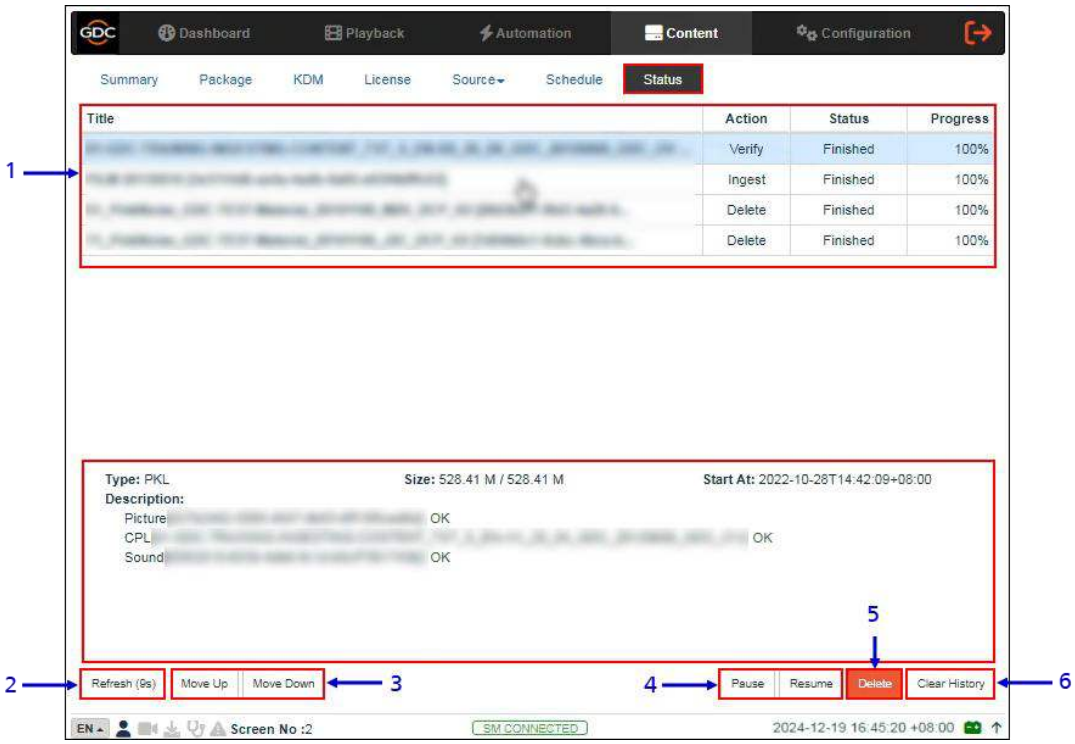


Figure 41: Content → Status

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 download of selected package(s) or CPL(s). When the Pause button is clicked, the Resume button will be enabled and can be used to resume the download of selected PKL(s) or CPL(s)
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.

Table 31

7 CONFIGURATION

The **Configuration** menu is used to change SR-5520 settings and configure aspects of the Server operation. The settings under the **Configuration** menu have been divided into five sub-tabs: **General, Playback, Storage, System** and **Maintenance**.

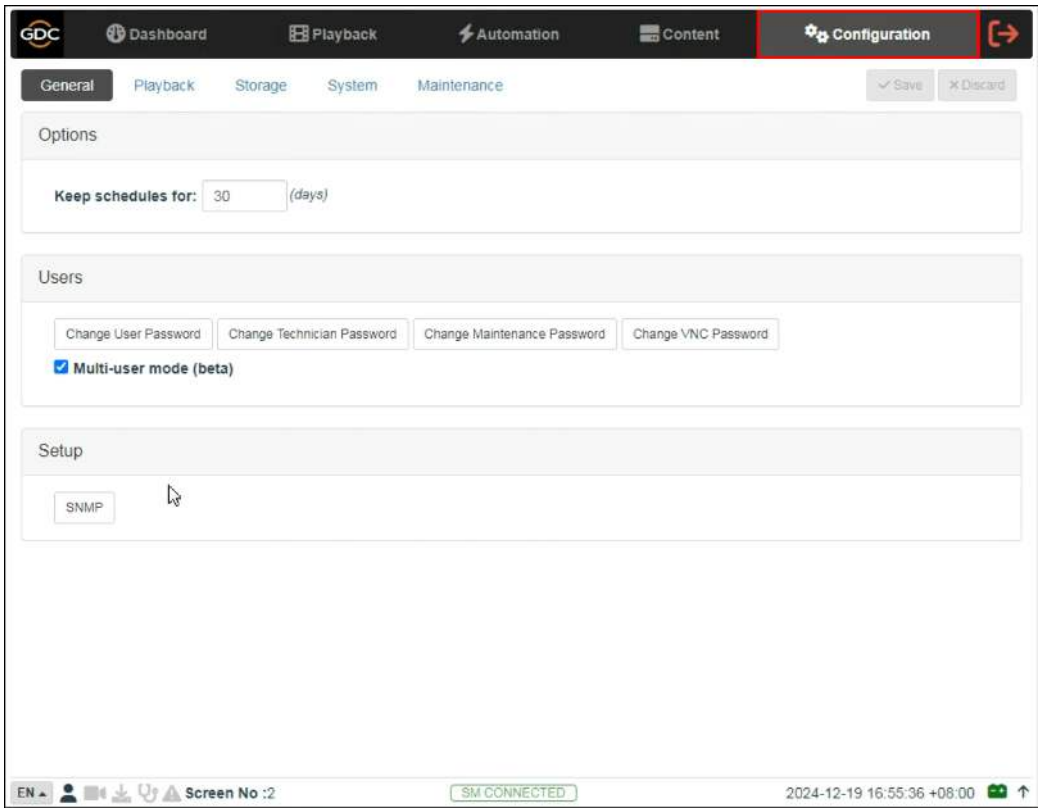


Figure 42: Configuration options

7.1 General

The **General** sub-tab can be used to change passwords for Web UI user logins as well as manage the SNMP configuration for the SR-5520.

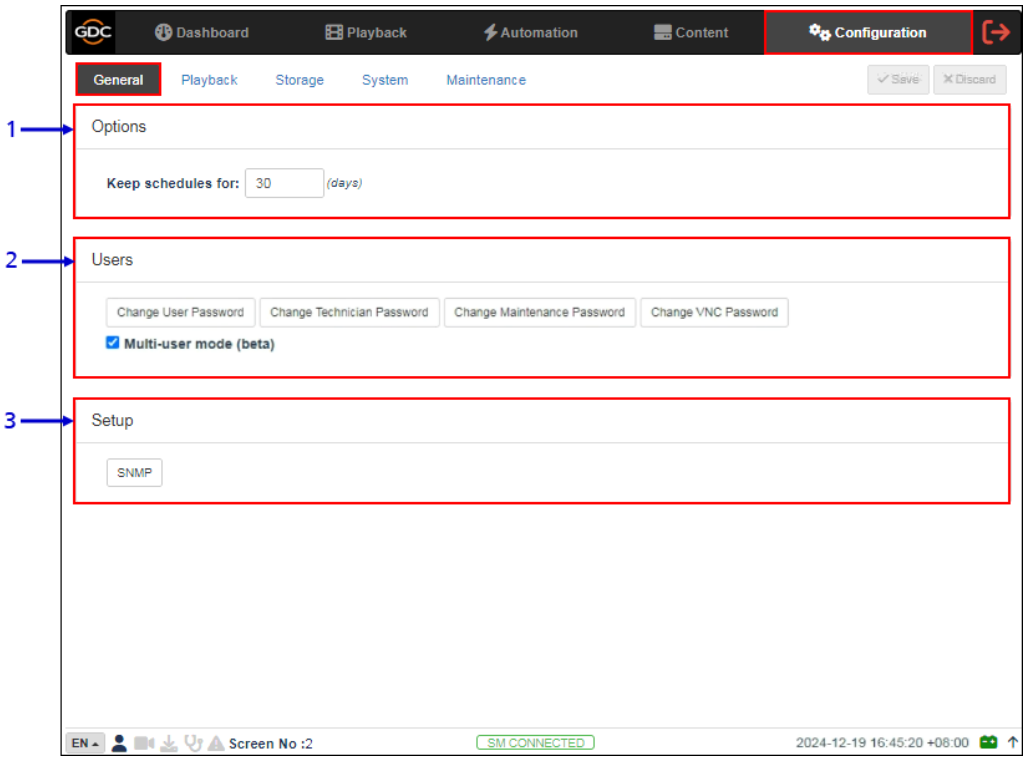


Figure 43: Configuration → General

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 caution.

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.

Table 32

7.1.1 SNMP Configuration

The SNMP feature is an option on the SR-5520 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

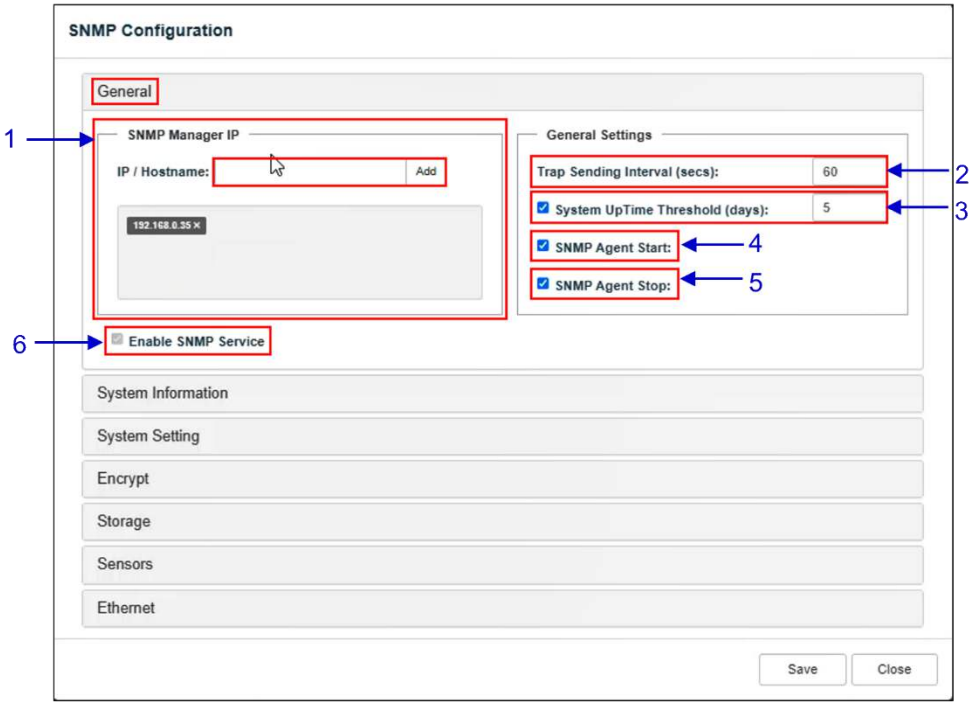


Figure 44: SNMP Configuration → General

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. **Note**: This option will be enabled by default and cannot be disabled. Click Save to save the settings or Close to cancel the changes.

Table 33

7.1.1.2 System Information

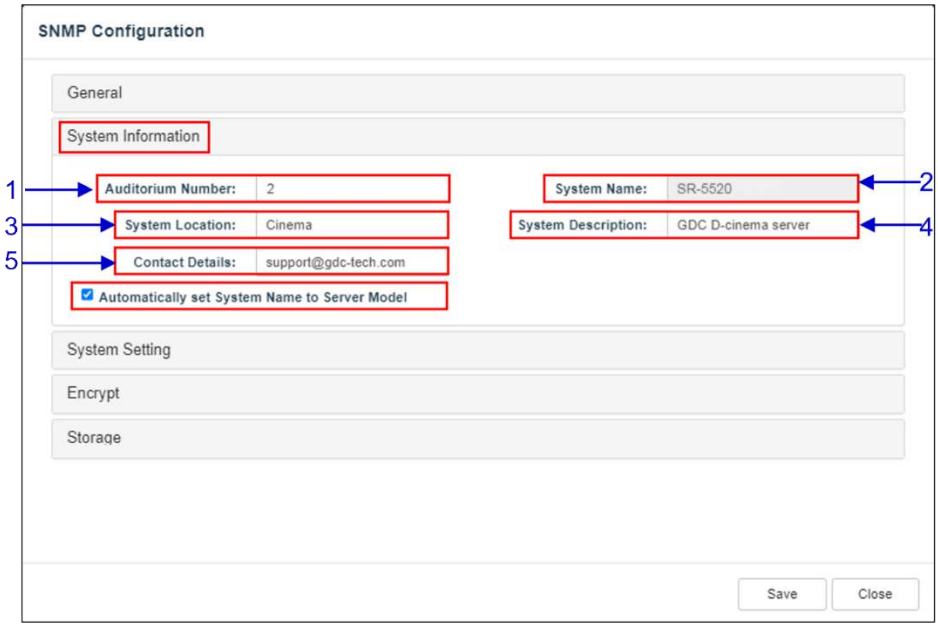


Figure 45: SNMP Configuration → System Information

SN	Function Name	Description
1	[Auditorium Number]	The auditorium name and number where the SR-5520 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.

Table 34

7.1.1.3 System Setting

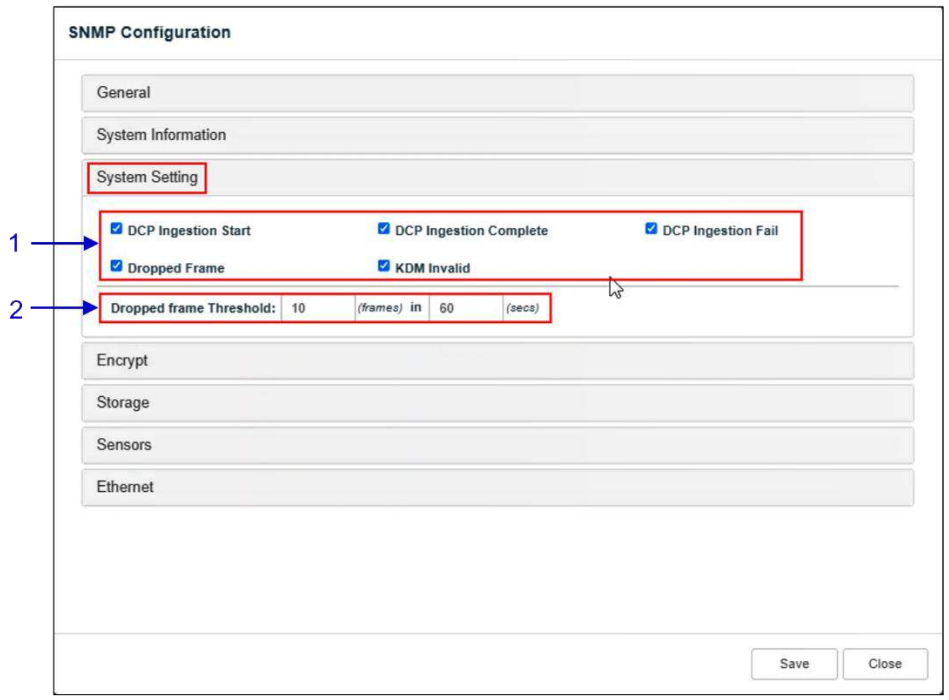


Figure 46: SNMP Configuration → System Setting

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).

Table 35

7.1.1.4 Encrypt

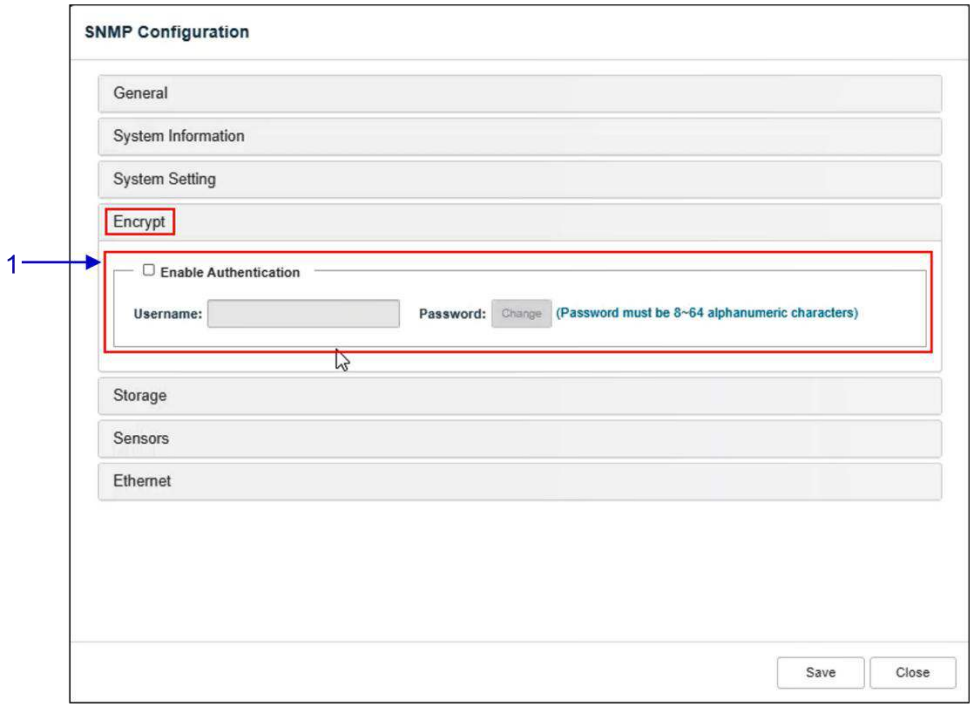


Figure 47: SNMP Configuration → Encrypt

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 minimum eight and maximum sixty-four characters long as well as should be alpha-numeric.

Table 36

7.1.1.5 Storage

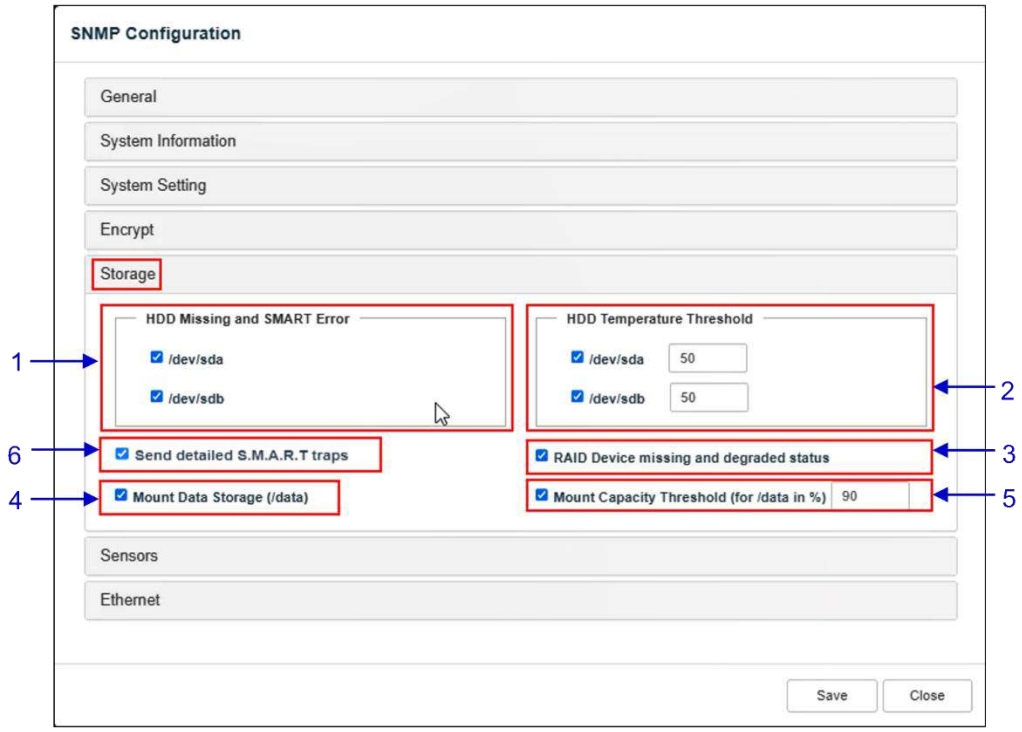


Figure 48: SNMP Configuration → Storage

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	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.
4	[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.

5	[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.
6	[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

Table 37

7.1.1.6 Sensor

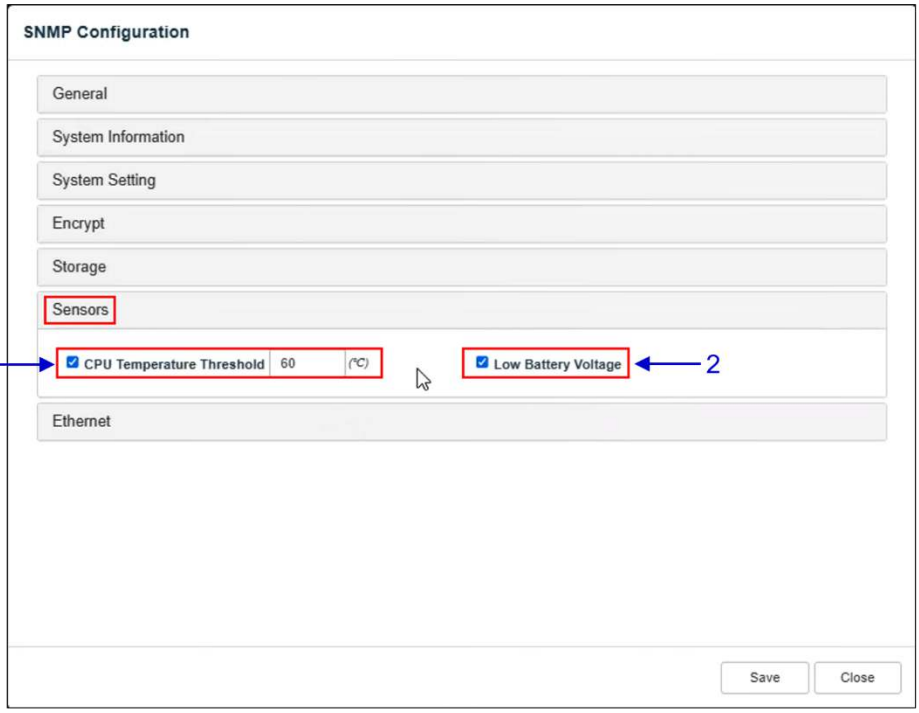


Figure 49: SNMP Configuration - Sensor

SN	Function Name	Description
1	[CPU Temperature Threshold]	Set the threshold temperature required for the CPU sensors by typing in the field. 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.

Table 38

7.1.1.7 Ethernet

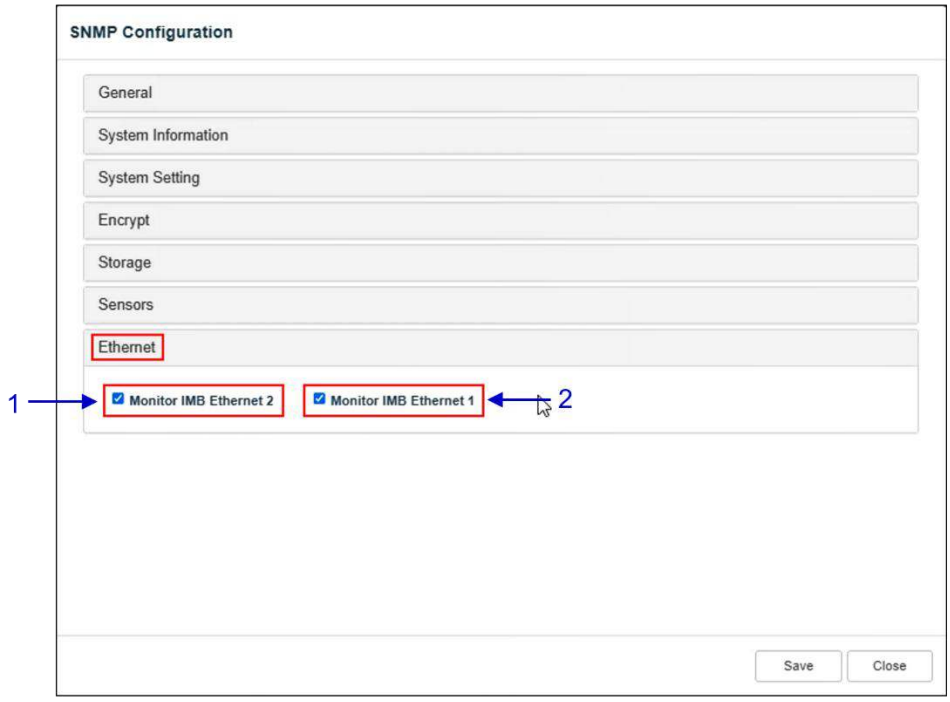


Figure 50: SNMP Configuration → Ethernet

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.

Table 39

7.2 Playback

The **Playback** sub-tab is used to configure video, audio, subtitles and other playback-related settings on the SR-5520.

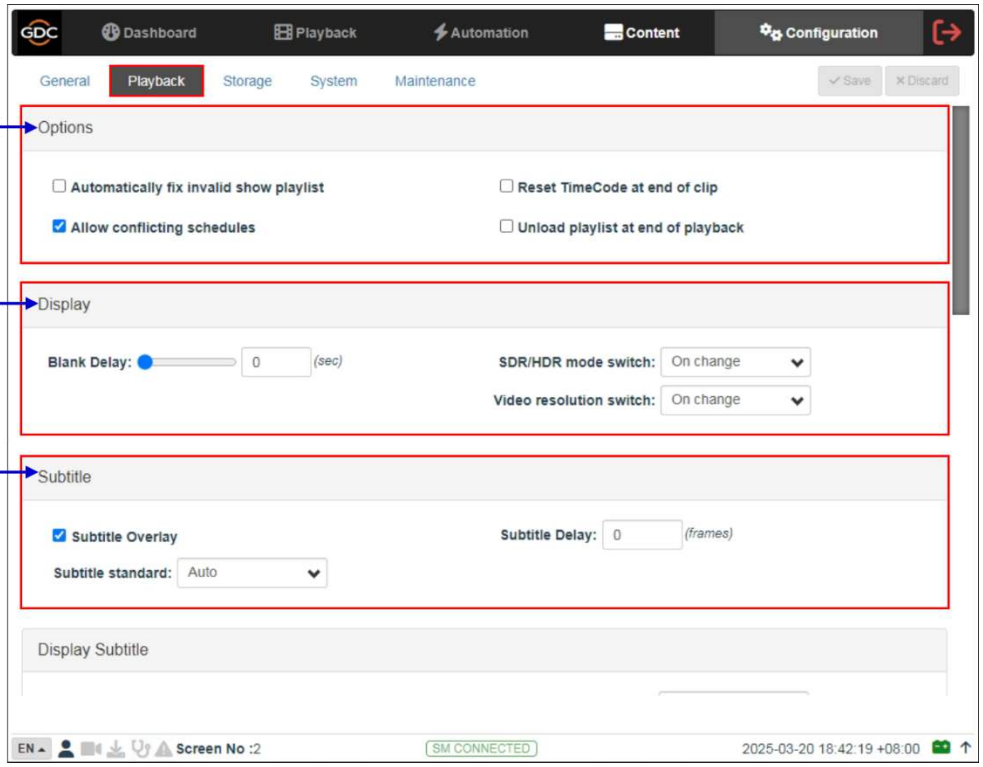


Figure 51: Configuration → Playback (1)

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 the timecode (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	[Display]	
	Blank Delay:	This option delays the playback of a composition (CPL) in the playlist by the amount of time (in seconds) set to allow the display to detect video output of the IMB. The **Blank Delay** is triggered when a change in the playback frame rate is detected and when playback switches between 2D and 3D. **Note**: Unless required by a particular display, it is recommended that the value for this option should be set to '0'
	SDR/HDR mode switch:	This option controls how frequently the IMB sends a signal to the display in order to switch between SDR and HDR modes during content playback. The following settings are available: • ***Always***: Sends the signal at the start of every CPL playback. • ***On Change (set by default):*** Sends the signal at the playback of the first CPL in the playlist and whenever the content mode switches between SDR and HDR. • ***Never***: Does not send the signal.
	Video resolution switch:	This option controls how frequently the IMB sends a signal to inform the display that playback video resolution has changed. The following settings are available: • ***Always***: Sends the signal at the start of every CPL playback. • ***On Change (set by default):*** Sends the signal at the playback of the first CPL in the playlist and whenever the playback video resolution changes. • ***Never***: Does not send the signal.
3	[Subtitle]	
	Subtitle Overlay	When this option is enabled, subtitles are displayed using Server rendering. When this option is disabled, display rendered subtitles are used.
	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 (set by default)*** • ***SMPTE 428-7*** • ***Legacy (to improve compatibility with Japanese sub-titles)***

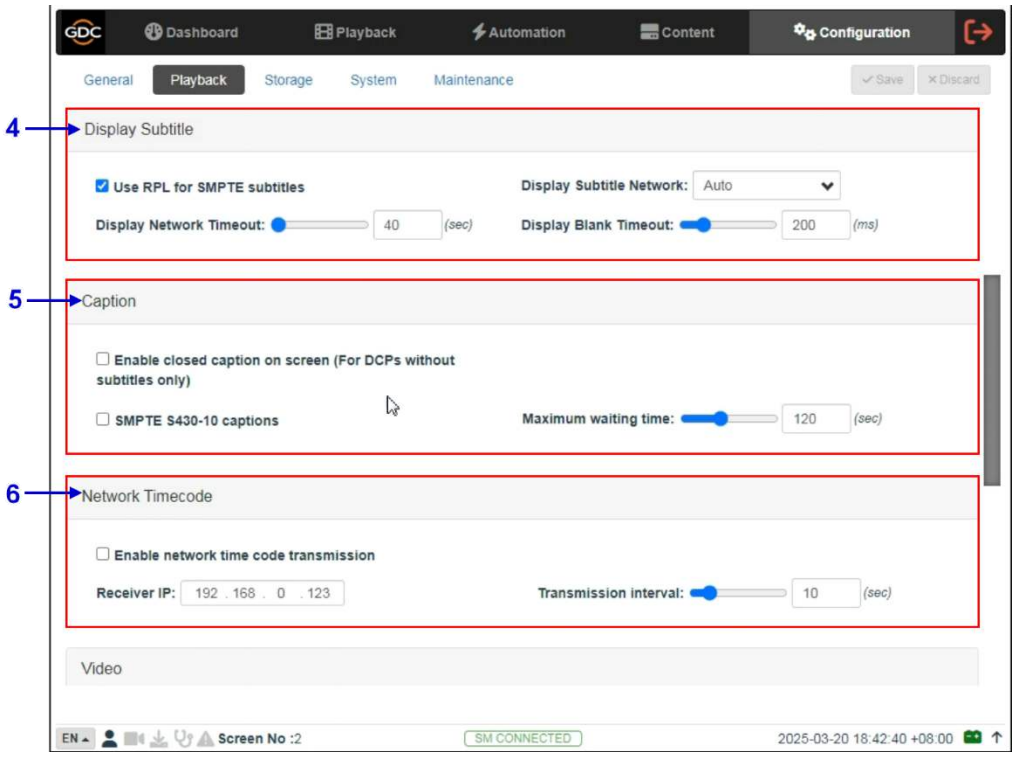


Figure 52: Configuration → Playback (2)

4	[Display Subtitle]	
	Use RPL for SMPTE subtitles	Send a SMPTE-compatible Resource Presentation List (RPL) instead of an Interop-compatible Subtitle Presentation List to the display for display rendered subtitles. This is only enabled when SMPTE subtitles are available for the CPL.
	Display Subtitle Network:	This drop-down allows selection of the network interface which should be used for providing display rendered subtitles to the display. 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.
	Display Network Timeout:	Timeout (in seconds) for communication with the display.
	Display Blank Timeout:	Select the blank time of the display 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 allow closed captions to be displayed on-screen, if the CPL does not 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-5520.
	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

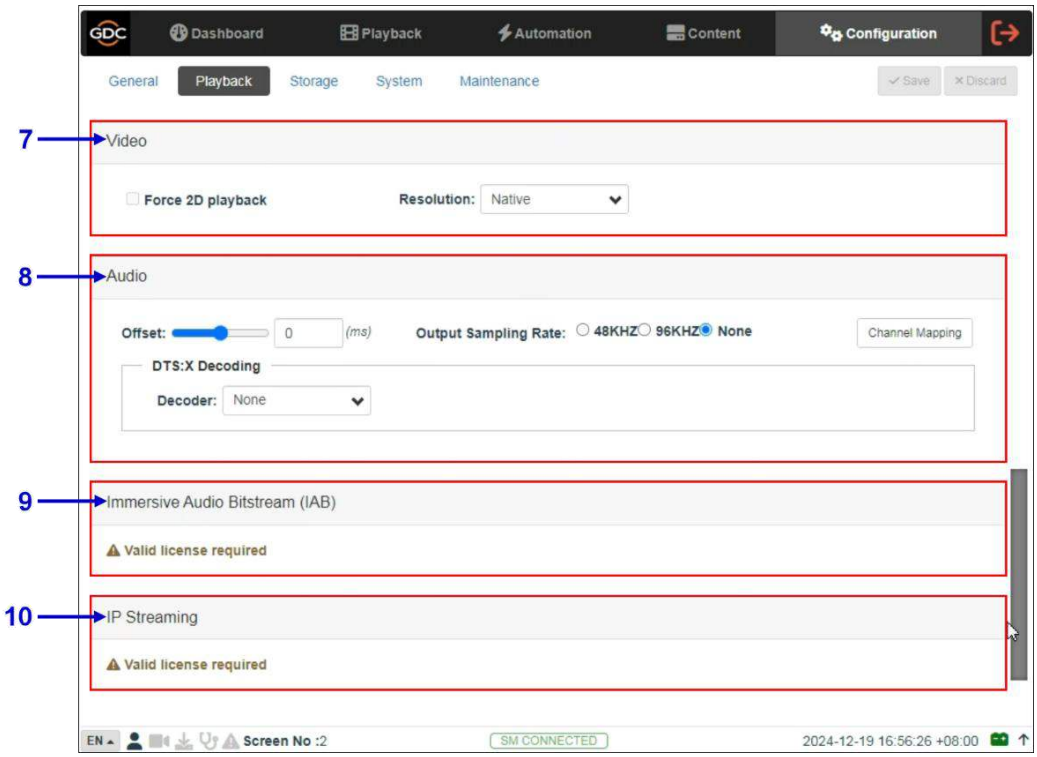


Figure 53: Configuration → Playback (3)

7	[Video]	
	Force 2D playback	Force 2D playback for 3D content. A valid license is required to enable this option.
	Resolution	Set the resolution of video output from the SR-5520. The following options are available: • ***Native*** ***(set 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-5520 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-5520. By default, the **'None'** option is selected.
9	[Immersive Audio Bitstream (IAB)]	Configure the SR-5520 for Immersive Audio Bitstream (IAB) decoding. IAB content can be decoded by selecting either '**Dolby Atmos (External)**' or **'APX (External)'**. • If **Dolby Atmos (External)** is selected; the SR-5520 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-5520. • If **APX (External)** is selected; the SR-5520 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-5520. By default, the **'None'** option is selected. **Note**: Contact GDC Technical support for detailed documentation on connections between the SR-5520 IMB and processors listed above.
10	[IP Streaming]	A valid license is required to enable **IP Streaming** on the SR-5520.

Table 40

7.2.1 Audio Channel Mapping

Using **Audio Channel Mapping**, audio output from the SR-5520 can be re-mapped to appear on different audio channels.

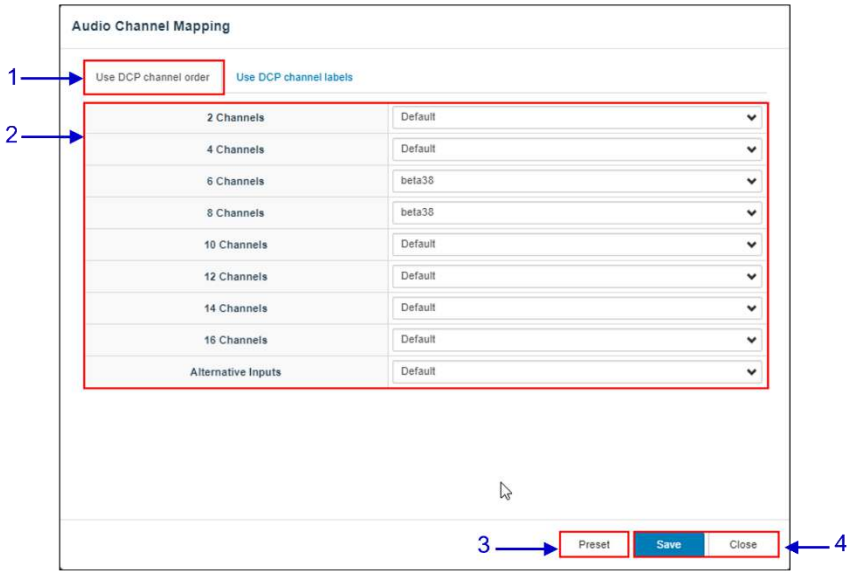


Figure 54: Using DCP Channel order

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
4	Click the Save button to save this mapping. Click the Close button to go back to the **Playback** sub-tab.

Table 41

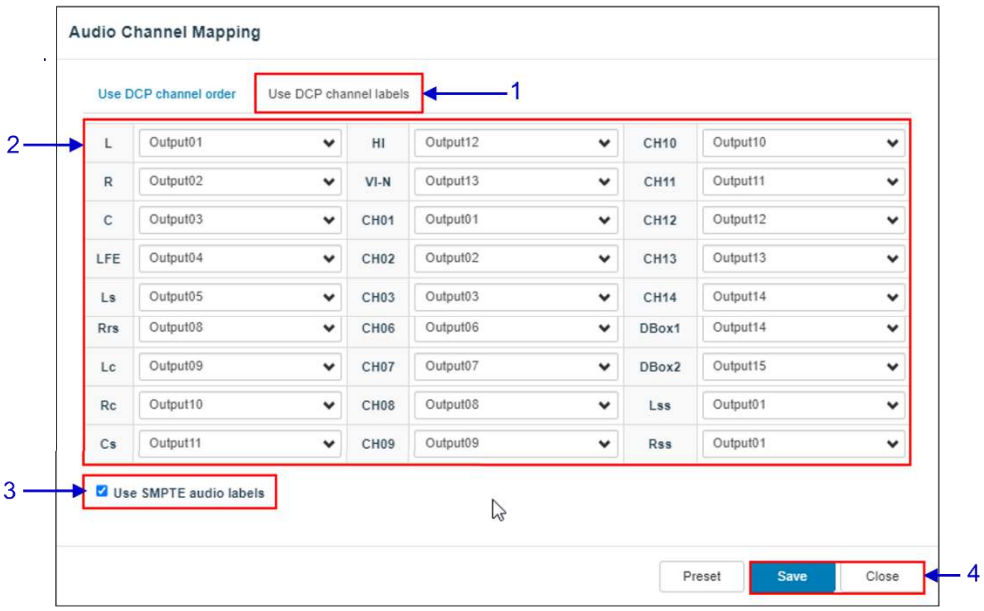


Figure 55: Using DCP Channel labels

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.
4	Click the Save button to save this mapping. Click the Close button to go back to the **Playback** sub-tab.

Table 42

7.2.1.1 Preset

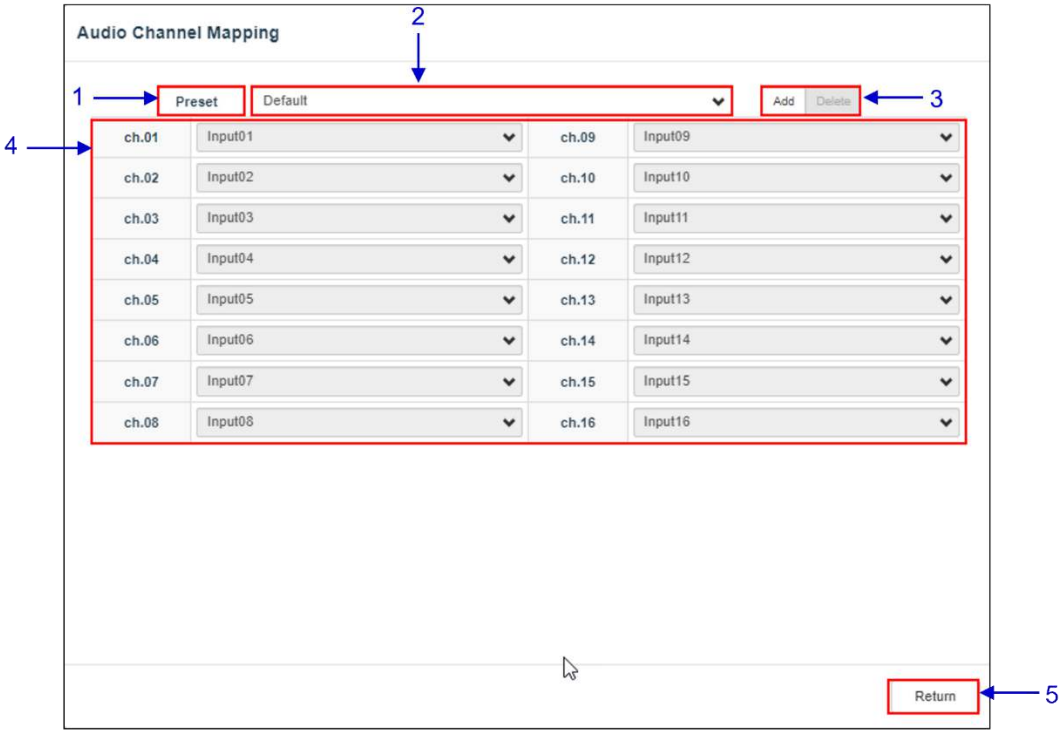


Figure 56: Preset

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.

Table 43

7.3 Storage

The **Storage** sub-tab is used to configure the storage settings on the SR-5520.

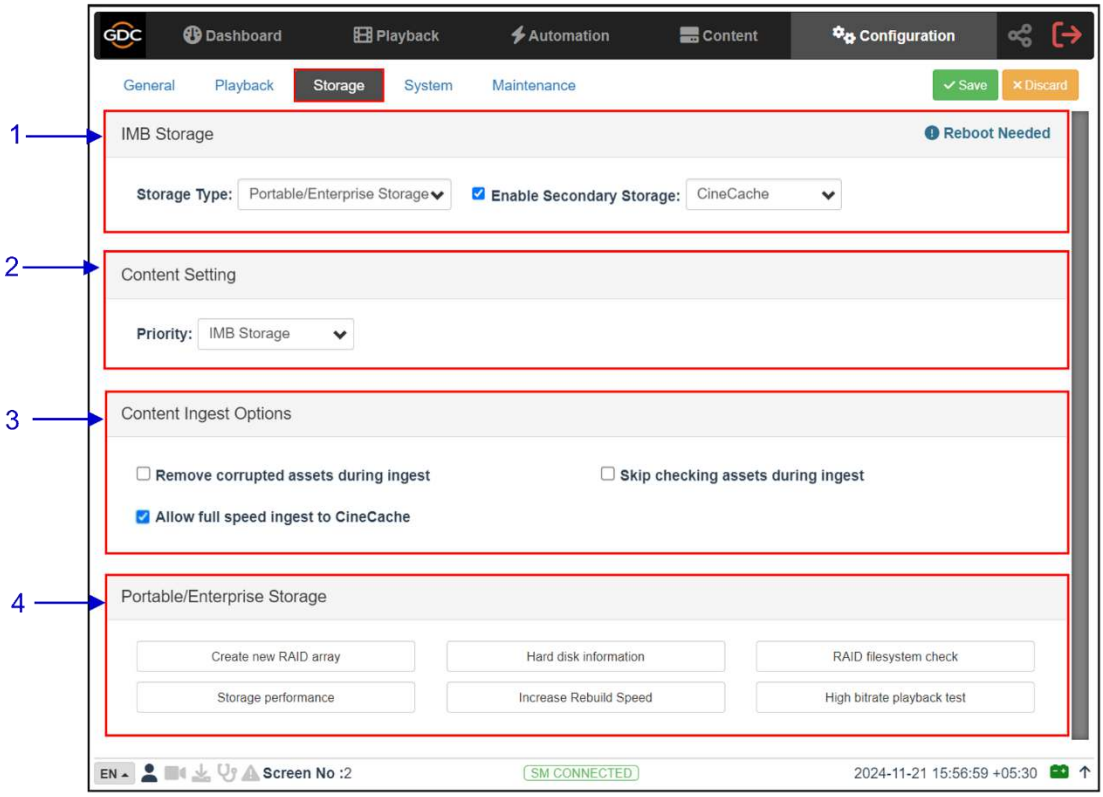


Figure 57: Configuration → Storage

SN	Function Name and Description	
1	[IMB Storage]	
	Storage Type	Configure the Primary Storage for the SR-5520. • **NAS:** Configure a Network-Attached Storage (NAS) as data storage. • **CineCache™:** Select this option to use the built-in CineCache™ as storage. **Note**: This is only available on SR-5520 with CineCache™ installed. • **Portable/Enterprise Storage:** Configure the SR-5520 to use Portable or Enterprise Storage. **Note**: A system reboot is needed after the Storage Type is changed.
	Enable Secondary Storage	For any SR-5520 with CineCache™, you can setup a fallback mechanism for the Primary Storage by checking the Enable Secondary Storage option & selecting the storage type from the drop-down

		 For detailed information regarding how to configure the SR-5520 for fallback from Primary Storage to Secondary Storage, refer to **Section 7.3.1.** **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:** The IMB will use centralized playback from an SCL Server* in a CA2.0 environment. If there are issues with centralized playback, playback will fall back to IMB 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; the user should select **'CineCache'** as the Primary Storage under Storage Type and set the Priority as 'Attached Storage'. For a non-CA 2.0 setup; the user can select either **'Portable/ Enterprise Storage'** or **'CineCache'** or **'NAS'** as the Primary Storage under Storage Type and set 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**: When **'CineCache'** is selected as the Primary Storage under Storage Type: • If the Allow full speed ingest to CineCache option is selected, the system will allow full speed ingest to CineCache™ during playback. • If the Allow full speed ingest to CineCache option is not selected, the system will throttle ingest speed to CineCache™ during playback. When **'Portable/Enterprise Storage** is selected as the Primary Storage under Storage Type, 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 7.3.2** for more details on the above-listed actions.)

Table 44

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

7.3.1 Configuring SR-5520 for fallback from Primary to Secondary Storage

For any SR-5520 with CineCache™, a fallback can be setup from the Primary Storage (Portable OR Enterprise Storage) to the Secondary Storage (CineCache™).

To configure this fallback mechanism, ensure that the Portable OR Enterprise Storage device is connected to the SR-5520 IMB.

Once done, follow the steps mentioned below:

1) From the Web UI, go to **Configuration** → **Storage** sub-tab .
2) Under the **IMB Storage** section, select the Storage Type as 'Portable/ Enterprise Storage'.
3) Check the Enable Secondary Storage check box. The 'CineCache' option will be automatically selected as the Secondary storage.
4) Click **Save** to save this new storage configuration.
5) Reboot the SR-5520 from the **Dashboard** menu.

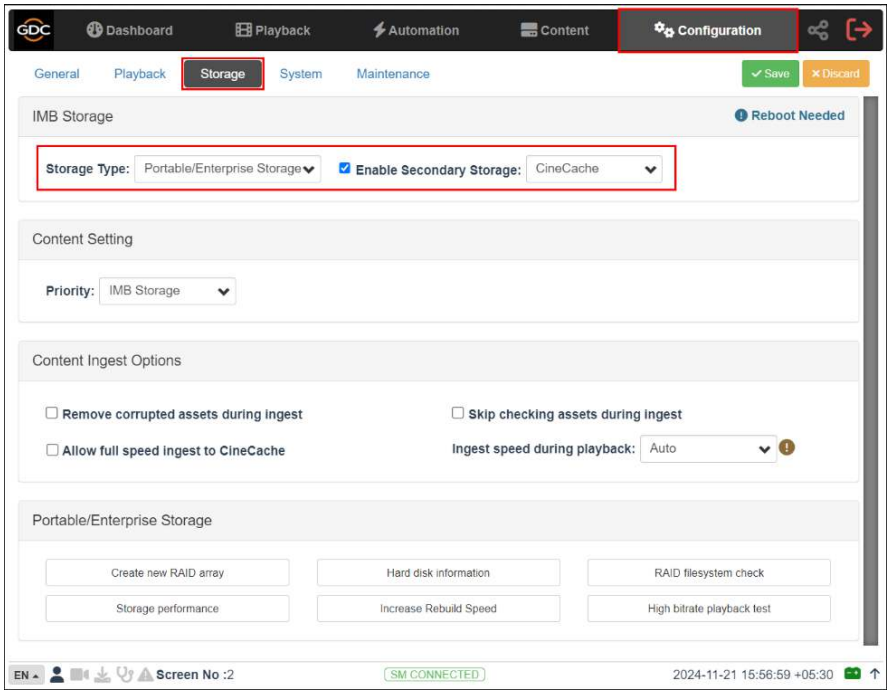


Figure 58: Configure IMB Storage

Note that fallback to Secondary Storage will occur under the following conditions:

- Primary Storage becomes unavailable (*e.g., eSATA cable unplugged, storage device powered OFF, hardware error*).
- Dropped frames are detected during playback from Primary Storage.

Content needs to be ingested into the Secondary Storage via the **Content** menu on the Web UI. This can be done either while ingesting content from any ingest source OR while browsing through ingested content:

I. After mounting the ingest source (refer to **Section 6.5.1** for more details), select the PKL/CPL to be ingested. Click the **Ingest** button and select the 'Ingest-Primary+Secondary' option. This will ingest the selected content to both Primary as well as Secondary storage simultaneously. The ingest status will be displayed under the **Status** sub-tab.

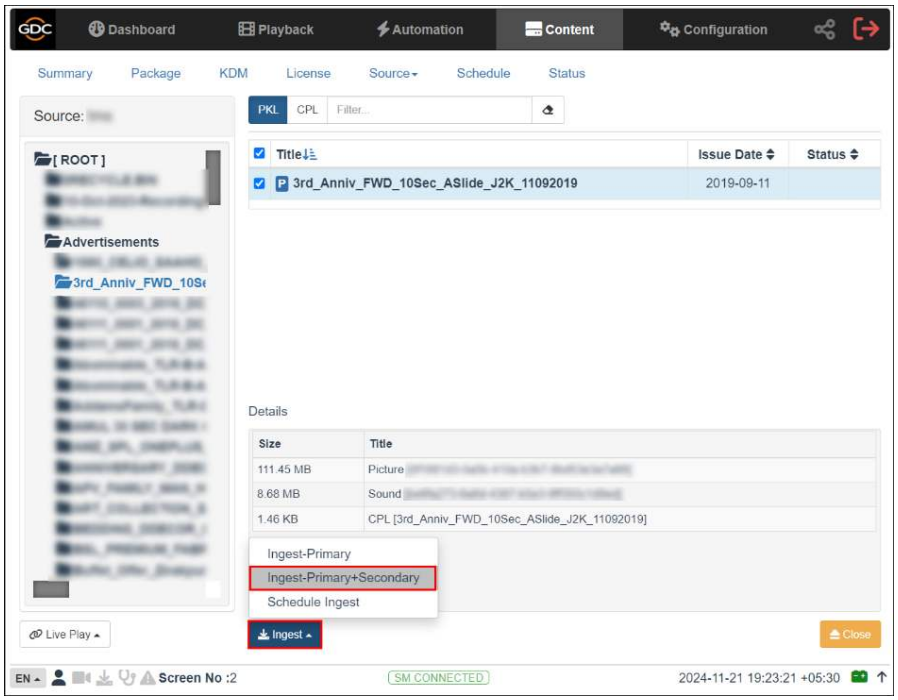


Figure 59: Ingest Primary + Secondary

II. Ingested content listed under the **Content** → **Package** sub-tab will be displayed in two different colors (refer to **Figure 60**):

- Content titles which are displayed in **Green** indicate that they are available in both Primary as well as Secondary storage.
- Content titles which are displayed in **Black** indicate that they are available in Primary storage only.

III. Ingested content available in the Primary storage can be copied to Secondary storage using the 'Cache' feature. Go to the **Content** → **Package** sub-tab and select the PKL/CPL to be copied. Click the **Cache** button and select the 'Immediately Cache' option (refer to **Figure 60**). This will immediately start copying the content from Primary to Secondary storage. The transfer status will be displayed under the **Status** sub-tab.

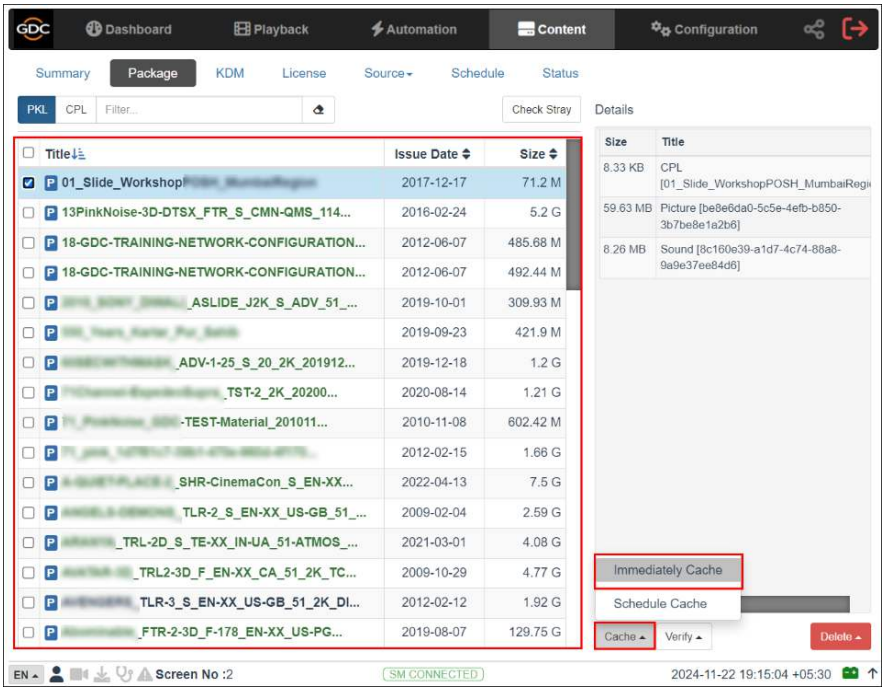


Figure 60: Caching Content

IV. Cached content in Secondary storage will be deleted when the corresponding content from the Primary storage is deleted (refer to **Section 6.2.3** for more details regarding content deletion). Furthermore, the system optimizes disk space on Secondary storage by automatically deleting the oldest ingested content when available storage is insufficient for new content ingestion. Prior to the deletion process, a system alert will be displayed (as shown in **Figure 61**) informing users about the impending removal of content from Secondary storage.

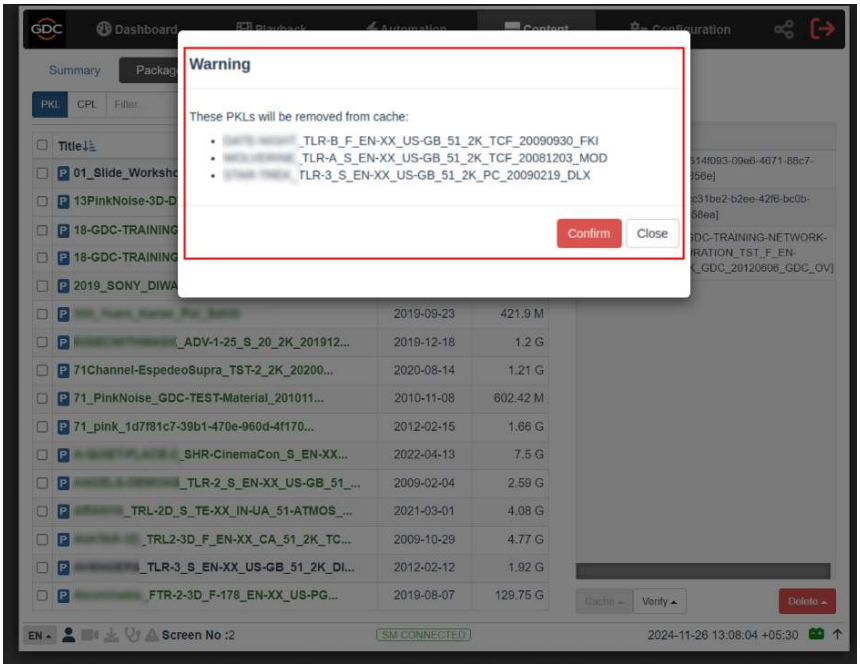


Figure 61: Auto Deletion of Cached Content

7.3.2 Actions of Portable/Enterprise Storage

7.3.2.1 Create new RAID array

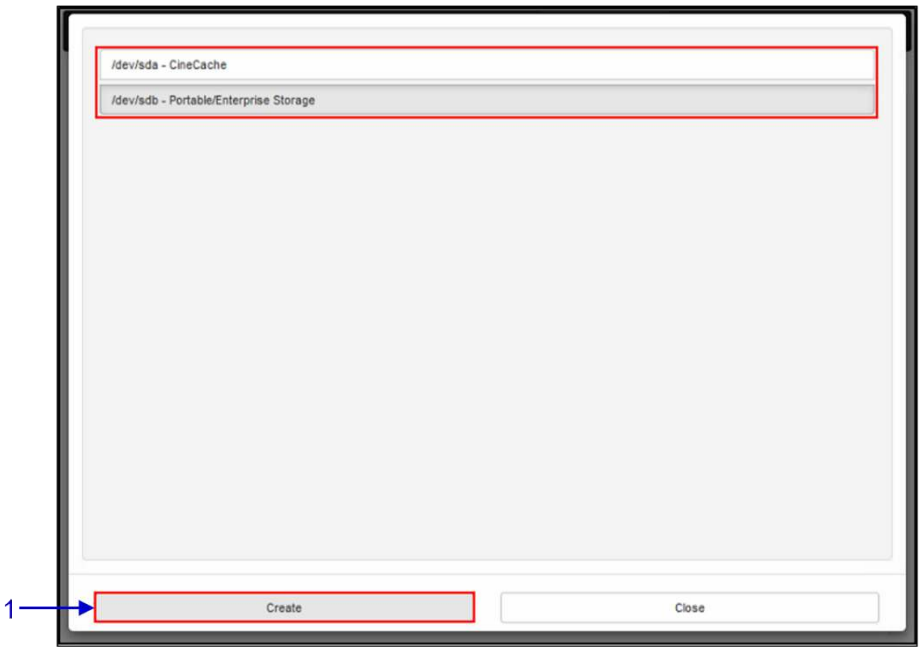


Figure 62: Create new RAID Array

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.

Table 45

7.3.2.2 Hard disk information

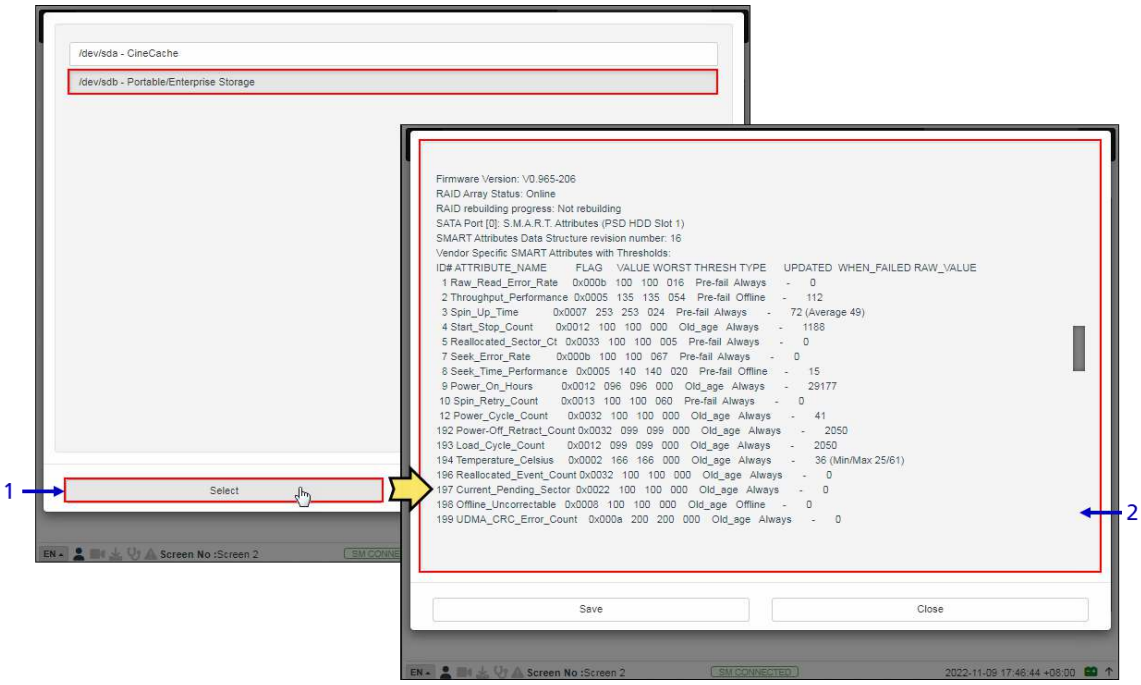


Figure 63: Hard Disk Information

SN	Function Name	Description
1	[Select Storage]	Clicking on the Hard Disk information option opens a pop-up window. Select the '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.

Table 46

7.3.2.3 RAID filesystem check

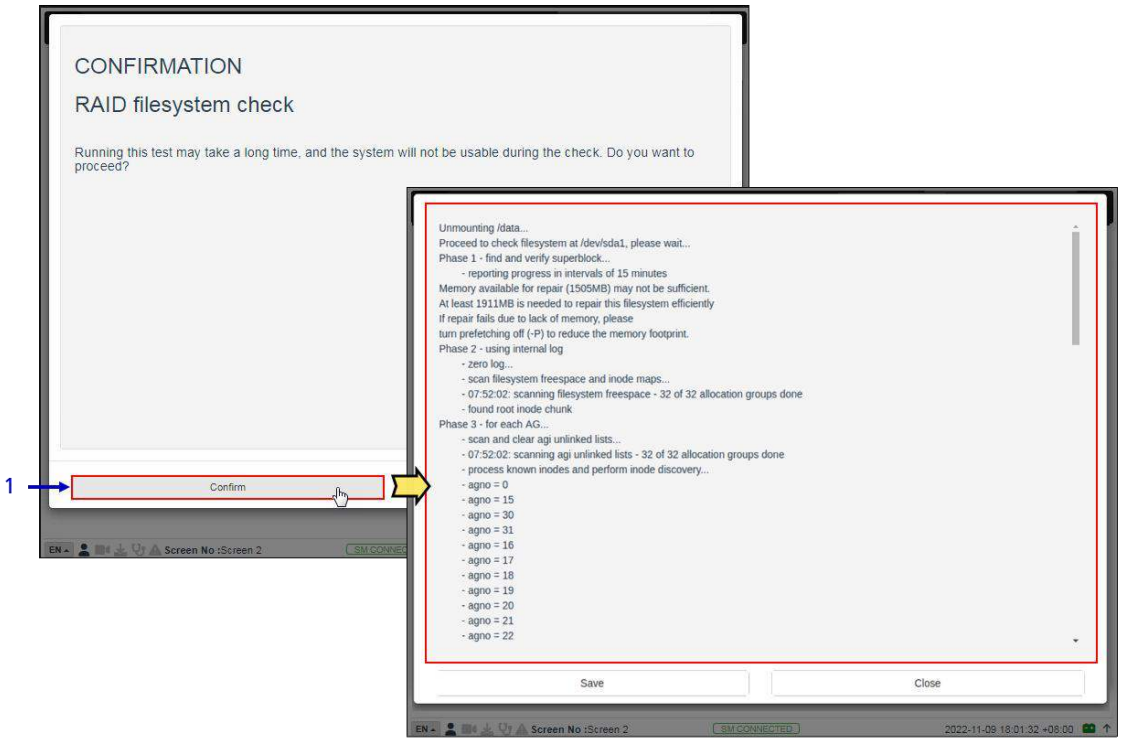


Figure 64: RAID Filesystem check

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.

Table 47

7.3.2.4 Storage Performance

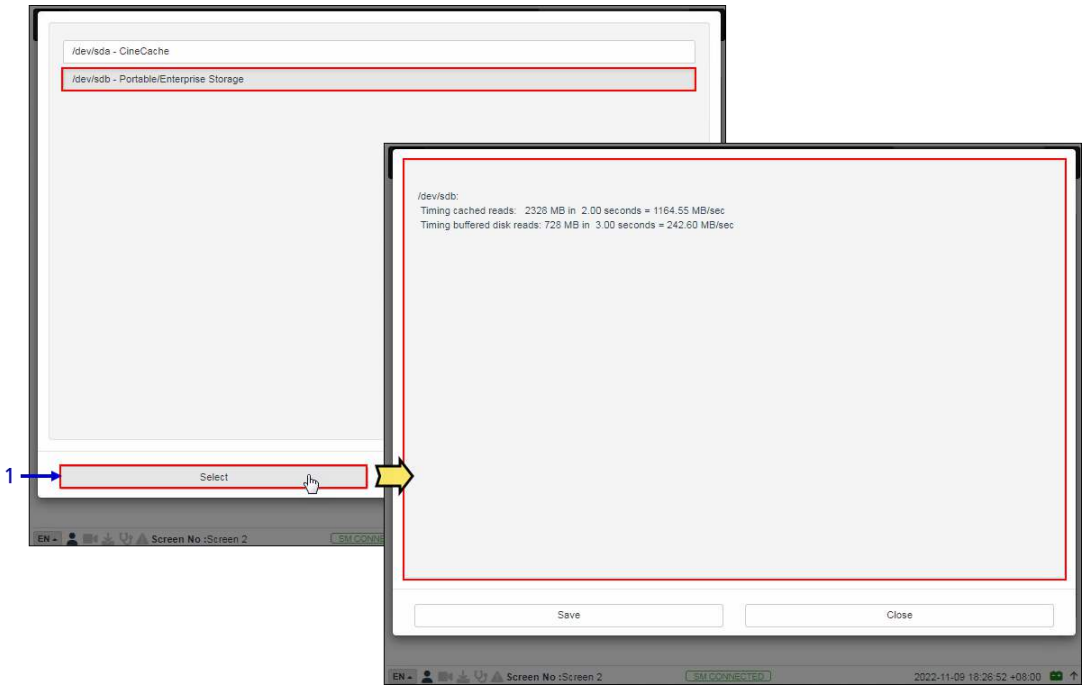


Figure 65: Storage Performance

SN	Function Name	Description
1	[Storage performance]	Clicking on the Storage Performance option opens a pop-up window. Select the '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.

Table 48

7.3.2.5 Increase Rebuild Speed

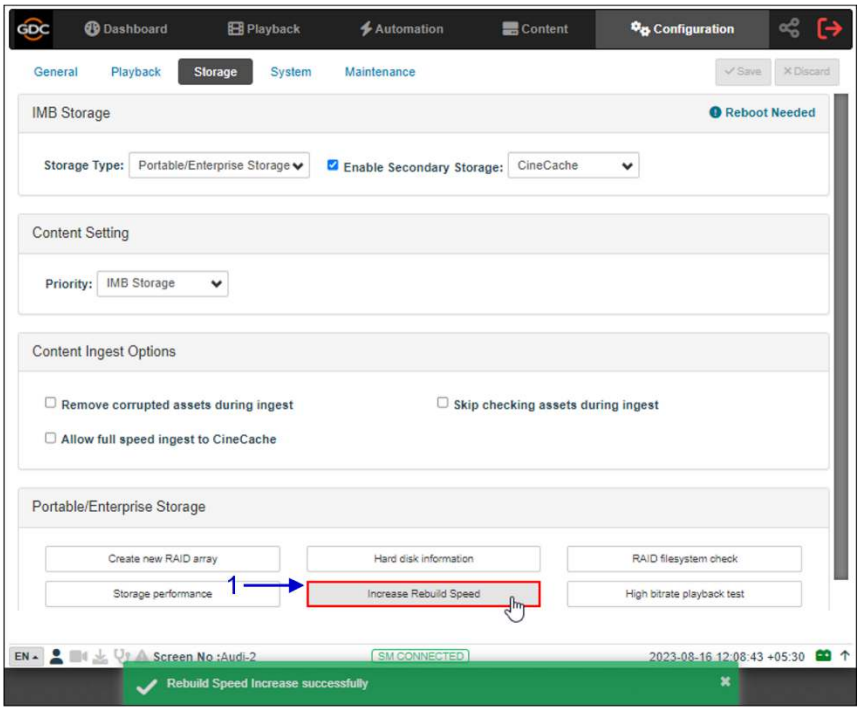


Figure 66: Increase Rebuild Speed

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.

Table 49

7.3.2.6 High bitrate playback test

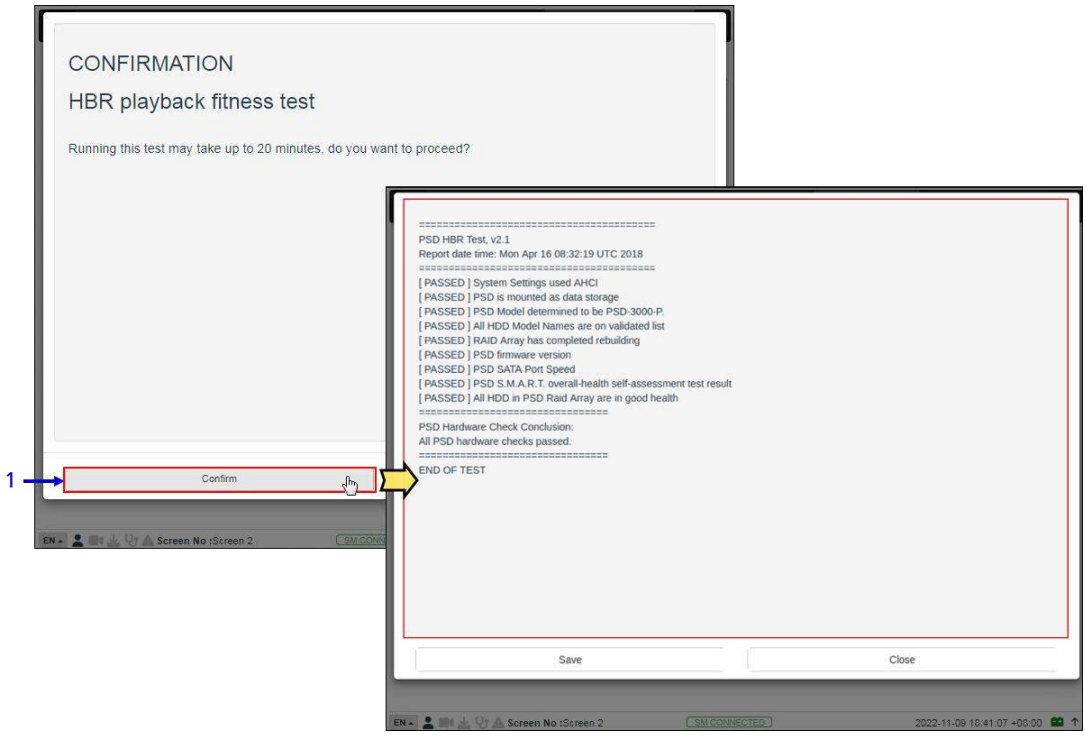


Figure 67: HBR Playback fitness test

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.

Table 50

7.4 System

The **System** sub-tab is used to configure the system settings on the SR-5520.

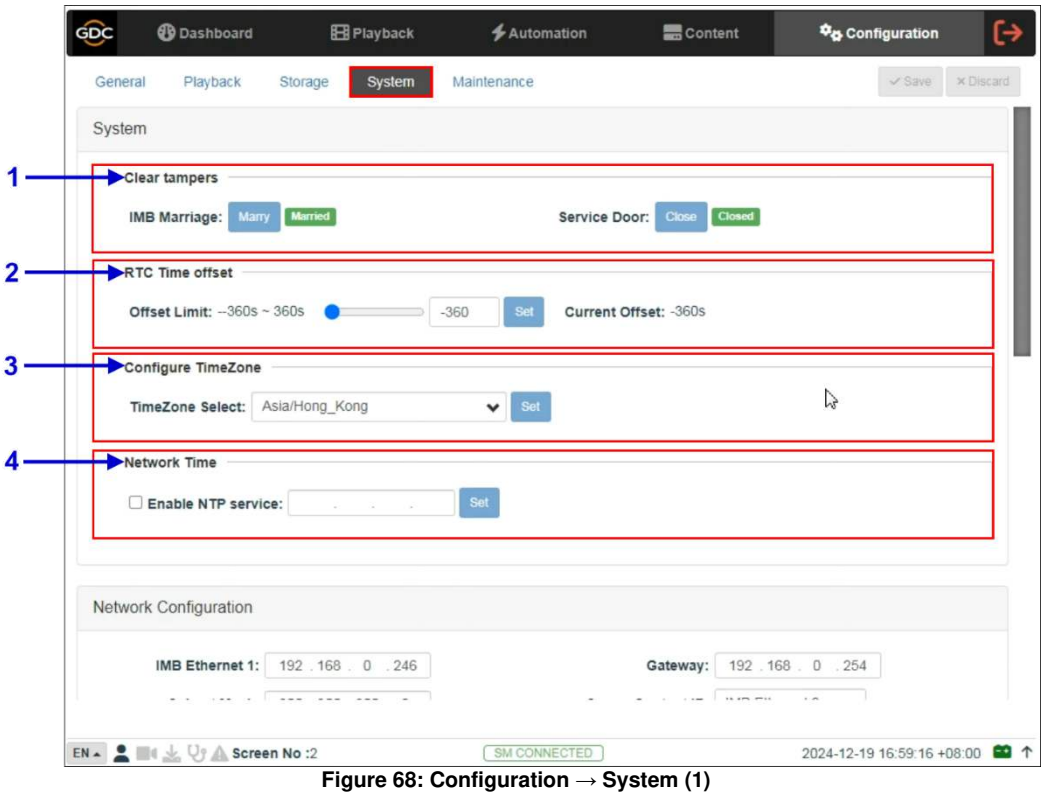
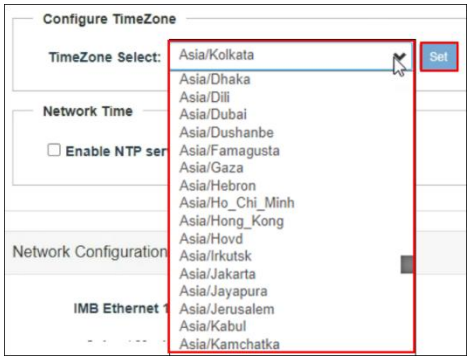


Figure 68: Configuration → System (1)

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-5520 will not allow playback if these tampers are not cleared.
2	[RTC Time offset]	
	Offset Limit	Make adjustments to the time on the IMB. **Note**: In accordance with DCI specifications, the SR-5520 allows a time offset from -360s to +360s (+/- 6 minutes) per calendar year.

3	[Configure TimeZone]	
	TimeZone Select	Select specific area/country from the dropdown list and click Set to configure the time zone. 
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).

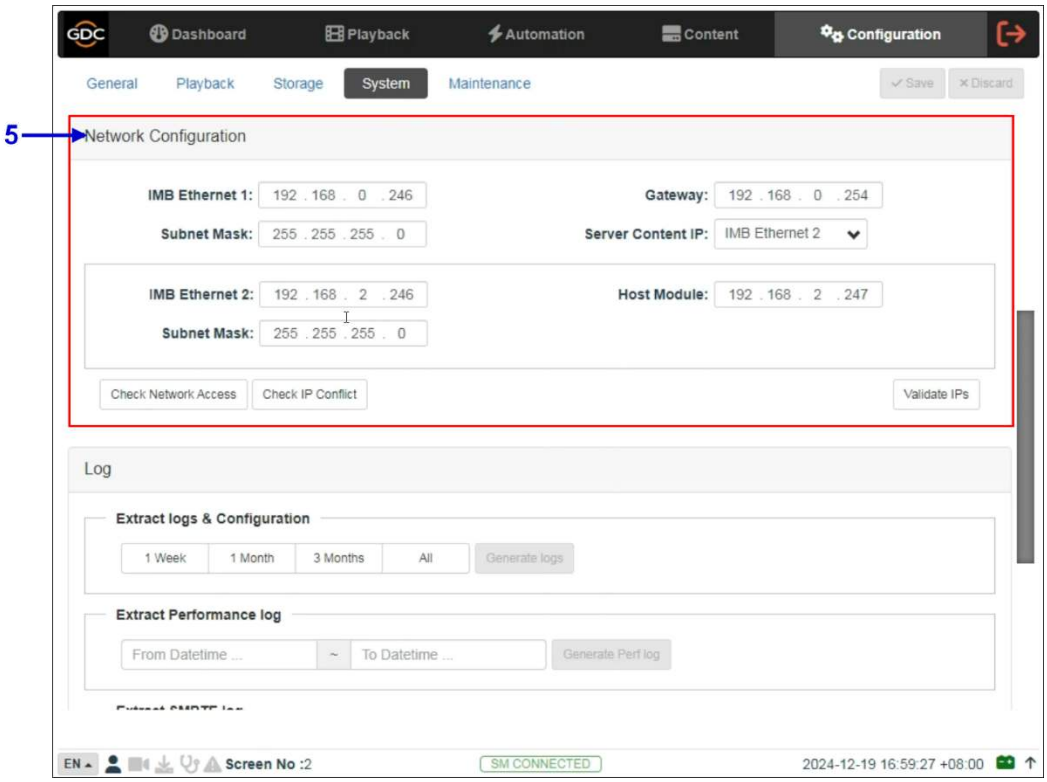
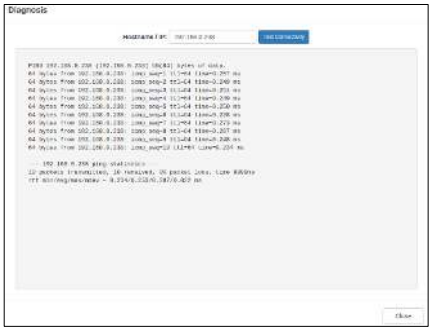


Figure 69: Configuration → System (2)

5	[Network Configuration]	
	Subnet Mask	Specify the subnet mask.
	Gateway	Specify the network gateway for the SR-5520.
	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-5520 IMB. The Web UI can be reached using this IP address. The default IP is 192.168.1.12.
	IMB Ethernet 2	This can be used to set up a secondary network. This is usually connected to a Content network. The Gateway & Subnet Mask values can also be set. The IP addresses assigned to **IMB Ethernet 1** and **IMB Ethernet 2** should belong to different subnets.
	Host Module	Specifies the IP Address of the Host Module of the SR-5520. The IP addresses assigned to **IMB Ethernet 2** and **Host Module** should belong to the same subnet.
	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. 

	Validate IPs	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. 

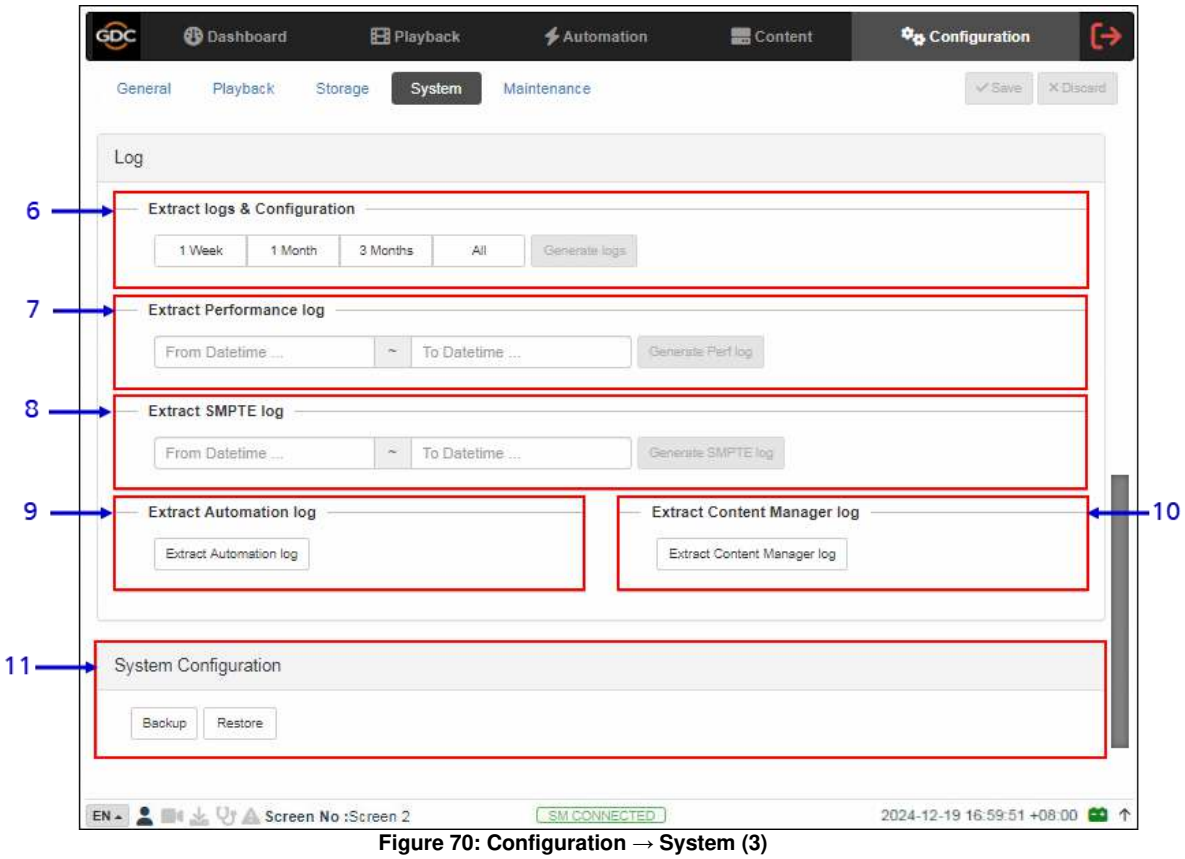


Figure 70: Configuration → System (3)

6	[Extract logs and Configuration]	This allows the operator to extract debug logs from the SR-5520 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-5520. After selecting the Date/Time, Generate Perf 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-5520. 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-5520. 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-5520. After clicking Extract Content Manager Log button, a pop-up window will be shown to save the file.
11	[System Configuration]	
	Backup	Backup and Restore options are available. The Backup option saves the SR-5520 configuration to a backup file. A pop-up window will be shown to save the configuration file. This backup file is saved in an encrypted format The following configuration files are included in the backup file: ▪ **Automation configuration** ▪ **SNMP configuration** ▪ **SMS configuration** ▪ **Content Manager source configuration** ▪ **Network Time Protocol (NTP) configuration** ▪ **System user interface passwords** ▪ **Show Playlists**
	Restore	The Restore option will restore the IMB configuration from a backup file. Users can upload the configuration files.

Table 51

7.5 Maintenance

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

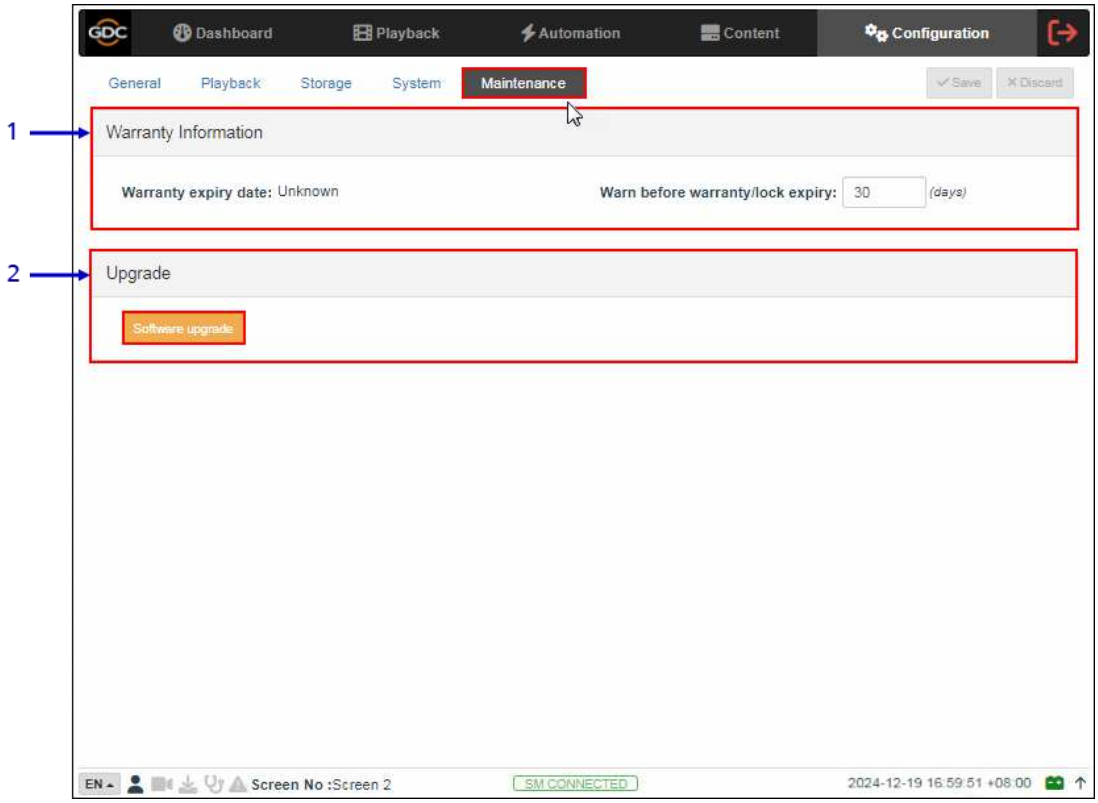


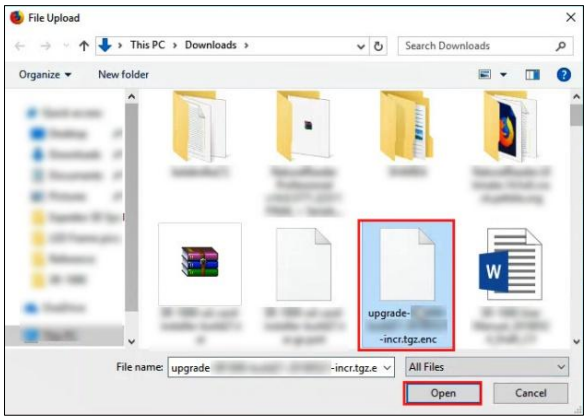
Figure 71: Configuration → Maintenance

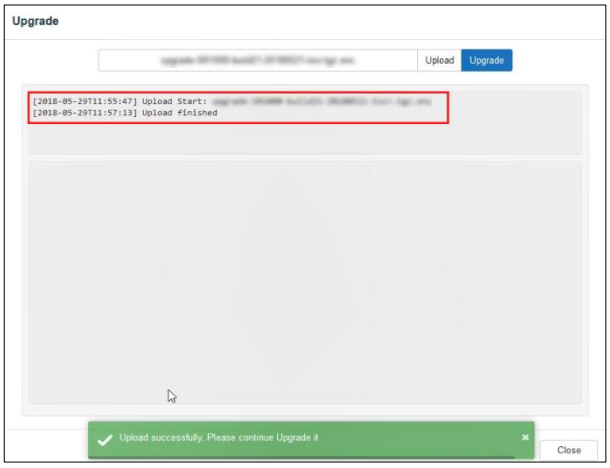
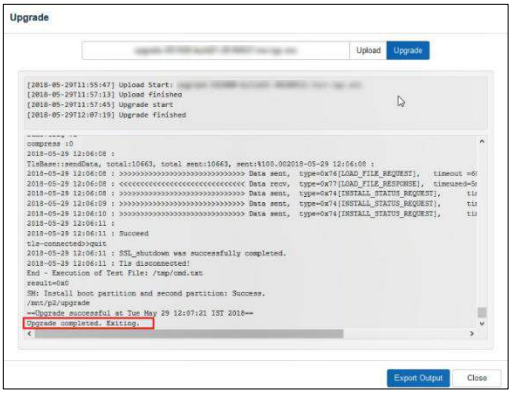
SN	Function Name and Description	
1	[Warranty Information]	
	Warranty expiry date **Warn before warranty /lock expiry**	Warranty expiry date is shown. The number of days in advance to issue a warning before warranty/lock expiry can be set.
2	[Upgrade]	
	Software Upgrade	When this button is clicked, a 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.

Table 52

7.5.1 Software Upgrade Procedure

Figure 72: Select and Upload Upgrade file

SN	Function Description
1	In order to initiate the upgrade process, the relevant software upgrade file for the IMB needs to be downloaded to the laptop or PC which is being used to access the SR-5520 Web UI. Contact GDC Technical support for more information regarding the upgrade file. 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-5520. 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.  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-5520 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. 

Table 53

8 OPERATION NOTES

8.1 Power Up Sequence

Always power up any Enterprise Storage/ Portable Storage before powering up the SR-5520. The Enterprise Storage must be powered up first to be correctly identified by the SR-5520.

8.2 Power Down Sequence

Always power down the SR-5520 and with the following steps:

1. Power down the SR-5520 by using the Shutdown button on the Web UI Dashboard.
2. Power down the Enterprise Storage attached to the SR-5520.

Note: The display should be powered down only after the IMB has been shut down from the Web UI.

GDC Technology manufacturing facility is ISO 9001:2015 certified.