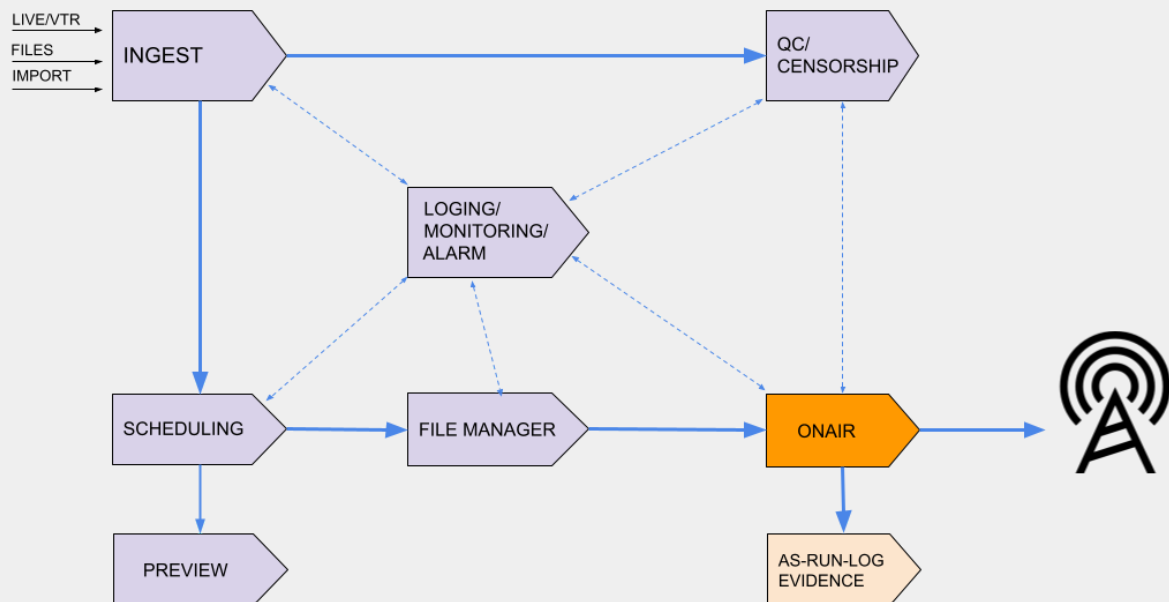


PLAYOUT AUTOMATION Lite

Playout Automation Lite provides a broadcast automation and a real-time video/audio server for playout, in an integrated software suite.



Playout Automation Lite is suitable for small systems, the core is installed with SQL Server in Always-on mode. The automation controls the system based on data from SQL server. **OnAir** can be used to control multiple channels playing to air or to plan schedules, program. Multiple remote or local users can control the schedule and playout operation. The **HD core** communicates with GUI softwares over web service, the client server can be both window form and web browser.

Playout Automation Lite comes in two flavors:

- Radio Playout: all the features HD core, OnAir, Playlist Pro, MAM Client, File Manager, Auto check, SYNC
- Television Playout: all of the above + Graph option included

Ordering information

HD Core

Running on Automation server to control frame accuracy playout server. Control mix between different video servers in the same channel broadcast via VDCP, Native API protocols played out from the server for a full playlist before stopping even in the case the whole system crashed.

OnAir

Running on a client workstation to control HD Core. It updates the playlist, allowing manual control of system and system monitoring. User friendly GUI with powerful graphic presentation of timeline and secondary event.

Playlist pro

Professional windows based playlist creator for any day in a year. Rich set of tools available for editors to quickly create linear lists: Copy, Sub-list, automated generate list from matrix planning (weekly schedule).

MAM Client

The light MAM system used to manage, search all media files in the playout section. It also manages playlist, manual ingest and automated watch folder ingest to playout system, time to live setting defines the file time in cache of playout server system or playout storage system

File Manager

The software interacts with MAM to copy files from the NAS system to Cache in the

playout server. The priority of copy is based on expected playout time in the playlist. The software also automatically flush the storage cache of the server by a pre-configured value (standard set for 70%) to make sure the server is ready for new incoming files any time.

Watch folder

Automatic ingest file in watch folder to playout MAM. Metadata can be extracted from long names of files or from XML associated with media. Ingest status is returned to the watch folder for external systems to keep track of the result.

Auto check

Automatic checking the video decode-ability using 01 video channel of the server or a shared channel of the preview channel.

Graph

Graphic playout onair graphic engine software. CG engines use HTML5 for graphic format and animation.

Sync

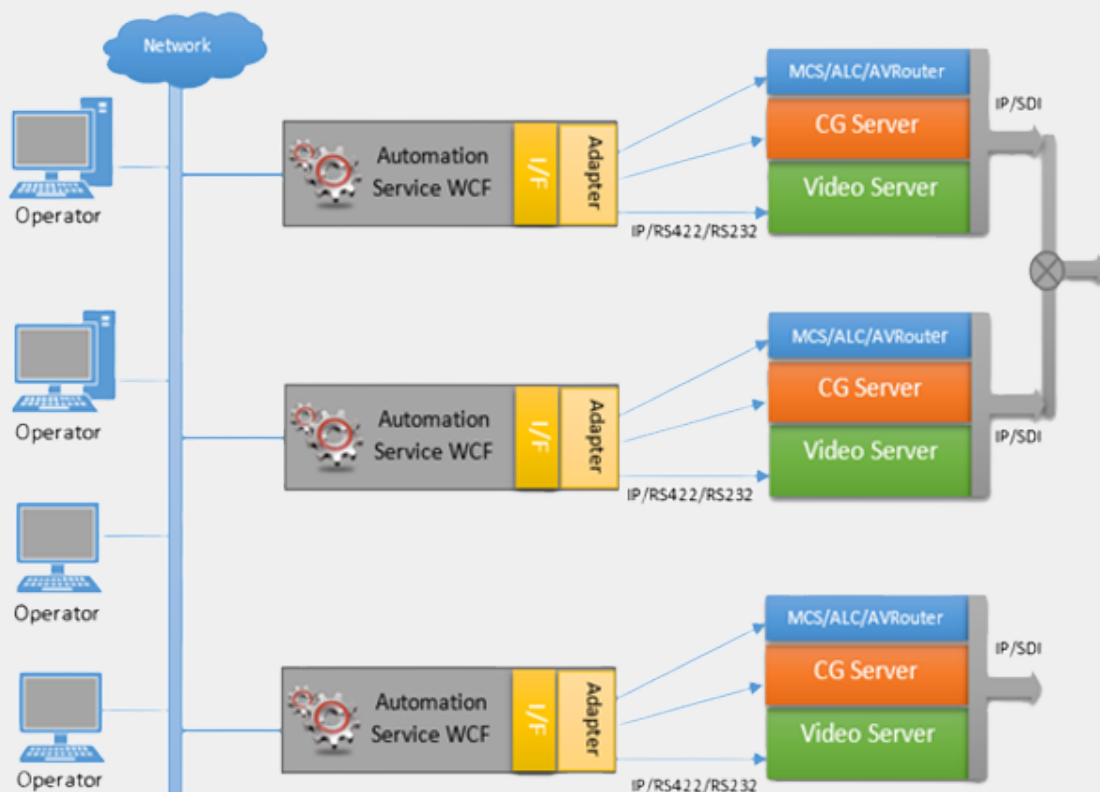
Synchronizes media, meta data and playlists between the Automation system and a Media Assets Management system. Sync plays an important role in file based workflow in broadcast stations, from production/post production to playout/distribution.

About us

HD Ultrasoft is recognized as the most simple and completed solution provider for distributed post-production of any TV channel. Our highly qualified staff are able to provide solutions for total automated file workflow and station management solutions for any existing infrastructure. The total new concept of a direct Database integration/synchronization on TV stations allows real-time feedback between Playout- Production-Sale.

HD CORE

HD Core Running on Automation server to control frame accuracy playout server over VDCP or native server protocol. For smaller systems, the core is installed with SQL Server in Always-on mode. The automation controls the system based on data from SQL server. The **HD Core** communicates with GUI software over web service, the client server can be in both window form and web browser.



Features

- Running on Automation servers
- Control frame accuracy video servers
- Supports control protocols such as VDCP, Native API
- GUI software over web service, the client side can be in both window form and web browser.
- Using native server playlist for playout, resulting in the highly availability of the playout system

ONAIR

OnAir Software directly controls the playout server to go on air based on the playlist. **OnAir** will load playlists from the central database, based on the playlists to control the playout server to Cue and Play the corresponding media files. OnAir Module simultaneously controls the playout servers, and the Video/Audio Router to automatically switch to the desired signals.

Playlist of 20/03/2017 - Play Time: 00:00:00										Total Duration: 07:00:41			Auto Sort			Playlists		
#	Code	Program	Mode	TC In	TC Out	Duration	Scheduled time	Play Time	Source	Date	Play Time	Name Clip						
1	KCHAT-30SEC-20170309	KCHAT-30SEC-20170309-Ale		00:00:00.00	00:00:30.05	00:00:30.06	00:00:00	00:00:00	M NA	20/03/2017	00:00:00	35						
2	ONEMUSIC-10MIN-2017	ONEMUSIC-10MIN-20170117		00:00:00.00	00:10:00.28	00:10:00.29	00:00:30	00:00:00	M NA	20/03/2017	00:00:00	40						
3	KCHAT-30SEC-20170309	KCHAT-30SEC-20170309-Ale		00:00:00.00	00:00:30.05	00:00:30.06	00:10:31	00:00:00	M NA									
4	ONEMUSIC-10MIN-2017	ONEMUSIC-10MIN-20170117		00:00:00.00	00:10:00.28	00:10:00.29	00:11:01	00:00:00	M NA									
5	KCHAT-10MIN-20170309	KCHAT-10MIN-20170309-Ale		00:00:00.00	00:10:00.28	00:10:00.27	00:21:02	00:00:00	M NA									
6	Clip 30 sec	Clip 30 sec Name		00:00:00.00	00:00:29.29	00:00:30.00	00:31:03	00:00:00	M NA									
7	KCHAT-30SEC-20170309	KCHAT-30SEC-20170309-Ale		00:00:00.00	00:00:30.05	00:00:30.06	00:31:33	00:00:00	M NA									
8	ONEMUSIC-10MIN-2017	ONEMUSIC-10MIN-20170117		00:00:00.00	00:10:00.28	00:10:00.29	00:32:03	00:00:00	M NA									
Program name													Songs					
9	KCHAT-10MIN-20170309	KCHAT-10MIN-20170309-Ale		00:00:00.00	00:10:00.26	00:10:00.27	00:42:04	00:00:00	M NA				Songs					
10	Clip 30 sec	Clip 30 sec Name		00:00:00.00	00:00:29.29	00:00:30.00	00:52:05	00:00:00	M NA				Songs					
11	KCHAT-30SEC-20170309	KCHAT-30SEC-20170309-Ale		00:00:00.00	00:00:30.05	00:00:30.06	00:52:35	00:00:00	M NA				Songs					
12	ONEMUSIC-10MIN-2017	ONEMUSIC-10MIN-20170117		00:00:00.00	00:10:00.28	00:10:00.29	00:53:05	00:00:00	M NA				Songs					
13	KCHAT-10MIN-20170309	KCHAT-10MIN-20170309-Ale		00:00:00.00	00:10:00.26	00:10:00.27	01:03:08	00:00:00	M NA				Songs					
14	Clip 30 sec	Clip 30 sec Name		00:00:00.00	00:00:29.29	00:00:30.00	01:13:07	00:00:00	M NA				Songs					
15	KCHAT-30SEC-20170309	KCHAT-30SEC-20170309-Ale		00:00:00.00	00:00:30.05	00:00:30.06	01:13:37	00:00:00	M NA				Songs					
16	ONEMUSIC-10MIN-2017	ONEMUSIC-10MIN-20170117		00:00:00.00	00:10:00.28	00:10:00.29	01:14:07	00:00:00	M NA				Songs					
17	KCHAT-10MIN-20170309	KCHAT-10MIN-20170309-Ale		00:00:00.00	00:10:00.26	00:10:00.27	01:24:08	00:00:00	M NA				Songs					
18	Clip 30 sec	Clip 30 sec Name		00:00:00.00	00:00:29.29	00:00:30.00	01:34:09	00:00:00	M NA				Songs					
19	KCHAT-30SEC-20170309	KCHAT-30SEC-20170309-Ale		00:00:00.00	00:00:30.05	00:00:30.06	01:34:39	00:00:00	M NA				Songs					

00:00:00

Server1: 00:00:00.00

Remain: 00:00:00.00

End list: 00:00:00.00

Mode

● Playing Time

● Beginning

PLAY RESTORE PAUSE CUE JUMP

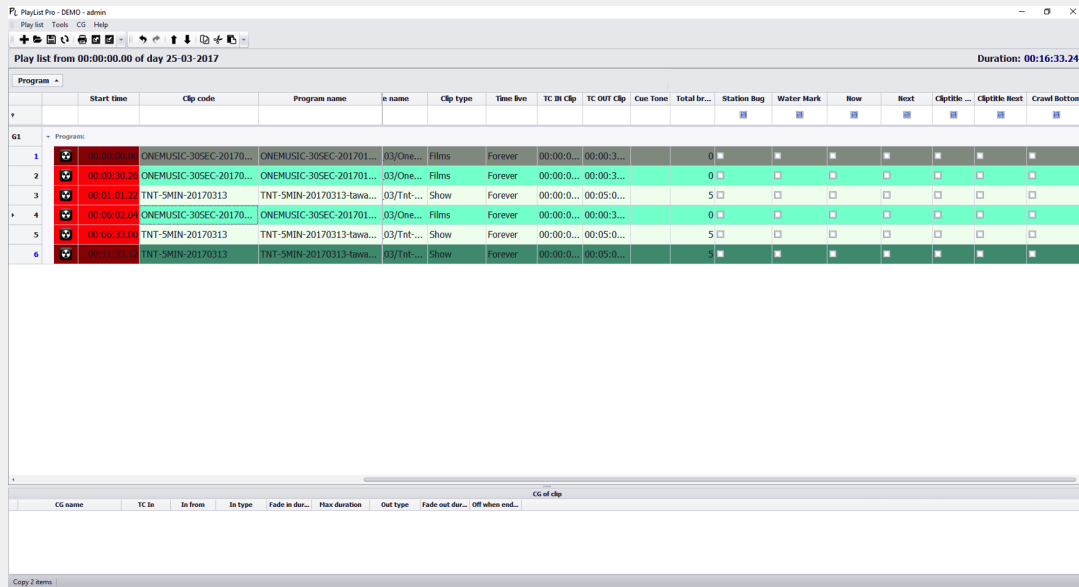
DISCONNECT STOP

Features

- Running on the client workstation to control the Automation system and update playlists, manually control the Automation system.
- Graphic User Interface (GUI) with timeline, second events are shown visually on timeline with graphical objects.
- Voice warning for emergency problems of the system that require staff's attention. This feature reduces the tension of staff on work.
- Support multi-language User Interface (English, Vietnamese...)

PLAYLIST PRO

Playlist Pro is a professional playlist creator for any day of a year. Rich set of tools available for editors to quickly create linear lists: Copy, Sub-list, automated generate list from matrix planning (weekly schedule).



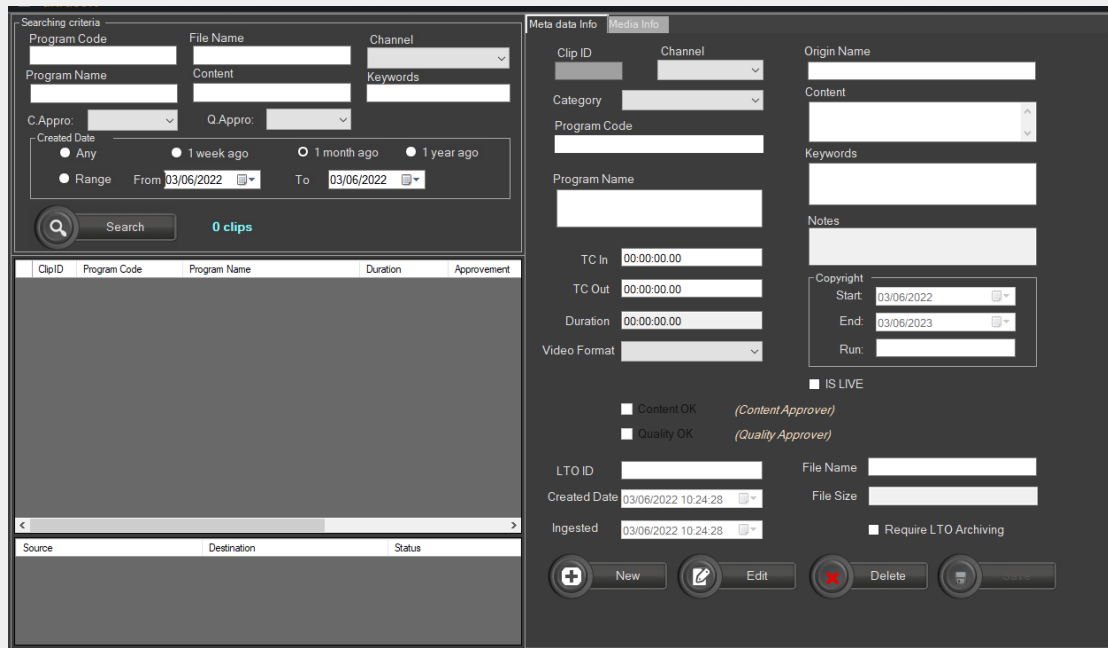
Editors use the **Playlist Pro** module to schedule playlists. The playlists can be planned for any future date. The Playlists can be printed, exported to XML, PDF, Excel, Words... formats, and can also be imported from XML, Excel.

Features

- Professional scheduling software
- Creating playlist for arbitrary days
- Supporting full tools for quick scheduling such as copy, paste, creating from weekly schedule
- Synchronize , metadata, playlist from HDStation, third party MAM system.
- Support multi-language User Interface (English, Vietnamese...)

MAM CLIENT

MAM Client is a light MAM system used to manage, search all media files in the playout section. It also manages playlist, manual ingest and automated watch folder ingest to playout system, time to live setting defines the file time in cache of playout server systems or playout storage systems



The screenshot displays the MAM Client interface, which is divided into two main sections: 'Searching criteria' and 'Meta data info'.

Searching criteria: This section includes fields for 'Program Code', 'File Name', 'Channel', 'Program Name', 'Content', and 'Keywords'. It also features a 'C.Appro:' dropdown, a 'Q.Appro:' dropdown, and a 'Created Date' filter with options for 'Any', '1 week ago', '1 month ago', and '1 year ago'. A 'Range' filter is set from '03/06/2022' to '03/06/2022'. A search button and a '0 clips' indicator are also present.

Meta data info: This section contains fields for 'Clip ID', 'Channel', 'Origin Name', 'Category', 'Program Code', 'Program Name', 'Keywords', and 'Notes'. It also includes 'TC In' and 'TC Out' time fields, a 'Duration' field, and a 'Video Format' dropdown. A 'Copyright' section with 'Start' and 'End' date pickers is visible. There are checkboxes for 'IS LIVE', 'Content OK (Content Approver)', and 'Quality OK (Quality Approver)'. Below these are 'LTO ID', 'Created Date', 'Ingested' date, 'File Name', and 'File Size' fields. A 'Require LTO Archiving' checkbox is also present. At the bottom, there are buttons for 'New', 'Edit', 'Delete', and 'Refresh'.

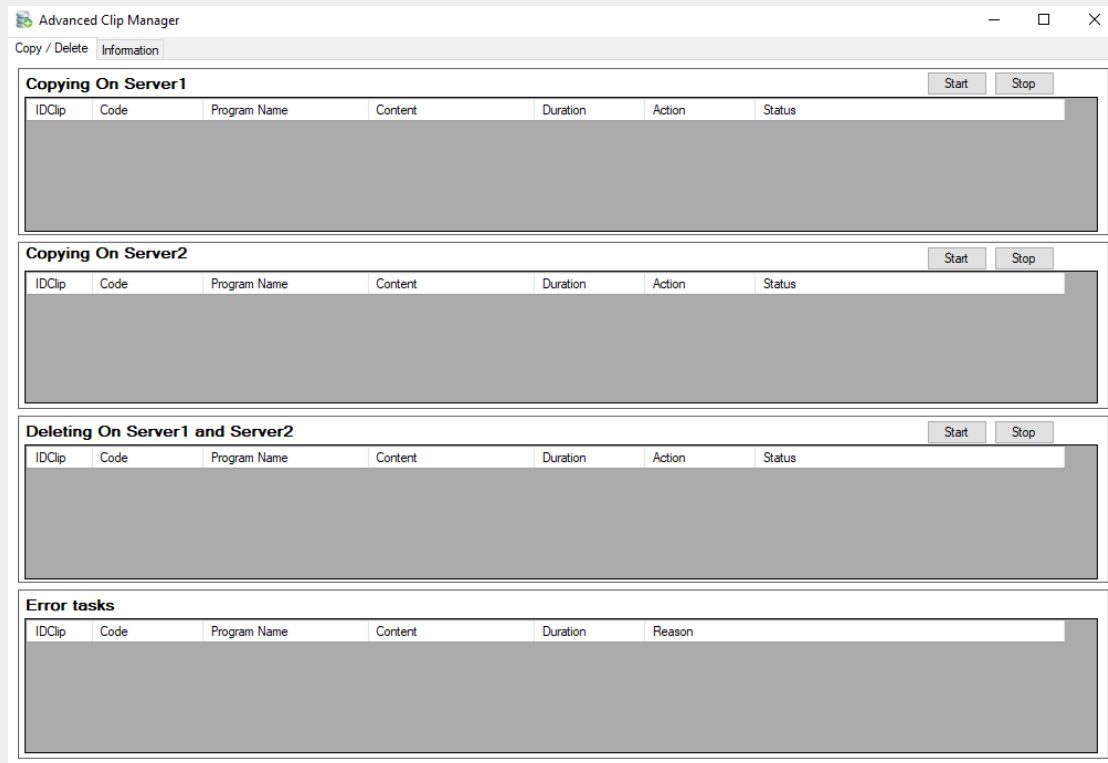
MAM Client (Media Asset Management Client) is used to create and manage resources in the Playout system such as: Search Media Asset, create clip metadata, edit clip metadata, upload video files to metadata, download media files from system to local computer, preview high resolution file, delete clip ...

Features

- Managing media files
- Ingesting media files
- Searching and managing media file
- Preview media files
- Delete, edit clip information in the system
- Downloading media file to local storage
- Support multi-language User Interface (English, Vietnamese...)

FILE MANAGER

File Manager is a software that interacts with MAM to copy files from the NAS system to the cache storage in the playout server. The priority of copying is based on expected playout time in the playlist. The software also automatically flush the cache storage of the server to a prefigured value (standard set for 70%) to make sure the server is ready for new incoming files any time.

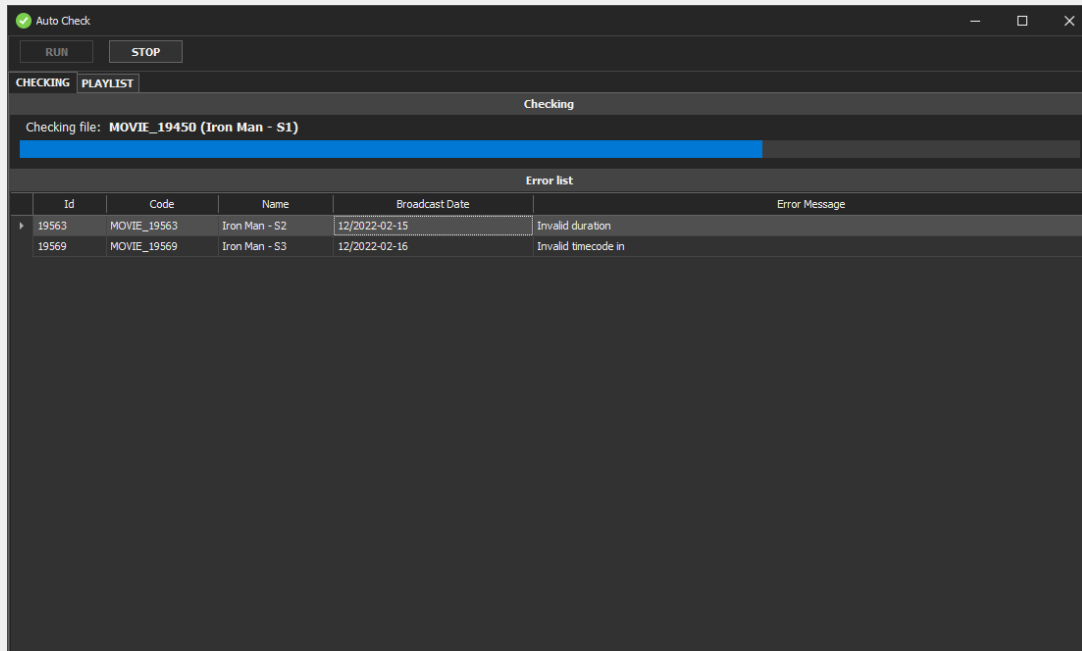


Features

- Co-operating with MAM and **Playlist Pro** to copy media files from NAS to Video Servers automatically
- Copying is prioritized, files that need to be ready for broadcasting will be copied first
- Automatically delete the files that are not in the working playlist to free up the video server storages, and ensure space for new media files.
- Number of working playlists can be configured to optimize video server storage usage.
- Support FXP (Server to Server File Transfer) protocol to copy files from NAS to video server directly, maximizing copying speed.
- Support multi-language User Interface (English, Vietnamese...)

AUTO CHECK

Auto Check automatically checks the video decode-ability using 01 video/audio channel on the server or shares the channel with the preview channel. The **Auto Check** service will load the media file into the checking channel and playout the video or audio in real-time or higher speed.

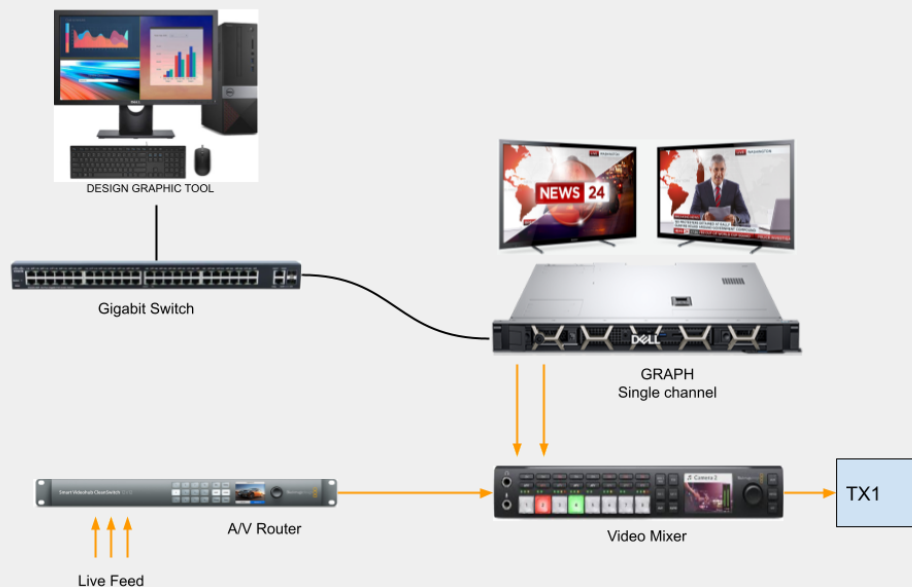


Features

- Automatically check media files for the capability of playing on servers
- Use 01 video channel to check the decoding ability on server for each newly copied media file
- Automatically load newly copied media files and play the entire file to check media.
- Allows to configure inspecting speed in various speeds 2x, 4x, 8x, 16x... depending on user's requirement.
- Validating timecode, audio silent detect of media files. Warnings and notices about such errors.
- Support voice warning and graphical notification on user interface.
- Support multi-language User Interface (English, Vietnamese...)

GRAPH

Graph is an onair graphic engine software. The engine uses HML5 for graphic format and animation. **Graph** module is an extremely powerful program designed especially for the live broadcast environment. **Graph** module has a background graphics engine that installs on Windows server or windows 10 and utilizes GPU performance to render multi-layer graphics.

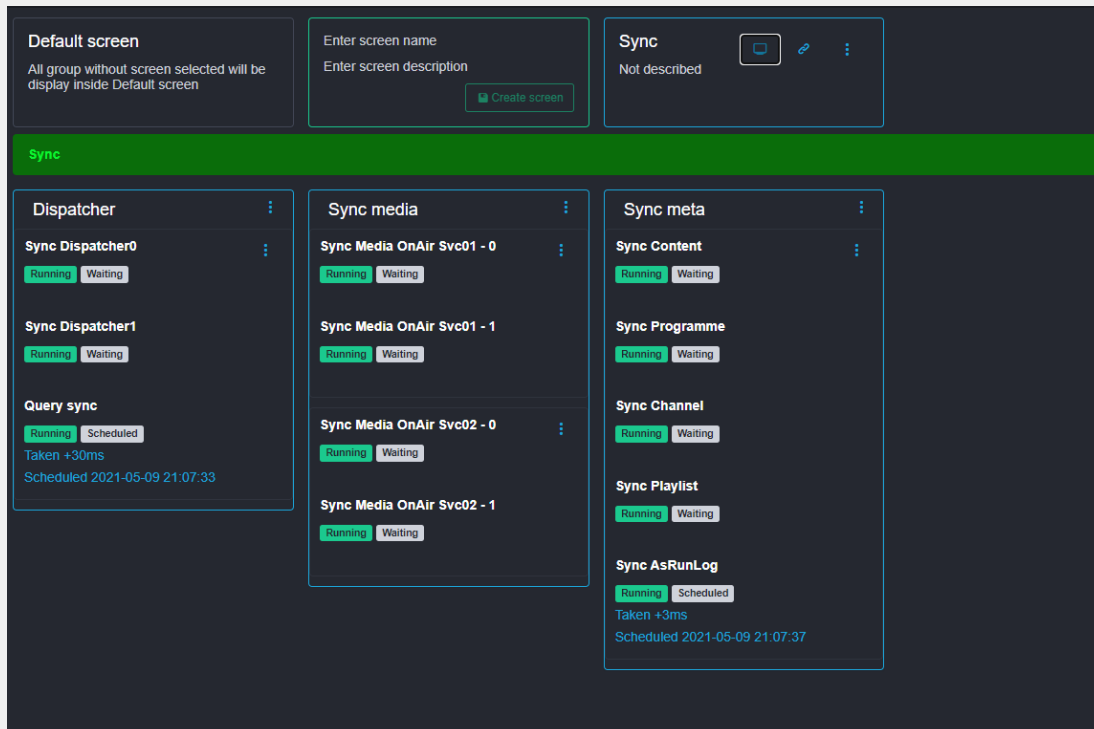


Features

- Integrated graphic engine on video server that allow rendering graphic contents
- Rendering contents that have compatible resolution and format to insert into video
- Capable of rendering static and animated graphic contents
- Support unlimited graphic layers
- Support text, crawl text, clock, images, image sequence, video popup
- Support various graphic file formats: BMP, JPG, PNG, TARGA, MP4, MOV...
- Rendering results have good quality, clear, true color, moving object is smooth, without flickering
- Graphic engine does not have user interface

SYNC

Sync is a module that synchronizes media, meta data and playlists between the Automation system and a Media Assets Management system. Sync plays an important role in file based workflow in broadcast stations, from production/post production to playout/distribution.



Features

- Automatically synchronize media, metadata, playlist, as run log between the automation system and the MAM system.
- Bidirectional synchronization in metadata and media.
- Integration between Automations and MAMs via APIs.
- Running as services, support server farm.