User Manual

Version: Release 2.3

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1. General information

Notice

If you have any questions, suggestions, or comments about this documentation, please send them via email to documentation.stream@qvest.com.

1.1 About this user manual

Notice

This user manual applies to the following Capturebox version:

Release 2.3

This user manual is intended for both new and advanced Capturebox users. It describes the basic structure of the Capturebox system as well as how to use its user interface and main functions.

1.2 About Capturebox

Capturebox is a user interface for controlling the recording functions of Clipbox. For information on playback functions, see the separate Clipbox user manual.

Clipbox is a professional video server especially suited for use in the production and studio environment of TV stations and media houses. The system is typically used as a player for feeds in live production as well as for pre-production recording.

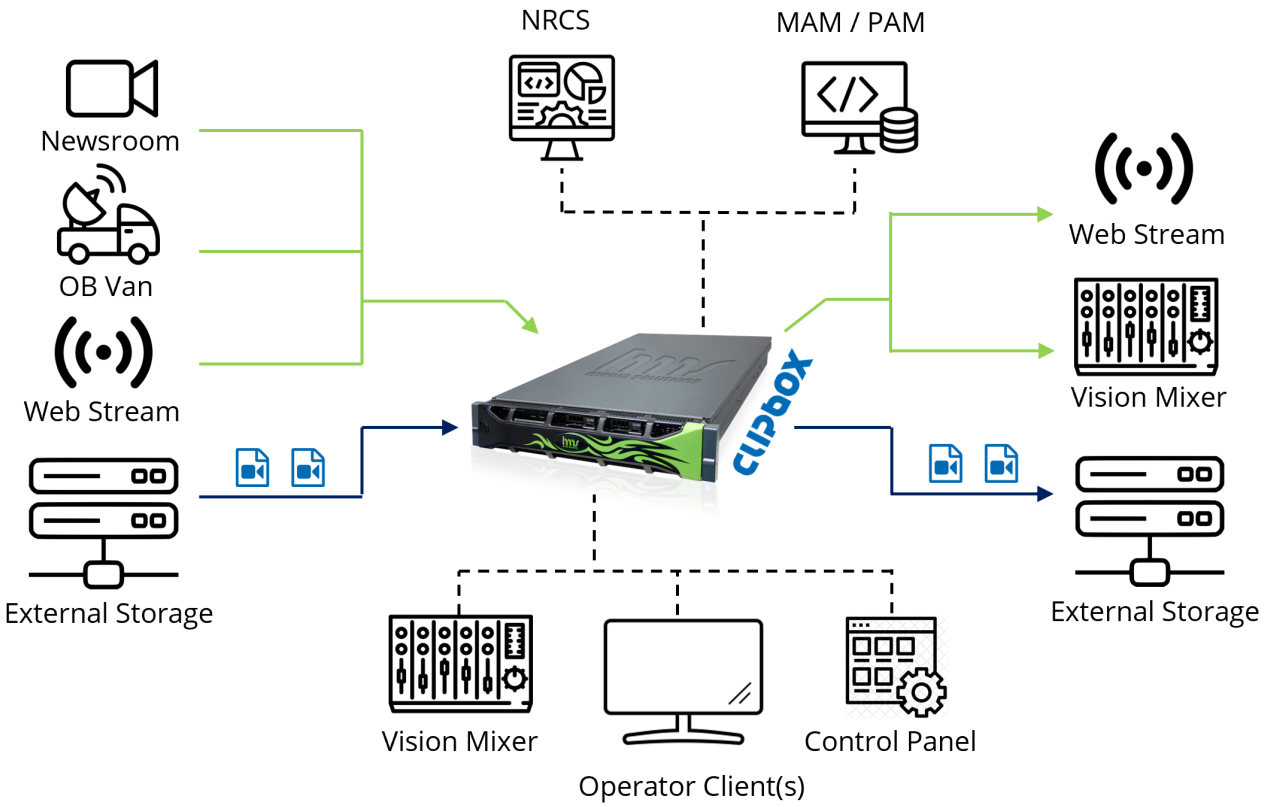


Figure: Clipbox system landscape

On the input side, Clipbox supports both file-based content and live signals. Depending on the system configuration, files can be played from the system's internal storage as well as from a connected network (nearline) storage. Depending on the system configuration, live signals can be received, for example, from a studio, from an OB van or as a web stream via SDI, SMPTE 2110 or MPEG-TS.

Clipbox provides interfaces to Newsroom Computer Systems (NRCS) and Media Asset Management (MAM) systems. Playlists from a connected NRCS are transferred via Media Object Server (MOS) protocol.

> **Notice**
>
> Clipbox supports MOS up to version 2.8.5.

For files that are used in playlists but are not yet available in the specified and monitored directory, Clipbox creates a missing file list. This is used to request missing files from a connected MAM system and to trigger corresponding file transfers.

A Clipbox system can be controlled by operator clients with a Clipbox user interface, by vision mixers as well as by control panels and dashboards. The Advanced Media Protocol (AMP) and Video Disk Control Protocol (VDCP) are used for this purpose, among others.

On the output side, Clipbox can provide played content via SDI, SMPTE 2110, NDI or web stream. In addition, received signals can be recorded as files. Support for growing files allows files to be used while they are still being recorded. The Clipbox user interface provides the possibility to preview growing files and to create subclips from them.

2. User interface

2.1 Main areas

The Capturebox user interface consists of the following main areas:

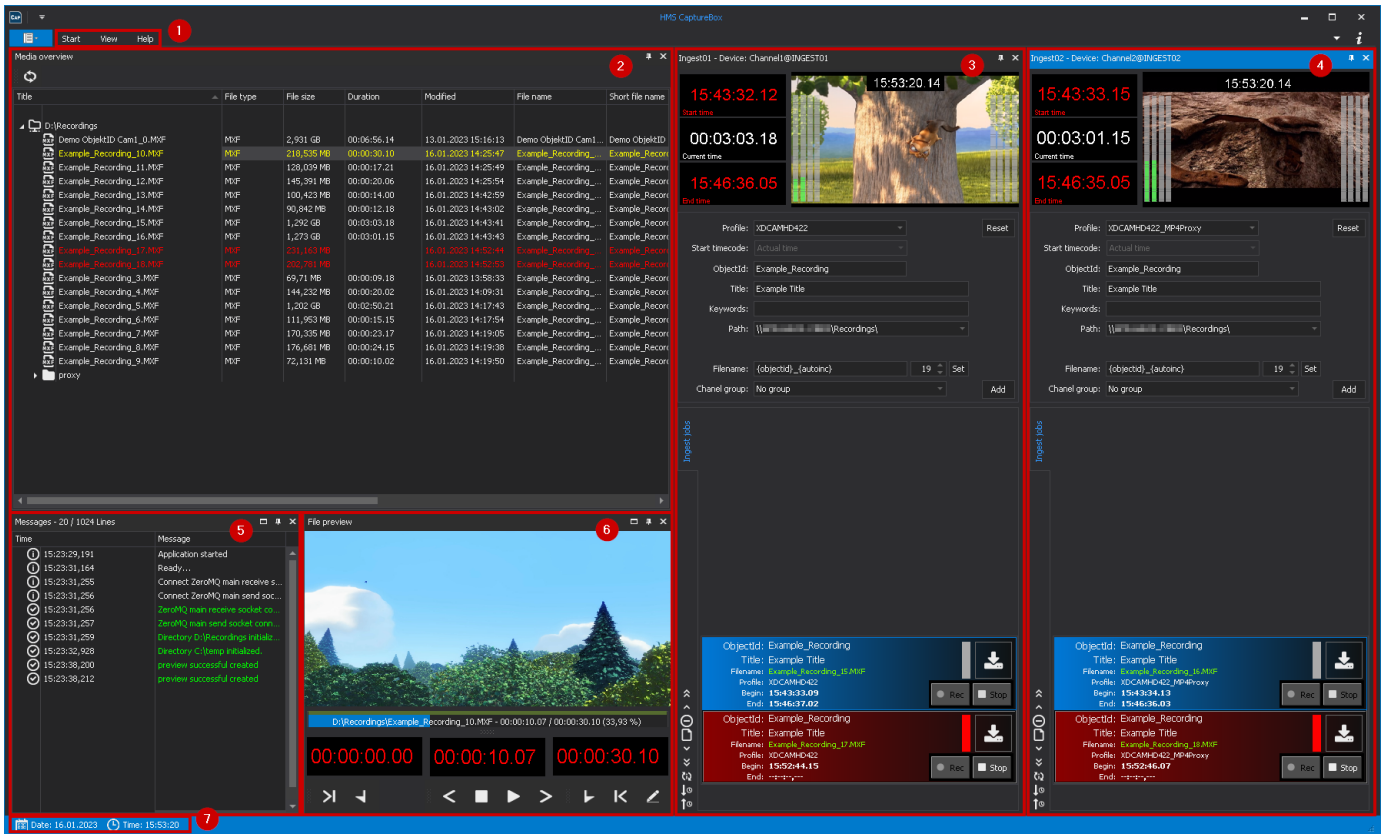


Figure: Capturebox user interface main areas

(1) - Menu/toolbar

(2) - Media overview

(3) - Ingest channel 1

(4) - Ingest channel 2

(5) - Messages

(6) - File preview

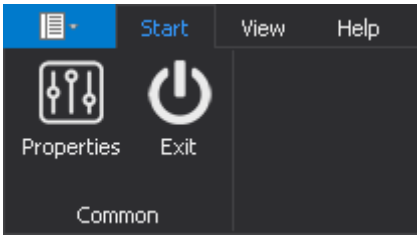
(7) - Status bar

> **Notice**
>
> All windows of the Capturebox user interface can be freely positioned by docking or undocking. The figure used here shows a possible arrangement of the elements with two ingest channels. Capturebox supports up to 16 ingest channels.

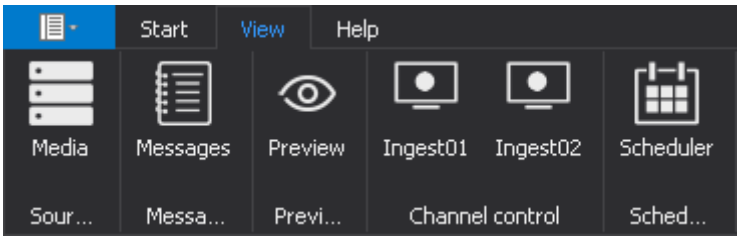
2.1.1 Menu bar

The menu bar of the main window contains the following sections:

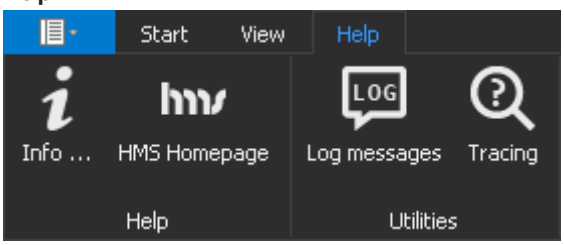
- **Start**



- **View**



- **Help**



> **Notice**
>
> The expanded toolbar is collapsed by **double-clicking** on the menu bar. Clicking again on an area of the menu bar expands the toolbar again. Alternatively, the toolbar can generally be expanded and collapsed by clicking on an area in the menu bar.

The areas of the menu bar provide access to the following functions:

Area	Symbol	Function
Start	Properties	Open the Capturebox system settings menu **Warning** *Incorrect configuration can lead to system failures. The settings should therefore only be changed by trained personnel.*
	Exit	Close the Capturebox application
View	Media	Show/hide the Media overview window
	Messages	Show/hide the Messages window

Area	Symbol	Function
	Preview	Show/hide the File preview window
	Ingest01	Show/hide the window for ingest channel 01
	Ingest02	Show/hide the window for ingest channel 02
	Scheduler	Show/hide the Scheduler window *(without function)*
Help	Info	Show information about the Capturebox application
	HMS Homepage	Open the Qvest Stream website
	Log messages	Enable/disable log messages
	Tracing	Enable/disable tracing **Notice** *The Tracing function is used for event monitoring and error analysis and should only be used by trained personnel.*

2.1.2 Media overview

The **Media overview** lists all files recorded with Capturebox (all files from monitored source directories).

If the **Media overview** window is not yet displayed, it can be enabled in the toolbar via **View > Media**. Afterwards the corresponding icon is highlighted in blue:

Figure: Media overview window enabled

Here you can see an exemplary general view of the **Media overview**:

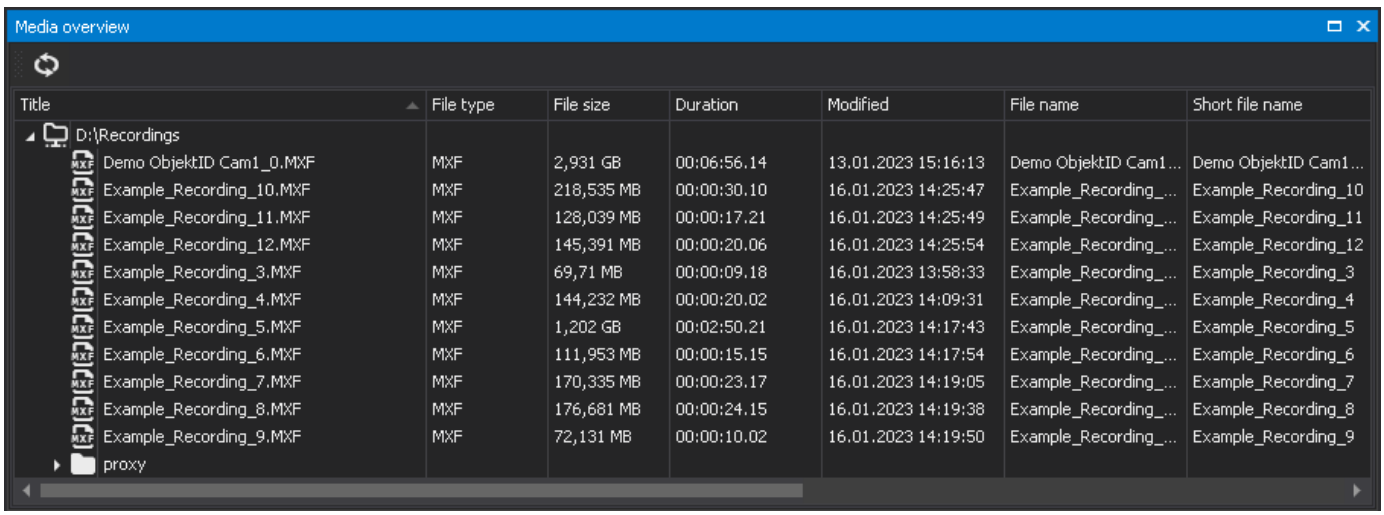


Figure: Media overview

For more information about the **Media overview**, see chapter Media management.

2.1.3 Ingest channel

To manage ingest jobs, a separate window is available for each configured ingest channel.

If the window of an **ingest channel** is not yet displayed, it can be enabled in the toolbar via **View > [Name of ingest channel]**. Afterwards the corresponding icon is highlighted in blue:

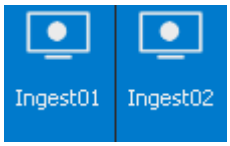


Figure: Ingest channel windows enabled

Here you can see an exemplary representation of an **Ingest channel** window:

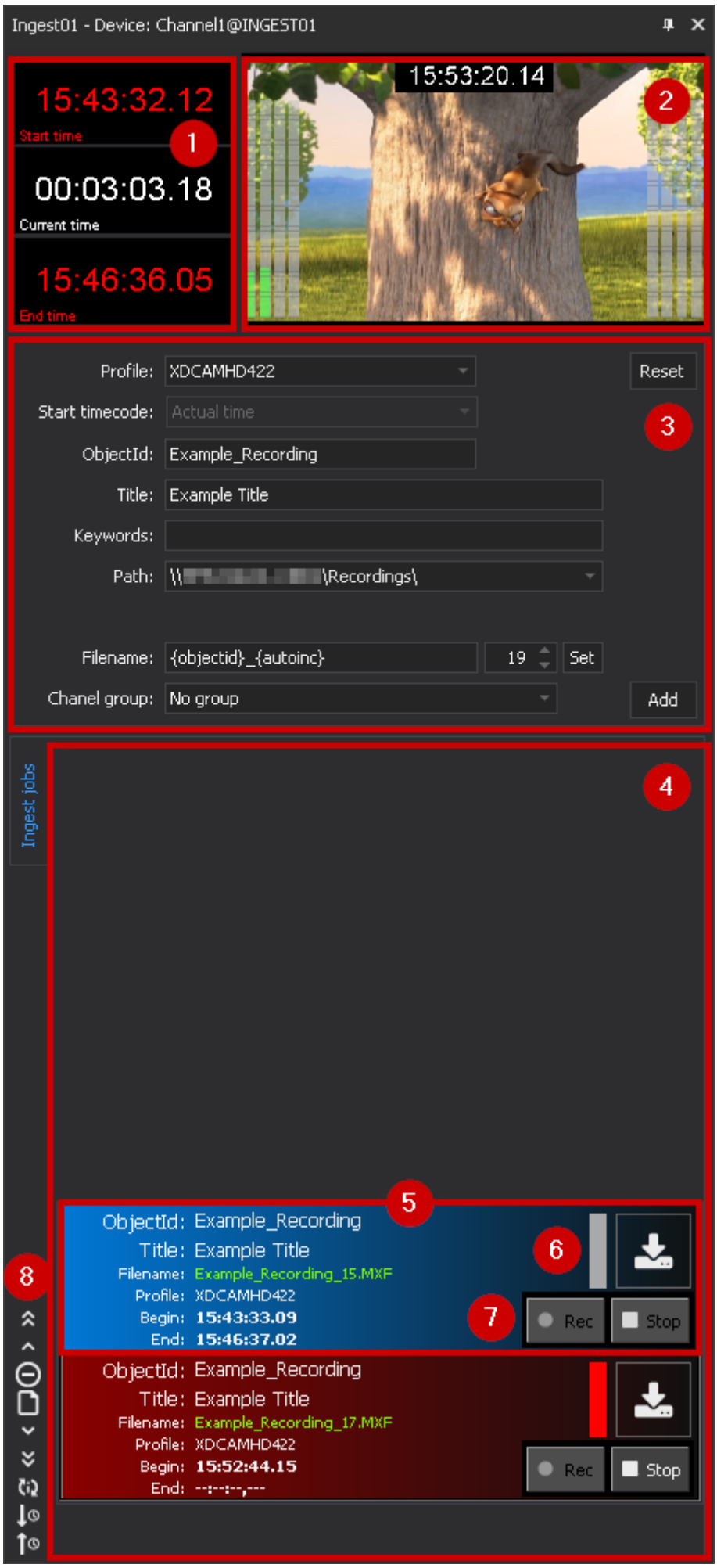

Ingest01 - Device: Channel1@INGEST01
15:43:32.12
Start time
1
00:03:03.18
Current time
15:46:36.05
End time
15:53:20.14
2
Profile: XDCAMHD422
Reset
Start timecode: Actual time
3
ObjectId: Example_Recording
Title: Example Title
Keywords:
Path: \\[redacted]\Recordings\
Filename: {objectid}_{autoinc}
19
Set
Chanel group: No group
Add
Ingest jobs
4
5
ObjectId: Example_Recording
Title: Example Title
Filename: Example_Recording_15.MXF
Profile: XDCAMHD422
Begin: 15:43:33.09
End: 15:46:37.02
6
7
Rec
Stop
ObjectId: Example_Recording
Title: Example Title
Filename: Example_Recording_17.MXF
Profile: XDCAMHD422
Begin: 15:52:44.15
End: --:--:--,---
Rec
Stop
8

Figure: Ingest channel window

The **ingest channel** window consists of the following elements:

No.	Element	Function	Description
1	Time information	Time displays for the currently selected ingest job	The start and end time as well as the current position (recording duration) of the selected job are displayed here.
2	Video preview	Video preview of the source signal of the ingest channel incl. audio level display (VU meter) and time code display	The video display can be activated and deactivated by **double-clicking** in this area. Alternatively, you can also open the context menu by **right-clicking** and selecting **Enable/ Disable Preview**. **Notice** *By default, the video preview displays the current system time as timecode. If necessary, the timecode display can be disabled in the Capturebox system settings.* **Notice** *The audio output is disabled by default. To enable it, open the context menu via right-click and select Sound on. To disable the audio output, select Sound off.*
3	Ingest job settings	Quick menu for creating new ingest jobs	For more information, see Ingest job settings (quick menu).
4	Ingest job list	List of all current jobs of the ingest channel	-
5	Ingest job	Single ingest job with job information	For more information, see Ingest job.
6	Ingest job status	Display of the job status and the job mode	For more information, see Ingest job.
7	Ingest job control	Ingest job control	For more information, see Ingest job control.
8	Ingest job list editing	Toolbar for editing the ingest job list	For more information, see Ingest job list editing.

Ingest job settings (quick menu)

This area is used to quickly create ingest jobs without having to open a separate menu. For this purpose, only basic settings of the ingest job must be specified.

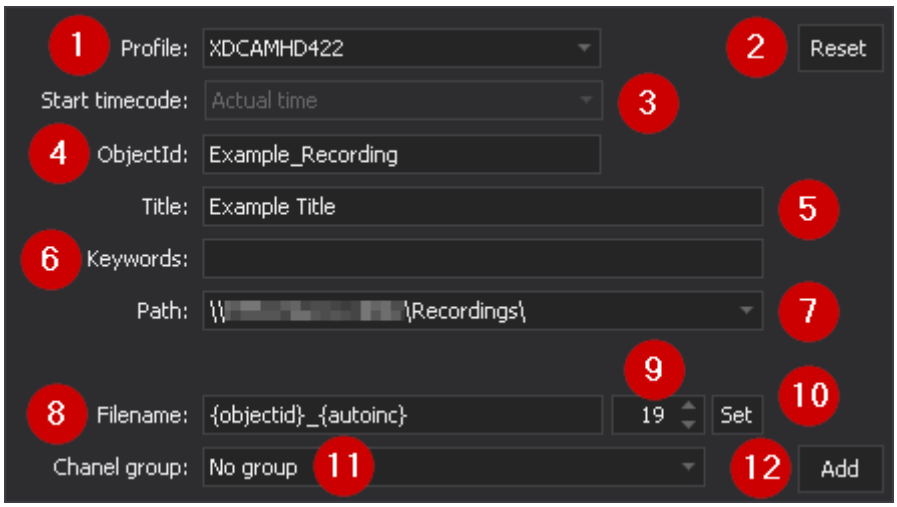


Figure: Ingest job settings (quick menu)

> **Notice**
>
> This menu can only be used to create ingest jobs for crash recordings.
>
> Capturebox also provides a separate menu with advanced ingest job settings. This can be used to create ingest jobs for crash recordings as well as for scheduled recordings.
>
> You can find a comparison of the different job types in chapter media recording overview.

The area includes the following elements:

No.	Element	Function	Description
1	Profile	Select recording profile	Here you select the recording profile to be used. This contains specifications which file format and parameters to be used for a recording.
2	Reset	Reset inputs	Via this button you can reset the properties of the ingest job to the default values.
3	Start timecode	Set timecode	This field displays the type of timecode that is stored as the start timecode ("timecode of first frame") in the metadata of the file to be recorded. The default setting is **Actual time**, i.e. the current system time is used as timecode. **Notice** *All files recorded by Capturebox are recorded with this timecode variant by default, if the used file format supports it.*

No.	Element	Function	Description
4	ObjectId	Enter ObjectId	The ObjectId is stored as a metadata element of the file to be recorded (see Sidecar XML file). **Notice** *If you leave the field empty, Capturebox generates the value automatically according to the current configuration. A default value can be defined for this in the Capturebox system settings.*
5	Title	Enter the job title	The title of the job is saved as a metadata element of the file to be recorded (see Sidecar XML file). **Notice** *If you leave the field empty, Capturebox generates the value automatically according to the current configuration. A default value can be defined for this in the Capturebox system settings.*
6	Keywords	Enter keywords	Keywords can, for example, contain descriptive information about a recording and can be evaluated by downstream systems. They are stored as a metadata element of the file to be recorded (see Sidecar XML file).
7	Path	Enter target directory	Specify the target directory where to save the file to be recorded.
8	Filename	Enter file name for recording	Enter the file name to be used for the recorded file. This can be created or extended both manually and by variables. **Notice** *If you leave the field empty, Capturebox generates the value automatically according to the current configuration. A default value can be defined for this in the Capturebox system settings.*

No.	Element	Function	Description
9	"Auto increment" counter	Select the current value of the "Auto increment" counter	This is a counter that applies across all ingest channels. This value is used when the variable `{autoinc}` is used in the file name and a new ingest job is created. The variable is replaced by the current value of the counter. **Notice** *When a new ingest job is created, the value of the counter is automatically increased by 1. This prevents already recorded files from being overwritten due to an identically chosen file name in a new ingest job.* **Tip** *You can also change the value of the counter manually, either by entering the corresponding number directly via the keyboard or by using the arrow keys in the counter field. To save the changed value, click Set. The new value will then be applied to all ingest channels.*
10	Set	Save current value of the "Auto increment" counter	This button allows you to save the value of the counter after a manual change. **Tip** *To retrieve the currently saved value after manually changing the value (without having saved it in the meantime), open the context menu by right-clicking on Set and select Retrieve counter reading.*
11	Channel group	Select ingest channel group	See Group recording.
12	Add	Create ingest job	This button allows you to add an ingest job to the job list using the selected properties.

Notice

For each recorded file, a sidecar XML file is created in the target directory with additional metadata that can be used by downstream systems. This is usually structured as follows (example):

```
<?xml version="1.0" encoding="UTF-8"?>
- <HMSJobInfo>
    <Guid>36d143be-c849-4b8e-a5bb-5aa380fe2acb</Guid>
    <ChannelName>Channel1</ChannelName>
    <DeviceName>INGEST01</DeviceName>
    <DeviceId>1</DeviceId>
    <ProfileName>XDCAMHD422</ProfileName>
    <Name>Recording-Job</Name>
    <JobType>CrashJob</JobType>
    <JobId>689114617741380</JobId>
    <ObjectId>Recording-Job</ObjectId>
    <DestFileName>\\127.0.0.1\Recordings\Recording-Job_68.MXF</DestFileName>
    <SecondDestFileName>D\PlayoutData\MXF\Recording-Job_68.MXF</SecondDestFileName>
    <DestFilePath>\\127.0.0.1\Recordings</DestFilePath>
    <SecondDestFilePath>D\PlayoutData\MXF</SecondDestFilePath>
    <DestFileId>0</DestFileId>
    <BufferLocal>false</BufferLocal>
    <SecondBufferLocal>false</SecondBufferLocal>
    <Owner>HMS-HAL01-CIB04.CaptureBox</Owner>
    <Created>2022-01-28T10:56:11.2105470Z</Created>
    <Prepared>2022-01-28T10:56:11.3245471Z</Prepared>
    <Started>2022-01-28T10:56:15.3233803Z</Started>
    <Stopped>2022-01-28T10:56:17.4657378Z</Stopped>
    <IngestStarted>2022-01-28T10:56:13.9794564Z</IngestStarted>
    <IngestStopped>2022-01-28T10:56:16.1394564Z</IngestStopped>
    <Status>Completed</Status>
    <FileNameSchema>{objectid}_68</FileNameSchema>
    <UserData>{"TimeCodeType":1,"TimeCode":{"Hours":-29,"Minutes":-7,"Seconds":-19,"Frames":-
      71},"ThirdPartyId":null,"Description":null,"KeyWords":"Keyword1","LogNotes":null,"Color":"Transparent","UserData":null}</UserData>
    <RegisterAlwaysVirtual>false</RegisterAlwaysVirtual>
    <UseOldNameConvention>false</UseOldNameConvention>
    <CategoryId>0</CategoryId>
    <MetadataBufferLocal>false</MetadataBufferLocal>
    <Bias>0</Bias>
    <Delay>0</Delay>
    <Compliance>false</Compliance>
  </HMSJobInfo>
```

Figure: Sidecar XML file

Ingest job control

The ingest job control allows you to manually control ingest jobs.

Figure: Ingest job control

It provides the following functions:

No.	Symbol	Function
1	Rec	Start recording
2	Stop	Stop recording

Notice

In case of a crash recording both buttons are available and you can use them to start and stop the recording manually.

If the recording job is a scheduled recording, the recording will start automatically at the selected time. For this reason, the only button available to you in this case is **(2) Stop**, which you can use to end the recording manually.

Ingest job

In the ingest job list, the type of each ingest job can be recognized by a corresponding symbol. The following symbols are used here:

 **Crash recording**

 **Scheduled recording**

The current job status can be recognized by the colored marker.

After an ingest job has been created and the recording is ready to be started, it is highlighted in green:

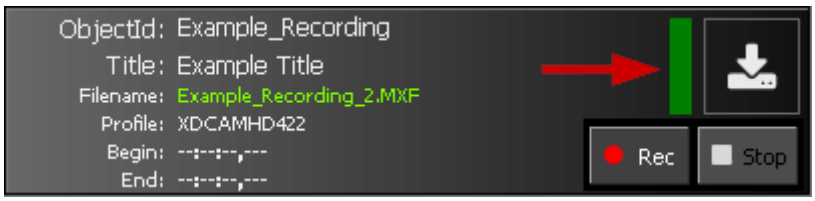


Figure: Crash recording (status: ready/green)

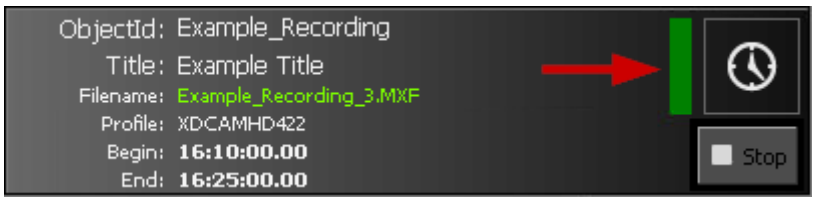


Figure: Scheduled recording (status: ready/green)

A started ingest job is highlighted in red:

Figure: Crash recording (status: started/red)

Figure: Scheduled recording (status: started/red)

After an ingest job is completed, it is highlighted in gray and the recorded file is listed in the specified directory in the **Media overview**:

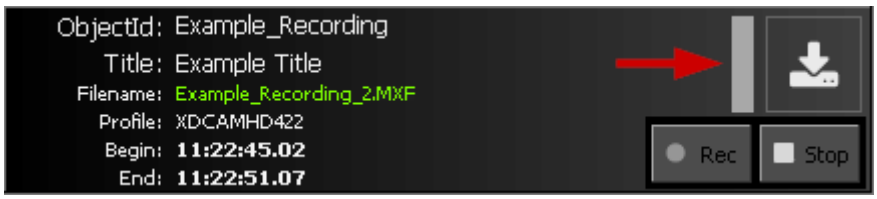


Figure: Crash recording (status: completed/gray)

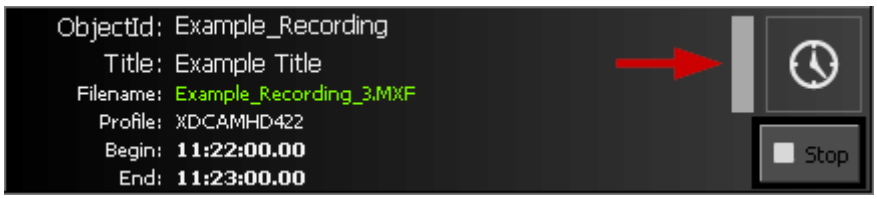


Figure: Scheduled recording (status: completed/gray)

Ingest job list editing

Via the ingest job list editing toolbar you can edit the list of ingest jobs.

Figure: Ingest job list editing toolbar

It provides the following functions:

No.	Symbol	Function
1		Move selected job up to the top of the list
2		Move selected job one position up
3		Remove selected job from list

No.	Symbol	Function
4		Create new job (open advanced ingest job settings)
5		Move selected job one position down
6		Move selected job down to the end of the list
7		Synchronize job list manually with the associated IngestServer
8		Sort job list in ascending order by job title
9		Sort job list in descending order by job title

Ingest job settings (advanced menu)

In addition to the ingest job settings quick menu, you can also create ingest jobs using the advanced ingest job settings. This menu provides additional settings and you can use it to create ingest jobs for both crash and scheduled recordings.

To open the advanced ingest job settings, click the **Create new job** icon  in the ingest job list editing toolbar.

The Ingest job properties window is displayed.

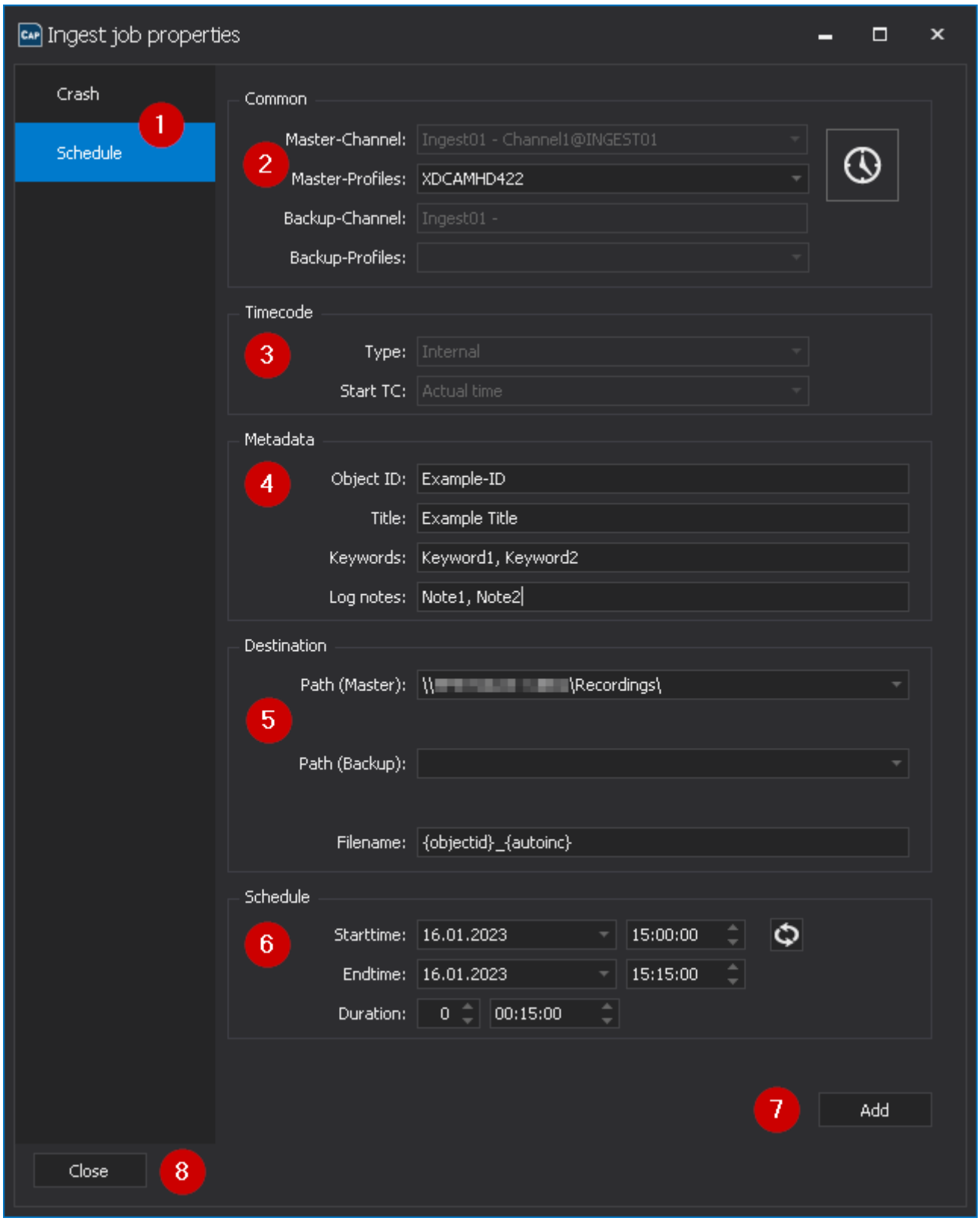


Figure: Ingest job properties window

The advanced ingest job settings enable you to set the following properties:

No.	Area	Property	Description
1	-	Job type	The job type to be used for recording. Available job types are **Crash** and **Schedule**.
2	Common	Master channel (not editable)	The primary ingest channel to be used for recording.
		Master profile (not editable)	The recording profile to be used for recording via the primary ingest channel.
		Backup channel (not editable)	The secondary ingest channel to be used for recording (without function).
		Backup profile (not editable)	The recording profile to be used for recording via the secondary ingest channel (without function).
3	Timecode	Type (not editable)	The type (source) of the timecode to be used.
		Start TC (not editable)	This field displays the type of timecode that is stored as the start timecode ("timecode of first frame") in the metadata of the file to be recorded. The default option is "Actual time", i.e. the current system time is used as timecode.
4	Metadata	Object ID	The ObjectId is stored as a metadata element of the file to be recorded (see Sidecar XML file). **Notice** *If you leave the field empty, Capturebox generates the value automatically according to the current configuration. A default value can be defined for this in the Capturebox system settings.*
		Object title	The job title is stored as a metadata element of the file to be recorded (see Sidecar XML file). **Notice** *If you leave the field empty, Capturebox generates the value automatically according to the current configuration. A default value can be defined for this in the Capturebox system settings.*
		Keywords	Keywords can contain, for example, descriptive information about a recording and can be used by downstream systems. They are stored as a metadata element of the file to be recorded (see Sidecar XML file).

No.	Area	Property	Description
		Notes	Notes can contain, for example, descriptive information about a recording and can be used by downstream systems. They are stored as a metadata element of the file to be recorded (see Sidecar XML file).
5	Destination	Path (Master)	The target directory to be used for recording via the primary ingest channel.
		Path (Backup)	The target directory to be used for recording via the secondary ingest channel (without function).
		Filename	The file name to be used for the recording. Variables are also supported here to automatically generate the file name or to extend it. **Notice** *If you leave the field empty, Capturebox generates the value automatically according to the current configuration. A default value can be defined for this in the Capturebox system settings.*
6	Schedule	Start time	Date and time for the start of the recording. **Notice** *This area is only available for scheduled jobs, i.e. when "Schedule" is selected as the type under (1).*
		End time	Date and time for the end of the recording.
		Duration	Duration of the recording. As an alternative to a manual entry in the **End Time** field, you can enter the duration of the job to be created in days (left field) as well as hours, minutes, and seconds (right field). The values displayed under **End time** will adjust according to your entries. **Tip** *You can reset the time data to the default values via the*  *button.*
7	-	Add	Create the ingest job using the selected properties.
8	-	Close	Close the **Job Properties** window.

Variables

To automatically generate filenames of recorded files according to your specifications, you can use variables in the filename field. This is possible both in the ingest job settings quick menu and in the advanced ingest job settings. When creating an ingest job, the used variables are replaced by actual values.

Tip

Example:

Suppose you use an ingest profile with MXF as container format for your ingest jobs and you want the file names of your recordings to be composed as follows:

1. the current date
2. a static identifier (e.g. "example_recording")
3. a consecutive number

In this case, you could enter the following value in the **Filename** field:

```
{yyyy}-{mm}-{dd}_example_recording_{autoinc}
```

If the auto-increment counter was set to 10, an ingest job created on 03/23/2022 would create a file with the following filename:

```
2022-03-23_example_recording_10.MXF
```

The following variables are available for this purpose:

Variable	Meaning
{d}	Day (1-31)
{dd}	Day (01-31)
{ddd}	Day short form
{dddd}	Day
{M}	Month (1-12)
{MM}	Month (01-12)
{MMM}	Month short form
{MMMM}	Month
{y}	Year (0-99)
{yy}	Year (00-99)
{yyy}	Year short form
{yyyy}	Year
{h}	Hour (1-12)
{hh}	Hour (01-12)
{H}	Hour (0-23)
{HH}	Hour (00-23)

Variable	Meaning
{m}	Minute (0-59)
{mm}	Minute (00-59)
{s}	Second (0-59)
{ss}	Second (00-59)
{f}	Tenth of a second
{ff}	Hundredth of a second
{fff}	Millisecond
{ffff}	Thousandth of a second
{fffff}	One hundred thousandth of a second
{ffffff}	Millionth of a second
{fffffff}	Ten-millionth of a second
{K}	Time zone difference local time to world time
{t}	AM/PM identifier short form
{tt}	AM/PM identifier
{g}	Epoch/period
{cw}	Calendar week
{doy}	Day of the year
{z}	Time zone hour difference (without leading zeros)
{zz}	Time zone hour difference two digits
{zzz}	Time zone hour and minute
{vfn}	File name
{iprofile}	Ingest profile name
{ichannel}	Ingest channel name
{ititle}	Ingest title
{objectid}	Object ID
{autoinc}	Auto increment

2.1.4 Messages

The **Messages** window contains status messages that are marked with corresponding icons and colors depending on their type and meaning. If the **Messages** window is not yet displayed, it can be enabled in the menu bar via **View > Messages**. Afterwards the corresponding icon is highlighted in blue:

Figure: Messages window enabled

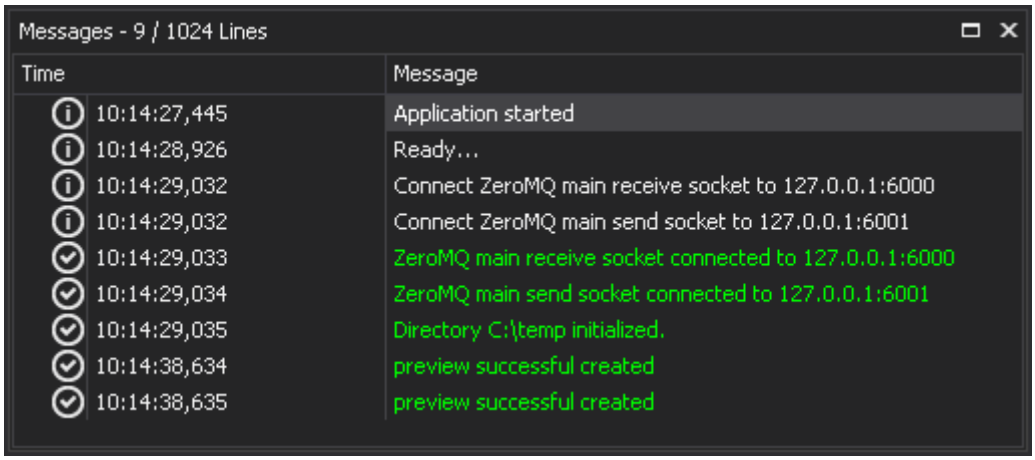


Figure: Messages window

2.1.5 File preview

Overview

The **File preview** enables frame-accurate preview playback of recorded files. Files to be previewed can be selected via the Media window.

> **Notice**
>
> The File preview in Capturebox provides basic functions for previewing recorded files. For advanced functions (such as trimming files or creating subclips), use the separate File preview in Clipbox.

If the **File Preview** window is not yet displayed, it can be enabled in the menu bar via **View > Preview**. Afterwards the corresponding icon is highlighted in blue:

Figure: File preview window enabled

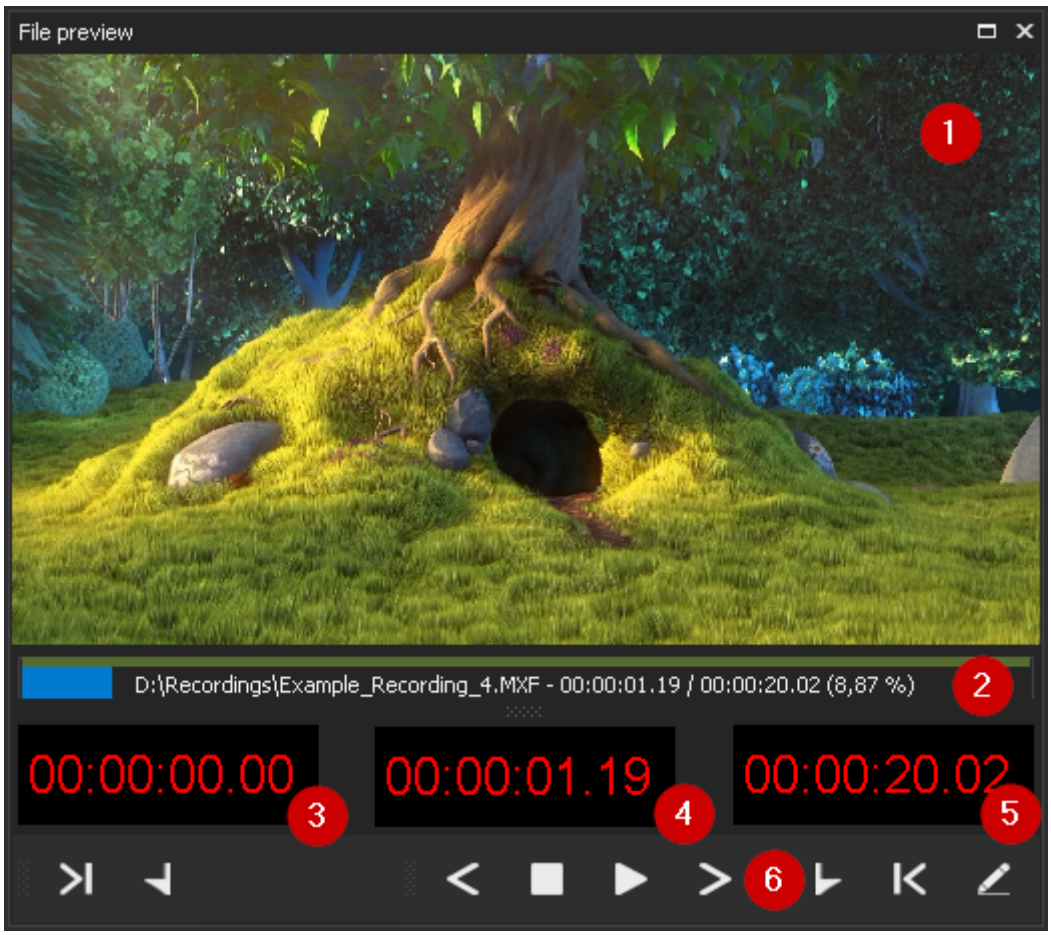


Figure: File preview window

The **File Preview** window consists of the following elements:

No.	Element	Function
1	Preview	Preview image of the current playback position of the selected file
2	Timeline	Timeline with file and playback information (file path and name, current time index, total duration, progress) **Tip** *You can also use the Timeline to jump to any position within a file by clicking on the corresponding position.*
3	Start of material	Currently set mark in time code (without function)
4	Position	Current playback position
5	End of material	Currently set mark out time code (without function)
6	Toolbar	File preview control toolbar

Toolbar

The **File preview** toolbar provides access to the following functions:

Figure: File preview toolbar

No.	Symbol	Function
1		Jump to mark in
2		Set mark in
3		Previous frame
4		Stop
5		Play/Pause
6		Next frame
7		Set mark out
8		Jump to mark out
9		Save mark in and mark out points *(without function)*
10		Update the length/duration of the file being played **Notice** *This function is only available if the currently playing file is a growing file (e.g. a file that is currently still being recorded).*

2.2 Customizing the user interface

Capturebox provides the possibility to customize the arrangement of the user interface windows. The main areas can be placed almost arbitrarily.

2.2.1 Changing the arrangement of windows

To change the arrangement of a window, proceed as follows:

1. Click the title bar of the window you want to move.
2. Hold down the left mouse button and move the window to the desired position.

Notice

The user interface provides you with possible positions for docking windows on the screen (top, bottom, left or right). If you move the selected window within an open window, an additional icon appears at the positions where you can dock it.

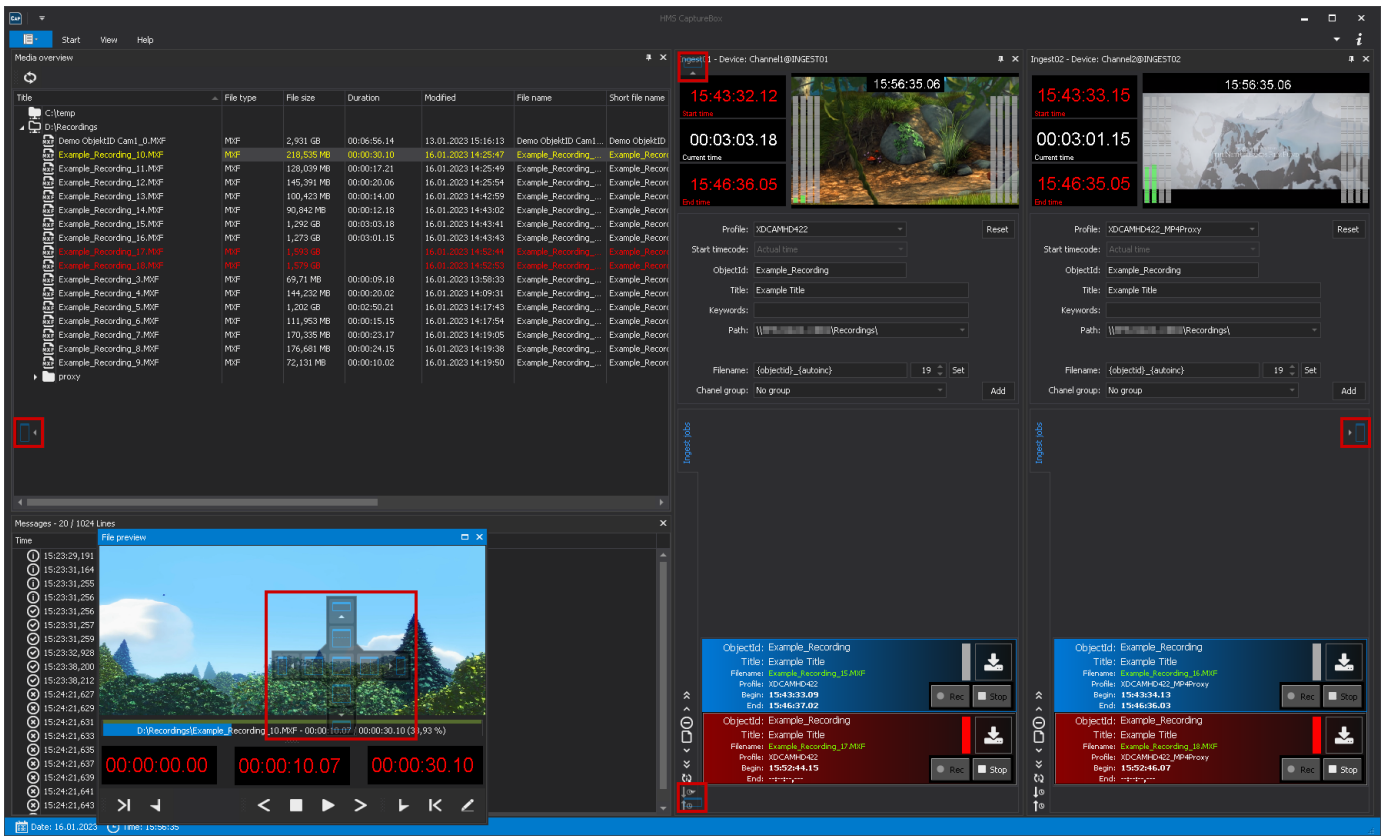


Figure: Move windows of the user interface

To dock a window at a suggested position, proceed as follows:

1. Click the title bar of the window with the left mouse button.
2. Drag the window to the desired position while holding down the left mouse button.

The corresponding position is highlighted in blue as a preview.

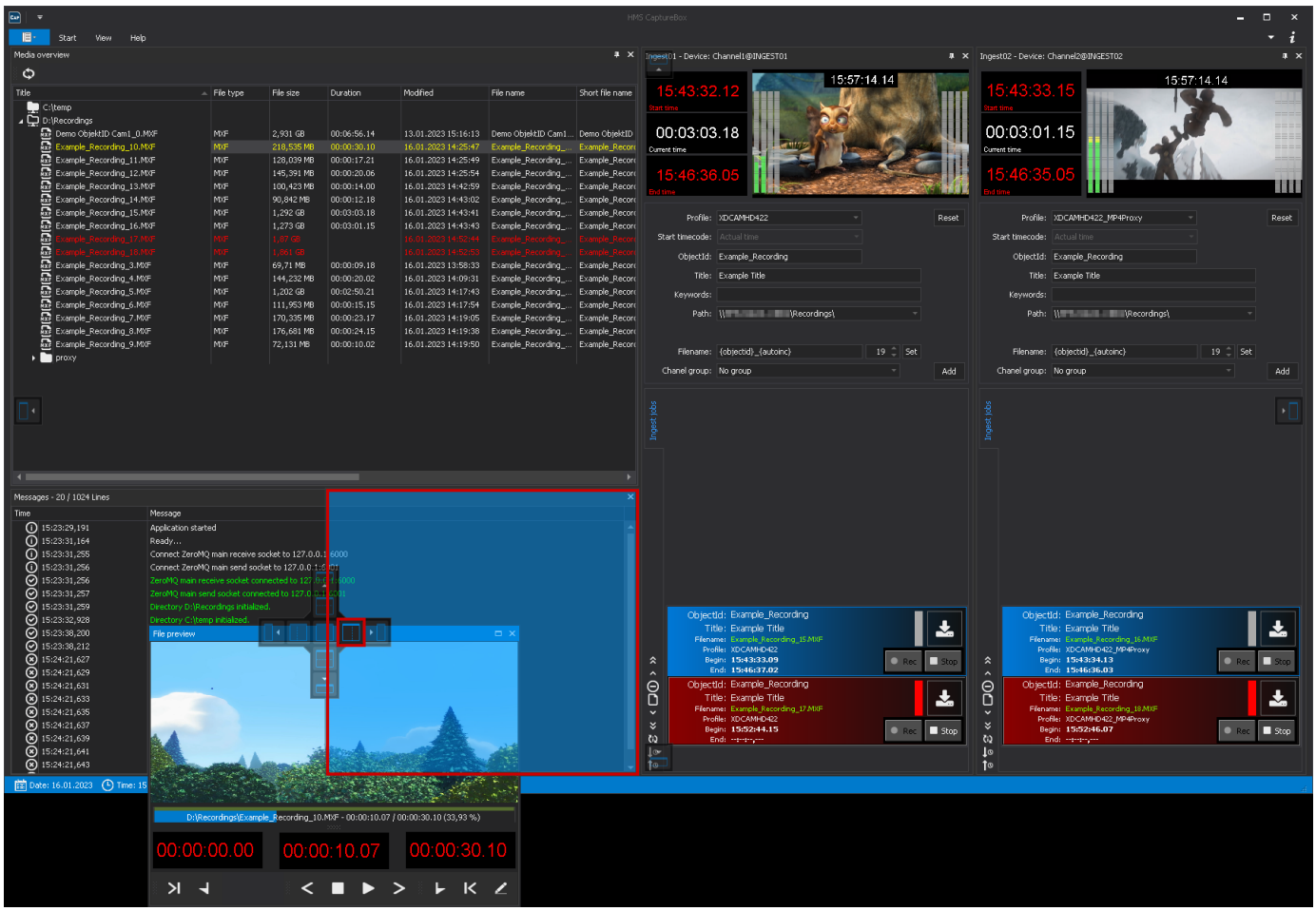


Figure: Dock window at new position

To undock a docked window, proceed as follows:

- Double-click the title bar of the respective window.

  The window is no longer docked and is displayed separately.

> **Tip**
>
> To dock the window back at its original position, **double-click** again.

2.2.2 Combining multiple windows

Multiple windows can be combined in one window and displayed via a tab bar. To do this, at least one window must already be open.

Proceed as follows to create a tab bar in a window:

1. Open another window via the toolbar.
2. Drag it to the center of the already opened window.

   The position selection for docking windows (see below) appears.
3. Select the position in the center.

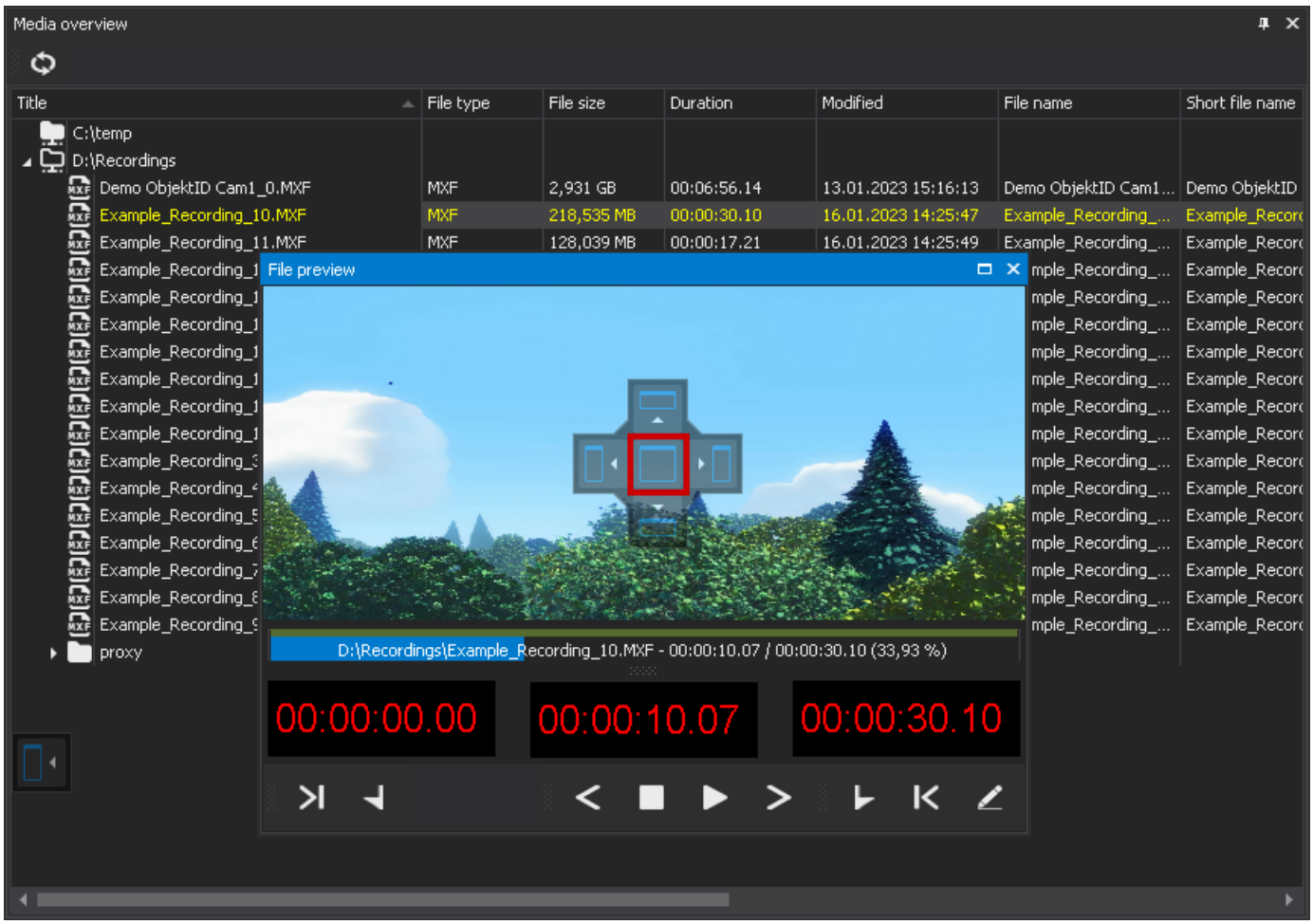


Figure: Dock window centrally

Both windows (in the example the "File Preview" and "Media Overview" windows) are displayed in the tab bar at the bottom and can be selected via this.

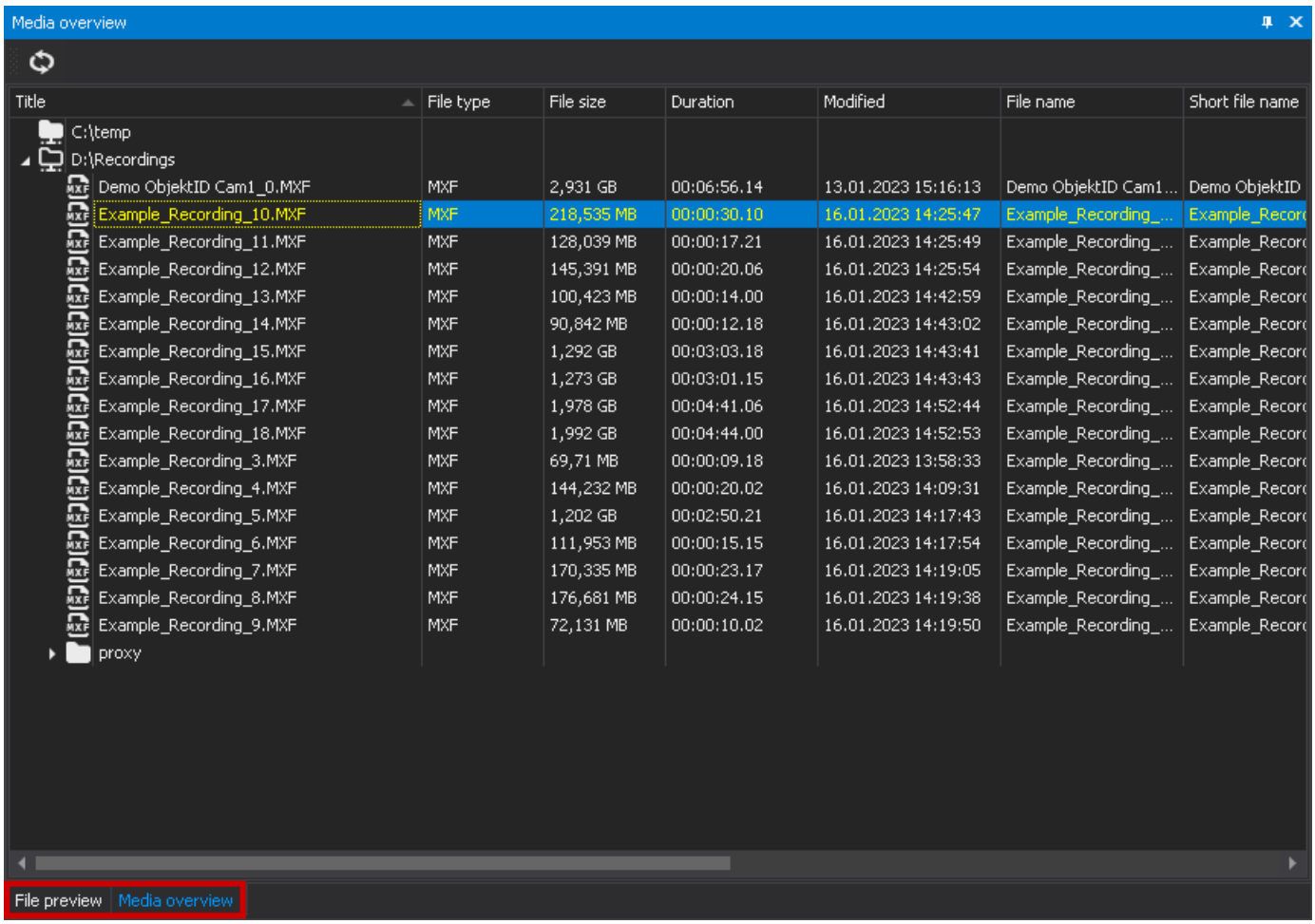


Figure: Window docked and added to tab bar

> **Tip**
>
> Any number of windows can be added to a tab bar.

3. Media management

3.1 Listing files

The Media overview lists all local or network directories monitored by Capturebox and files contained therein. In addition, it displays basic technical metadata of files, such as file name, type, and size.

Available files can be played via the File preview.

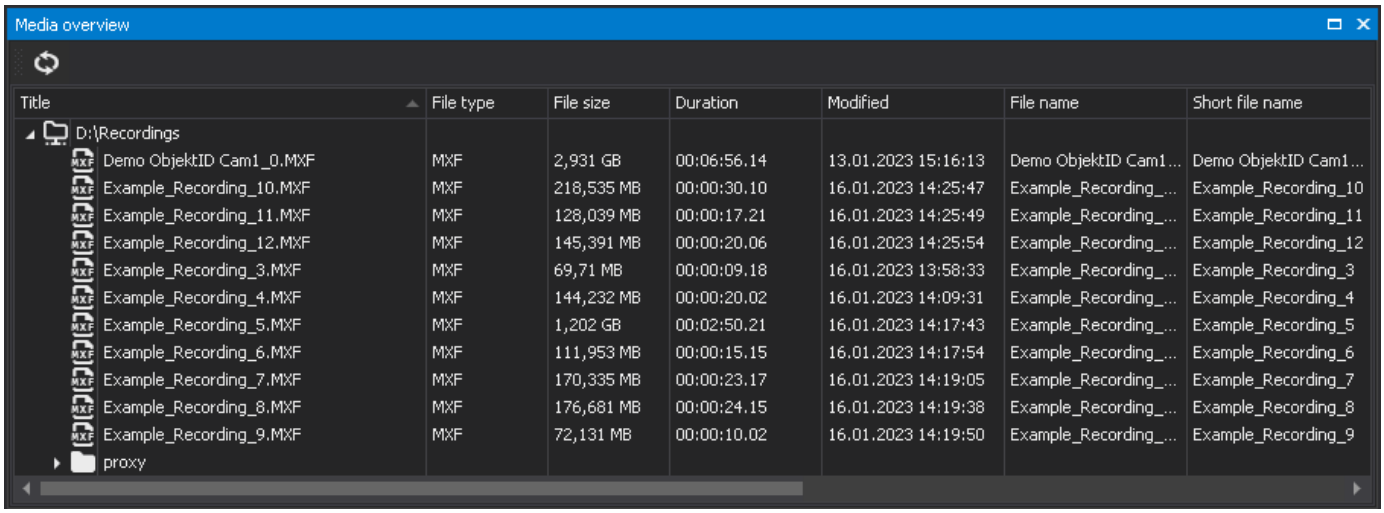


Figure: Media overview

> **Notice**
>
> Files are highlighted in the **Media overview** according to their status:
>
> - White - file is completed and is in neutral status
> - Yellow - file is currently being used (e.g. in the **File preview**)
> - Red - file is not yet complete and is still being created in or copied to the monitored source directory
>
> In addition, a symbol indicates the type of the file (e.g.  for MXF files).

The display of the **Media overview** can also be customized. You can customize the width and order of all columns by dragging them. You can also access additional settings by **right-clicking** on one of the columns, which opens the following context menu:

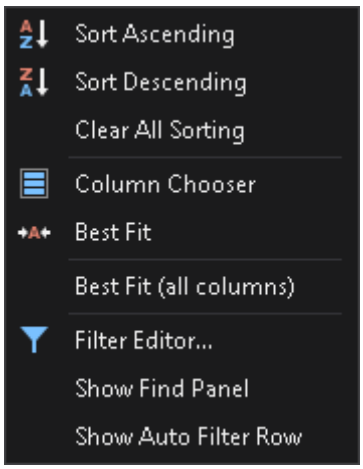
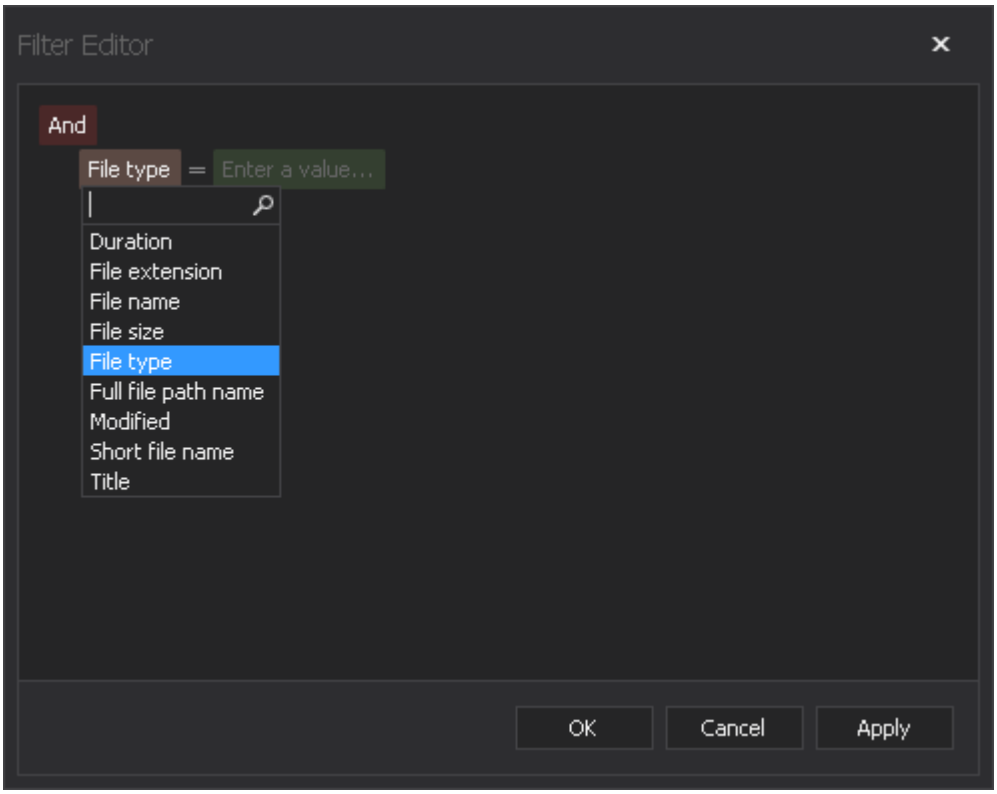


Figure: Media overview context menu

It provides the following functions:

Function	Meaning
Sort ascending	Sort files alphabetically in ascending order
Sort descending	Sort files alphabetically in descending order
Clear sorting	Restore default sort order of the selected column
Clear all sorting	Restore default sort order of all columns
Column chooser	Edit column selection
Best fit	Set width of selected column automatically
Best fit (all columns)	Set width of all selected columns automatically

Function	Meaning
Filter editor	Open menu for creating custom search filters  *Figure: Custom search filter* **Tip** *This menu enables you to create custom search filters. You can use technical metadata, such as file name, size or type as a data source and create and combine search conditions using logical operators.*
Show find panel	Display search field above the Media overview **Tip** *You can also open the search field via the keyboard shortcut [Ctrl] + [F].*
Show auto filter row	Show separate search field above each column **Tip** *To display the entry you are looking for, it must be entered completely.*

3.2 Playing files

Capturebox provides the possibility to play and preview recorded files via the File preview.

Notice

The File preview in Capturebox provides basic functions for viewing recorded files. For advanced functions (e.g. trimming files or creating subclips) use the separate File preview in Clipbox.

To play a file, proceed as follows:

1. In the **Media overview**, open the directory where the file to be played is stored.
2. **Double-click** the file to be played.

   The file opens in the File preview.
3. Use the File preview toolbar to control the playback.

> **Tip**
>
> To update the length/duration when playing a growing file, click the **Refresh** icon  .

> **Tip**
>
> To end the playback, open the context menu of the File preview by **right-clicking on the preview image** and select **End preview**.

4. Media recording

4.1 Overview

4.1.1 Types of ingest jobs

The following basic types of ingest jobs can be created via the Capturebox user interface:

Type	Features
Individual recording	• a single ingest job that is created once and executed by a single ingest channel
Group recording	• an ingest job that is created once, added to an ingest channel group, and executed by multiple ingest channels (all channels of the group)

A distinction is made between the following ingest job types:

Type	Basic principle	Features
Crash	Manual recording	• can only be started and stopped manually • can be created via the quick menu and the advanced menu • can be used for both individual and group recordings
Schedule	Automatic scheduled recording	• is automatically started and stopped according to the selected time • can alternatively also be stopped manually • can only be created via the advanced menu • can only be used for individual recordings

4.1.2 Creating ingest jobs

The Capturebox user interface provides the following ways for creating ingest jobs:

Menu	Features
Quick menu	• allows only the creation of manual jobs • enables the creation of both individual and group recordings
Advanced menu	• enables the creation of both manual and scheduled jobs • allows only the creation of individual recordings

4.2 Individual recording

4.2.1 Crash recording

To create an ingest job for crash recording, you can use both the quick menu for ingest job settings and the advanced ingest job settings.

Creating a crash job via the quick menu

To create an ingest job for crash recording via the quick menu for ingest job settings, proceed as follows:

1. Select the window of the ingest channel to be used.
2. To ensure that the input signal is available, check the video preview of the selected ingest channel.

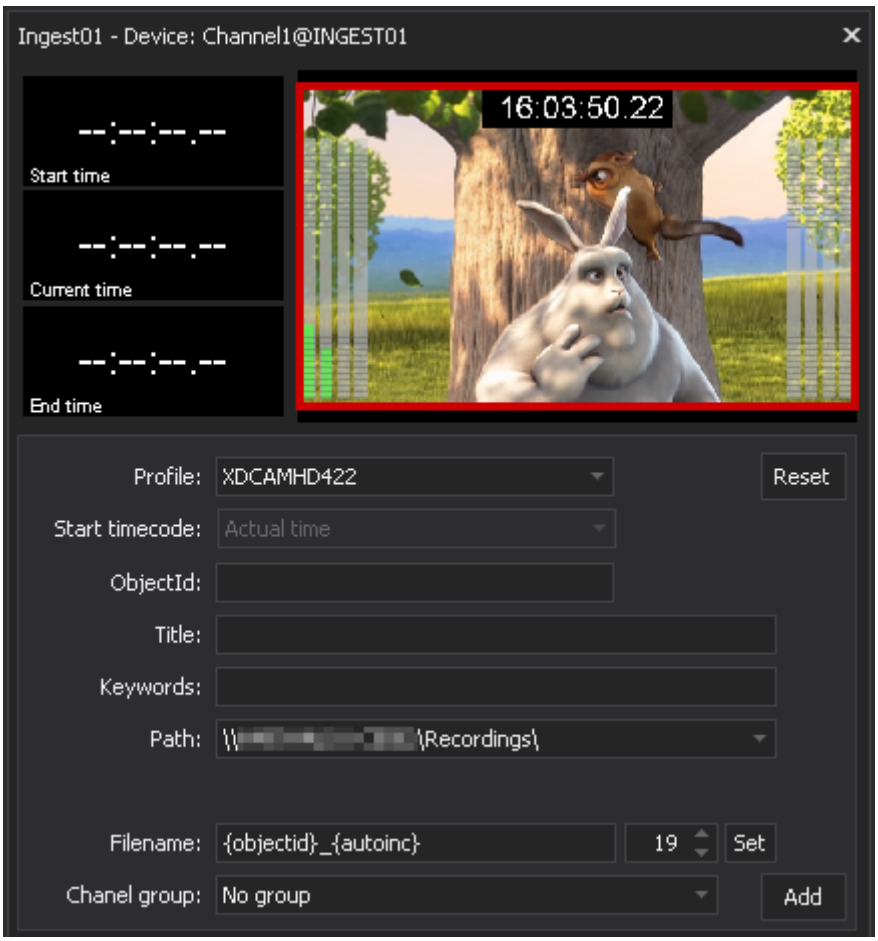


Figure: Ingest channel input signal video preview

> **Notice**
>
> If the input signal is not displayed at all or is displayed incorrectly, make sure that the correct signal feed is provided to the Capturebox system.

3. In the quick menu for ingest job settings select the settings to be used:

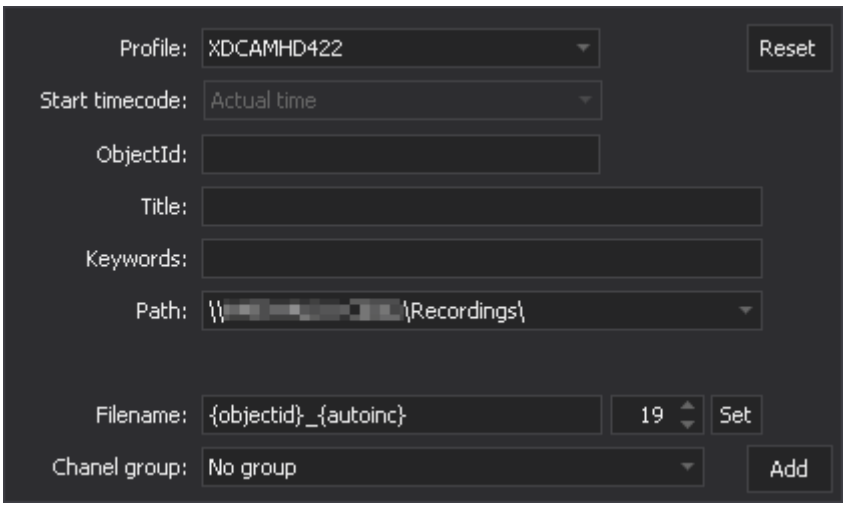


Figure: Quick menu for ingest job settings

a. As **Profile** select the recording profile to be used.

b. (Optional) Enter an **ObjectId**.

> **Notice**
>
> If you do not enter a value in this field, the default value configured in the Capturebox system settings is used.

c. (Optional) Enter a **Title**.

> **Notice**
>
> If you do not enter a value in this field, the default value configured in the Capturebox system settings will be used.

d. (Optional) Enter **Keywords**.

e. Select the **Path** where to store the recorded file.

f. (Optional) Enter a **Filename**.

> **Notice**
>
> This field displays the default value configured in the Capturebox system settings. If you do not want to use this, you can specify the file name manually. Note that you cannot add multiple ingest jobs with identical file names to the job list.
>
> If the filename contains the variable `{autoinc}`, it is usually not necessary to change the filename manually. Automatically incrementing the counter creates a unique filename for each ingest job, preventing existing files from being accidentally overwritten.

g. (Optional) If you want to assign the ingest job to a channel group, select the **Channel group** to be used. If you want to create the ingest job only for the currently selected ingest channel, select **No group**.

> **Tip**
>
> To reset your entries and restore the default values, click **Reset**.

4. To create the ingest job, click **Add**.

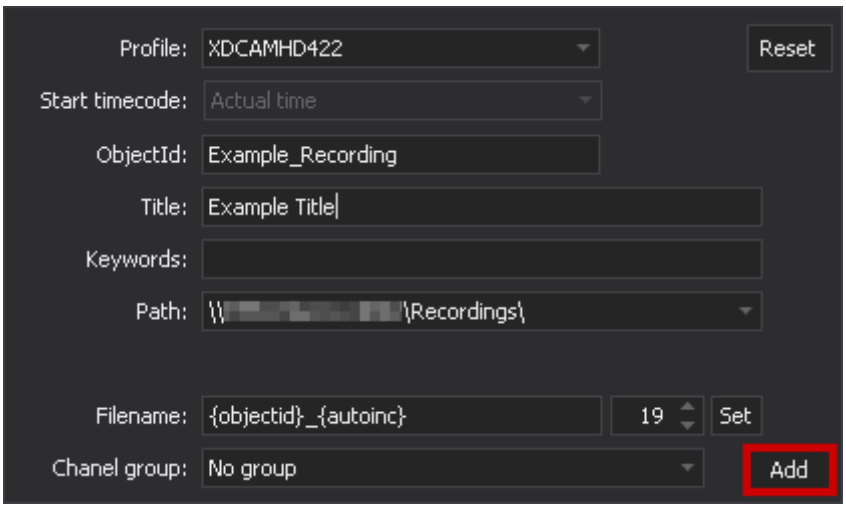


Figure: Add ingest job to job list

The ingest job is created using the previously selected settings, added to the job list, and prepared for recording.

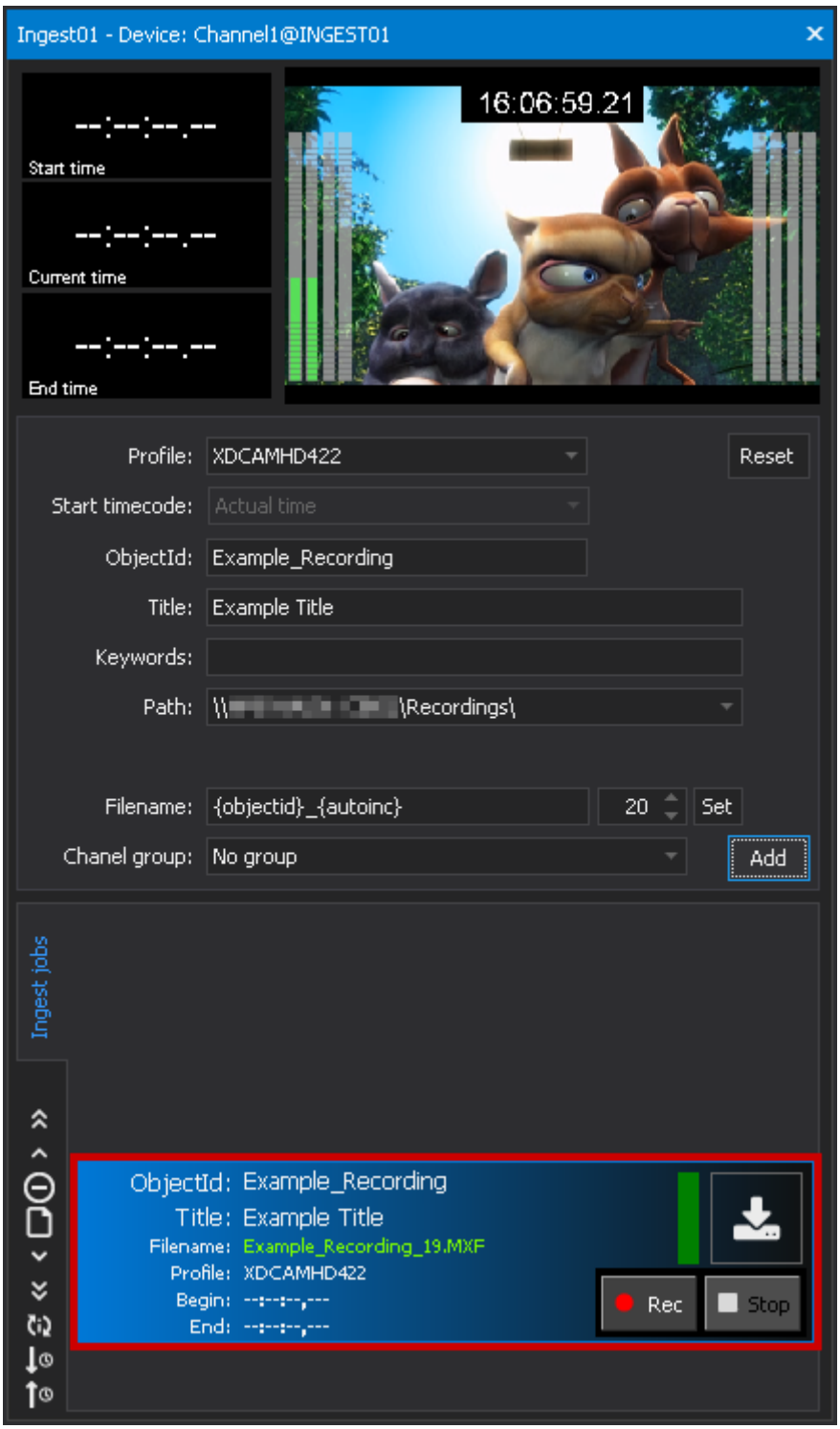


Figure: Ingest job created

5. To start the recording, click 

The recording is started and highlighted in red in the job list.

Figure: Ingest job started

> **Notice**
>
> The corresponding file is listed in the Media overview and highlighted in red, because it is a growing file. Provided it is a supported file and container format (e.g. MXF), you can already play and view the file using the File Preview.

6. To stop the recording, click 

   The recording is stopped.

The recorded file is located in the selected target directory and is listed in the Media overview. You can play and view the file via the File preview.

Creating a crash job via the advanced ingest job settings menu

To create an ingest job for crash recording using the advanced ingest job settings, proceed as follows:

1. Select the window of the ingest channel to be used.
2. To make sure that the desired input signal is present, check the input signal preview of the ingest channel.

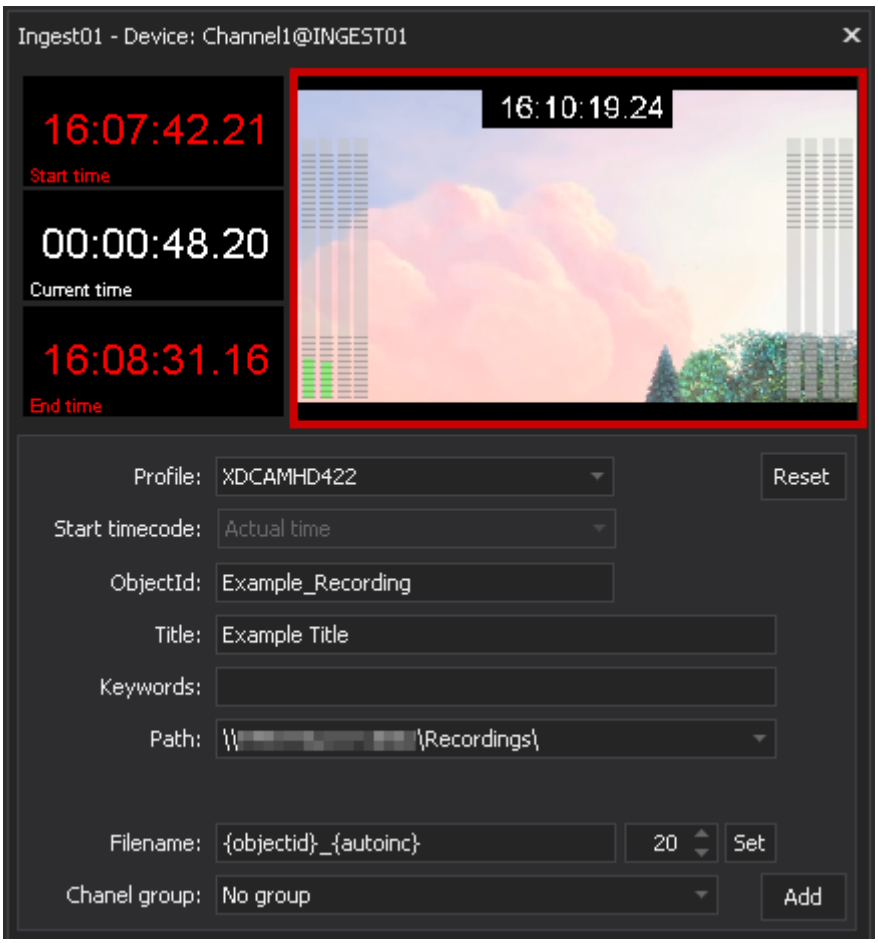


Figure: Ingest channel input signal preview

> **Notice**
>
> If the input signal is not displayed at all or is displayed incorrectly, make sure that the correct signal feed is provided to the Capturebox system.

3. Open the advanced ingest job settings by clicking the **Create new job** icon in the Ingest job list editing toolbar.

   The Ingest job properties window is displayed.

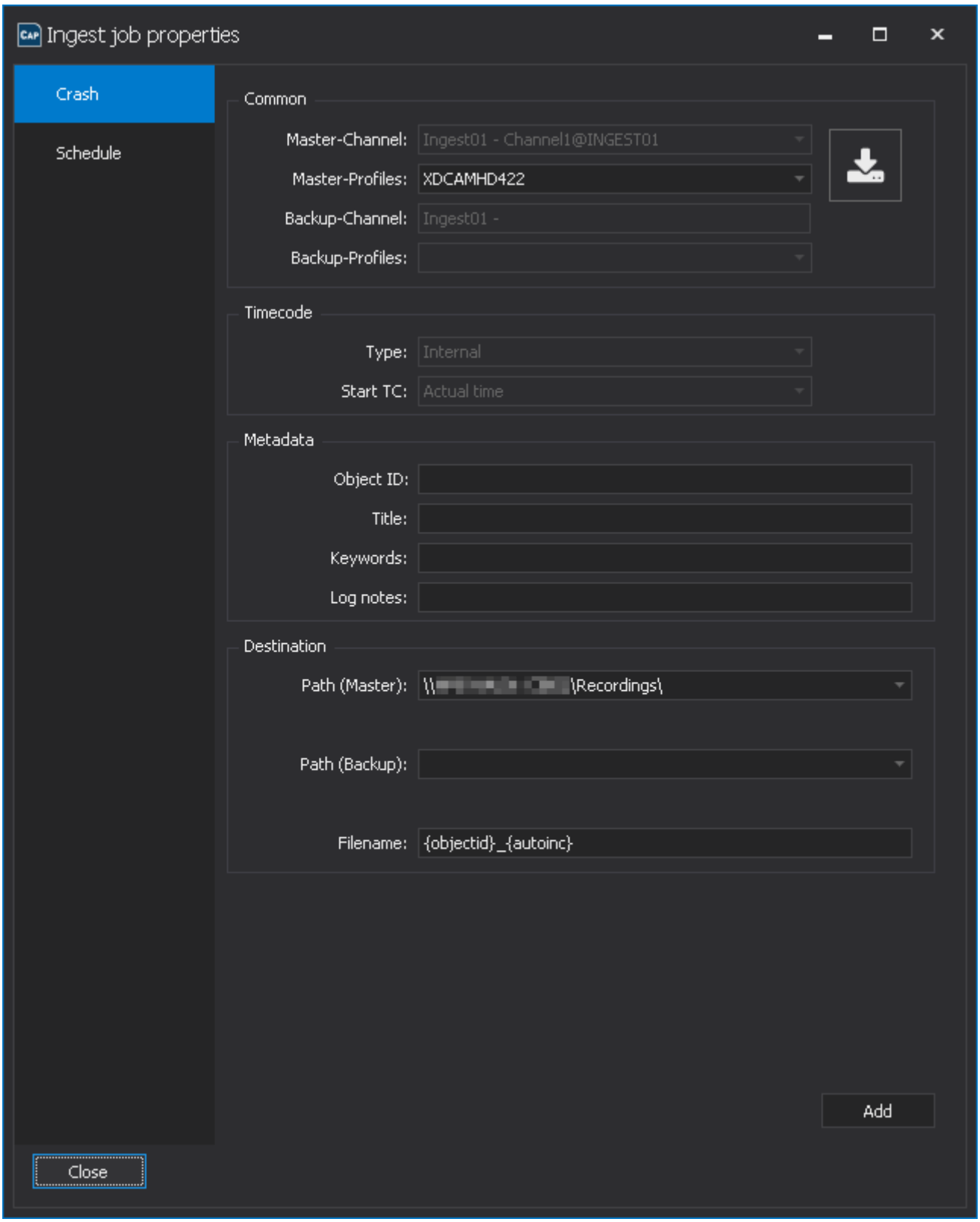


Figure: Ingest job properties window

4. As job type select **Crash**.

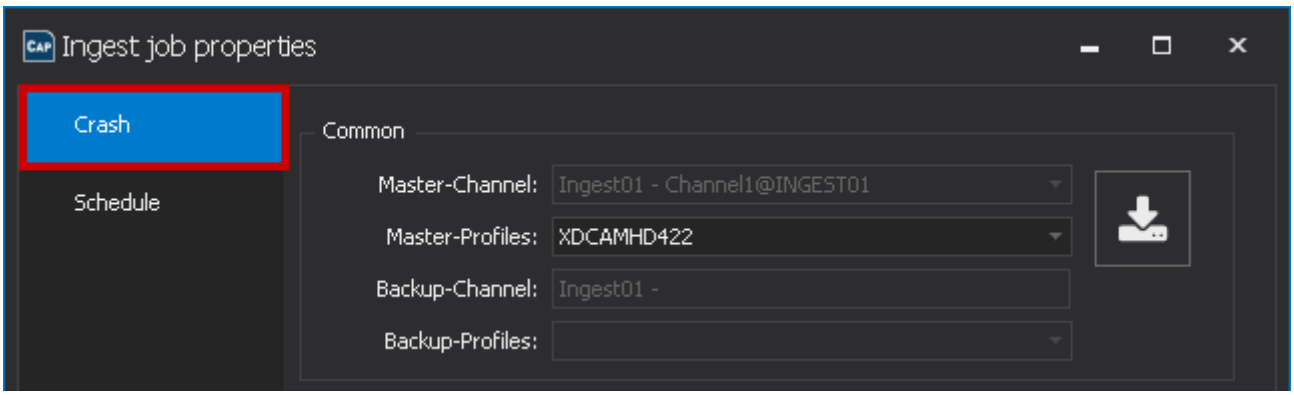


Figure: Select job type

5. (Optional) Enter the metadata to be used:
    a. (Optional) Enter an **Object ID**.

> **Notice**
>
> If you do not enter a value in this field, the default value configured in the Capturebox system settings is used.

    b. (Optional) Enter a **Title**.

> **Notice**
>
> If you do not enter a value in this field, the default value configured in the Capturebox system settings is used.

    c. (Optional) Enter **Keywords**.
    d. (Optional) Enter **Log notes**.
6. Select the **Path** where to store the recorded file.
7. (Optional) Enter a **Filename**.

> **Notice**
>
> This field displays the default value configured in the Capturebox system settings. If you do not want to use this, you can specify the file name manually. Note that you cannot add multiple ingest jobs with identical file names to the job list.
>
> If the filename contains the variable `{autoinc}`, it is usually not necessary to change the filename manually. Automatically incrementing the counter creates a unique filename for each ingest job, preventing existing files from being accidentally overwritten.

8. To create the ingest job, click **Add**.

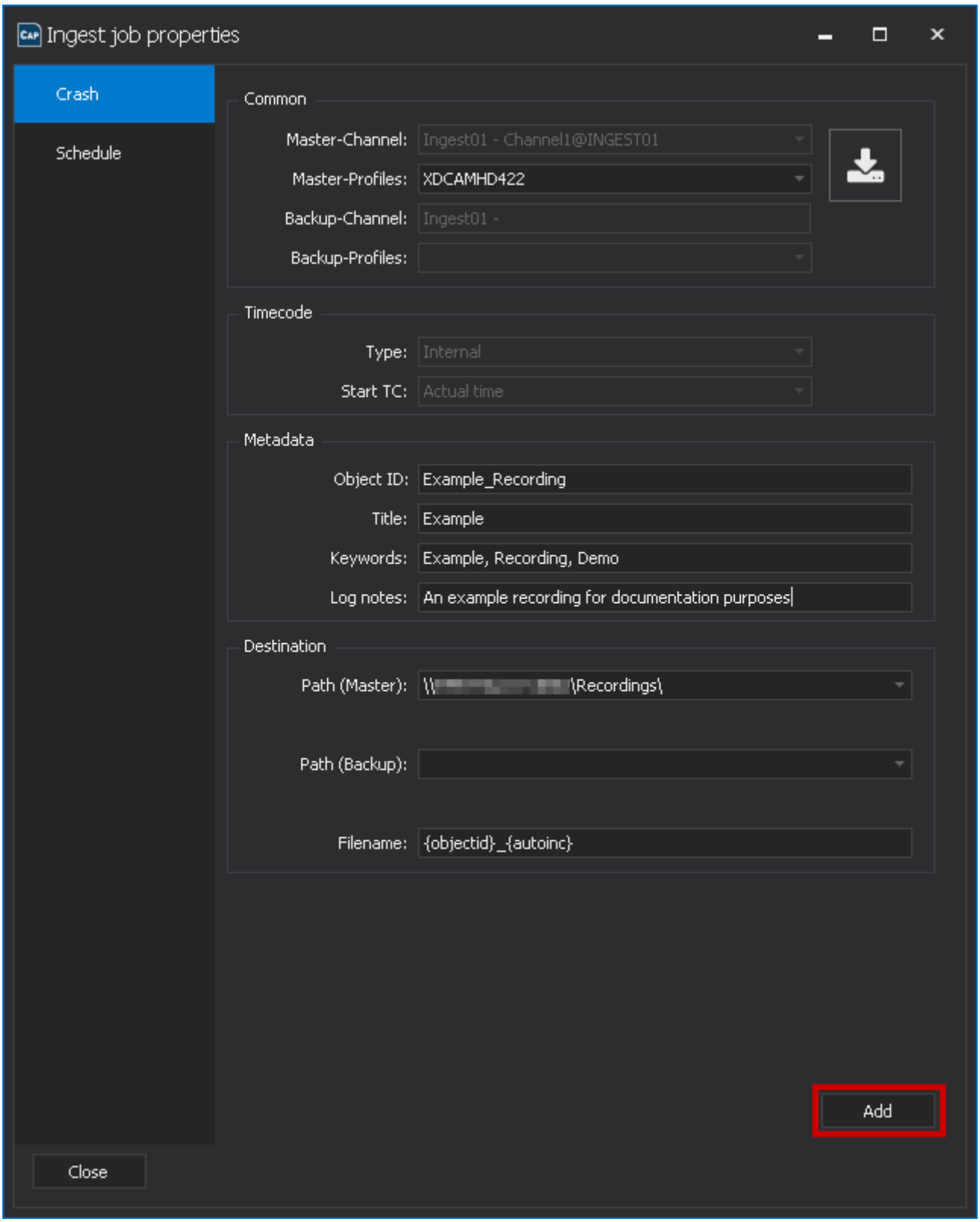


Figure: Add ingest job to job list

The ingest job is created using the previously selected settings, added to the job list, and prepared for recording.

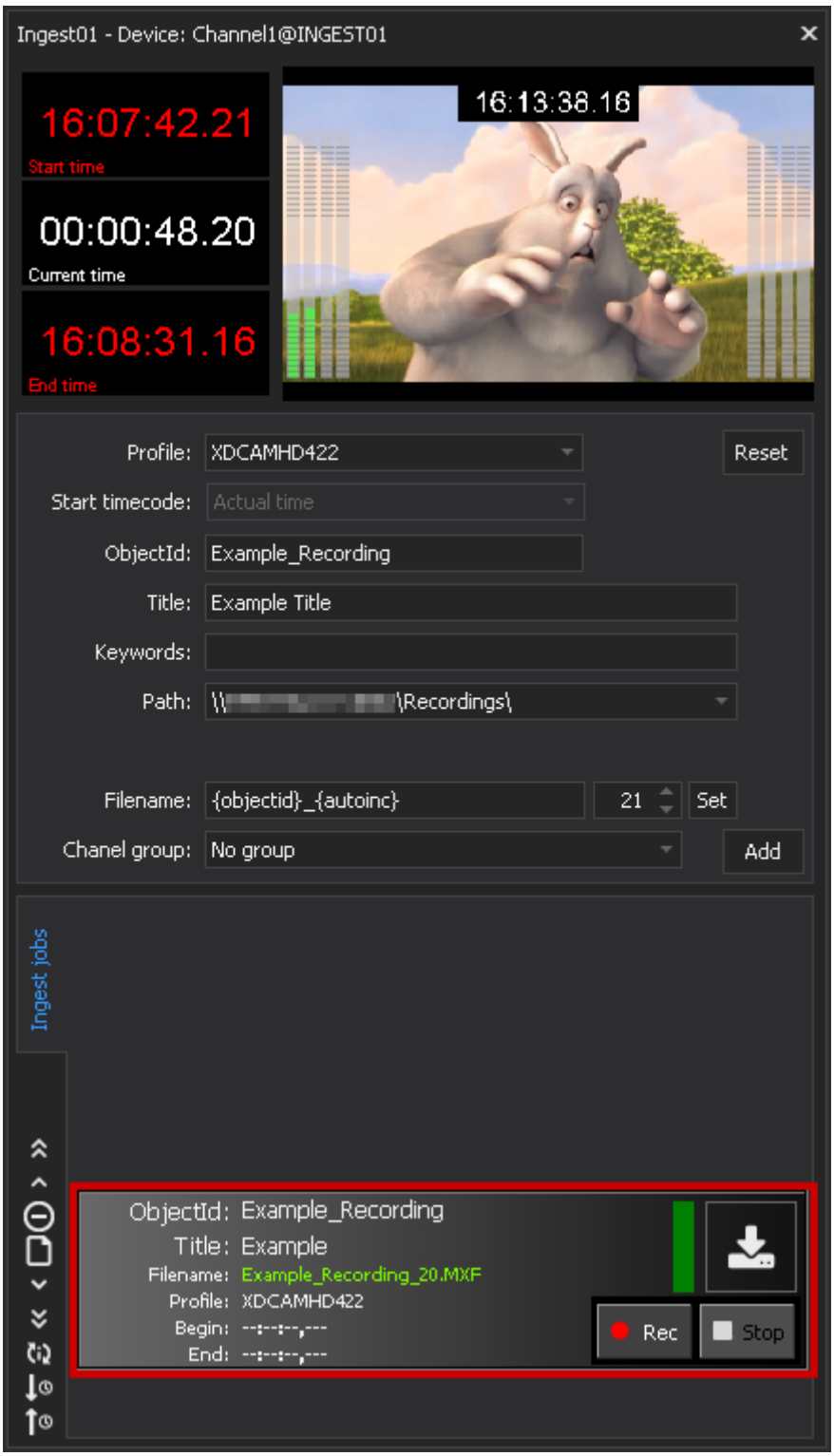


Figure: Ingest job created

9. Close the **Ingest job properties** window by clicking **Close**.
10. To start the recording, click 

.

    The recording is started and highlighted red in the job list.

Figure: Ingest job started

> **Notice**
>
> The corresponding file is listed in the Media overview and highlighted in red, because it is a growing file. Provided that it is a supported file and container format (e.g. MXF), you can already play and preview the file via the File preview.

11. To stop the recording, click 

.

The recording is stopped.

Figure: Ingest job completed

The recorded file is located in the selected target directory and is listed in the Media overview. You can play and preview the file via the File preview.

4.2.2 Scheduled recording

To create an ingest job for scheduled recording, use the advanced ingest job settings menu and proceed as follows:

1. Select the window of the ingest channel to be used.
2. To make sure that the desired input signal is present, check the preview of the ingest channel.

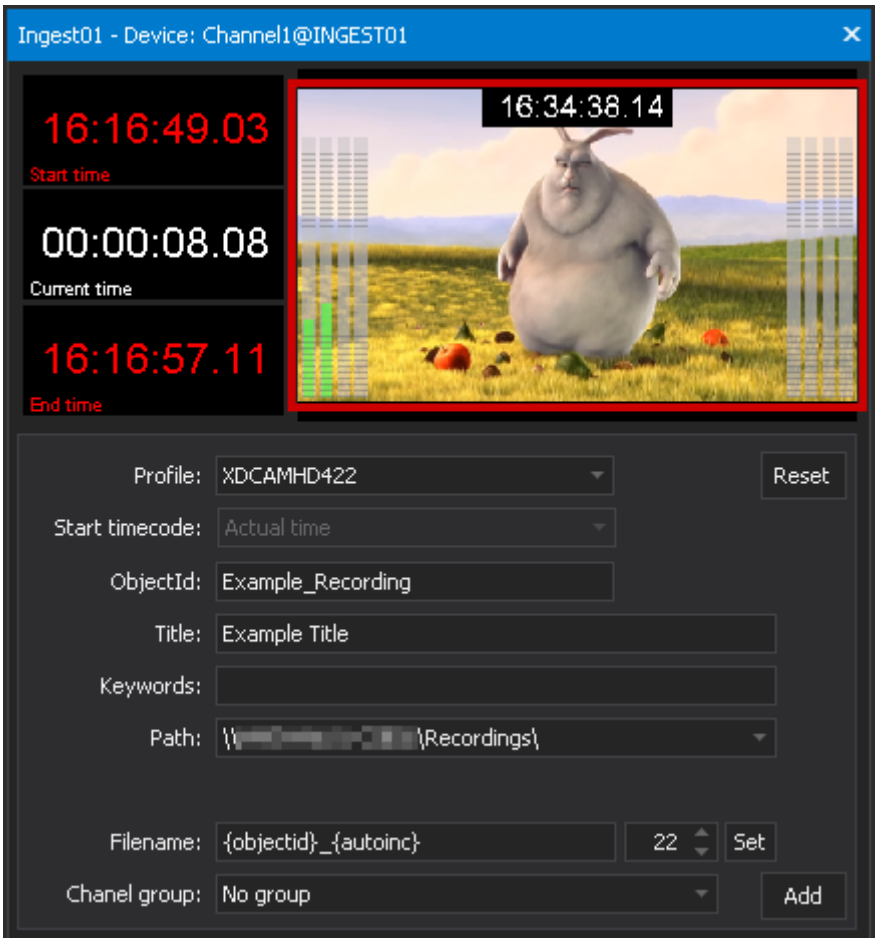


Figure: Ingest channel input signal preview

> **Notice**
>
> If the input signal is not displayed at all or is displayed incorrectly, make sure that the correct signal feed is provided to the Capturebox system.

3. Open the advanced ingest job settings by clicking the **Create new job** icon in the Ingest job list editing toolbar.

   The Ingest job properties window is displayed.

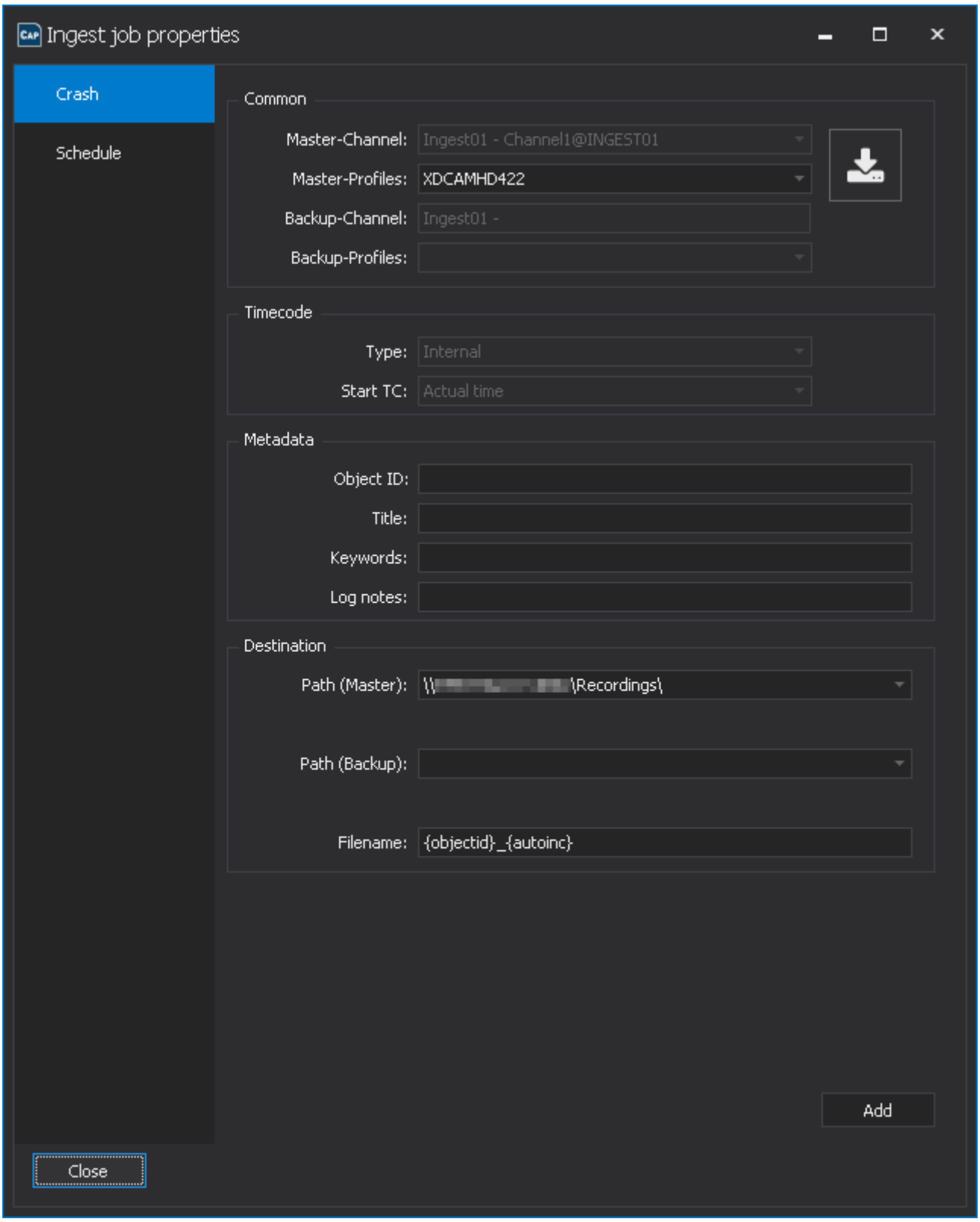


Figure: Ingest job properties window

4. As job type select **Schedule**.

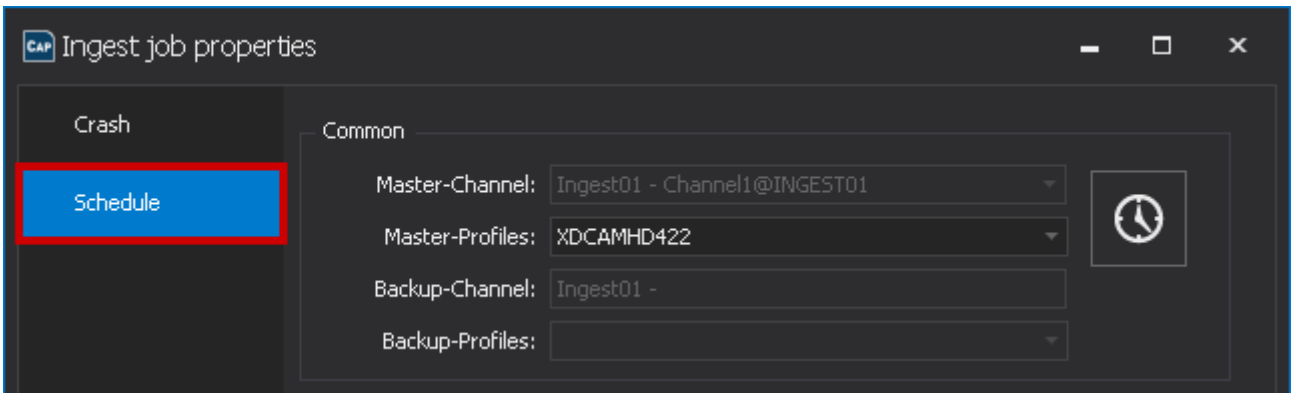


Figure: Select job type

5. (Optional) Enter the metadata to be used:
    a. (Optional) Enter an **Object ID**.

    > **Notice**
    >
    > If you do not enter a value in this field, the default value configured in the Capturebox system settings is used.

    b. (Optional) Enter a **Title**.

    > **Notice**
    >
    > If you do not enter a value in this field, the default value configured in the Capturebox system settings is used.

    c. (Optional) Enter **Keywords**.
    d. (Optional) Enter **Log notes**.
6. Select the **Path** where to store the recorded file.
7. (Optional) Enter a **Filename**.

> **Notice**
>
> This field displays the default value configured in the Capturebox system settings. If you do not want to use this, you can specify the file name manually. Note that you cannot add multiple ingest jobs with identical file names to the job list.
>
> If the filename contains the variable `{autoinc}`, it is usually not necessary to change the filename manually. Automatically incrementing the counter creates a unique filename for each ingest job, preventing existing files from being accidentally overwritten.

8. Select the **Start time** and **End time** to be used.

> **Tip**
>
> As an alternative to entering the end time manually, you can enter the **Duration** of the job to be created in days (left field) as well as hours, minutes and seconds (right field). The values displayed under **End time** will adjust according to your entries.

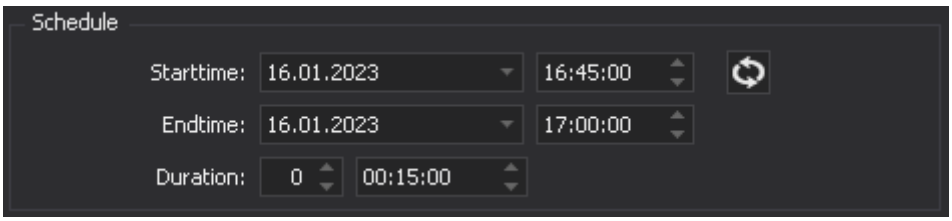


Figure: Ingest job scheduling

9. To create the ingest job, click **Add**.

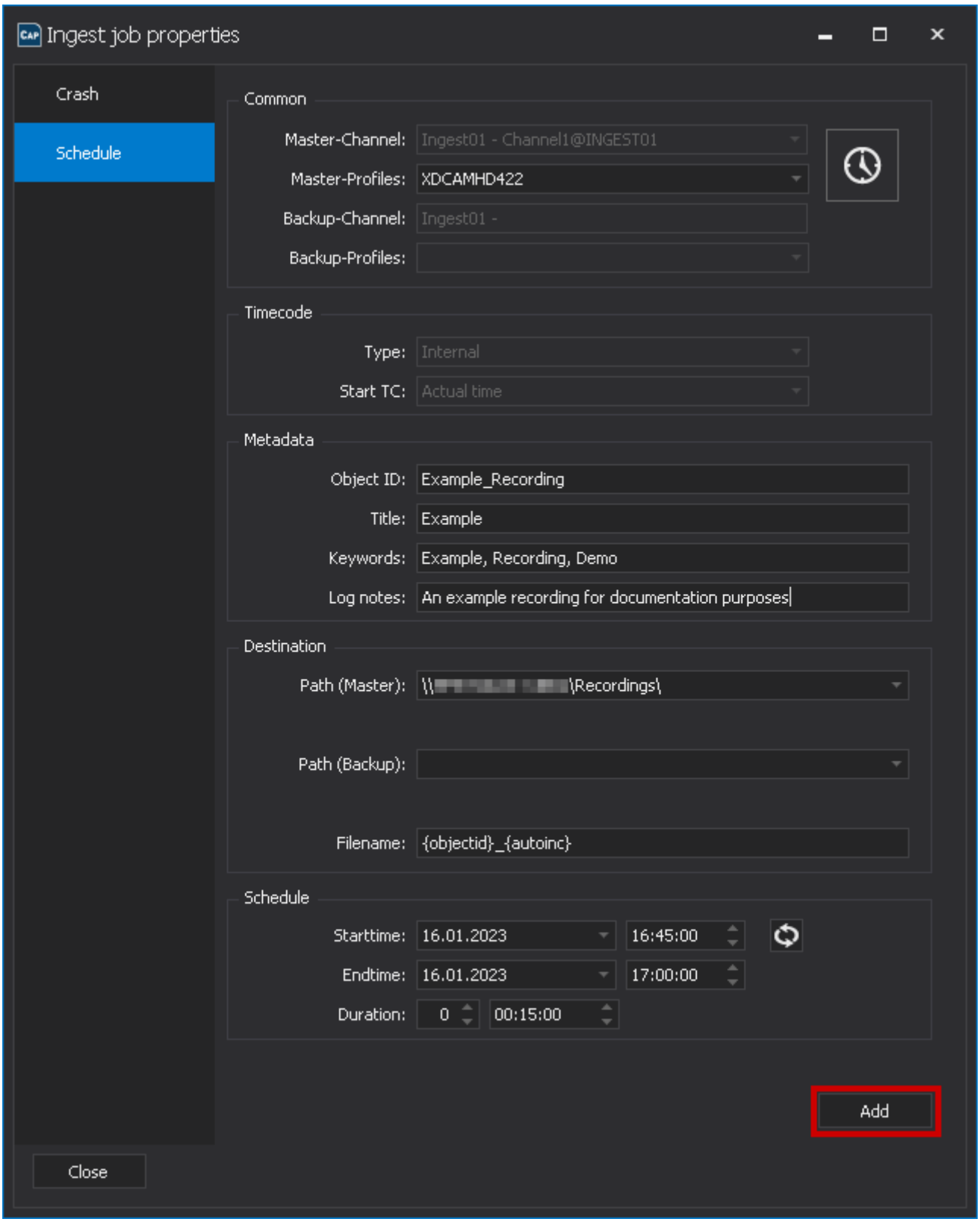


Figure: Add ingest job to job list

The ingest job is created using the previously selected settings, added to the job list, and prepared for recording.

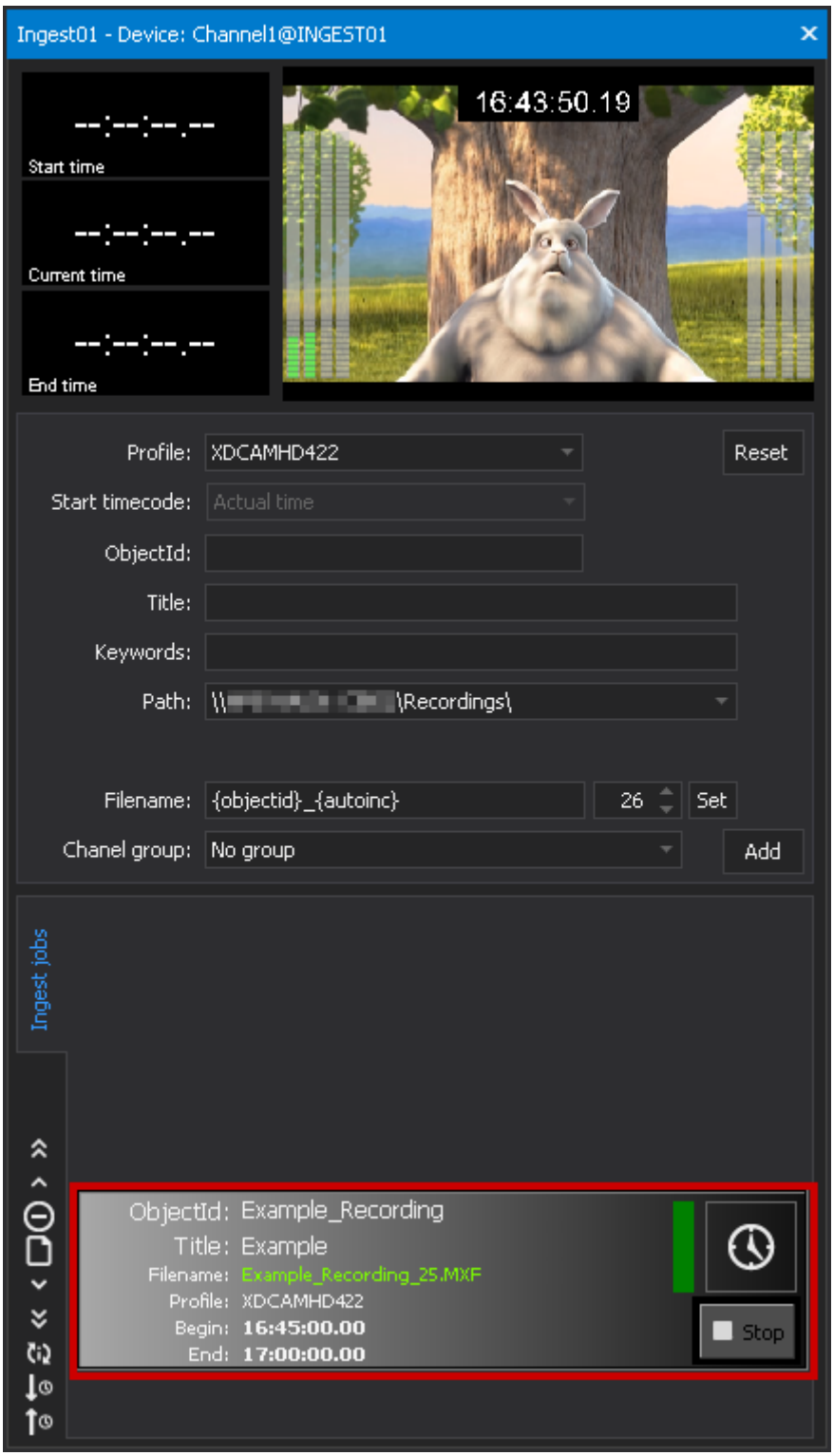


Figure: Ingest job created

10. Close the **Ingest job properties** window by clicking **Close**.
11. The recording starts automatically at the selected start time.

Figure: Ingest job started

Notice

The corresponding file is listed in the Media overview and highlighted in red, because it is a growing file. Provided that it is a supported file and container format (e.g. MXF), you can already play and view the file via the File preview.

Tip

To manually stop the recording before the scheduled end, click 

.

12. The recording stops automatically at the specified end time.

Figure: Ingest job completed

The recorded file is stored in the selected target directory and is listed in the Media overview. You can play and preview the file via the File preview.

4.3 Group recording

4.3.1 General information

Capturebox provides the ability to combine multiple ingest channels into a channel group. Ingest jobs can be created for individual ingest channels as well as for channel groups. This provides the advantage that an ingest job to be executed by multiple ingest channels only needs to be created once, specifying the channel group to be used. This way, a corresponding ingest job is created in all ingest channels assigned to the selected channel group.

Notice

Channel groups can be configured in the Capturebox system settings. An incorrect configuration can lead to system failures. Therefore, the settings should only be changed by trained personnel.

Notice

Group jobs can only be created for crash recordings via the quick menu.

Notice

If a group recording is started in one ingest channel of the group, the associated ingest jobs will be started in all ingest channels of the group.

If a group recording is stopped in one ingest channel of the group, the associated ingest jobs are stopped in all ingest channels of the group.

A typical use case for a group recording is, for example, a multi-camera recording of a live broadcast in a TV studio. Here, multiple cameras are used to record different positions in the studio. For each camera signal, a separate ingest channel can be configured in Capturebox. All ingest channels can be assigned to a channel group. To record all camera signals simultaneously, only a single ingest job needs to be created for the channel group.

4.3.2 Create ingest job as group recording

In the following example, two ingest channels ("Ingest01" and "Ingest02") are configured in Capturebox and assigned to the "CAM TOTALE" channel group. To create an ingest job for this channel group, the quick menu of the first ingest channel is used as an example. No manual entries are required for the second ingest channel.

To create an ingest job as a group recording, proceed as follows:

1. Select the window of one of the ingest channels of the channel group to be used.
2. To ensure that the desired input signals are present, check the video displays of all ingest channels in the channel group.

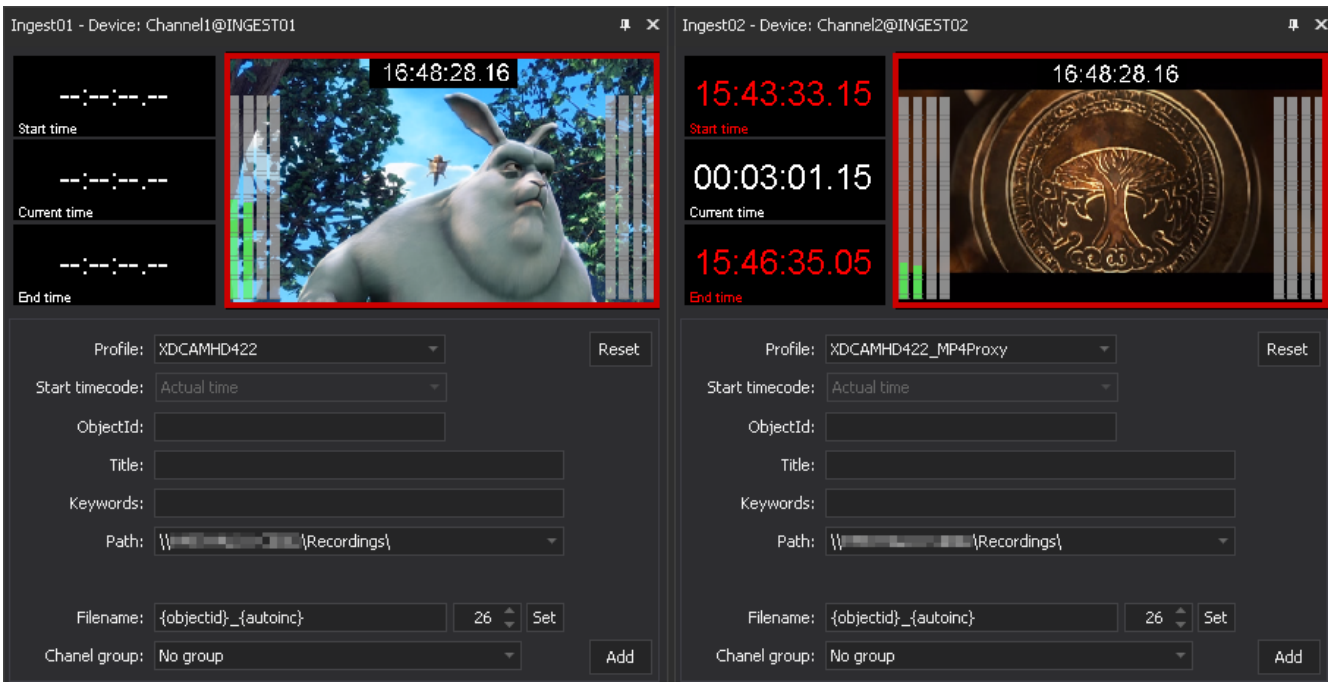


Figure: Ingest channel group input signal previews

> **Notice**
>
> If the input signal is not displayed at all or is displayed incorrectly, make sure that the correct signal feed is provided to the Capturebox system.

3. In one of the ingest channels of the channel group, select the settings to be used via the quick menu for ingest job settings:

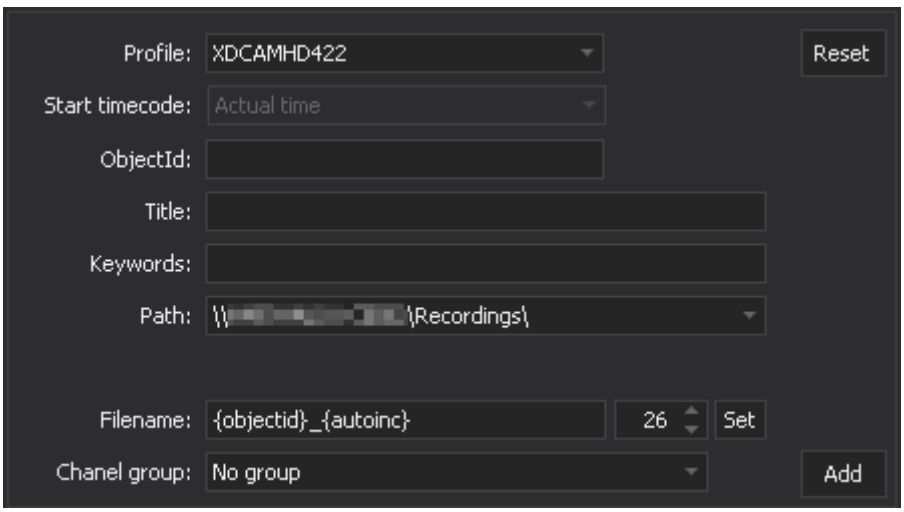


Figure: Quick menu for ingest job settings

   a. As **Profile** select the recording profile to be used.

   b. (Optional) Enter an **ObjectId**.

> **Notice**
>
> If you do not enter a value in this field, the default value configured in the Capturebox system settings is used.

c. (Optional) Enter a **Title**.

> **Notice**
>
> If you do not enter a value in this field, the default value configured in the Capturebox system settings will be used.

d. (Optional) Enter **Keywords**.

e. Select the **Path** where to store the recorded file.

f. (Optional) Enter a **Filename**.

> **Notice**
>
> This field displays the default value configured in the Capturebox system settings. If you do not want to use this, you can specify the file name manually. Note that you cannot add multiple ingest jobs with identical file names to the job list.
>
> If the filename contains the variable `{autoinc}`, it is usually not necessary to change the filename manually. Automatically incrementing the counter creates a unique filename for each ingest job, preventing existing files from being accidentally overwritten.

g. (Optional) To adjust the default job settings of the other ingest channels in the channel group, repeat steps a to f for the corresponding ingest channels.

h. Select the **Channel group** to be used.

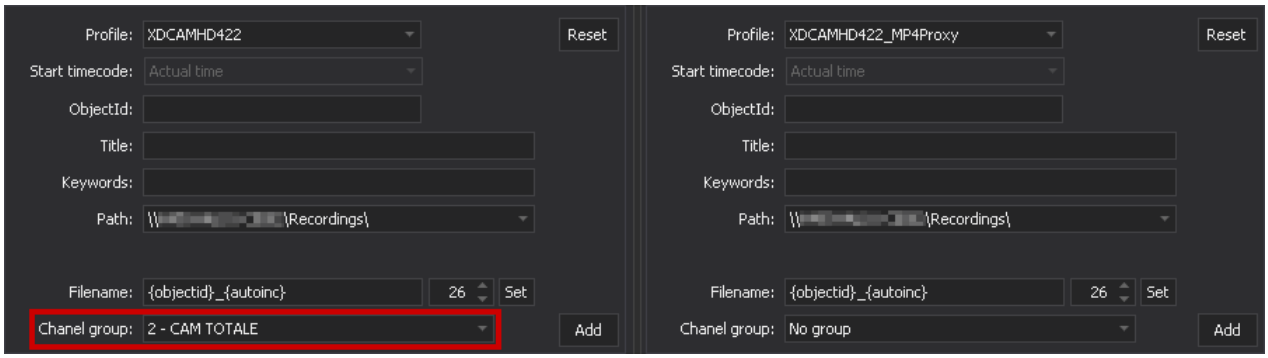


Figure: Channel group selected

> **Tip**
>
> To reset your entries and restore the default values, click **Reset**.

4. To create the ingest job, click **Add**.

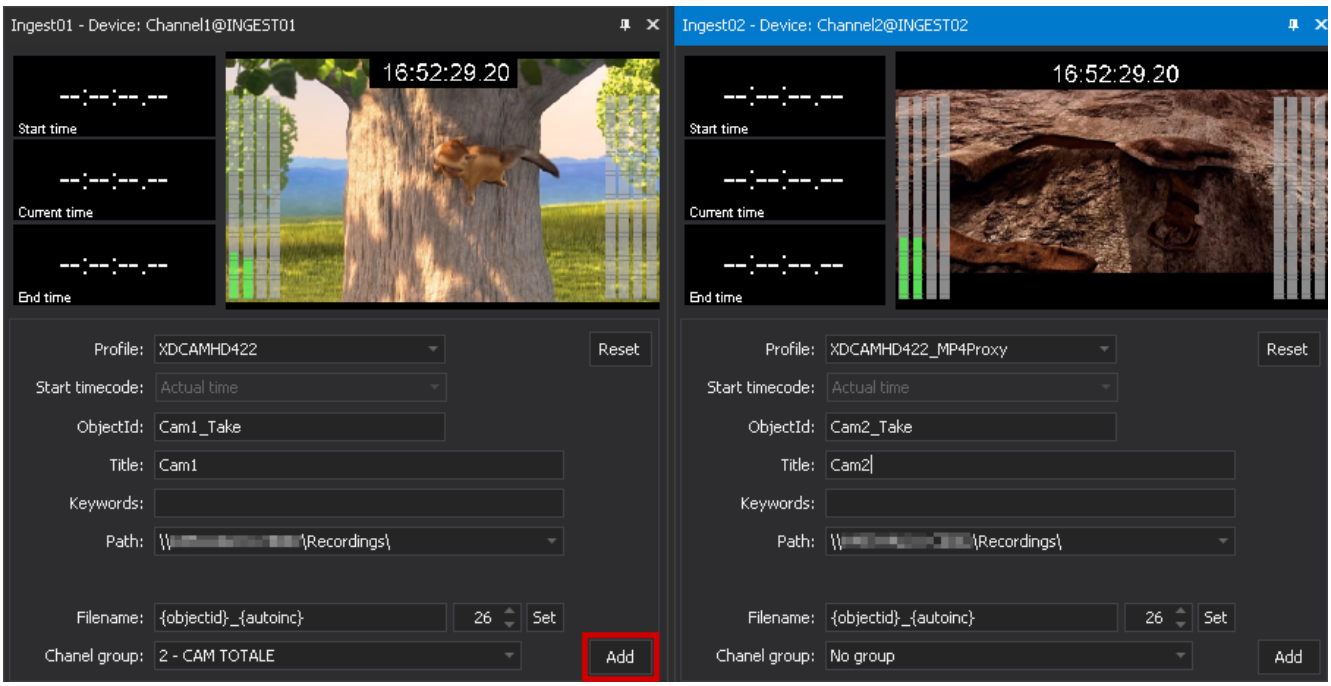


Figure: Add ingest job to job list

The ingest job is created using the previously selected settings, added to the job lists of all ingest channels in the selected channel group, and prepared for recording.

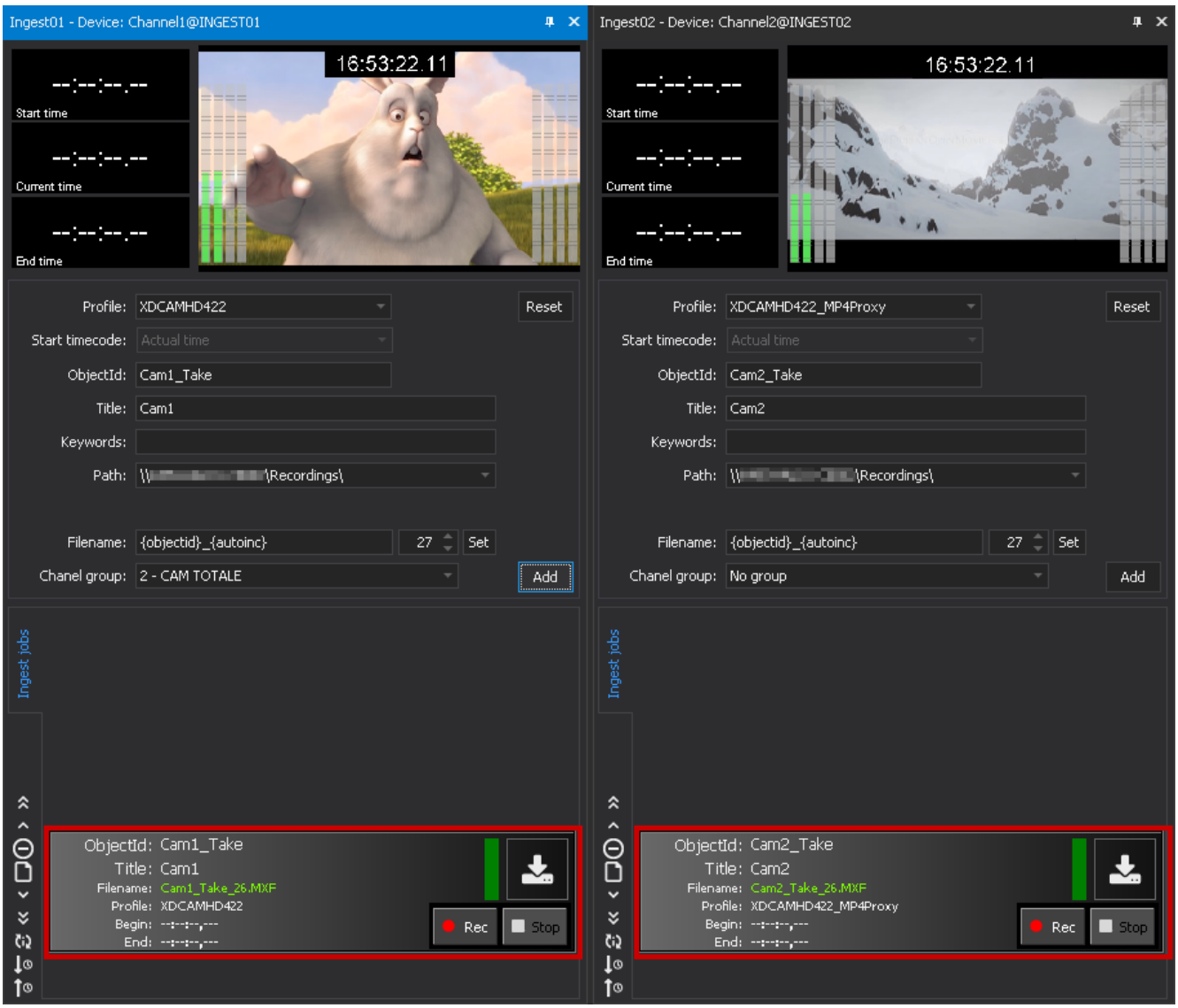


Figure: Created ingest jobs

5. To start the recording, click 

in one of the corresponding ingest channel windows.

   The recording is started in all ingest channels of the channel group and highlighted in red in the job lists.

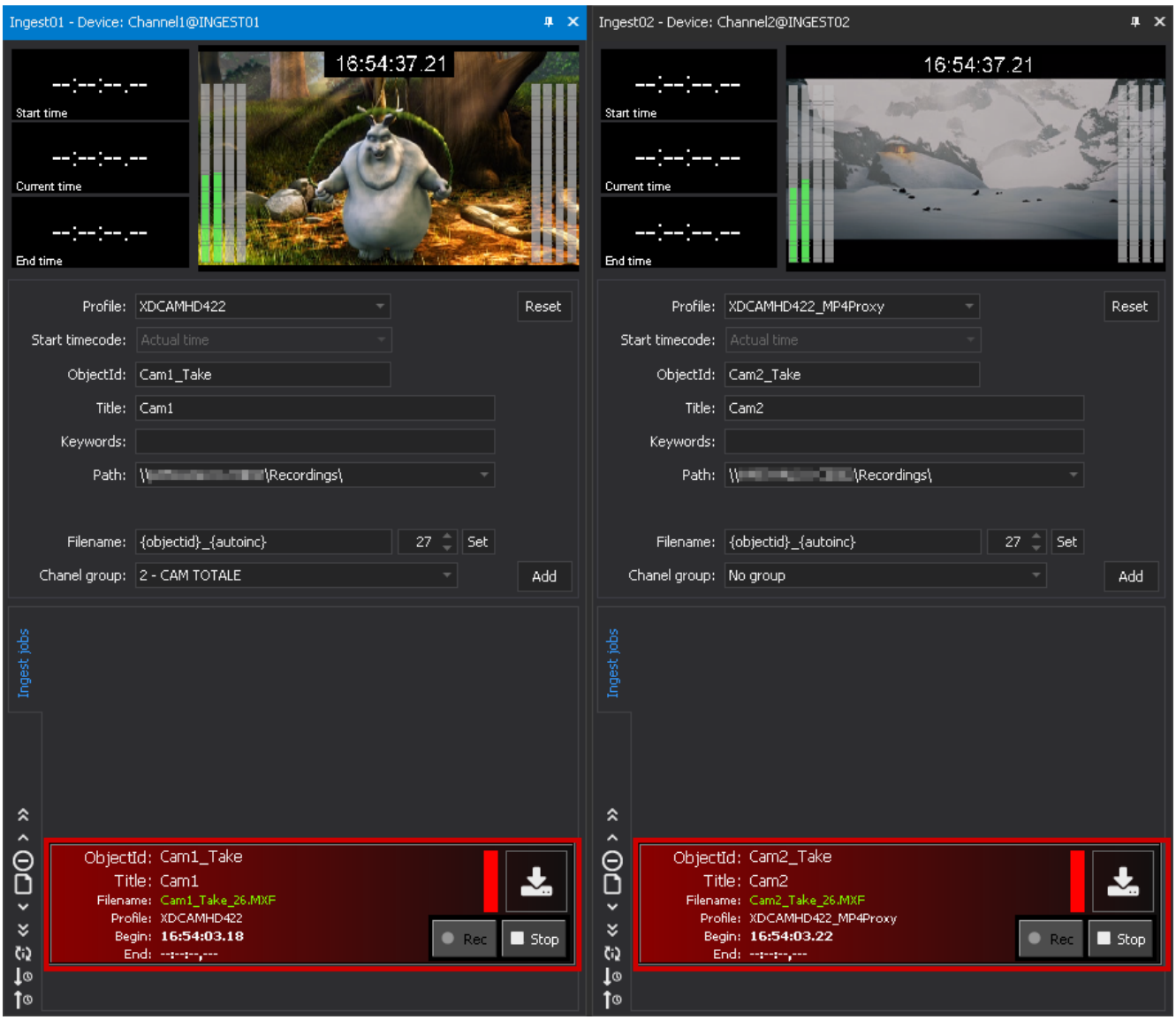


Figure: Started ingest jobs

> **Notice**
>
> The corresponding files are listed in the Media overview and highlighted in red, because they are growing files. Provided that they are supported file and container formats (e.g. MXF), you can already play and preview the files via the File preview.

6. To stop the recording, click 

in one of the corresponding ingest channel windows.

   The recording is stopped in all ingest channels of the channel group.

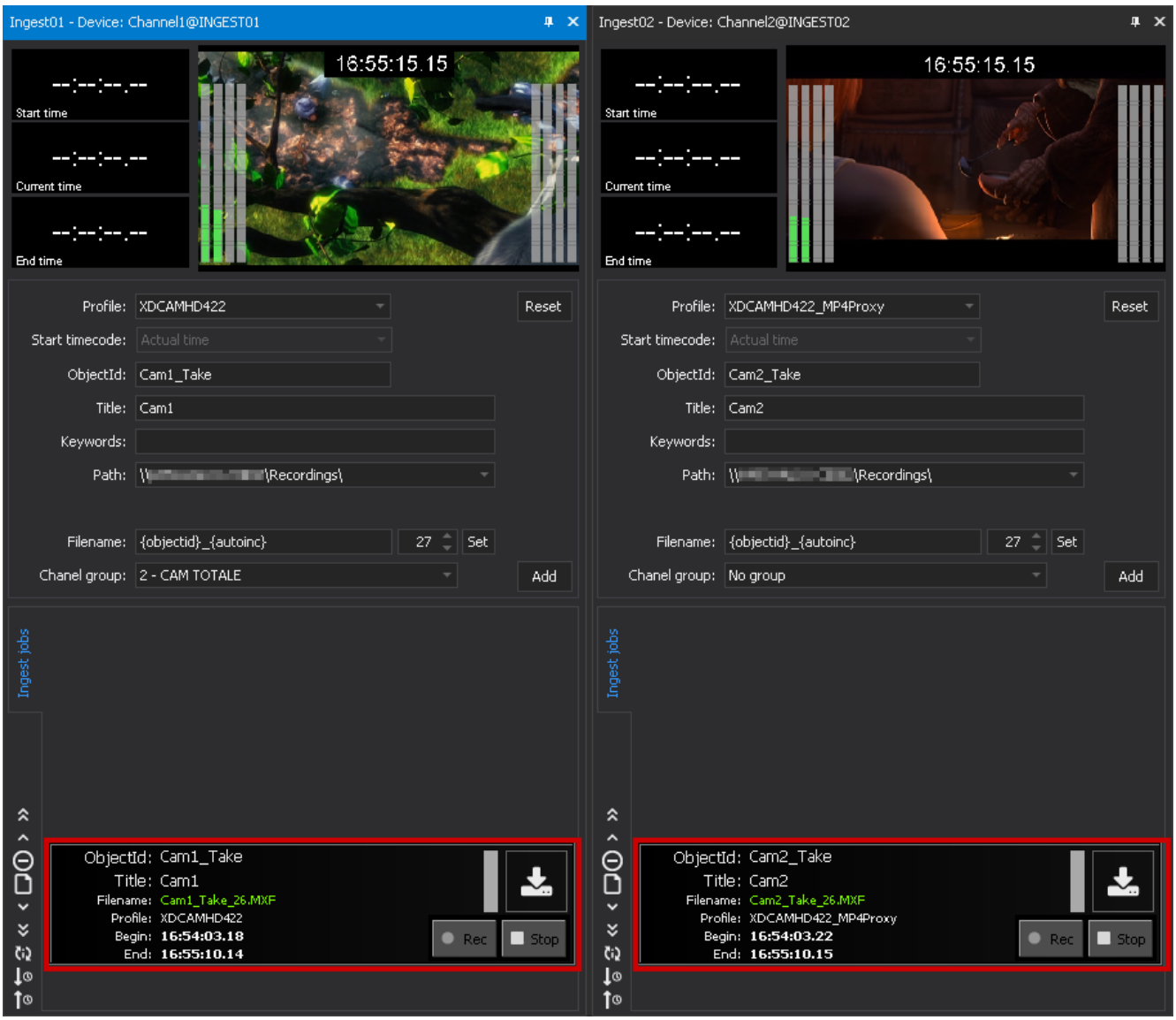


Figure: Completed ingest jobs

The recorded files are stored in the selected target directory and are listed in the Media overview. You can play and preview the files via the File preview.

5. Keyboard shortcuts

The following table contains all standard keyboard shortcuts supported by Capturebox and their functions.

Area / Window	Key / Key combination	Function
Media overview	Ctrl + F	Open search panel
File preview	Ctrl + I	Jump to mark in
	I	Set mark in
	Arrow left	Previous frame
	Shift + Esc	Stop
	Space	Play/Pause
	Arrow right	Next frame
	O	Set mark out
	Ctrl + O	Jump to mark out
	Shift + Enter	Save mark in and mark out points *(no function)*