Mirasys Spotter Guide V9.7 (English)

Table of Contents

1 Introduction

Mirasys Spotter is a modern, easy-to-use application for viewing live and recorded video and exporting video clips.

Mirasys Spotter can be used to create multi-monitor configurations with multiple independently operating device tabs and windows.

A spotter can also be used to connect to multiple different VMS Servers simultaneously.
Spotter supports camera tours, alarms, audio, I/O feeds, text channels, the opening of video archives and clips, as well as layouts for storing and accessing desired configurations.

A spotter is expandable with various plug-ins like Mirasys Video Wall (MVW) video matrix option (add-on). This feature's availability depends on the VMS type you have purchased (Base, Pro or Enterprise).

2 Installing Spotter

A Spotter is installed with other applications when the standard VMS installer is used.

If a user wants to install only the Spotter client, he can use the dedicated Spotter-only installer.

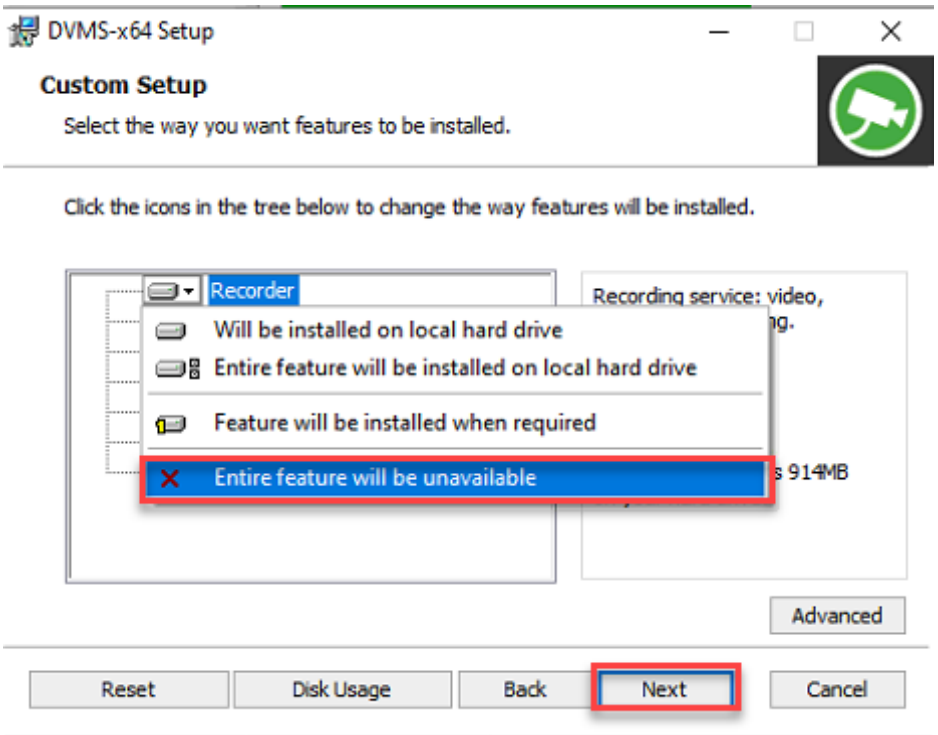
A spotter is also available as a standalone executable file (SpotterPlayer.exe), which does not require installation.

This version of Spotter can be used to review video clips, Storyboard clips and video archives.

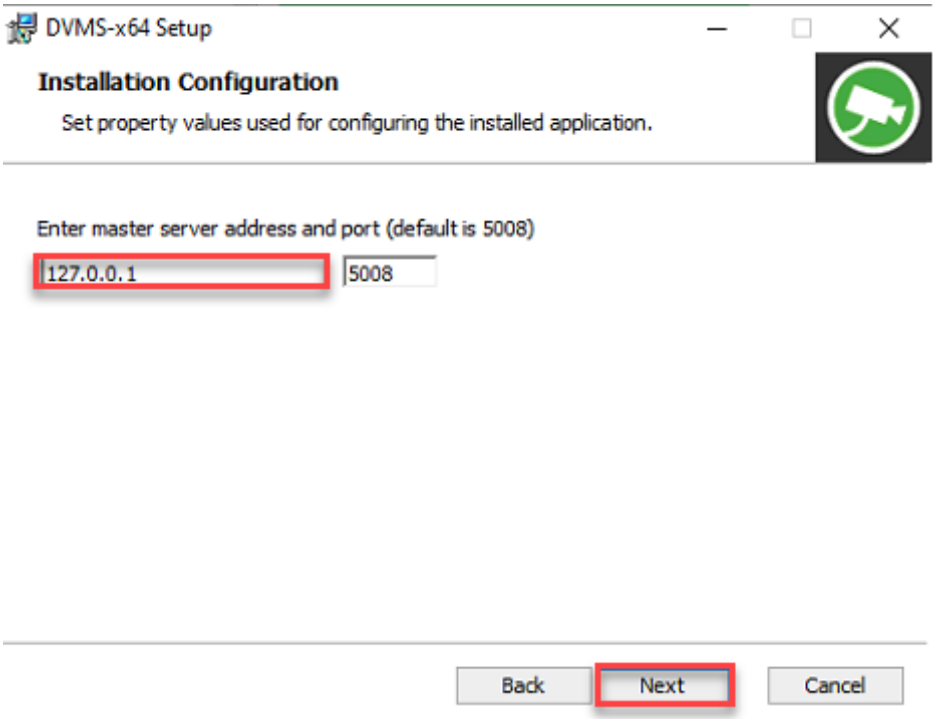
2.1 Installing Spotter With VMS Installer package

The spotter can also be installed as part of the standard VMS installation package.

1. Start the installation by clicking Complete installation package
2. Click **Install**
3. Click **Next**
4. Use the default destination folder and click **Next**
5. Set **Recorder** component to **Entire feature will be unavailable**
6. Click **Next**



7. Enter the master server address and click **Next**

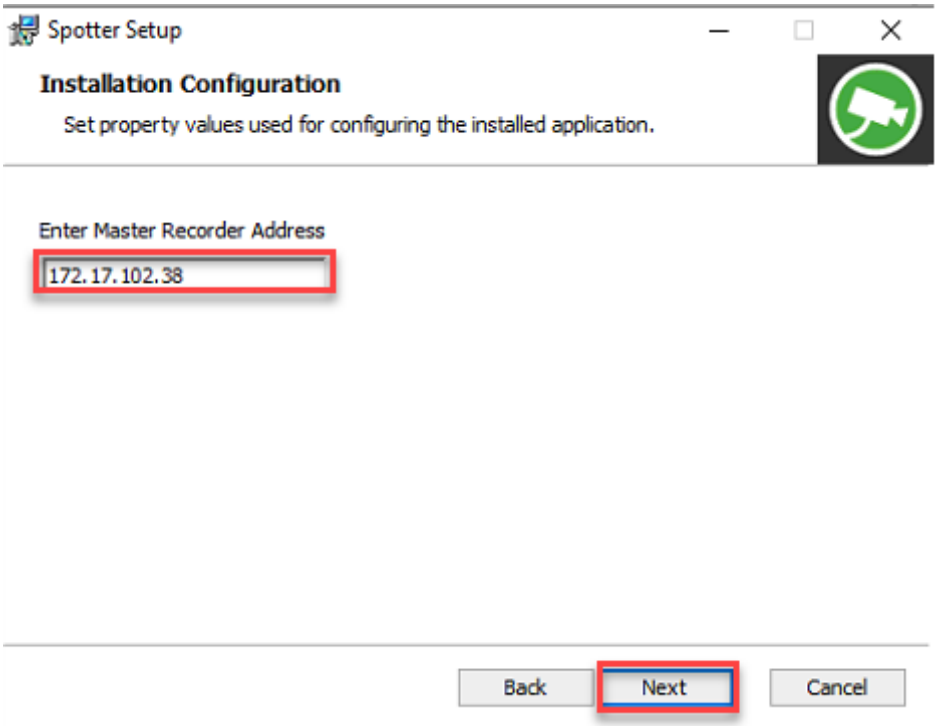


8. Click **Install**
9. Click **Finish**
10. Click **Close** to finalize the installation

2.2 Installing Spotter With Spotter-Only Installer

The Spotter-only installer installs only the Spotter application.

1. Click **Install**
2. Click **Next**
3. Use the default destination folder and click **Next**
4. Enter the master server address and click **Next**

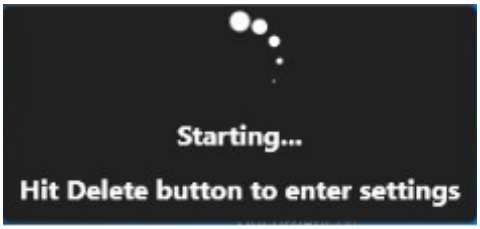


5. Click **Install**
6. Click **Finish**
7. Click **Close** to finalize the installation

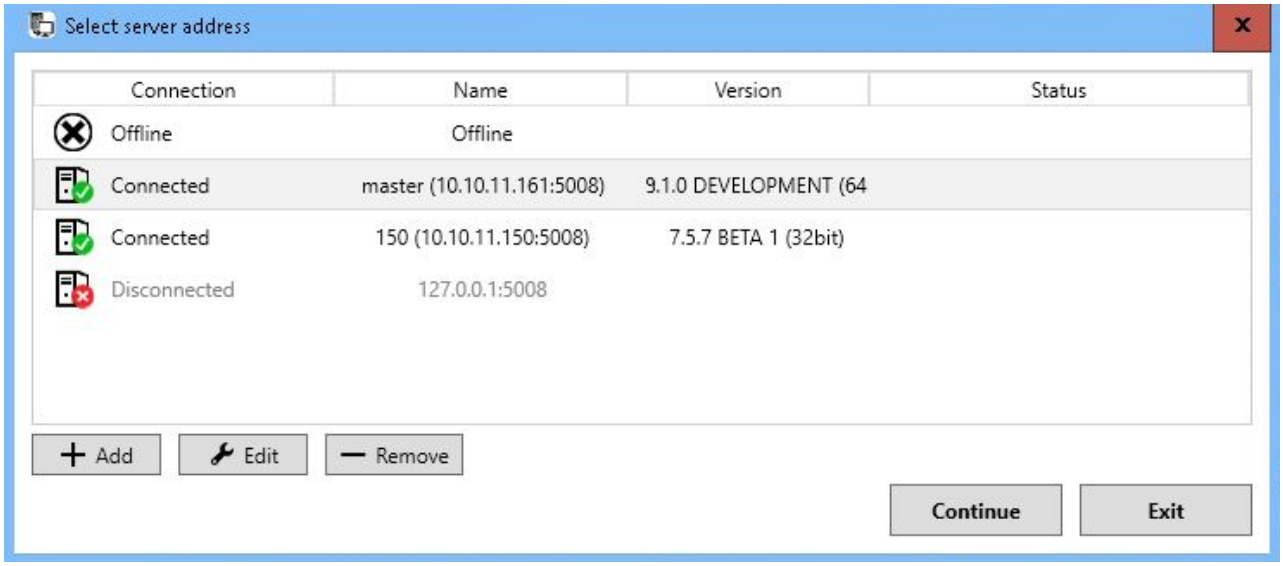
3 Starting Spotter and Logging In

A Spotter is started by double-clicking the Spotter icon on the desktop is also possible to start Spotter automatically when the computer boots up. See more from Installing Spotter With VMS Installer package (see page 17)

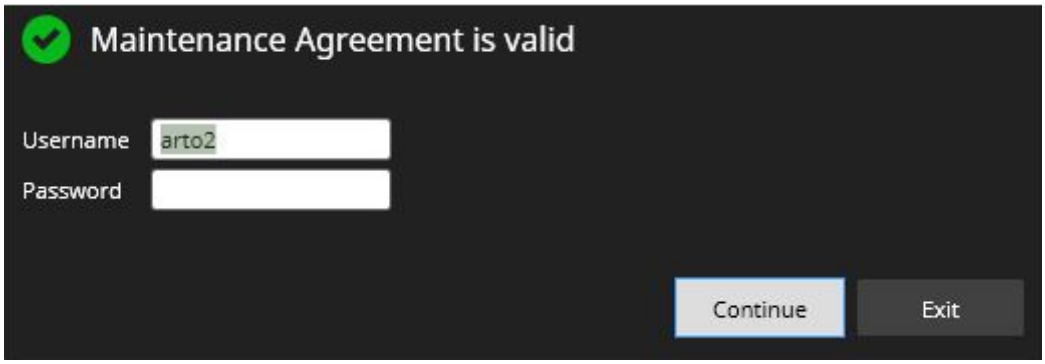
It is possible to create shortcuts that control to which Master Server Spotter connects. The application launcher dialogue for site selection can be accessed by pressing the "Delete" button on the initial dialogue when the spotter is launched as administrator.



The site selection list contains the list of all the master servers that have been configured. More servers can be added, or the details of existing servers can be edited with the add and edit options. Users can choose a server and press "**Continue**" to log in to that server.



The system will log in to the last server if the site selection screen is not accessed during Spotter's startup. It is possible to log in to different versions and servers that are 32-bit or 64-bit versions. The settings and other site-specific information and resources for different servers are stored separately. After choosing a server and continuing, the login screen is shown (unless the user has selected automatic login for this server).



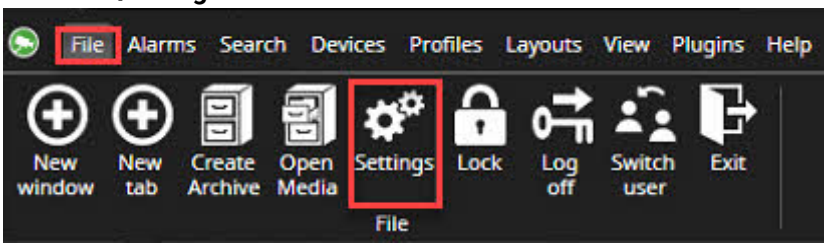
The user can enter his/her username and password here and then "Continue" to log in. It is possible to have multiple Spotter windows logged in to different servers simultaneously. After logging in to one server, the user can re-start Spotter from the desktop icon, enter the site selection dialogue and select another site. All site-specific operations such as layout saving only affect the Spotter settings to which the user is logged.

3.1 Postpone Spotter restart

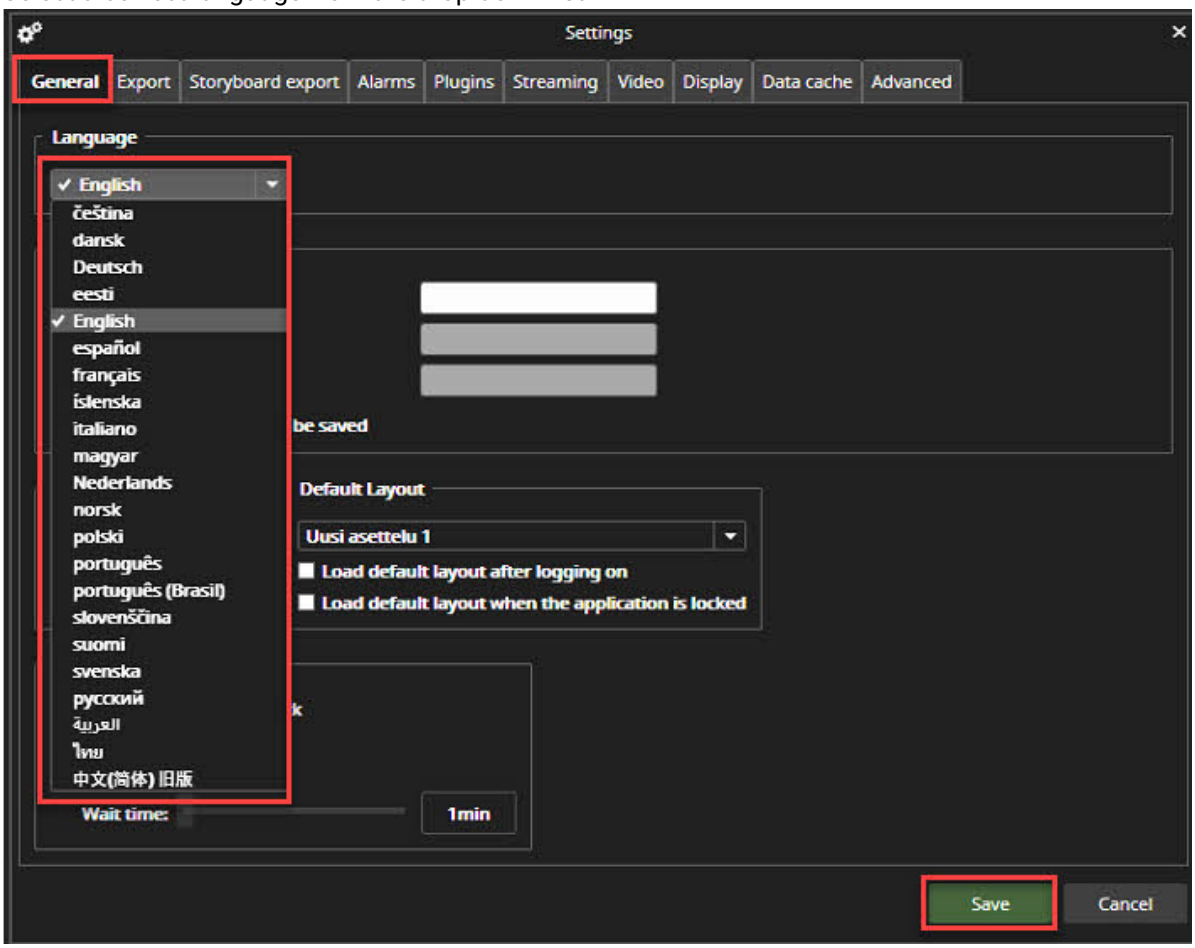
When the system is updated, and there comes an event that the client needs to be restarted, if postpone Spotter restart is set on Spotter user roles, then the client restart is postponed. Postponing time is defined in the Spotter user role. Postpone time and the possibility to trigger Spotter restart are shown in Spotter UI.

4 Changing the Spotter language

1. Click **File\Settings**



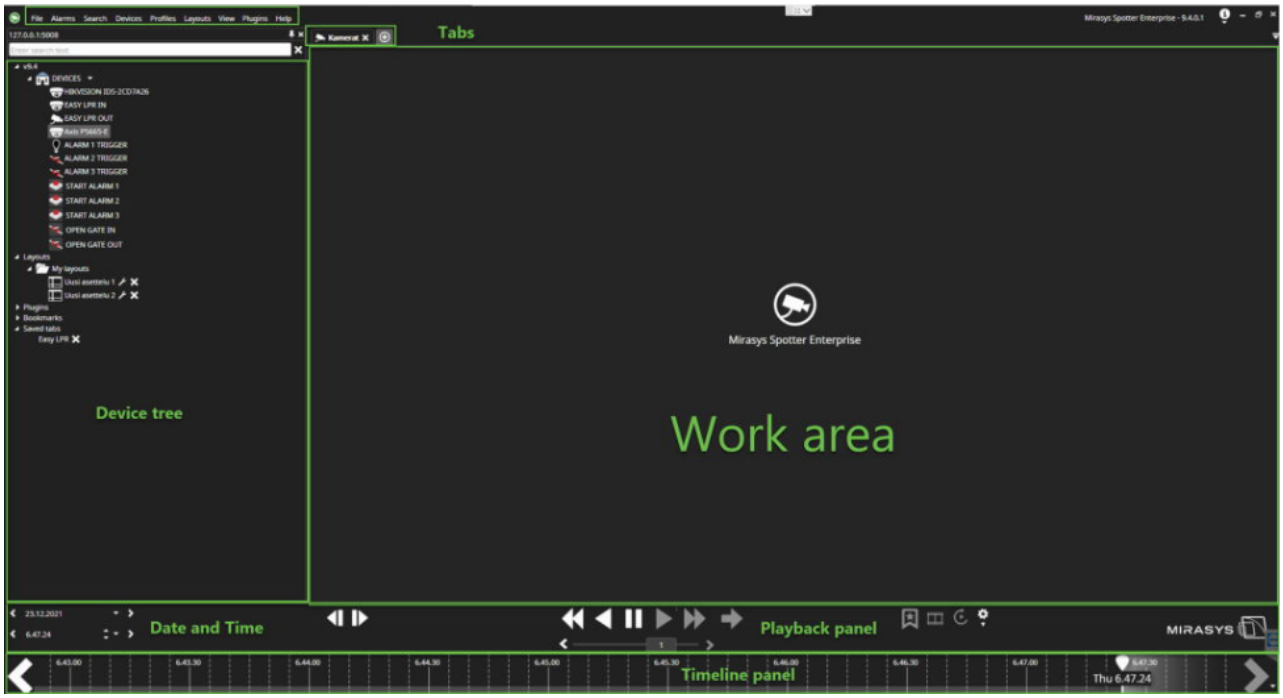
2. Select a correct language from the drop-down list



3. Click **Save**

5 Spotter UI

Here you can see an overview of the different Spotter user interface components.



5.1 Spotter Title Menu

5.1.1 File

5.1.1.1 Various functions can be accessed from the File menu.

5.1.1.1.1 New Window

New Windows opens independent Spotter Window, which can be dragged for example to another monitor.

5.1.1.1.2 New tab

A new tab creat a new device tab in the work area.

5.1.1.1.3 Create Archive

See more from Create Archive (see page 88)

5.1.1.1.4 Open Media

The opening created archive or media clip

5.1.1.1.5 Settings

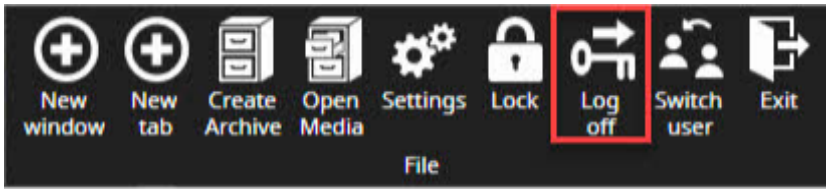
See more from Settings (see page 221)

5.1.1.1.6 Lock

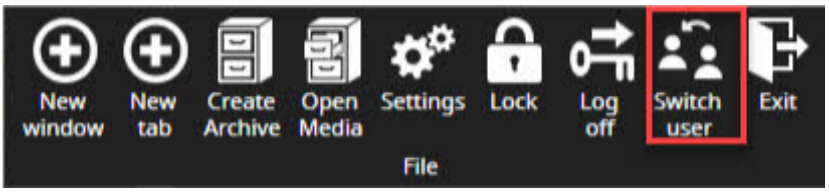
The user can manually lock and log off Spotter from the File menu.

5.1.1.1.7 Log off

Using Log off, users can end the Spotter session and go back to the login screen.



5.1.1.1.8 Switch user

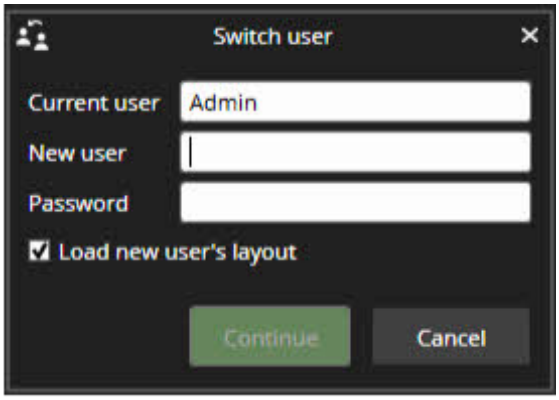


Switch user option allows change logged users without logoff.

When the **Switch user** is selected, the current user is shown.

1. Enter a new username and password
2. Click **Continue**

As default new user´s layout is loaded



5.1.1.1.9 Exit

- With the Exit, the user can close the Spotter application

5.1.1.2 Alarms

See more from Alarm Management (see page 131)

5.1.1.3 Search

See more from Search Tools (see page 94)

5.1.1.4 Devices

5.1.1.4.1 Input devices

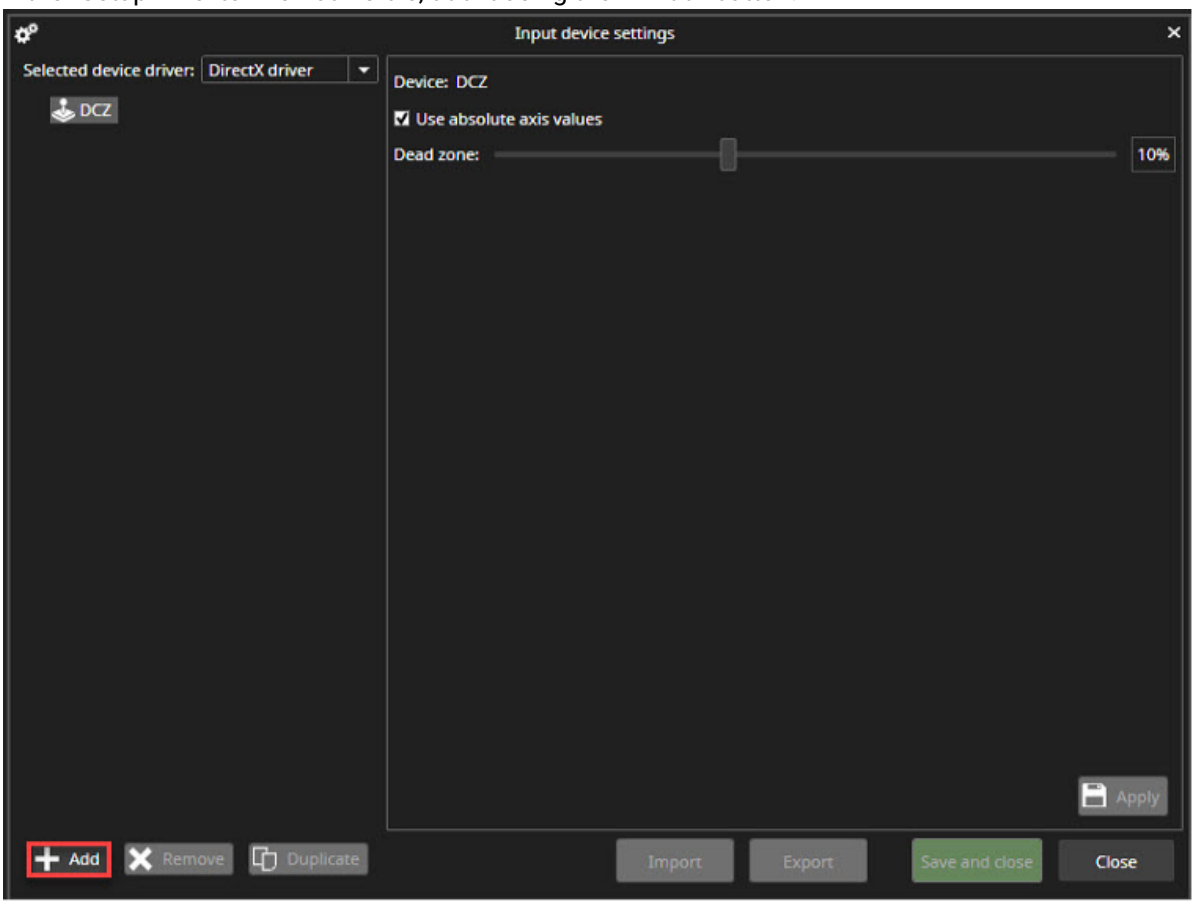
You can use any DirectX compatible joystick as a control device.
A joystick can be fully configured, and each button can be assigned a customizable function.
Before a joystick can be taken into use, it needs to be configured, first in Windows, then in Spotter.
To calibrate a joystick in Windows, open the Control Panel and find “Set up USB game controllers” under “Devices and printers”.

Follow the instructions on calibrating the joystick.

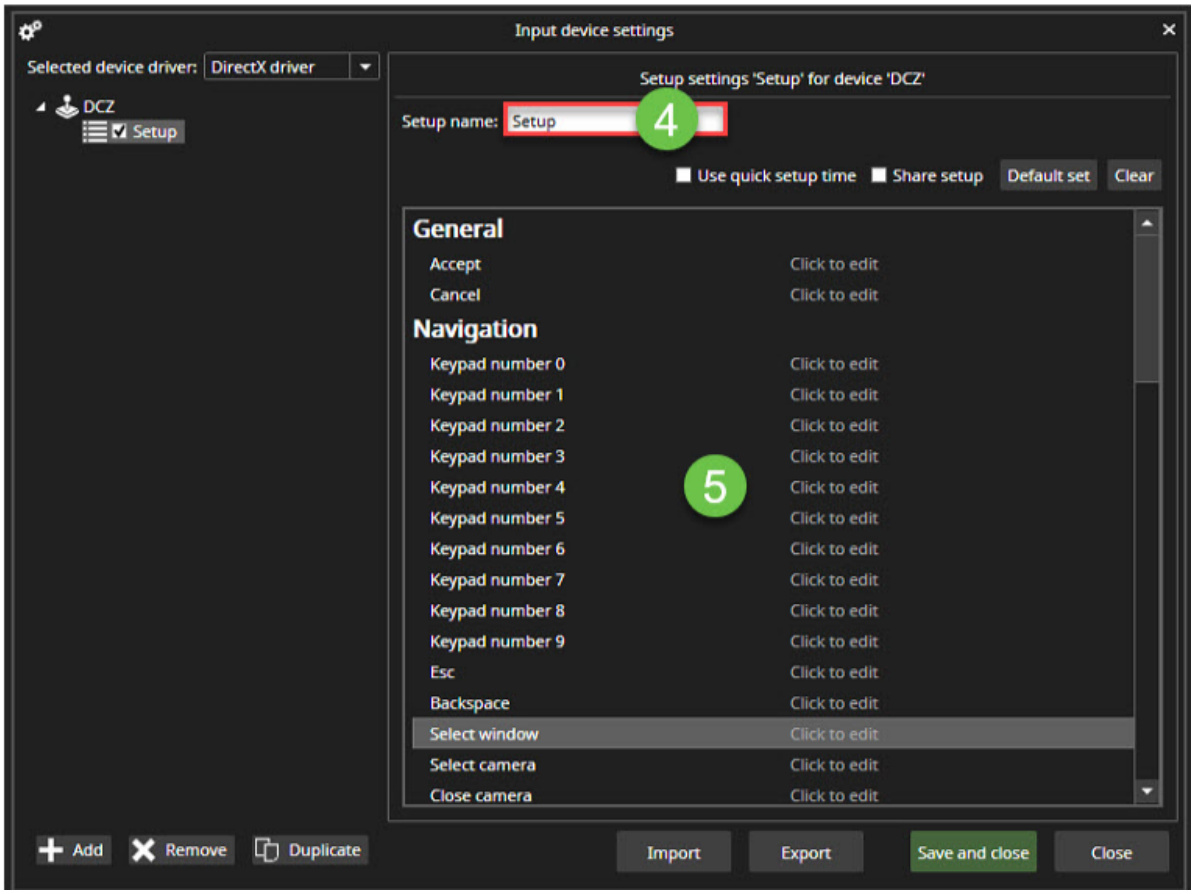
5.1.2 Adding Input devices

1. Start Spotter
2. Go to **Devices** and open **Input devices**

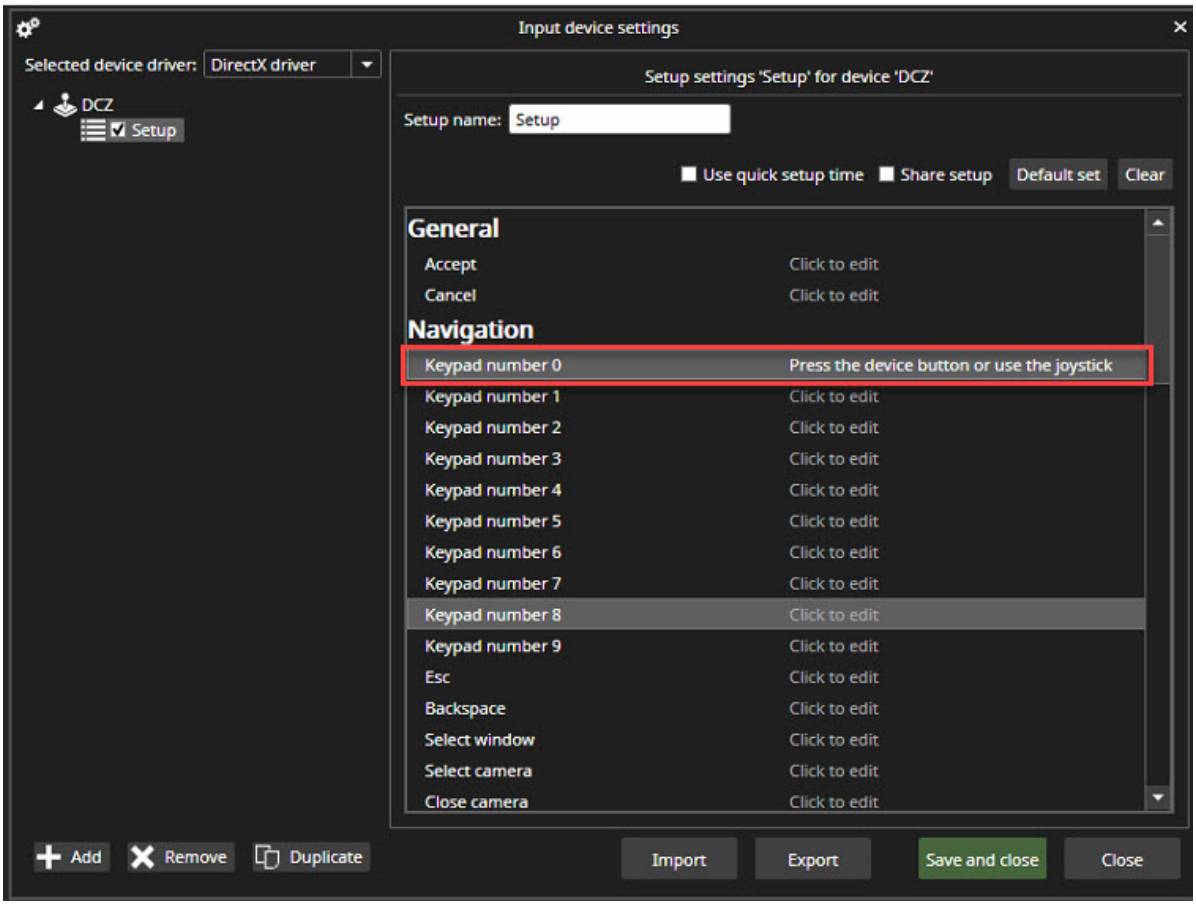
1. If the “Setup” line item is not visible, add it using the “**+ Add**” button.



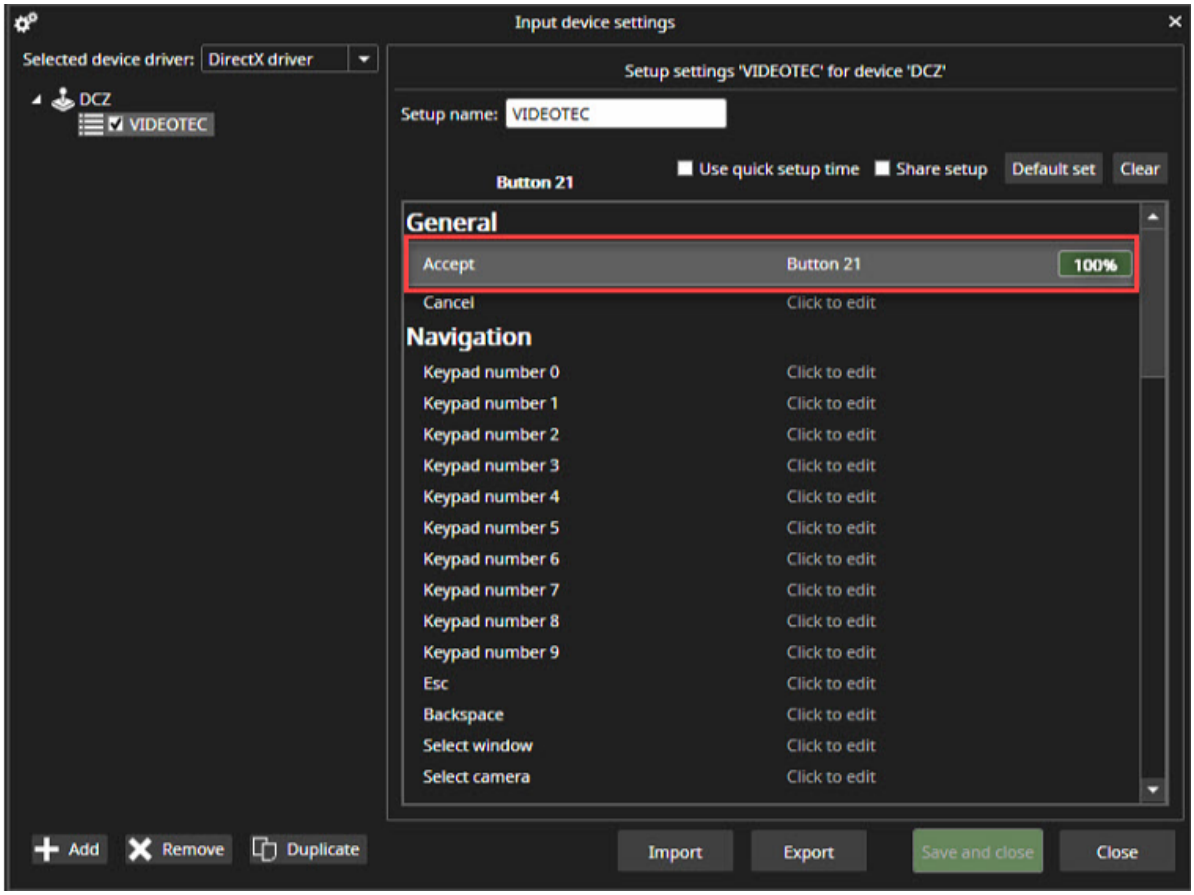
1. Define the Setup name
2. Start configuring the buttons by clicking **Click to edit**



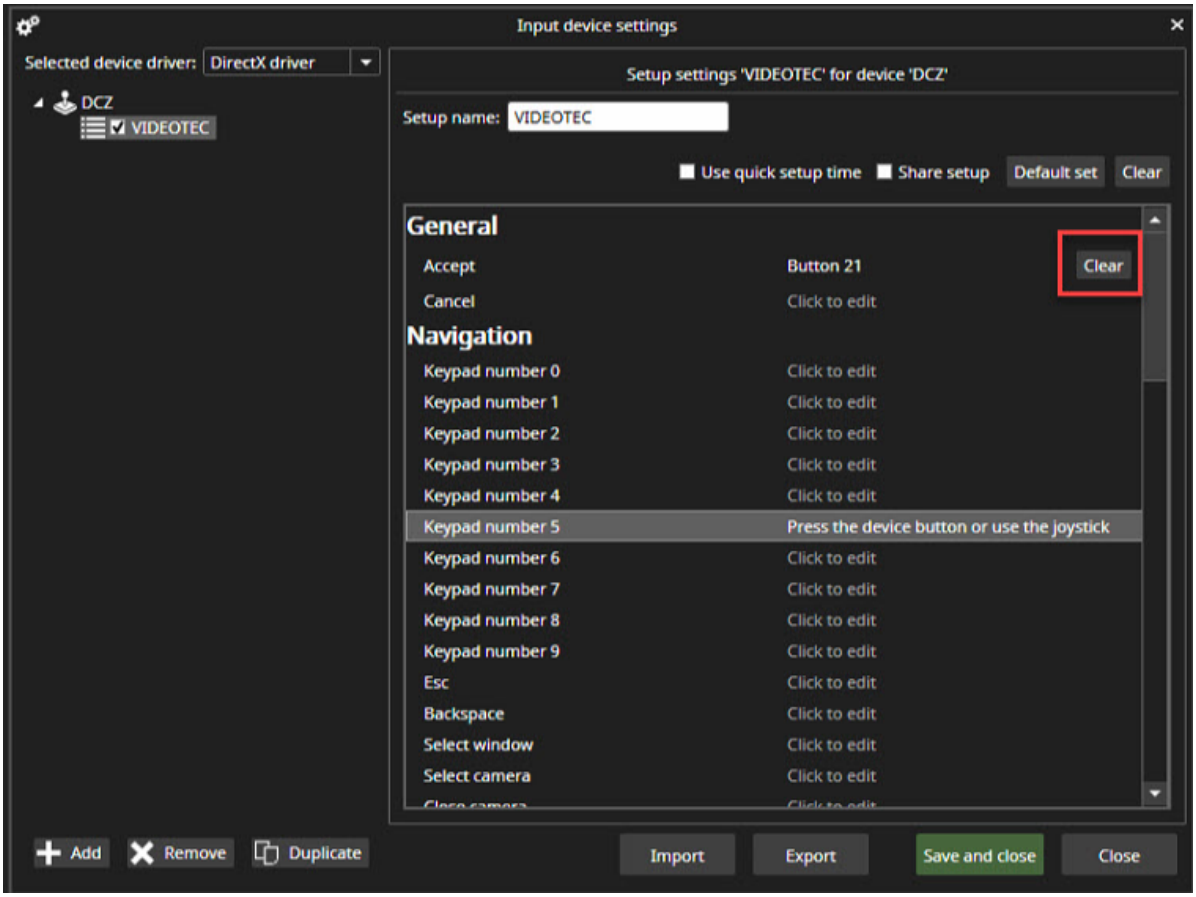
1. Select functions from the list
2. Click **Press the device button or use the joystick**



1. Press the select button until the value reaches 100% and the release button



1. When the button is correctly initialized, the clear button appears at the end of the line
2. Repeat the actions and finalize by clicking **Save and close**



5.1.2.1 Profiles

Profiles contain all profiles, which has been added to the user group

5.1.2.2 Layouts

5.1.2.3 View

5.1.2.3.1 View-tab contains view options for:

- Zoom
- Edit Custom grids
- Playback
- Timeline
- Device tree
- Description
- Alarms

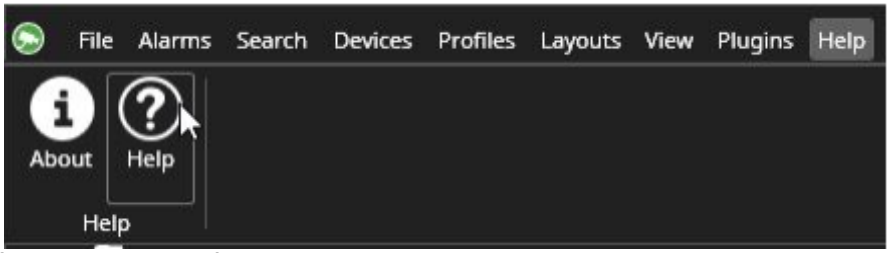
- Storyboard
- Tabs
- Auto Hide

5.1.2.4 Plugins

See more from Plugins (see page 155)

5.1.2.5 Help

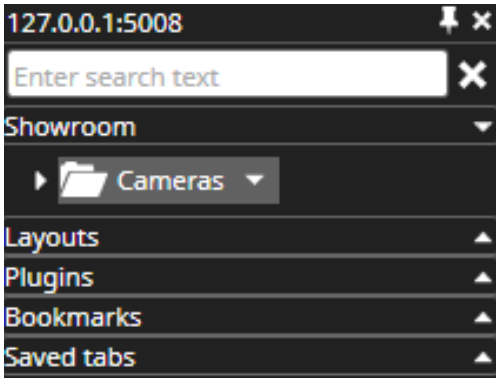
Spotter contains built-in help. The help is accessible from the Help menu or by pressing the F1 key.



Help contains information on new features and valuable things like keyboard shortcuts and links to view training videos.

5.2 Spotter Device Tree

The Device tree title shows the name of the Master Server that Spotter is connected to.
Below is a search field that can be used to filter the tree contents.
Any text entered in the area can be removed with the "X" control or by pressing the Esc-key.
This also clears all profile folder searches.



The Device tree contains five different types of content that can be opened to the work area.

5.2.1 Profile

The currently selected profile, which includes the cameras and other devices, is the first item.
The shape can be changed from the title menu.
Each profile folder can be searched independently using profile folder search.

5.2.2 Layouts

Contain all the available layouts for the current user if configured.

5.2.3 Plugins

Contains all plugins, which are enabled in the master server license

5.2.4 Bookmarks

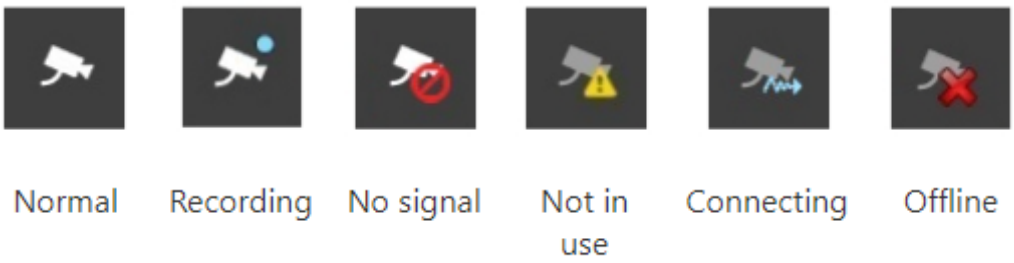
Contains all specific user saved and shared bookmarks

5.2.5 Saved tabs

Contains all tabs, that the user has saved.

5.2.6 Device states

When the device is in another state, for example, no signal, connecting, and connection, there is an icon on top of the device symbol.

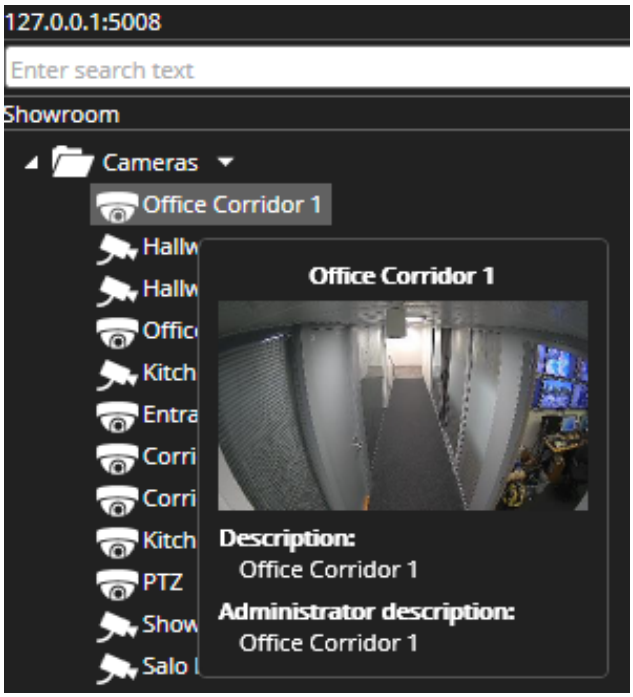


5.2.7 Alarms

If a device is used as a trigger or an alarm action in an active alarm, it has a yellow highlight colour.
The colours for active and ended alarms can be adjusted in the **Alarm Visualization Settings**
Alarms can also be assigned a custom colour that can be specified for each alarm separately.

5.2.8 Device name and descriptions

The name and description are visible in the device tooltip—unique icons for the System Manager Profile Settings devices.

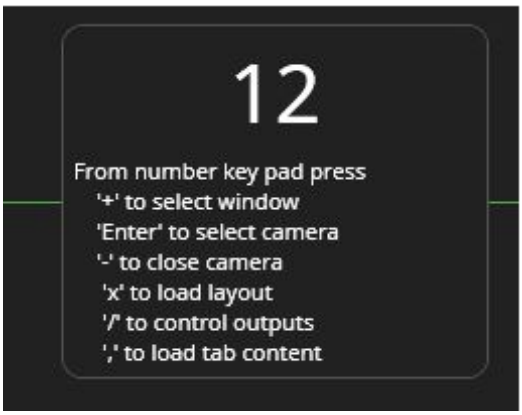


5.2.9 Frequently Used Keyboard Shortcuts:

Shortcut	Description
Ctrl+Alt+D	Cycle between the different device tree view modes

5.3 Spotter Device Numbering

The shortcut numbers for cameras are assigned via the system manager at the profile level.
The configured keyboard shortcuts can be accessed anywhere in Spotter by using the numeric keypad.
The entered numbers show up in a popup dialogue.



The dialogue can be positioned anywhere in the Spotter window, and it will remember the set location.

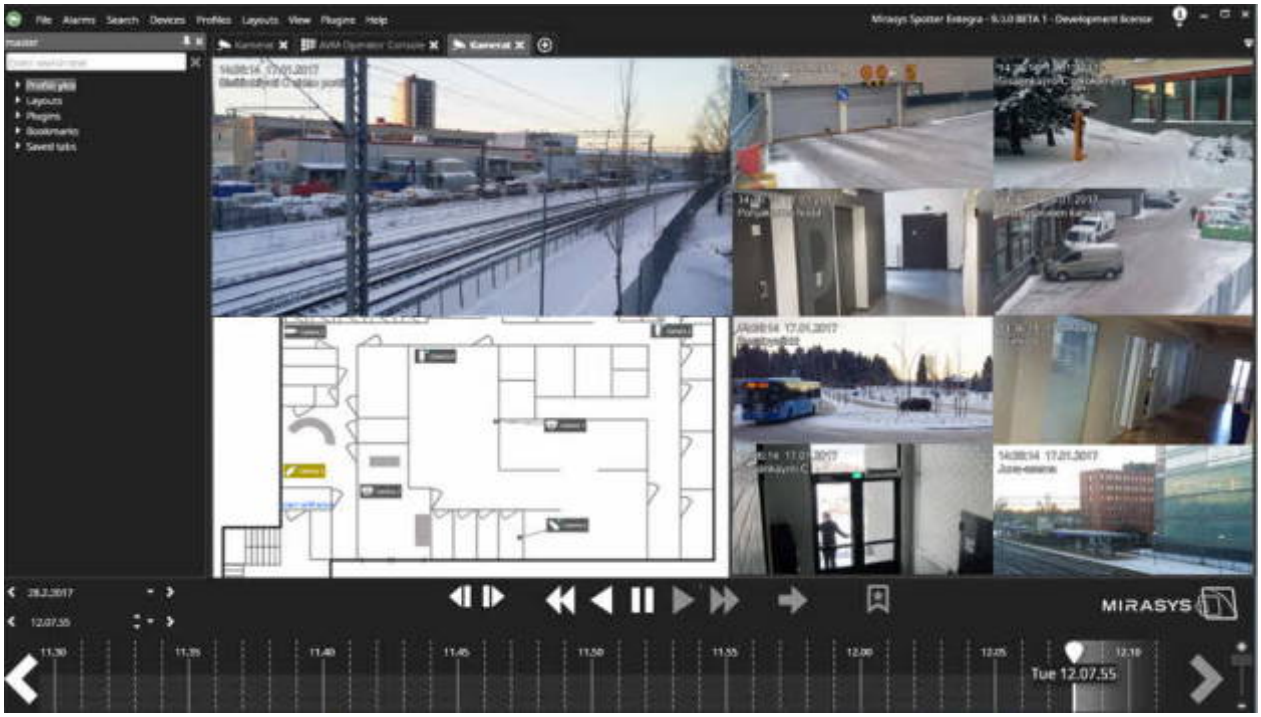
When the following Numpad keys follow the numbers:

- Enter: The camera is opened.
- Double-Enter: The camera is opened and maximized, and if a PTZ camera, the PTZ control is assumed.
- “+”: Spotter window is selected.
- “-“: the camera is closed.
- “/”: layout is loaded.
- “,”: saved tab is loaded.

The device numbering settings can be exported and imported to another PC. The import works only if the same profile is active.

5.4 Spotter Work Area

The work area is the region of the Spotter window where the content of the devices can be viewed. When cameras and other devices are added to the work area, they automatically open the stream to the playback position or the live position of the work area.



5.5 Spotter Playback panel

With the playback buttons, the user can choose the direction and speed of the playback.
With each mouse click, the speed can be increased (**left click**) or decreased (**right-click**).
The speed is indicated with a small number on the button.

Very low speeds 1fps, 0.1x, 1/8x, 1/4x and 1/2x are accessible only with the slider or by clicking with mouse right button on the playback button to reduce the speed.

If the user wants to go to real-time mode, there is a "Go to current time" button.

5.5.1 Playback panel controls

Using the small arrow to the right of the playback panel, the user can configure which controls are displayed in the two available view modes for the playback panel.

5.5.1.1 Playback panel state

- Show normal
- Hide
- Show minimized

5.5.1.2 Controls in large playback panel

- Date picker
- Time picker
- Activity selection
- Step buttons
- Playback speed slider
- Quick bookmark button
- Camera tour controls
- Tab step / next camera tour step buttons

5.5.1.3 Controls in small playback panel

- Date picker
- Time picker
- Activity selection
- Step buttons
- Quick bookmark button
- Camera tour controls
- Tab step / next camera tour step buttons

The only control that is not available in minor view mode is the Speed slider.

5.5.2 Date And Time Controls

The date and time controls show the selected date and time.

The user can change the date by opening the calendar.

The buttons left and the date adds or subtracts one day from the currently shown day.
It is also possible to click on the date box and enter the date manually.

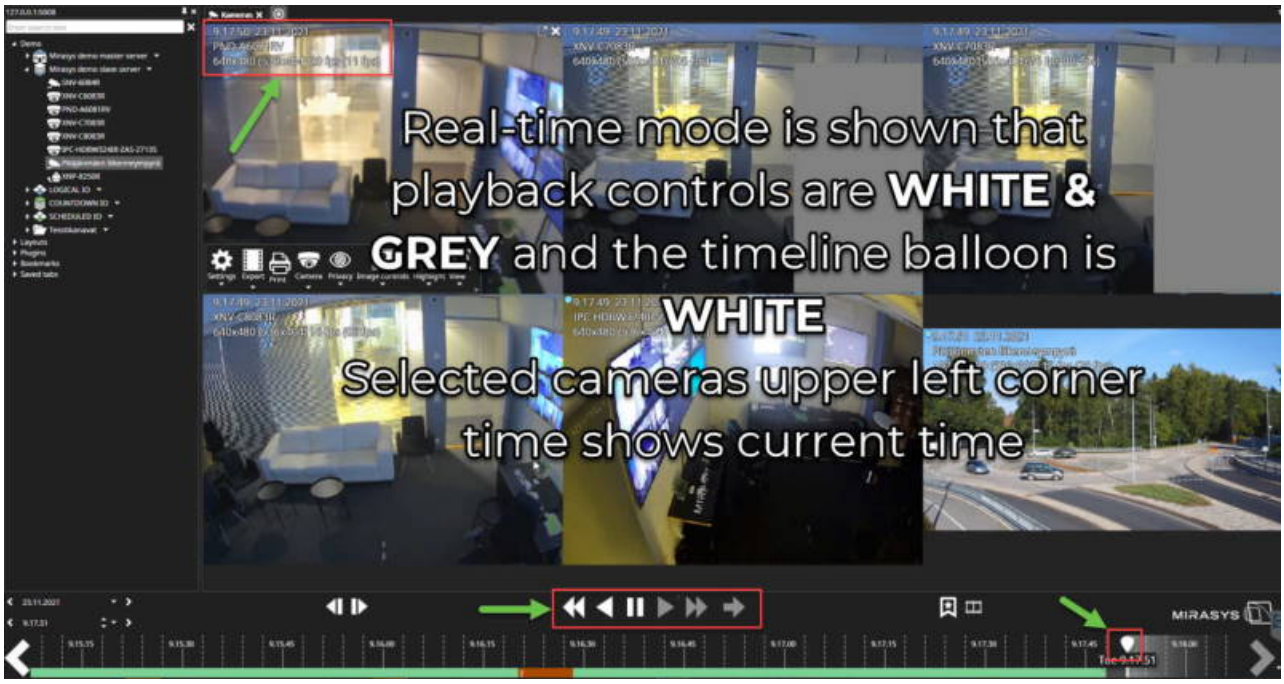
The buttons left and right of the time add or subtract one hour.
Like with the date selector, it is possible to click on the time box and manually enter the time box.

It is also possible to quickly set time with 10-minute accuracy using the pulldown menu.

5.5.3 Frequently Used Keyboard Shortcuts:

Shortcut	Description
Ctrl+Right	Set playback time +30 seconds.
Ctrl+Left	Set playback time -30 seconds. If in real-time mode, switch to playback mode first, and set 1x speed.
Ctrl+Space	Pause playback.
Ctrl+Enter	Go to real-time.
Ctrl+Alt+C	Cycle between different view modes.

6 Real-time mode



6.1 Opening single camera or device

6.1.1 Opening single camera or device

- Double click camera from device tree
- Drag camera from device tree to the work area

6.2 Opening device group

- Double click device group from device tree
- Drag device group from device tree to the work area

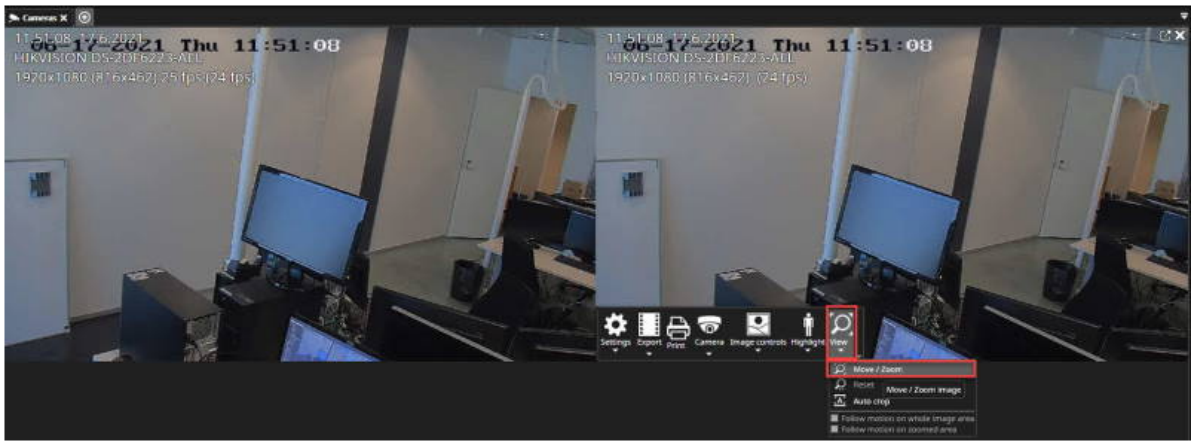
The camera name and timestamp are shown on the top left corner of the camera.
The visibility and colour of the name and the timestamp can be controlled from Spotter\File\Settings\Display or the Camera toolbar\Settings\Display

The camera recording indicator is a small blue dot next to the timestamp.
It is displayed when the camera is recording.

6.3 Virtual Cameras

1. Open camera to the real-time view
2. Open camera toolbar
3. Select **Camera**
4. Select **Duplicate**

1. Open **View**
2. Select **Move/Zoom**

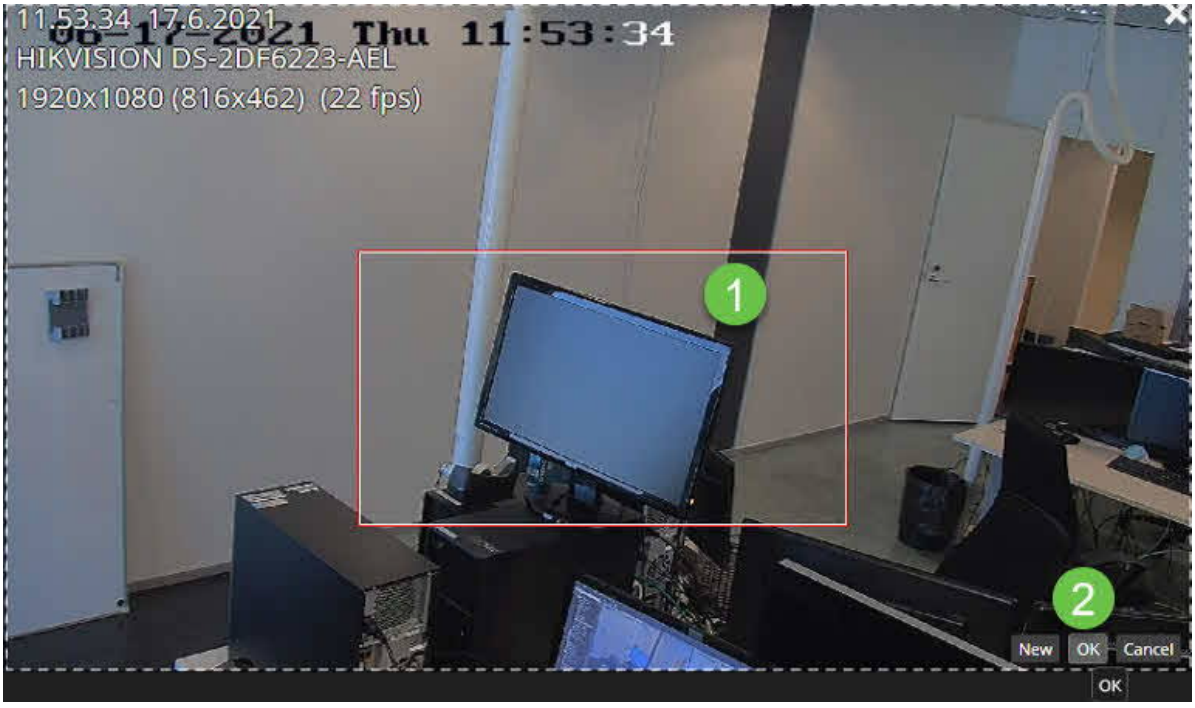


Mouse wheel movements will make the virtual camera rectangle larger or smaller.

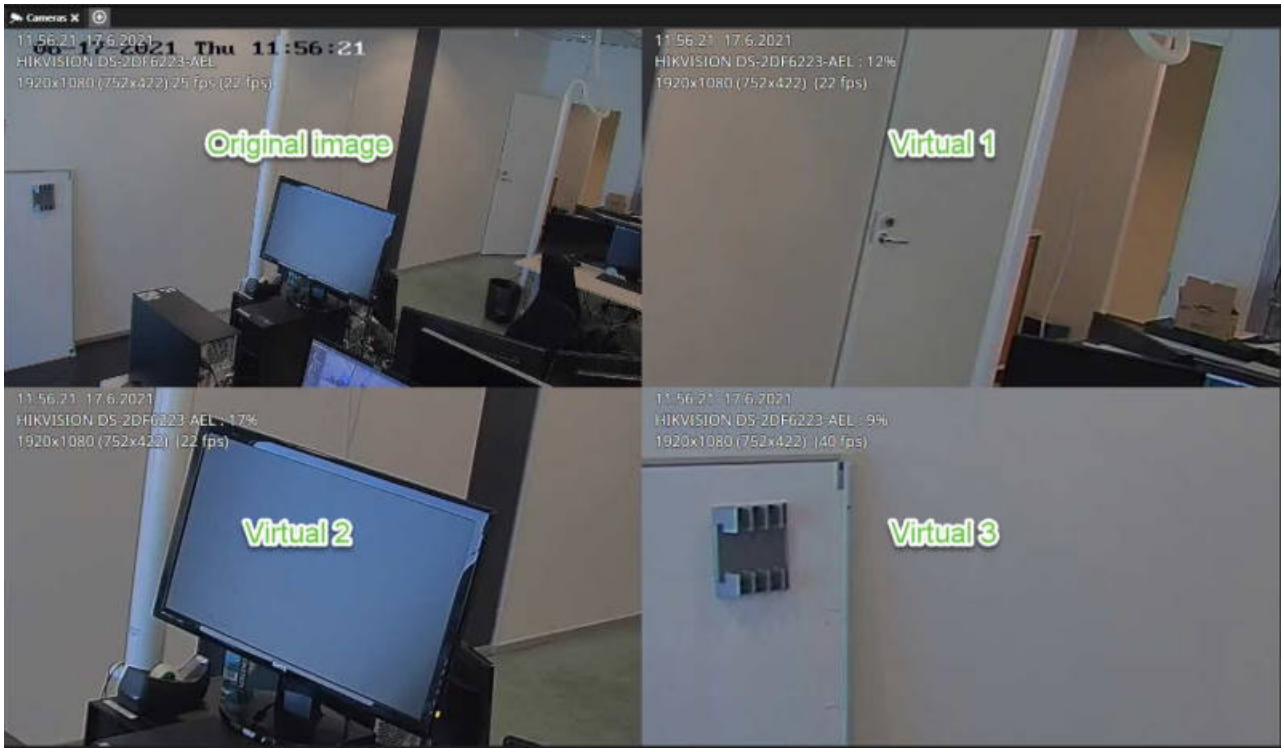
The size can also be adjusted by dragging the edge of the rectangle with mouse and left-click.

The size will also change from the keyboard "page up" and "page down" buttons.

1. Draw zoomed area
2. Click **OK**



Create more virtual cameras, if needed



6.3.1 Frequently Used Keyboard Shortcuts:

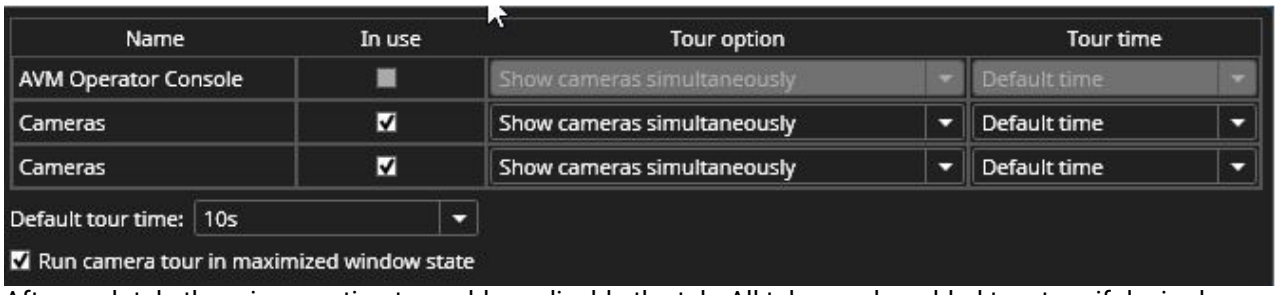
NOTE: Only when in virtual camera editing mode.

Shortcut	Description
Arrow left	Moves the red box to the left.
Arrow right	Moves the red box to the right.
Arrow up	Moves the red box up.
Arrow down	Moves the red box down.
Page Up	It makes the box more significant (zoom out).
Page Down	It makes the box smaller (zoom in).

6.4 Camera Tour Controls

Camera tour controls can be configured to be seen in both standard and large view mode playback panels.

Control is enabled when there is more than one tab open in Spotter.
Settings are opened from the "Cogwheel" icon.
There is a row for each tab. Particular tabs like plugin tabs have disabled functionalities and are by default disabled.



After each tab, there is an option to enable or disable the tab. All tabs can be added to a tour if desired.
There are two options for the Tour.
The user can either show cameras simultaneously or show cameras one by one.
If devices are shown one by one, it is possible to have a tour with just one tab.
The tour time can be selected at the last row individually, or the user can set a default time and define it at the lower-left corner.
There is also an option to run the camera tour in maximized window state on the lower-left corner. This checkbox is selected by default.

When the tour is running, it is indicated with a rotating orange arrow. The Camera borders are also highlighted in orange.
There is also a counter underneath the controls that counts the time set for each tour step.
The user can also select the forward and backward arrows to move between tour steps.
The tour is stopped if the user selects another operation in Spotter. For example, the image or clip export stops the tour.

Note: A camera tour can also be operated in the Agile Video Matrix (AVM) with the AVM Operator Console. In AVM, the counter is not displayed.

6.4.1 *Frequently Used Keyboard Shortcuts:*

Shortcut	Description
F12	The toggle camera tour starts and pauses state.
Ctrl + F12	Steps to next camera tour view.

6.5 Full-Screen Mode

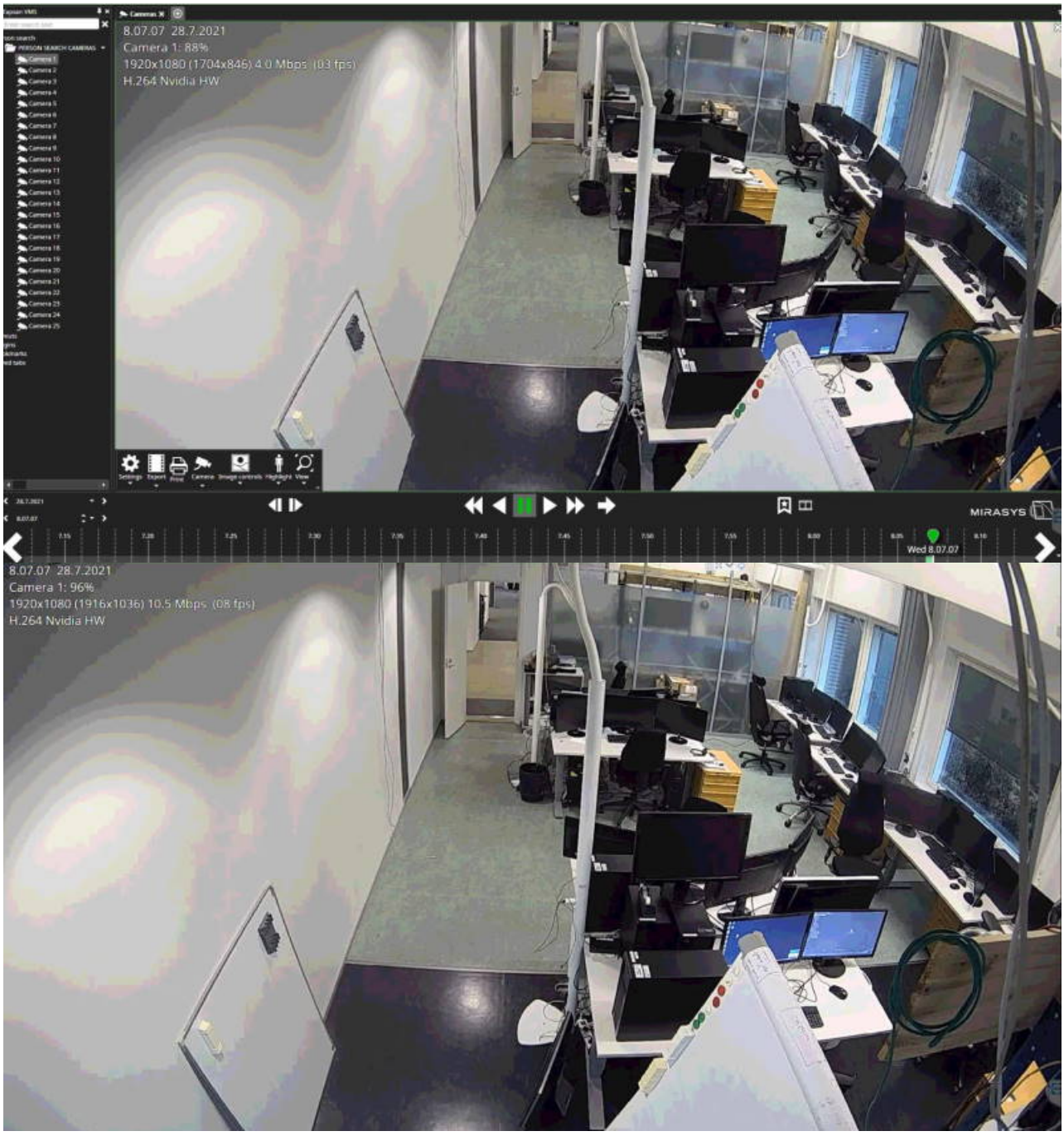
A single-camera can be maximized to cover the whole work area with the maximize control or double-clicking it.
The whole work area of a Spotter window can be made to be full screen by pressing the F11 key or double-clicking the tab control.
The second press of the F11 key (or the Esc key or mouse right double click) will return to the original window size.

6.5.1 Frequently Used Keyboard Shortcuts:

Shortcut	Description
F11	Maximize the current tab to full-screen size.
F11 or Esc	Restore maximized tab to average size (when no camera is selected).

6.5.2 A single camera on the device tab

A single camera can be maximized to cover the whole work area with the mouse **RIGHT** double-clicking it.
The second mouse **RIGHT** double-click returns the original size.



6.5.3 Multiple cameras on the device tab

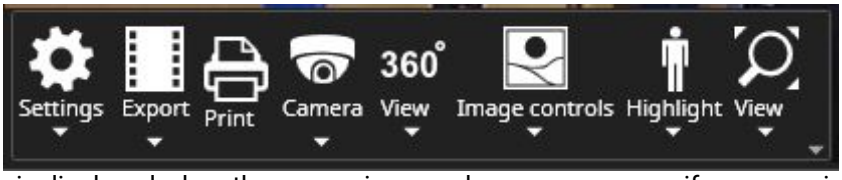
6.5.3.1 A single-camera full-screen

A single camera can be maximized to cover the whole work area with the mouse **LEFT** double-clicking it.The second mouse **LEFT** double-click returns a single camera to the original size.

6.5.3.2 Device tab full-screen

A whole device tab can be maximized to cover the whole work area with the mouse **RIGHT** double-clicking it.The second mouse **RIGHT** double-click returns the device tab to the original size.

6.6 Camera Toolbar



The camera toolbar is displayed when the mouse is moved over a camera or if a camera is selected with other means.If the mouse is not moved for some time, the camera toolbar disappears automatically.

6.6.1 The camera toolbar can contain the following items:

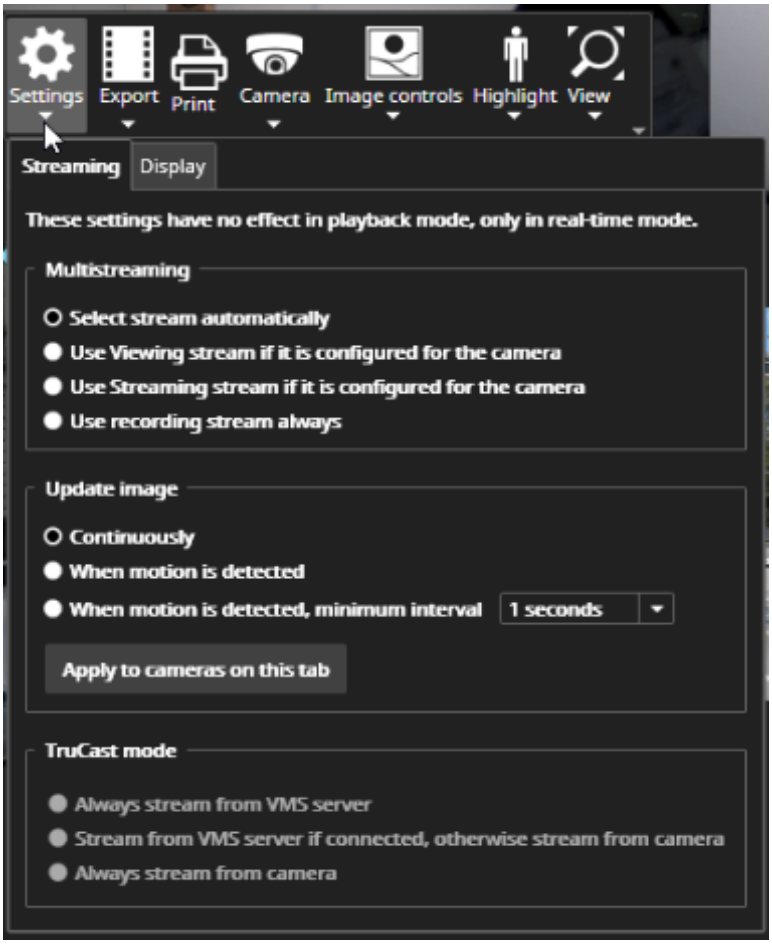
- Settings
- Export
- Print
- Camera
    - Dome control, duplicate modes
- 360 camera de-warping
- Two-way audio
- Image controls
- Highlight
- View or virtual zoom

6.6.2 Spotter Camera Settings

All the camera-specific settings are saved to layouts when a user saves a layout.See the Layouts[1] of this guide for further information.

The camera settings contain the camera-specific settings for:

1 https://documentation.mirasys.com/articles/spotter-guide-v9-en/layouts-management



6.6.2.1 Streaming

6.6.2.1.1 Multistreaming

- Spotter chooses the recording stream automatically (default)
- Use Viewing stream if it is configured for the camera
- Use Streaming stream if it is configured for the camera
- Use recording streams always

6.6.2.1.2 Update image

- Continuously, which draws all images from the camera even when there is no motion detected
- When motion is detected(image is updated only when VMS has detected motion)
- When motion is detected, minimum interval(min. 1 second and max 60 seconds).

Below the image update settings is a button to update the current image update settings for all cameras on this tab.

When a new camera is opened to the work area, the image update settings default to the setting defined in **Spotter\File\Settings\Streaming**.

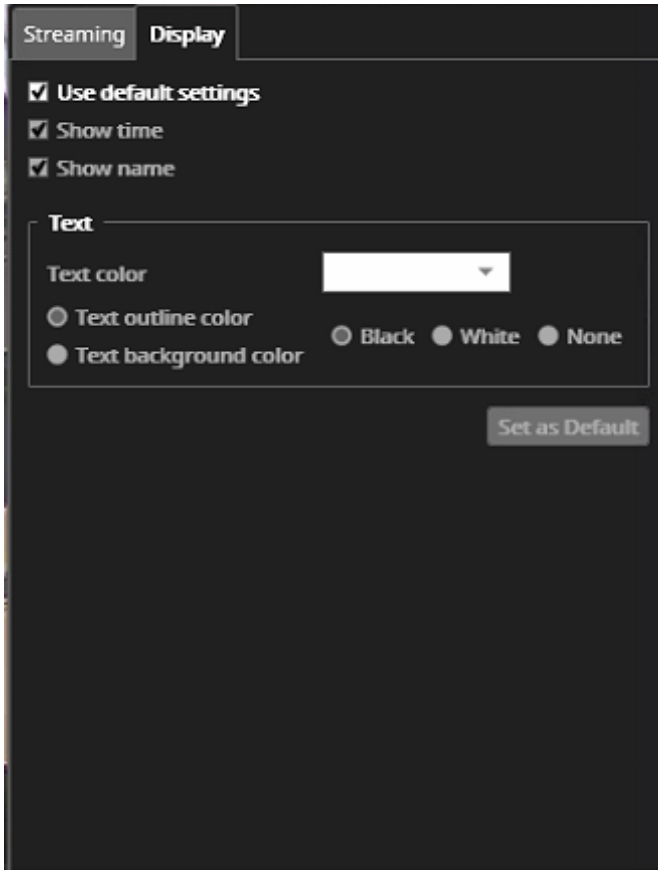
6.6.2.1.3 The TruCast

- Always from the VMS server
- Stream from VMS server if connected, otherwise, stream from the camera
- Continuously stream from the camera

The TruCast settings are remembered for the camera, so even if the camera is closed, the next time it is opened, it will be using the same TruCast settings last time.

6.6.2.2 Display

The display settings control if the name and timestamp are shown on top of the camera and the colour used for the text and the text outline.If the user finds a nice colour that he prefers, he can set a new global default for all cameras.



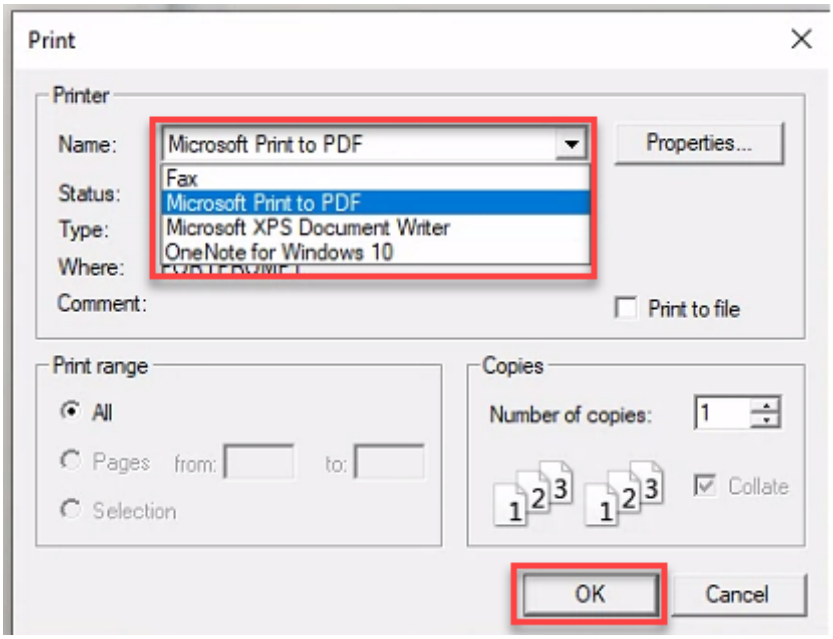
6.6.3 Spotter Export (Spotter Export Chapter)

See more under Export image (see page 74)
See more under Add to video export (see page 75)
See more from Add to storyboard (see page 79)

6.6.4 Print

1. Open camera toolbar
2. Click **Print**

1. Select the printer
2. Click OK



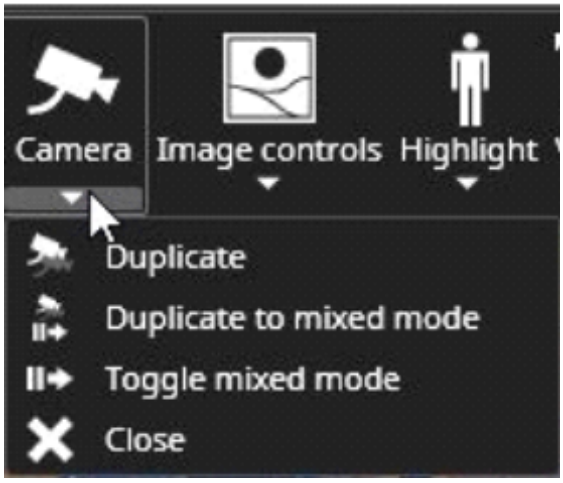
6.6.5 Two-Way Audio

6.6.5.1 Two-Way Audio

If the camera has two-way audio configured, the menu item becomes active. Two-way audio can be in three different modes.

In the closed mode, the audio channels are not open. In the listening mode, the user will hear audio from the camera and any potential audio going to the camera from any other VMS client.
The audio channel from the current user is not open. In the talk mode, the user can hear the audio from the camera, and the audio channel from the current user is open, so the audio is broadcasted to the camera. The toolbar icon has red (to camera) and green (from camera) volume indicators, which show if there is audio going to or coming from the camera. The channel volumes can be adjusted from the sliders.

6.6.6 Camera

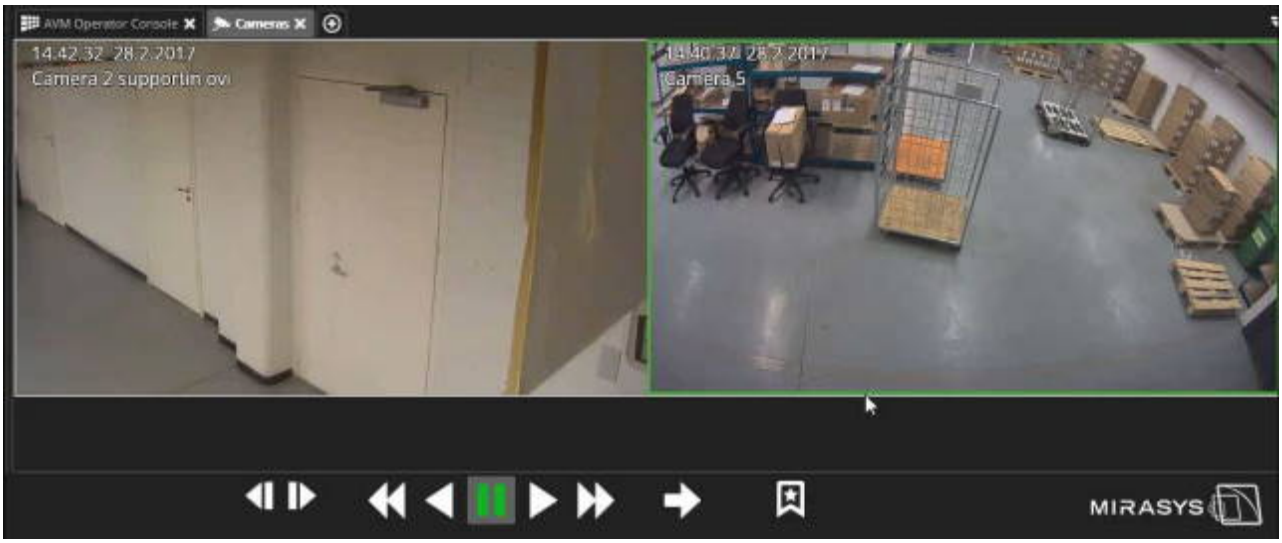


6.6.6.1 Duplicate

See more information from Virtual Cameras (see page 40)

6.6.6.2 Duplicate to mixed mode

The Mixed Playback Mode allows users to review playback on specific cameras while monitoring real-time situations in other cameras and doing this while staying in the same Spotter tab.The mode is accessed by pressing the Ctrl key and then selecting cameras currently open on the Spotter screen with a mouse left-click.The selected cameras will then be highlighted with a thick green border.The user can select multiple cameras by keeping the Ctrl key pressed and continuing to select other cameras.The selection is cancelled by clicking somewhere without keeping the Ctrl key pressed.

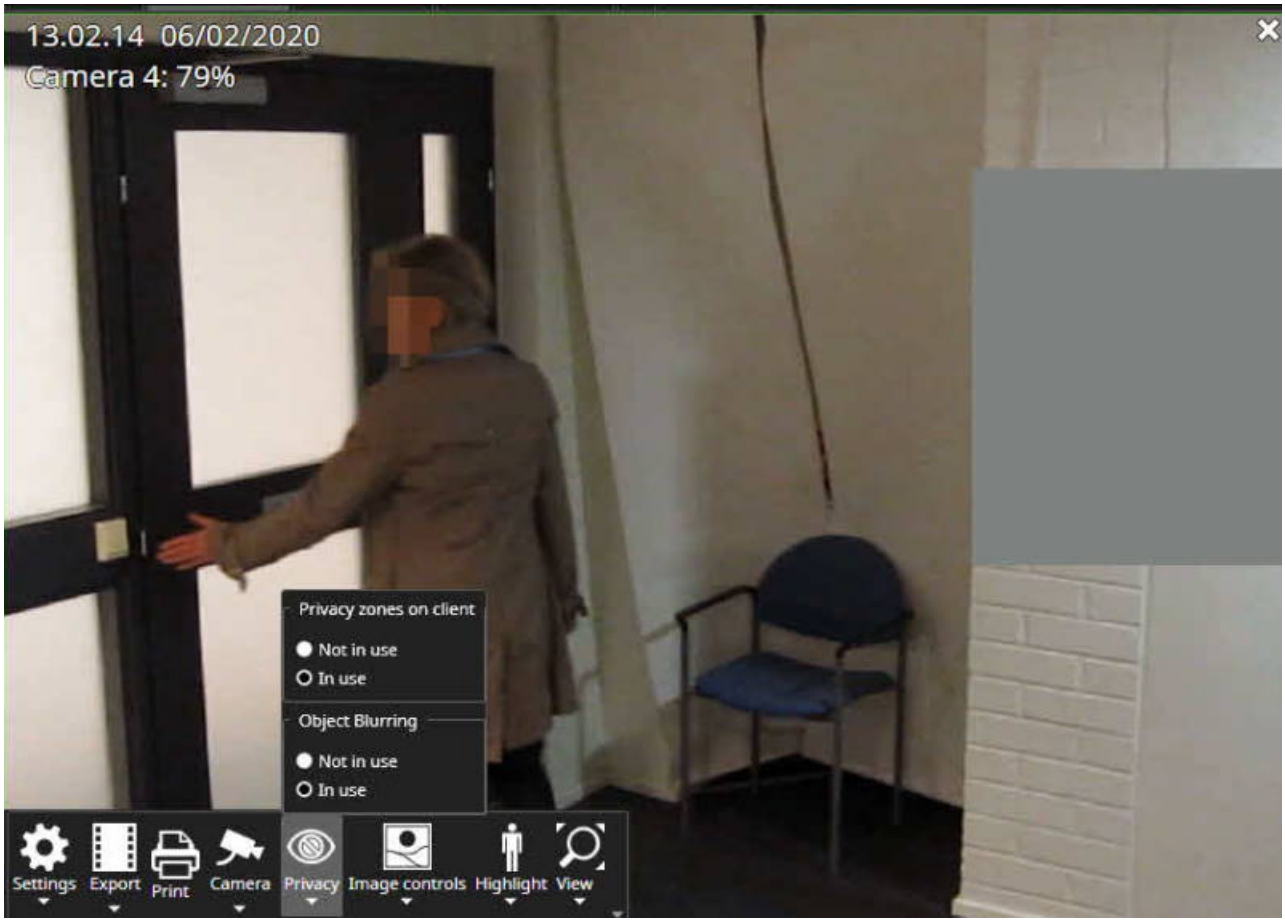


When some number of cameras are highlighted like this, they are in mixed playback mode.Other cameras that are not selected are always in real-time.The cameras in mixed playback can now be controlled with the time slider balloon, the playback controls, or a joystick jog-wheel.

6.6.6.3 Toggle mixed mode

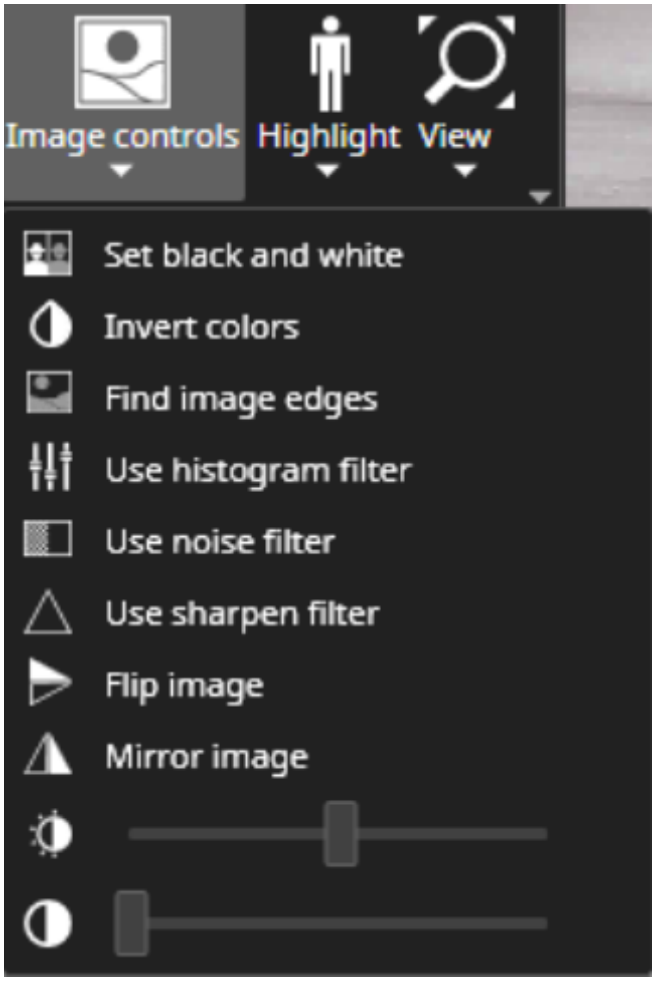
6.6.7 Spotter Privacy

If you have been assigned sufficient permissions, you will also access the "Privacy" menu.
In here, you may be given access to turn on/off the privacy zones (if you have sufficient permissions to do this and the functionality has been enabled for the specific cameras).



1 Examples of facial blurring- and privacy masks that could be disabled from the privacy menu.

6.6.8 Image Controls



The Image Control plugin has various options to adjust the camera image:

- Option to turn the image into a black and white image
- Invert colours filter
- Edge highlight filter
- Histogram filter (a form of contrast optimization filter)
- Noise reduction filter
- Image sharpening filter
- Image flip (flips the image along the horizontal axis)
- Image mirror (mirrors the image along the vertical axis)
- Brightness adjustment slider
- Contrast adjustment slider

6.6.9 Highlight

The metadata objects for LPR and FR events contain bounding box elements and labels (identity name in FR metadata and license plate number in case of LPR metadata). These bounding boxes and labels can be displayed in the Spotter application if the VCA visualization plugin is enabled and the user selects to show VCA in the video view control panel.

6.6.9.1 VCA visualization requirements

Spotter needs to get metadata to visualize objects.

- The license must have VCA channels.
- VCA must be enabled for the camera in System Manager settings or license plate recognition or face recognition needs to be used
- The database must be installed (for metadata playback)
- For best results, hermeneutic motion detection should be used
- Both VCA Core and Mirasys metadata can be used, although there can be some differences in how objects are detected

6.6.9.2 Visualization

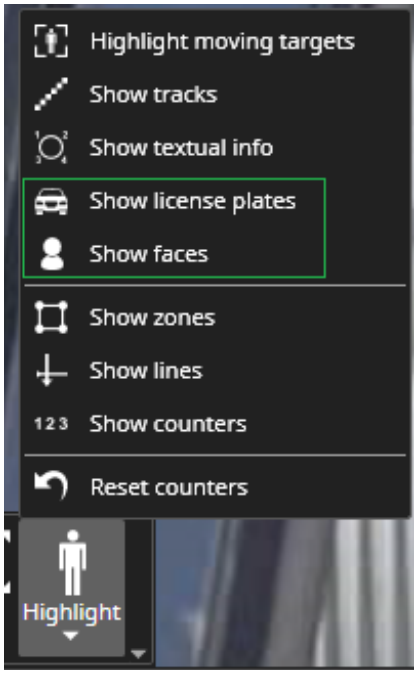
- Highlight moving objects such as cars and walking persons
- Show the track that the object has taken on the camera screen
- Show textual info shows textual info related to the tracked object
- Show VCA zones and lines after they have been configured using the VCA configurator
- Show a client-only VCA event counter
- Reset all counters on a camera screen
- VCA visualization can be set on for all cameras from the tab menu
- VCA visualization states are kept in memory and stored on a local PC for each user
    - camera VCA state is remembered so that when the camera is opened, its VCA states are set to ones that were used before
- VCA visualization can be set on / off also with AVM

The client-only VCA counters are local to the Spotter application and not integrated into the Mirasys Reporting+ application.They are meant for short term reporting and can be reset by clicking on the counter on the camera screen.

6.6.9.2.1 Smart recognition metadata visualization

There are two “Highlight“ menu items for the “license plate” and “face” moving objects visualization (drawing borders and name/license plate number):

- Show license plates
- Show faces



2 Smart recognition visualization items

The menu items are enabled only when the camera is configured for any VCA detection.

6.6.9.2.2 Settings for VCA visualization in Spotter

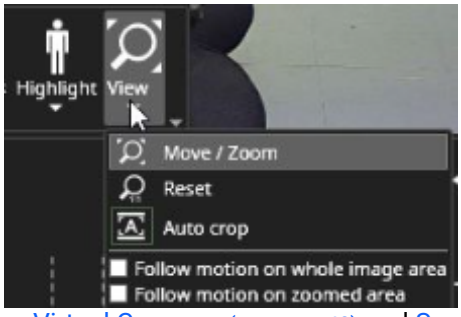
- The line color can be changed
- Line thickness can be changed
- Trail maximum length can be changed
- The zone color can be changed

6.6.9.2.3 Advanced settings

In advanced settings, there is a setting to allow VCA for all cameras, even if the VCA is not configured for the camera. This is useful in cases where metadata is received from 3rd party system (for example, from data drivers) that will not use recorder VCA.

6.6.10 View

6.6.10.1 Move / zoom



Read more about **Move / Zoom** from Virtual Cameras (see page 40) and Spotter Digital Zoom (see page 60).

6.6.10.2 Reset

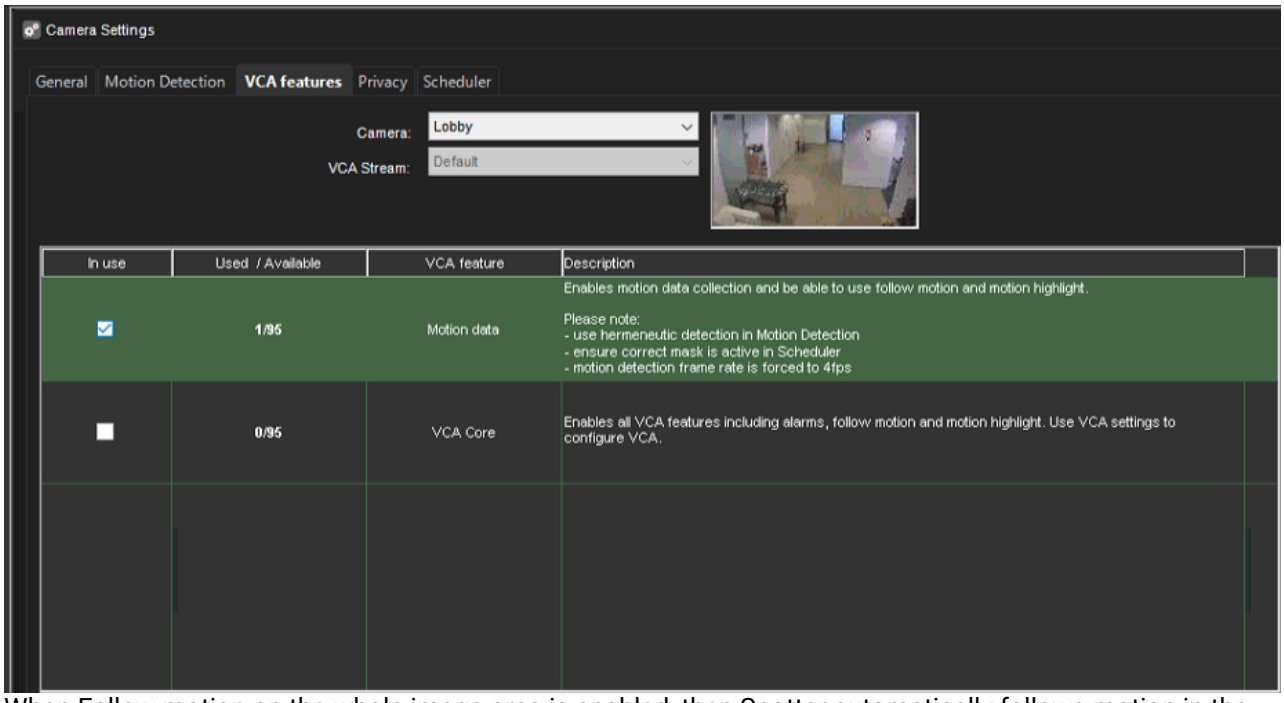
Reset to the full image

6.6.10.3 Auto crop

Enables Auto image cropping to the image

6.6.10.4 Follow motion on the whole image area

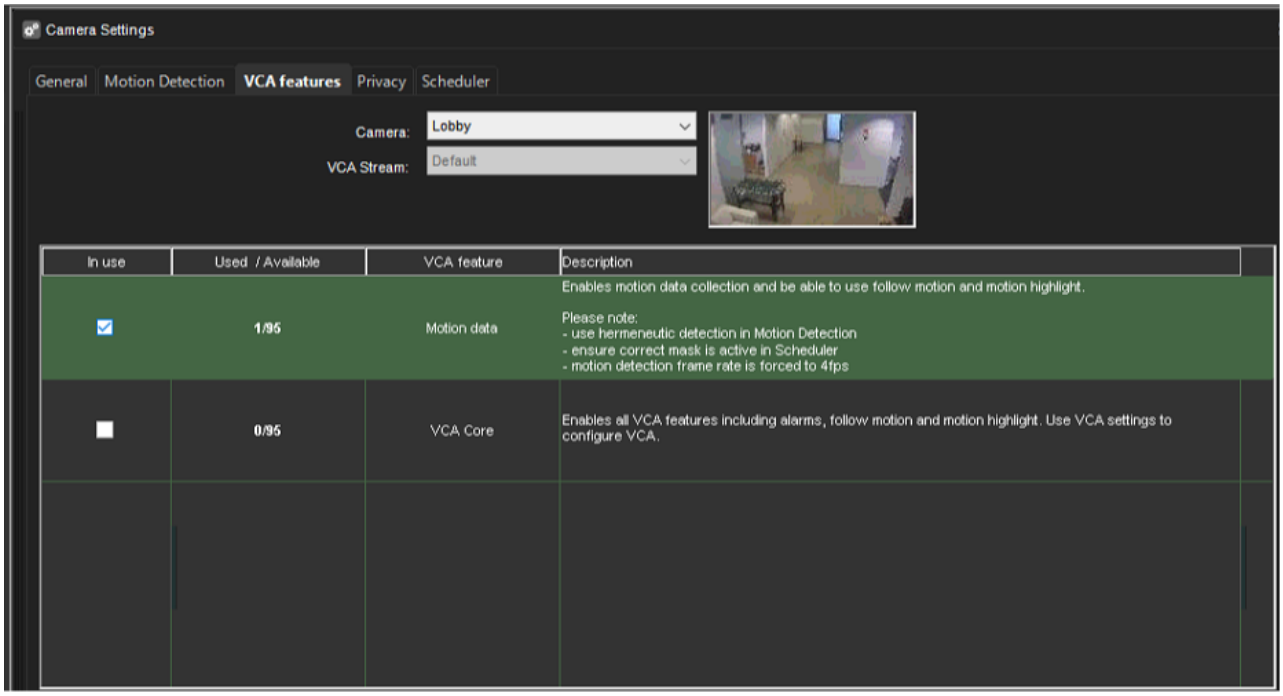
Before **Follow motion on the whole image area** can be used, VCA feature **Motion data** must be enabled from the **VCA features** tab.



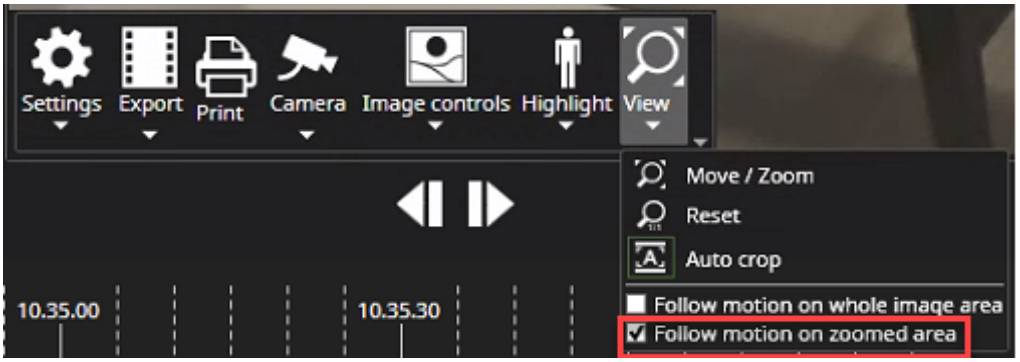
When Follow motion on the whole image area is enabled, then Spotter automatically follows motion in the camera area.

6.6.10.5 Follow motion on the zoomed area

Before **Follow motion on the zoomed area** can be used, VCA feature **Motion data** must be enabled from the **VCA features** tab.



When **Follow motion on the zoomed area** is enabled, then Spotter automatically follows motion in that area of the image, which has been set to the zoomed state.



6.6.11 Spotter Digital Zoom

In the camera view, it is possible to digitally zoom a selected rectangle of it or zoom in on it. The selected rectangle can open as its view.

6.6.11.1 Digital zoom with mouse

6.6.11.1.1 Area zoom (shift key + mouse left button)

Pressing the shift key and the mouse left button, a sizeable rectangle appears in the mouse position. Keeping the mouse's left button down can change the rectangle area size. If the shift key is pressed when releasing the left mouse button, the rectangle area is zoomed to view size. Zoomed view returns to normal side either clicking the mouse right button or selecting the Reset button from View drop-down button.

6.6.11.1.2 Zoom in (mouse right button + mouse scroll)

Pressing the mouse's right button down over a view, a zoom cross appears over the view. The zoomed area can be changed by moving the mouse when the mouse right button is pressed. Mouse scroll can then be used for zooming in and out when the mouse button is pressed. The current zoomed view stays in view when releasing the mouse's right button. When pressing the right button again, zooming can continue. Mouse the right button click overview, and return the view to normal size.

6.6.11.2 Digital zoom with View drop-down button

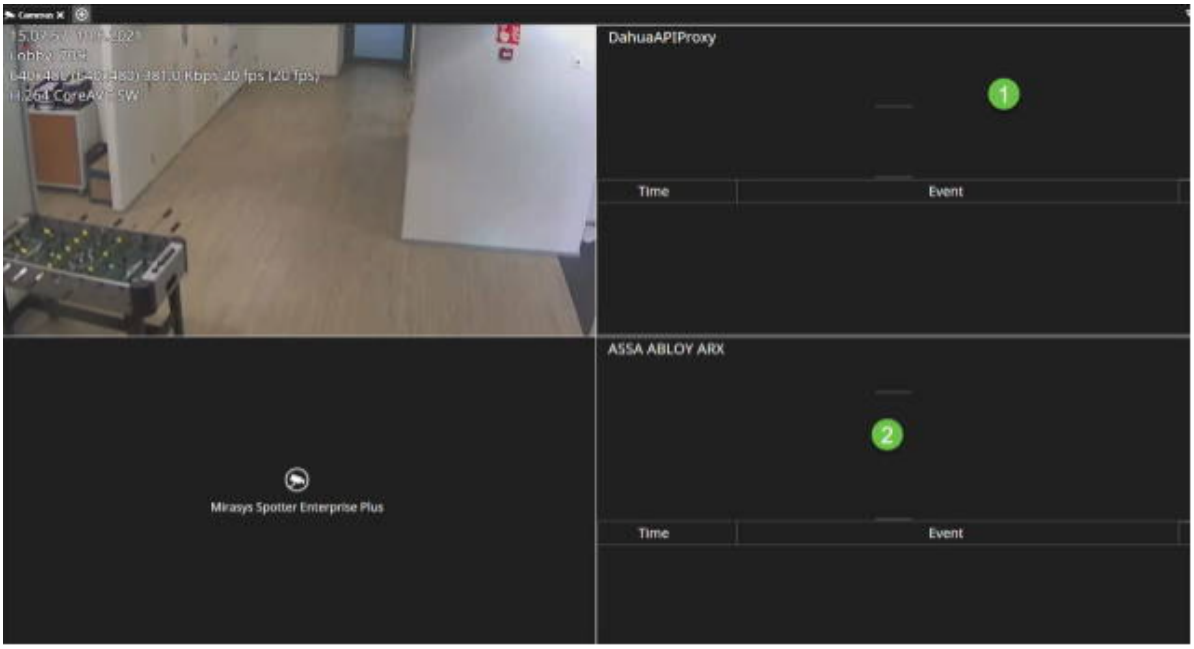
- Move / Zoom
  - Opens sizeable rectangle overview. Rectangle size and position can change. On the view right bottom corner buttons open the selected rectangle as a new view (New), zoom the rectangle area in this view (OK), or cancel zooming (Cancel). Selected new zoom views can see as dashed line rectangles on the original view.
- Reset
  - Resets view zooming to original size. Same as the mouse's right button press over the view.
- Auto crop

    - Set/reset auto crop for this view
- Follow motion on the whole image area, enabled only if VCA is configured to this camera.
- Follow motion on the zoomed area, enabled only if VCA is configured to this camera.

6.7 Spotter Text channels

When the text channel is opened, the below information is shown:

- Text channel name
- Time of the event
- Event name



6.8 Audio channels

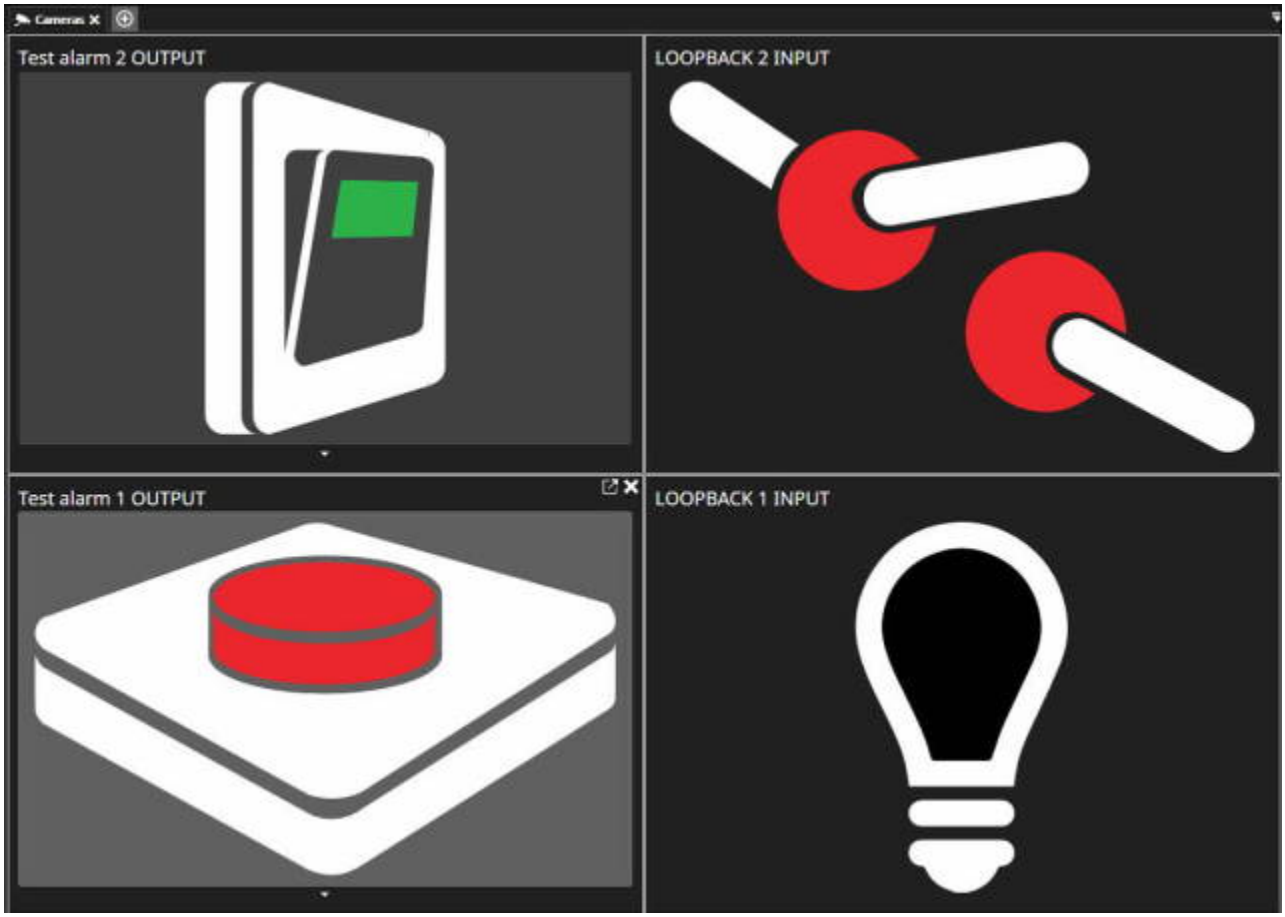
Audio channels have a little blue note symbol indicating that the channel is open.The channel opens automatically if it is added to the component panel.Audio channels have a similar pull-down control as outputs to control mute, unmute and volume.

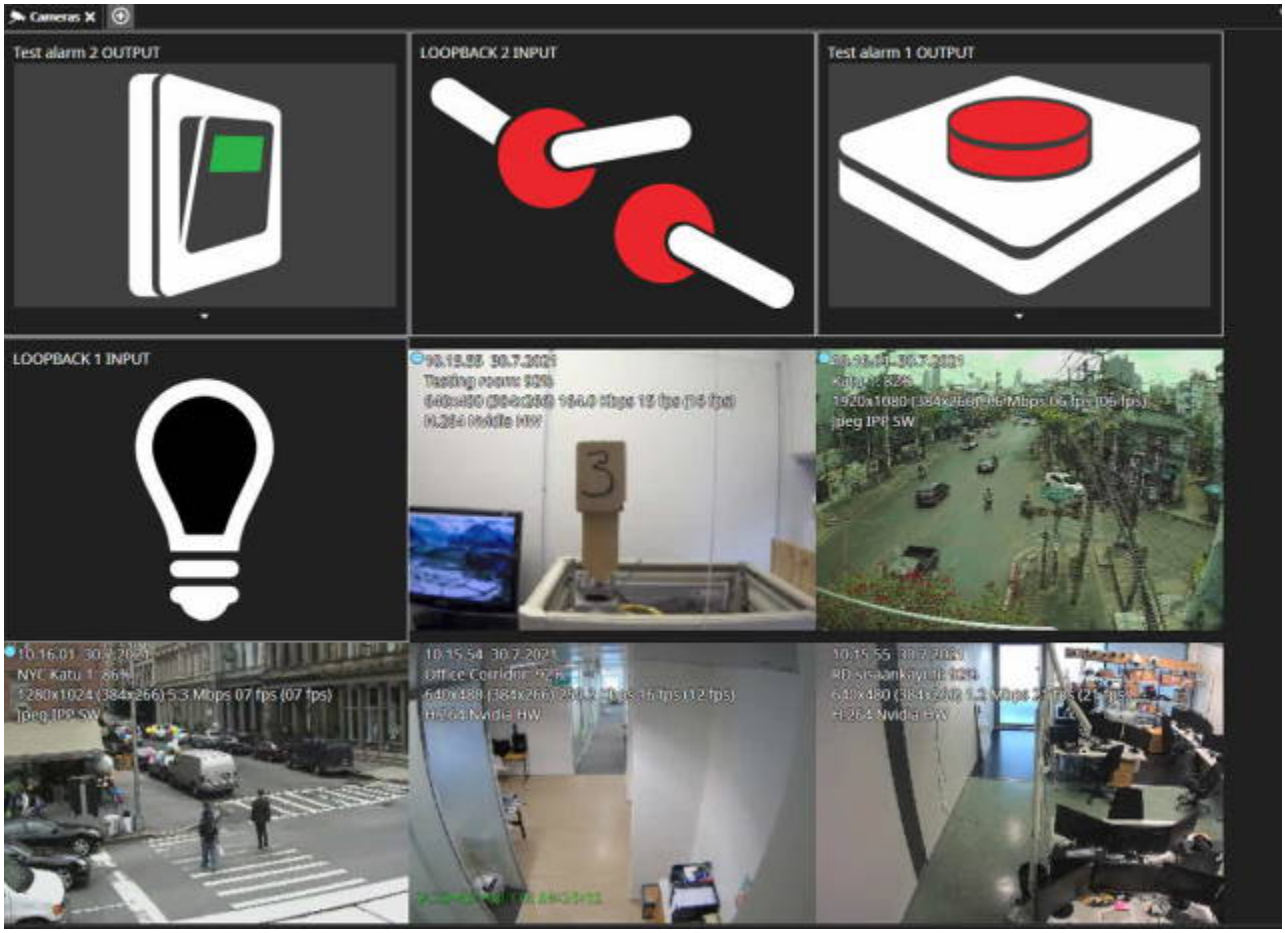
All component panel components, inputs, outputs and audios can be closed from the individual component close controls.

The whole component panel can be closed from the component panel close control.When the devices are on the grid cell, they can be closed via the usual way with the top right corner "X" control.

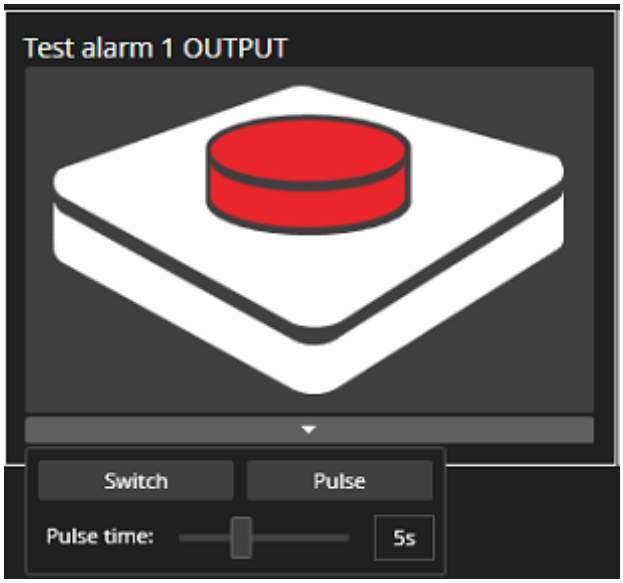
6.9 Spotter Digital I/O

The component panel width can be adjusted, and it can also be collapsed only to show the I/O control.When the I/O devices are added to the camera grid cell, they take over the entire grid cell.


Test alarm 2 OUTPUT
LOOPBACK 2 INPUT
Test alarm 1 OUTPUT
LOOPBACK 1 INPUT



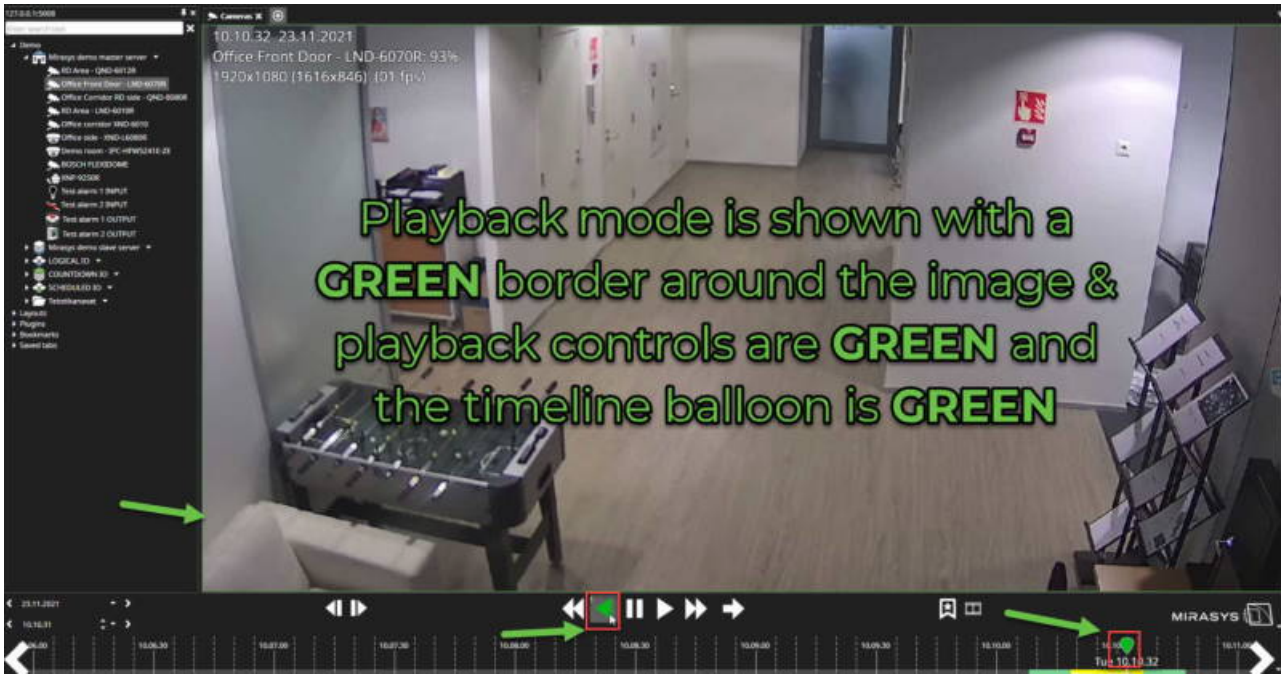
Outputs have a small pull-down menu that allows control of state switch, pulse and pulse duration.



Please note that output states can also be toggled from the device tree by clicking on the output control.The default action of the outputs is defined in the System Manager – Profiles section.

7 Playback mode

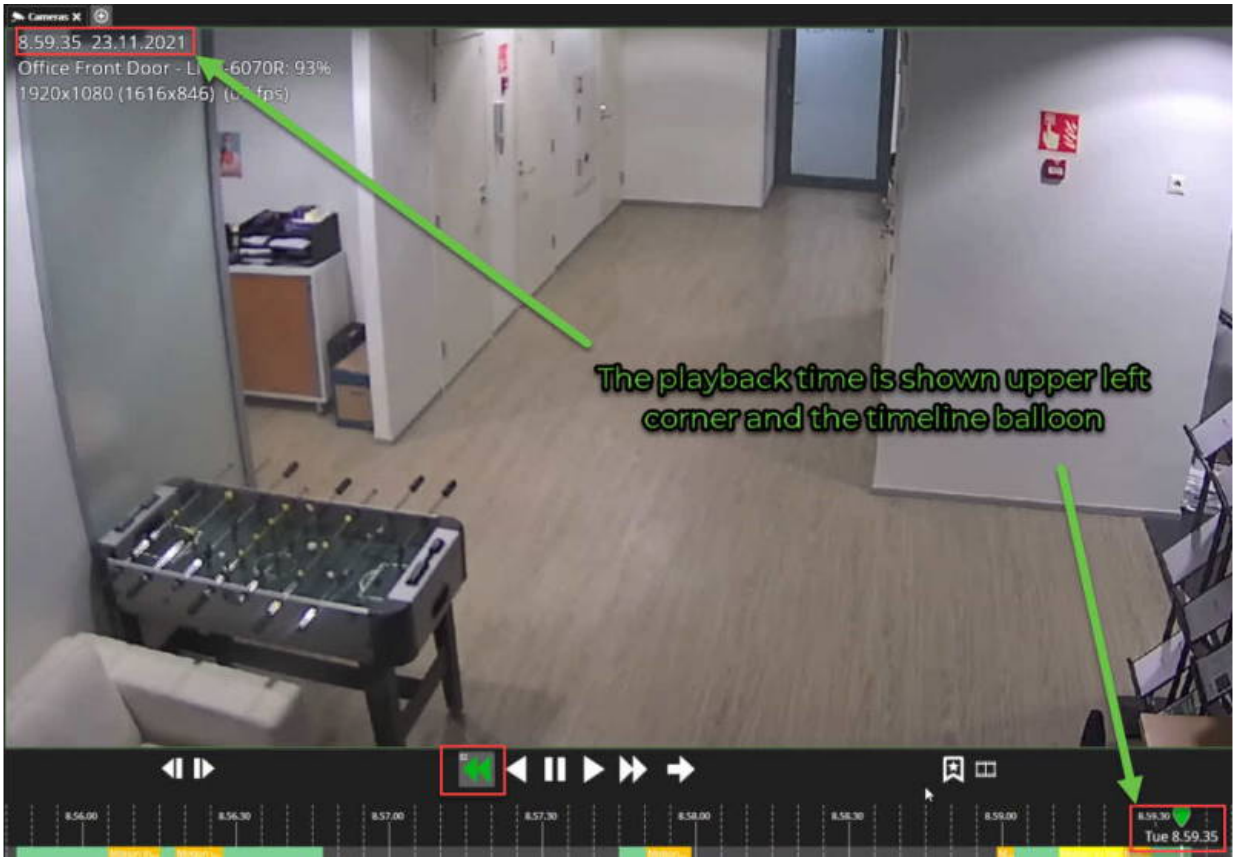
When the playback mode is used, Spotter shows always latest recorded time from those cameras, which the user has selected to the view



7.1 Start instant playback

1. Select camera or cameras from the device tree(double-click or drag to the work area)
2. Click the **Play backwards** button
3. Change playback speed with the mouse button


Cameras
10.29.03 23.11.2021
Office Front Door - LND-6070R: 70%
1024x768 (1024x768) 20 fps (12 fps)
Play backward

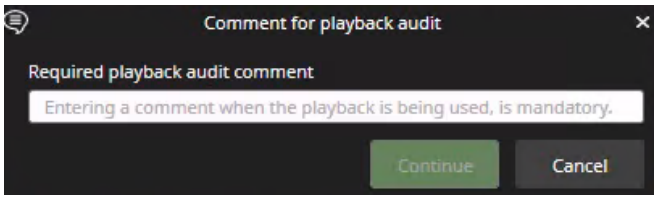


7.1.1 For users required to add a comment before playback mode

When a Playback audit comment is required, then in real-time mode, the StepBackward and StepForward buttons are disabled.

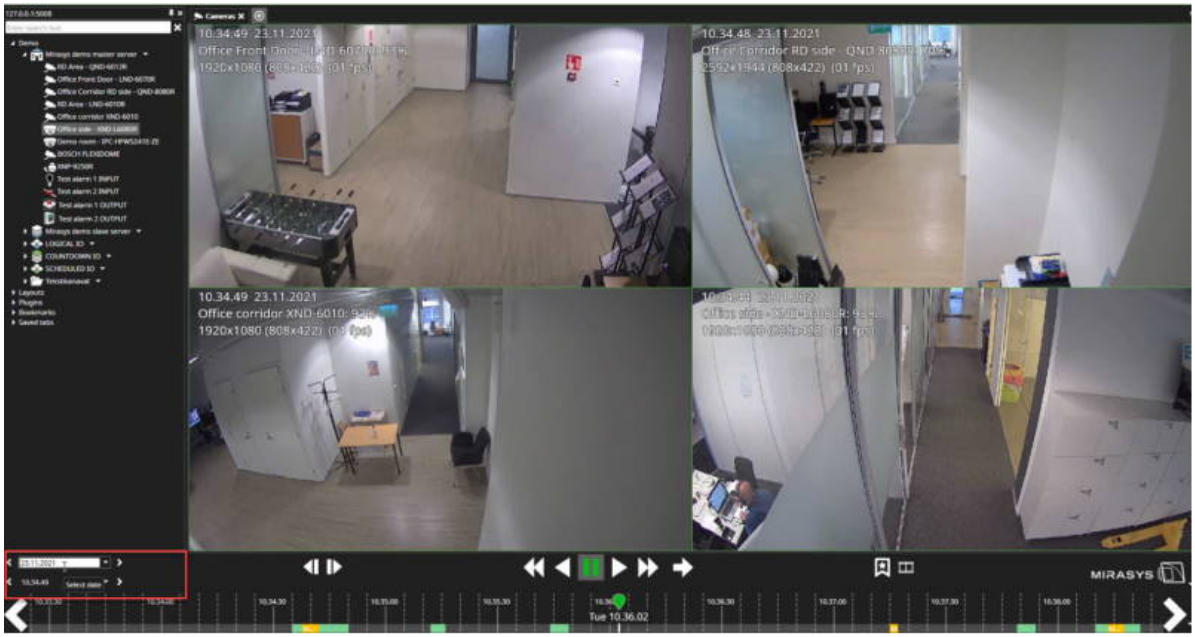
When a user adds a comment and moves to playback mode, the buttons are enabled again.

When loading a layout with streams in playback mode, a comment needs to be added by the user before the layout is loaded.



7.2 Playback selected time

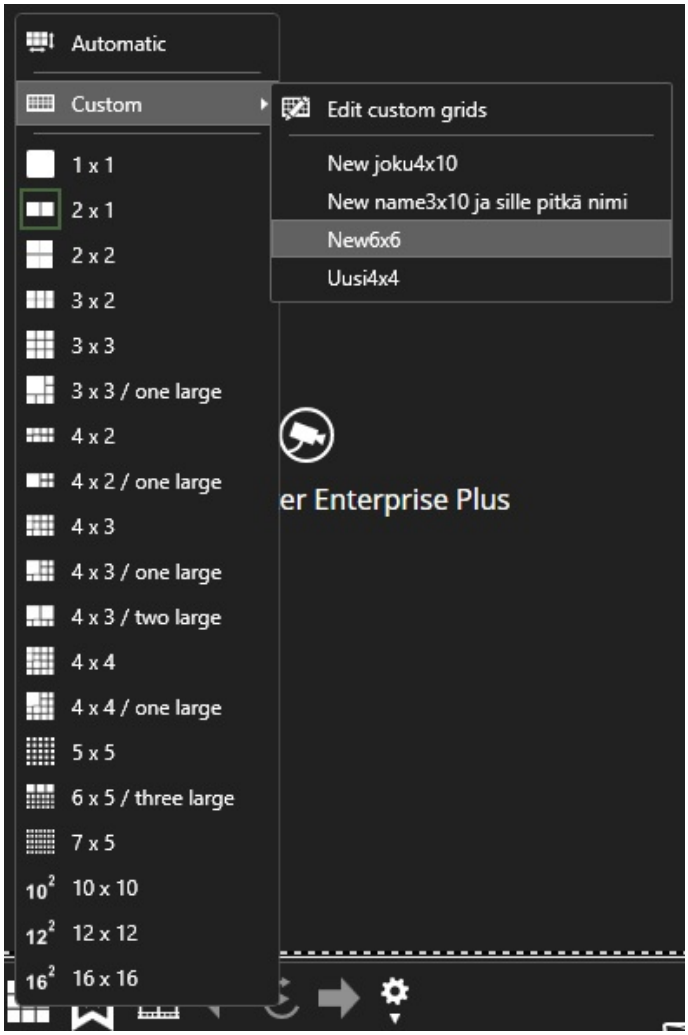
1. Select camera or cameras from the device tree(double-click or drag to the work area)
2. Use **Select date** or **Select time** to go to the needed time
3. Use the playback controls for the playback



7.3 Camera Grid in Playback Panel

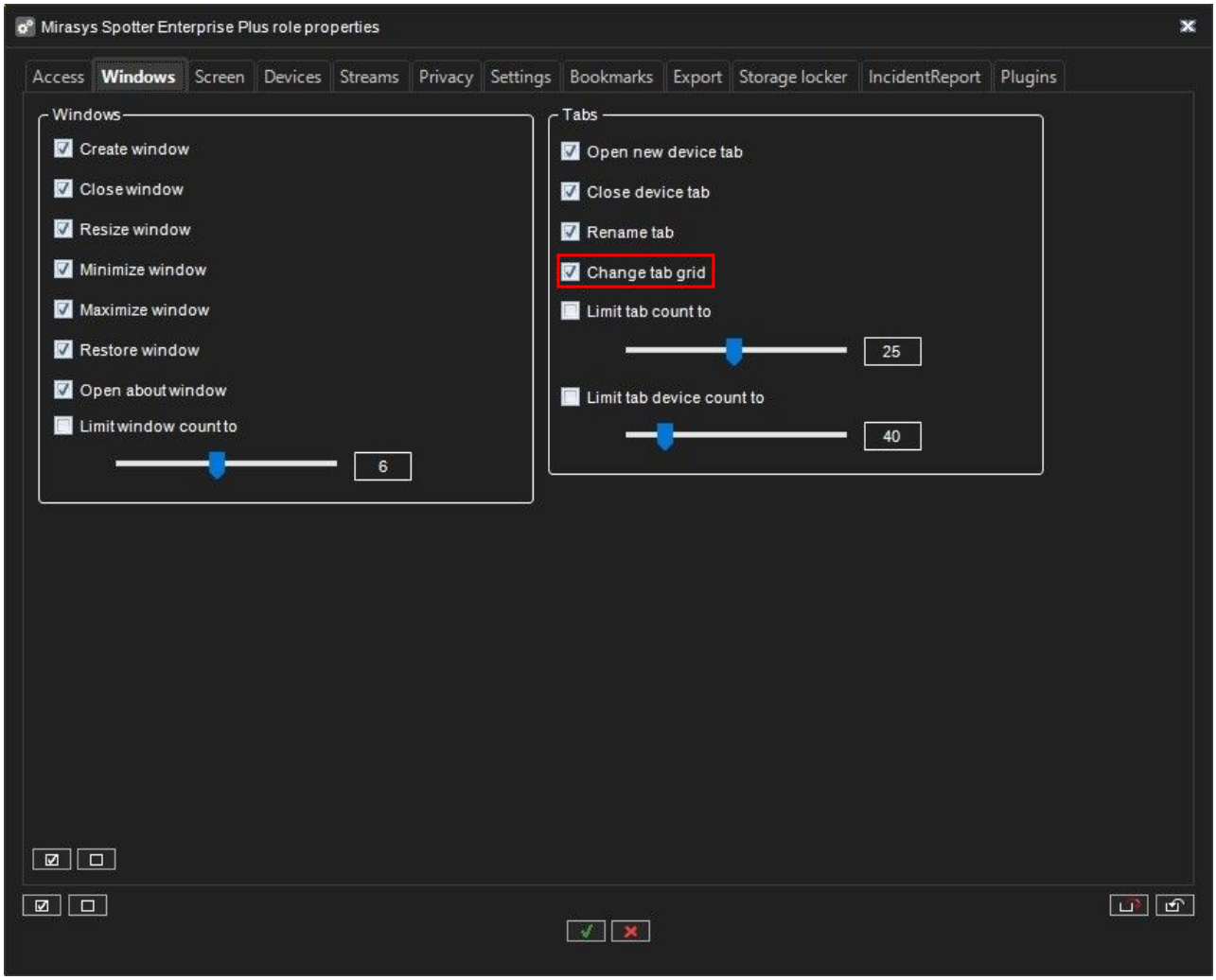
7.3.1 Spotter camera grid selection button

Spotter playback panel UI has a popup button to open the camera grid selection list.

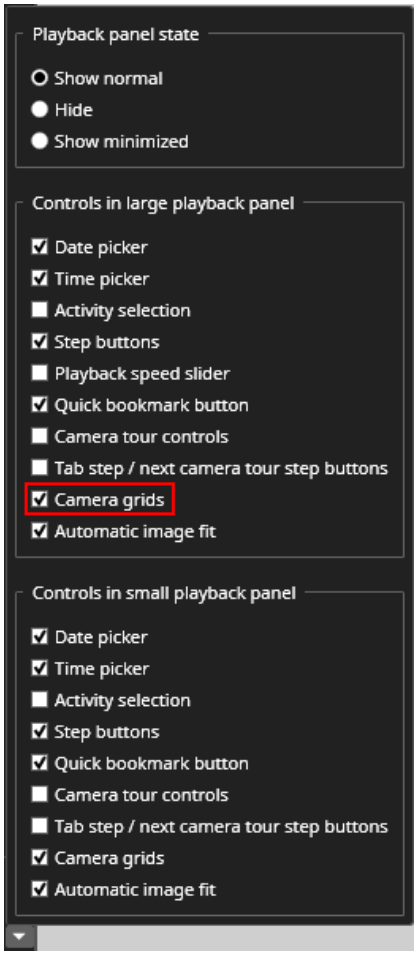


This button is visible if both following rules are filled:

The "Change tab grid" setting is enabled in user group Spotter roles.



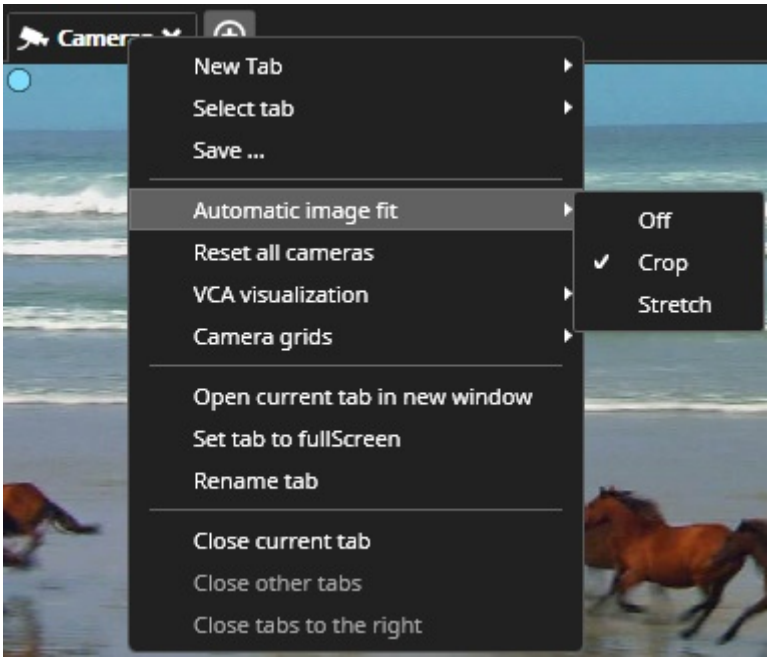
Camera grids are enabled in playback panel controls settings:



7.4 Image Fit in Playback Panel

7.4.1 Image fit

Image fit modes can be changed from the tab context menu:



Or from a button at the playback panel:

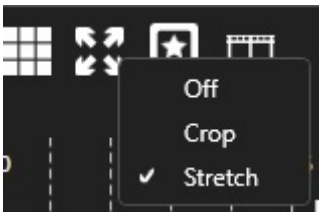
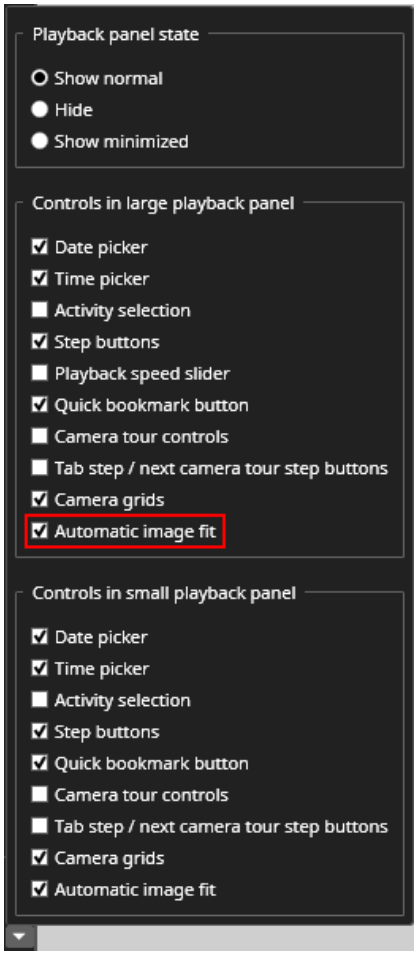


Image fit modes are the following:

- Off
    - Keep the image view scaling the same as the original image, and show the whole image at the view area.
- Crop
    - Try to keep the image view scaling the same as the original image, fill all available view areas and cut part of the image off if needed.
- Stretch
    - Change image scaling to stretch the whole image in the available view area.

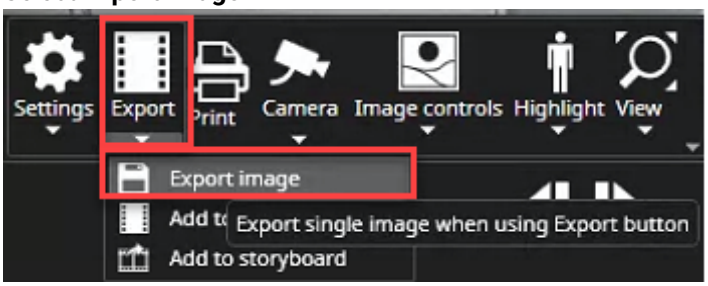
The image fit button is visible in the playback panel if it is enabled in the playback panel controls settings:


Playback panel state
Show normal
Hide
Show minimized
Controls in large playback panel
Date picker
Time picker
Activity selection
Step buttons
Playback speed slider
Quick bookmark button
Camera tour controls
Tab step / next camera tour step buttons
Camera grids
Automatic image fit
Controls in small playback panel
Date picker
Time picker
Activity selection
Step buttons
Quick bookmark button
Camera tour controls
Tab step / next camera tour step buttons
Camera grids
Automatic image fit

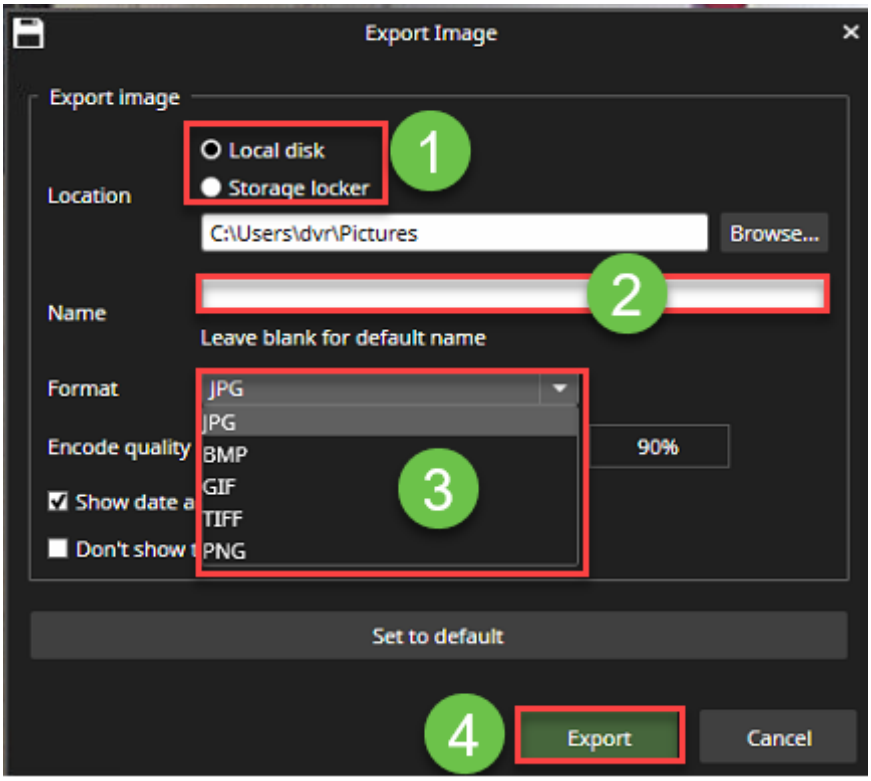
8 Export

8.1 Export image

1. Move the mouse cursor top of the image
2. Click **Export**
3. Select **Export image**



1. Select the location
2. Set name
3. Select the format
4. Click **Export**

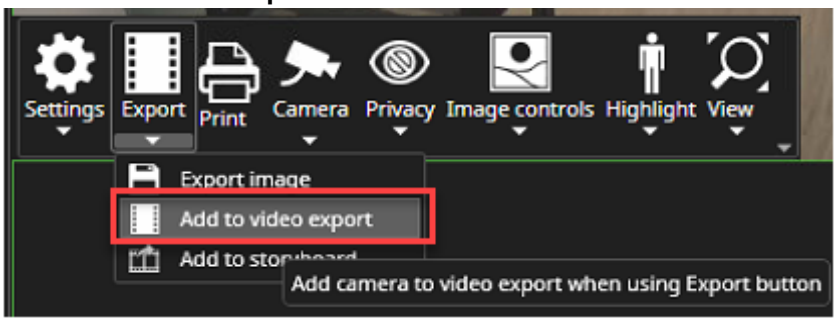


8.2 Add to video export

8.2.1 The user can create a media clip with the Spotter, which contains max. 8 cameras

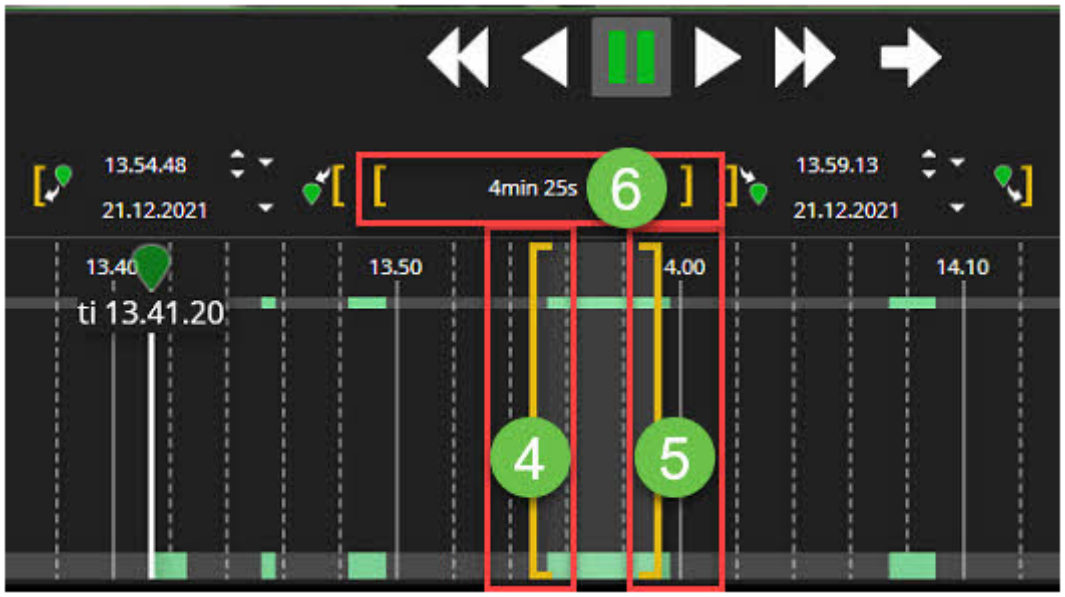
All devices, which are selected to **Add to the video export** area will be added to the media clip

1. Open camera toolbar from needed camera
2. Click **Export**
3. Select **Add to video export**



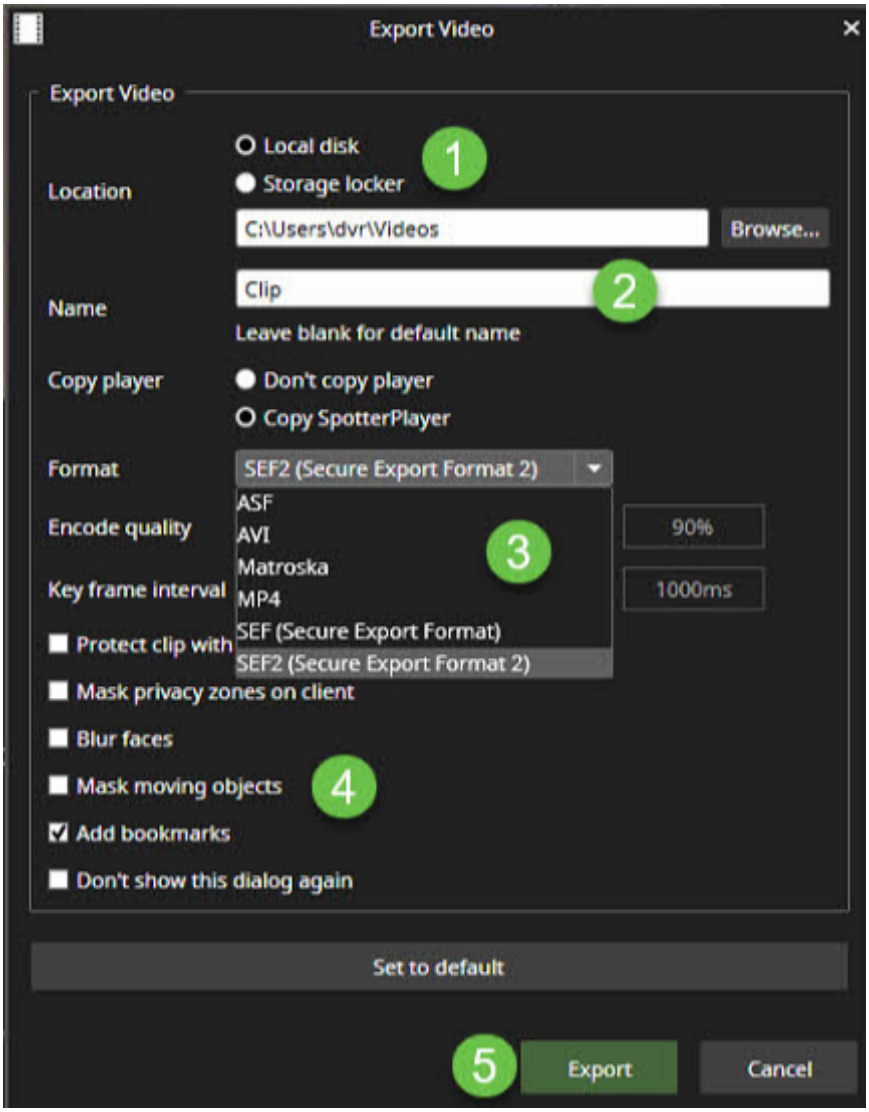
1. Set media clip starting point using **LEFT** yellow bar

2. Set media clip endpoint using **RIGHT** yellow bar
3. The Middle area shows the total length of the media clip



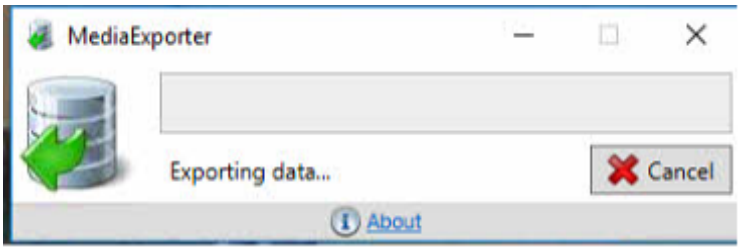
1. Select **Start to video export**

1. Select the location
2. Set name
3. Select Format
4. Enable all other needed options
5. Click **Export**

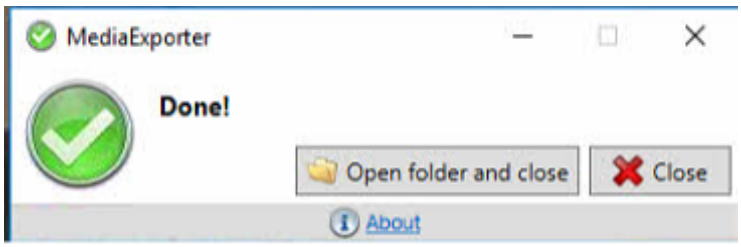


1. Click **I agree. Export will continue**

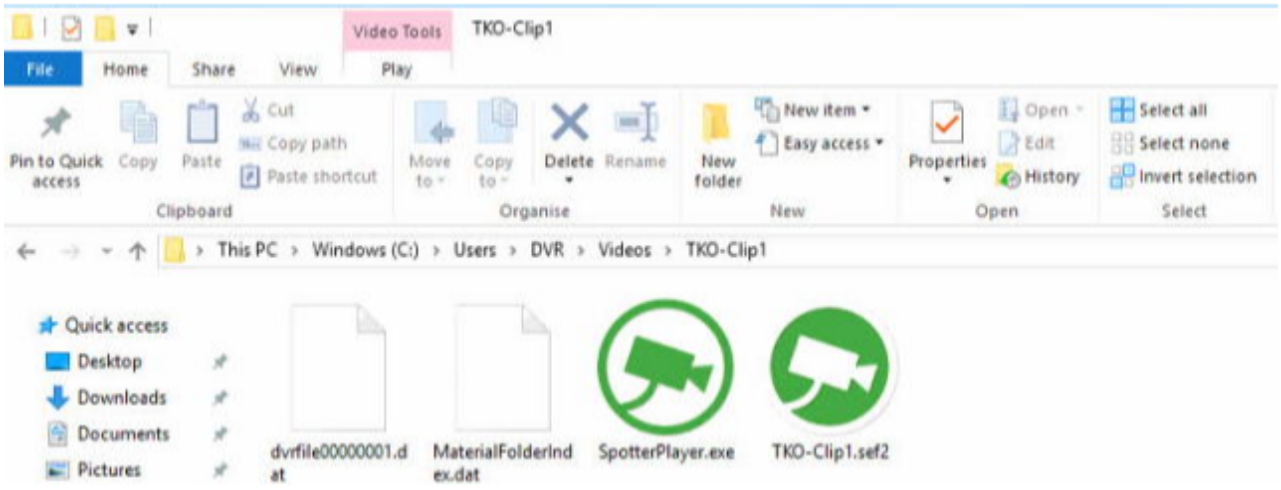
MediaExporter show exporting data process



When MediaExporter has finalized the video export, the user can access the location folder by clicking **Open folder and close**



The folder contains all necessary files and **SpotterPlayer.exe**



8.2.2 Supported export formats

- ASF
- AVI
- Matroska
- MP4
- SEF and SEF2

The fastest export file format is **SEF** (**Secure Export Format**). It can be viewed with **Spotter** or **SpotterPlayer**.

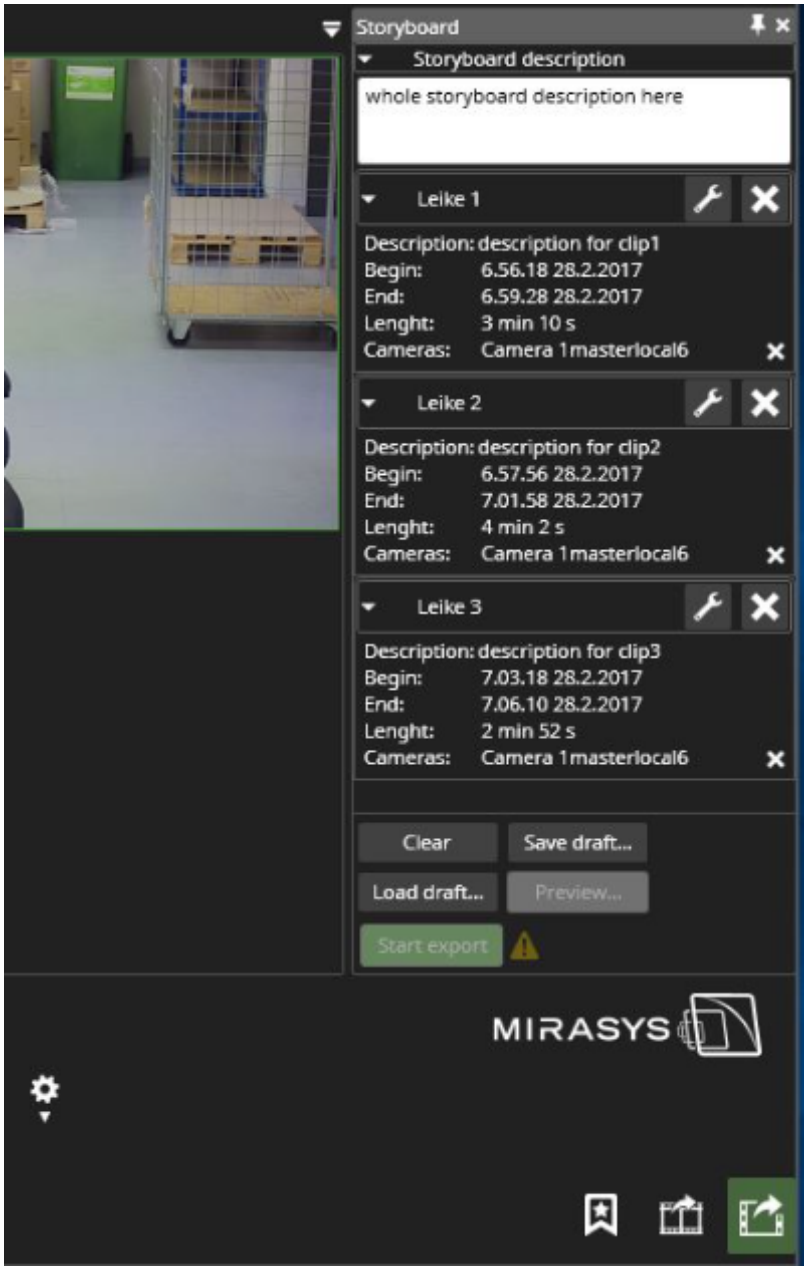
- SEF - video with subtitles audio, text data **(authenticity protected format)**
- SEF2 - video with subtitles audio, text data **(authenticity protected format)**
- ASF- video with subtitles audio, text data **(authenticity protected format)**
- AVI - video, audio
- MP4 (new in version 9.x) - video with subtitles

Using the **SEF2** enables:

- Protecting the video material with the password,
- Software side privacy zones in the export,
- Blur faces(The blurring needs to be enabled for the camera to be included in the export.)
- Mask moving objects(The blurring needs to be enabled for the camera to be included in the export.)

8.3 Add to storyboard

An essential feature of any video management system is creating authentic video export material for law enforcement authorities.



With Storyboard, it is possible to create a movie-like video export that makes it extremely easy for the recipient of the clip to view and understand instantly and accurately the chain of events. Storyboards can be viewed with the regular Spotter client application or the separate, standalone SpotterPlayer executable that is now exported as the default player for exported video.

Storyboard allows, for example, the following:

- I am creating a movie-like viewing experience from surveillance video material.
- Maintains complete material authenticity.
- View material in the Storyboard in sequential playback mode or an all-cameras real-time mode.
- Add clarifying comments and descriptions to activities.
- Viewer for control of displaying of comments as subtitles.
- Playback in continuous replay mode.

- Save drafts and share the Storyboard with other system users.

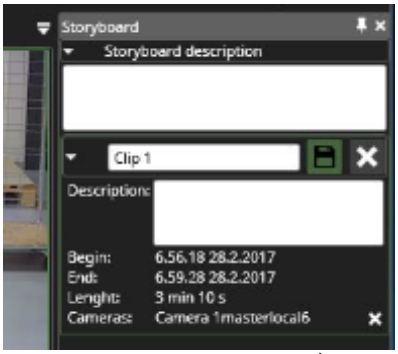
In addition to these, powerful features in the Spotter time slider make editing export clips very easy. These are explained in the section.A single Storyboard can contain a maximum of 63 camera streams.

8.3.1 Adding Clips to Storyboard

A storyboard is constructed from individual clips.These clips can contain up to 8 cameras, but for the most "movie like" experience, it is preferable to use a single camera per clip.The recommended way to start storyboard creation is to find the camera and event that will be the first clip in the storyboard and adjust the first clip export start and end times usually with the export mode activity panel.

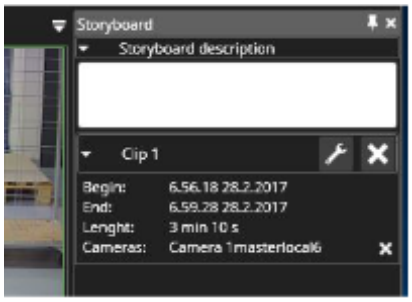
After this, add the clip to the storyboard with the "Add clip to storyboard" button.

This adds the clip as the first clip.

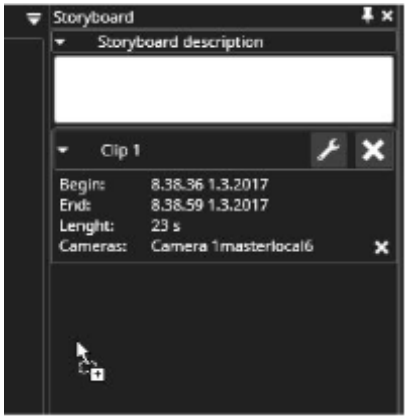


The clip is still in edit mode (white text boxes and the "Save" icon).The clip name or description can be edited. Any change in the clip start or end times or camera content is still reflected in the clip contents.If no editing is needed, press the "Save" button.

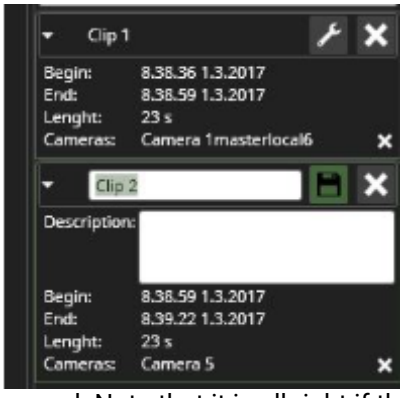
Now the clip is saved (texts change to non-white), and the following clip can be added to the storyboard.



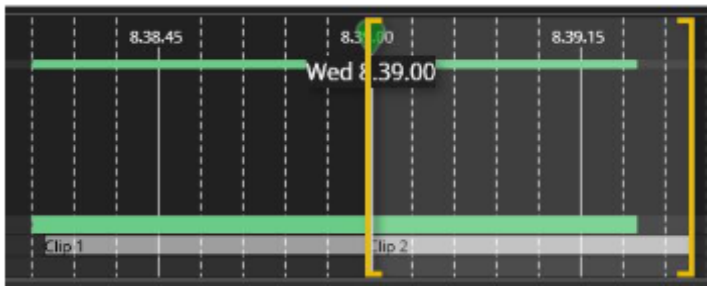
The most convenient way to add the following clip is to find the camera, open it to the work area, and drag it below the first clip in the storyboard.



This will set the next clip start time to match the end time of the previous clip and copy the clip duration.The clip opens in edit mode, and the start and end times can be fine-tuned.



The clips are highlighted in the activity panel. Note that it is all right if the clips overlap.



This same process can be repeated to add more clips to the storyboard. When it becomes difficult to drop a new camera to the list, the recommended way is to drop the new camera to the scroll bar.This will add the

camera as the last clip. If a camera is dropped on top of an existing clip in the storyboard list, it will be added to that clip as an extra camera.

There are other ways to add content to the storyboard:

- With the camera toolbar export control.
- By dragging and dropping from different search result screens and the device tree.
- With a right-click option from the alarm list.

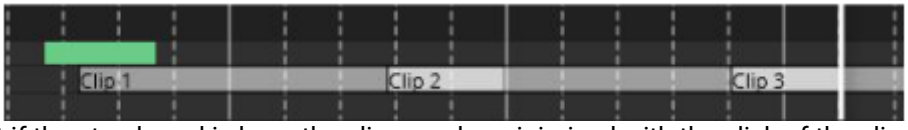
8.3.2 Editing Clips In Storyboard

Clips appear in the storyboard, always in time order, ordered by the clip's start time. A clip can be opened for editing later by pressing the "Edit" button.

When a clip is opened for editing:

- Any other clips in edit mode are automatically saved.
- The name and description are editable and changed to white to indicate this.
- The export time slider is populated with the devices from the clip.
- The start and end times are editable and can be adjusted.
- Devices can be added to the export time slider, and saving the clip will add them to the storyboard.

If someone has created a bookmark for the clip time that is not already in the clip, editing the clip and saving the clip will add the bookmark to the storyboard.If the start time is adjusted so that it is now earlier than before and before another clip, the clips are rearranged in the storyboard list automatically.The start and end times of the clips can overlap. The start time of a later clip can be earlier than the end time of the previous clip.The user has several options for playback, but in the default setting, the clips are played sequentially, the first one to the end before the next one starts, even if the clip times overlap.The overlapping times are indicated in the time slider by a slight difference in the colour of the clips where they overlap.

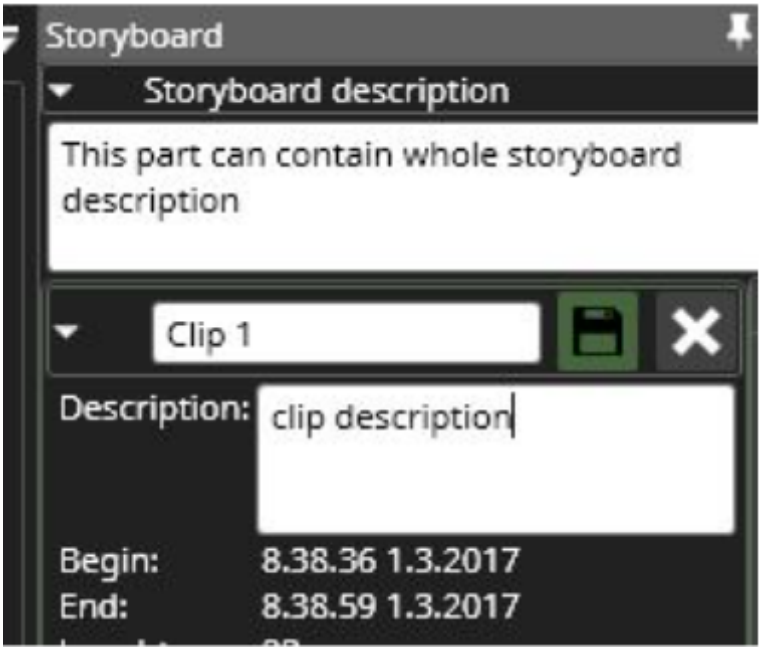


Please note that if the storyboard is long, the clips can be minimized with the click of the clip title.

8.3.3 Descriptions And Comments

The storyboard has several types of descriptions:

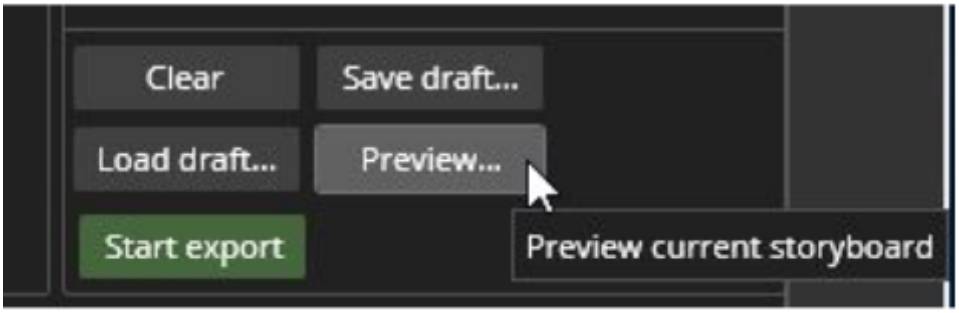
- Whole storyboard description
- Individual clip descriptions
- Bookmarks



The descriptions are shown to viewers of the storyboard as subtitles.The timing of showing the descriptions is based on the start time of the clip or bookmark.Description texts are also exported in HTML text format to the target folder for further use for the target audience.

8.3.4 Preview

During the construction of a storyboard, it is possible to preview the storyboard by pressing the "Preview" button.This opens a new Spotter window where the draft storyboard can be previewed.After previewing, it is recommended to close the window and make any desired adjustments to the storyboard in the original Spotter window.



Preview opens in a unique Spotter window, first to full screen, but the window can also be resized.

8.3.5 Drafts And Sharing

It is possible to save storyboard drafts by pressing the "Save draft…" button.

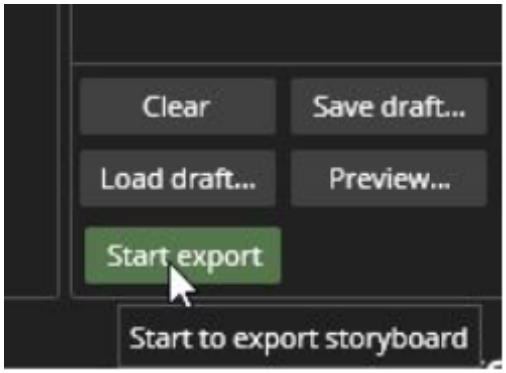
This will open a dialogue where the user can enter a name for the draft storyboard. If there are many users interested in draft storyboards, it is recommended to save the storyboard to a shared location, such as a network drive. Then the draft storyboards can be opened by anyone who has access to the same profile used to generate the storyboard draft. The location can be defined in settings. The "Load draft" button can be used

to load a draft storyboard.
Please note that closing the Spotter window or exiting Spotter will clear any unfinished and unsaved storyboard contents.

8.3.6 Settings

Settings for the storyboard are described in Storyboard Settings (see page 226).

8.3.7 Exporting Storyboards

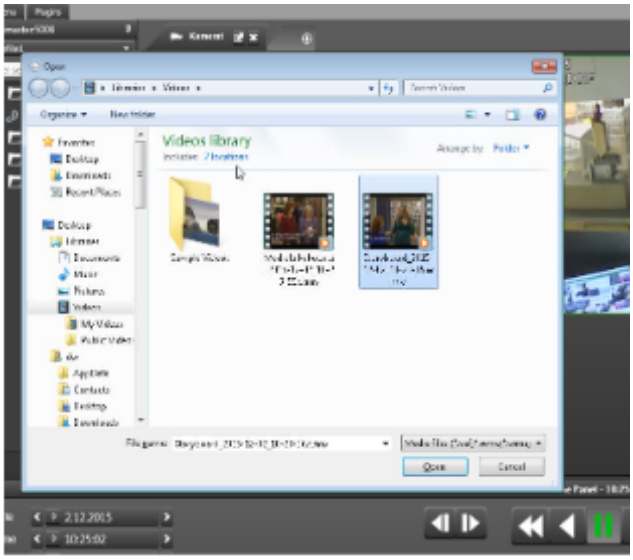


When the storyboard is ready to be exported, the user can press the "Start Export" button. This will open a dialogue where the location and name can be adjusted.If no information is given, a default location and default name will be used. Please note that large storyboards can take some time to export. It is also possible to export the individual video clips from the time slider button.The SpotterPlayer application will also be exported to the target folder if it is not already there. In addition to the media, the HTML text attachment with a summary and details of the storyboard is also exported to the target folder.

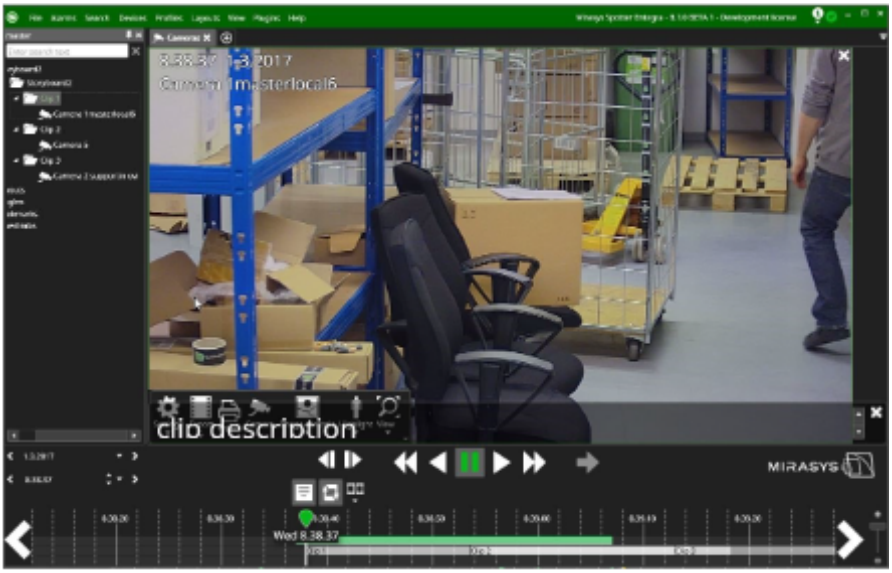
8.3.8 Viewing Storyboards

A storyboard can be viewed with Spotter or with the SpotterPlayer.Media can be opened by pressing the F4 key or by "Open media" from the File menu or by double-clicking the storyboard file in the file system.

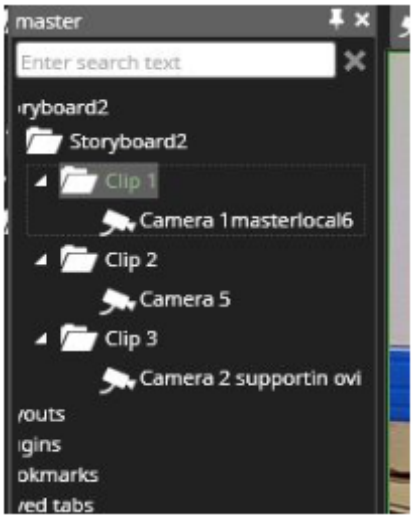
Then the storyboard can be opened from the file selection dialogue



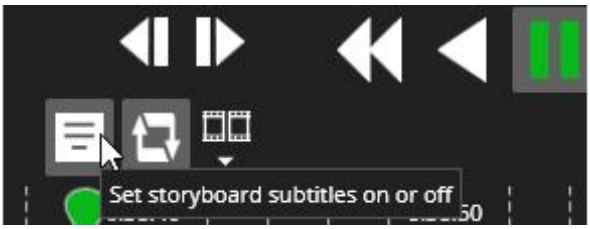
Media opens in "Media view" mode with a green window title.



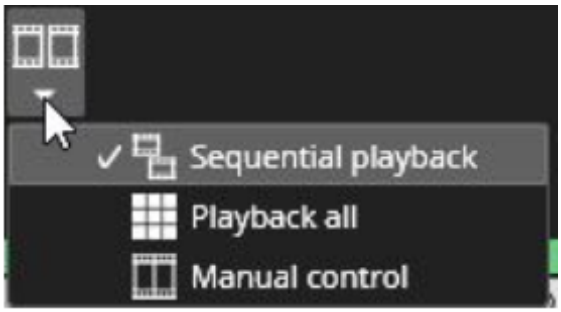
The clip will default open with the comment subtitles on and the player in "Repeat" mode. The individual clips are seen in the device tree area.



The repeat and subtitle settings and the playtime settings can be changed from the buttons next to the playback controls.

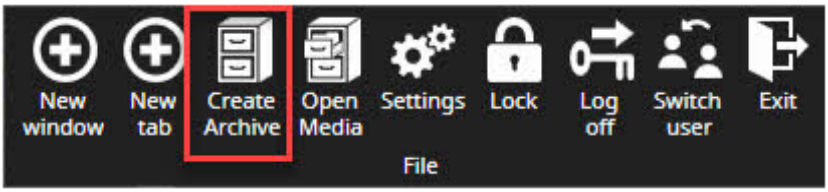


8.3.9 Other Viewing Modes



The sequential mode is the default playback mode. It plays the clips in time order, ordered by the start time of the clip. It plays each clip entirely before moving to the next so that the time can jump backwards in this mode.The user can switch the playback mode at any time. If he switches to "Playback all" mode, all cameras in the storyboard are opened.Note that when the user starts to play in this mode, the time does not jump backwards when clips overlap, but the storyboard is played in real-time. In the manual mode, no camera is opened or closed automatically, and the user can choose which camera to open from the device tree.

8.4 Create Archive

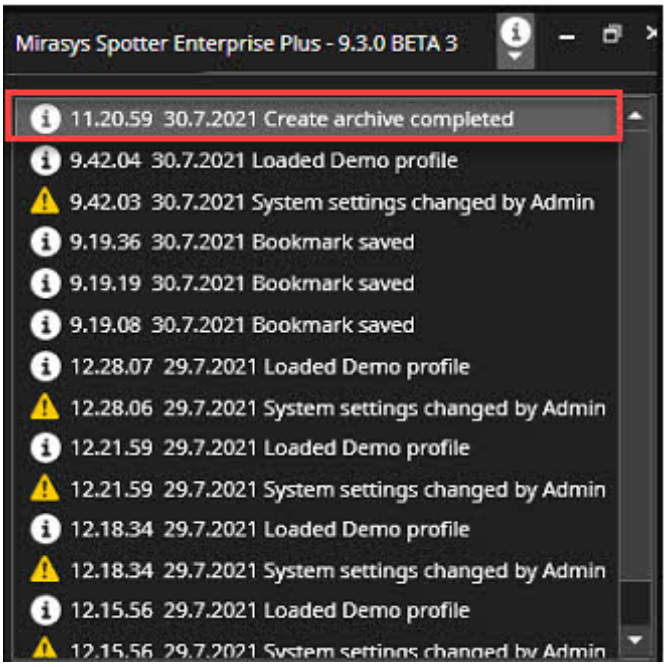


The archive is a tool for material backup and copying a larger amount of the material from multiple cameras. Archived material can be opened with the Spotter or SpotterPlayer

Archive creation is only allowed if the archiving feature is enabled in the license.

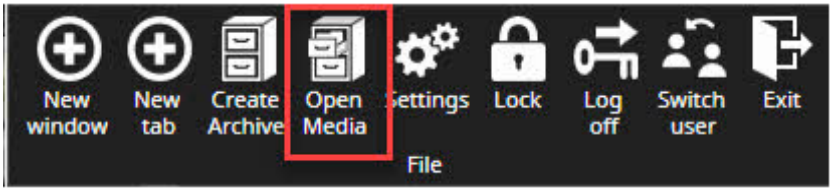
1. Set name of the archive
2. Set password protection, if needed
3. Set the location
4. Set length of the archive
5. Select archived components
6. Click **Create**

When the archive is done, you will see a notification in the UI upper right corner.

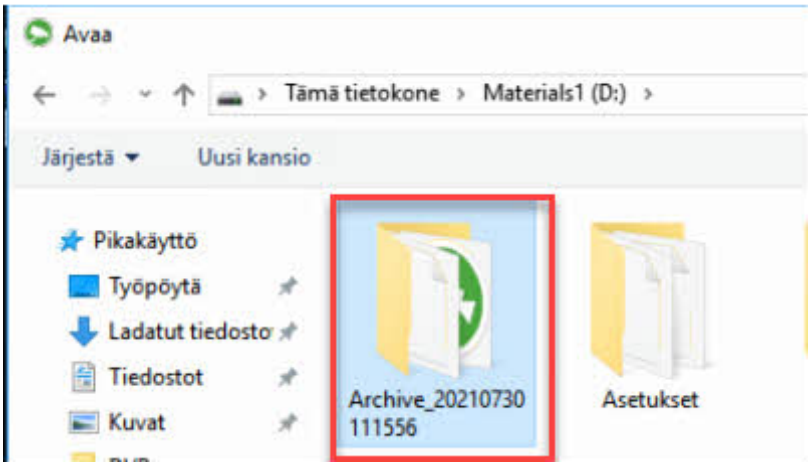


8.5 Open Media

Archives or video clips are opened by the F4 key or the File menu “Open Media” option.



1. Click Open Media
2. Browse the location of the clip or archive



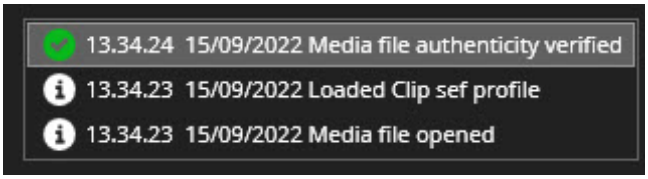
3. Select archive file or clip(**SEF**)

8.6 Media file authenticity verification

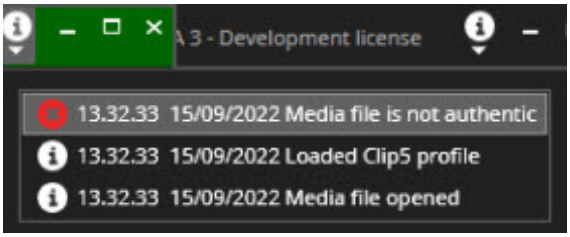
8.6.1 Authenticity verification

The material authenticity is automatically verified when exported format SEF, SEF2, and ASF are played with the Spotter Player or Spotter.

If the media is authentic, then the Spotter Player and Spotter are shown a notification: **Media file authenticity is verified**



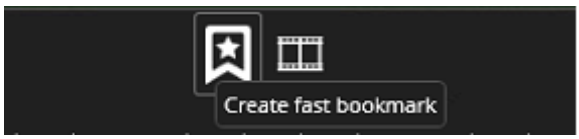
If the media is not authentic, then the Spotter Player and Spotter are shown a notification: **Media file is not authentic**



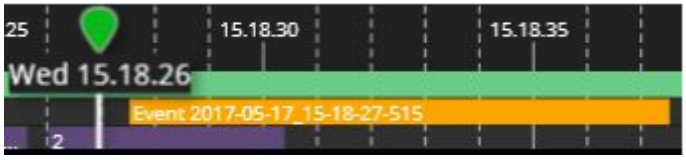
9 Bookmarks

9.1 Creating a bookmark

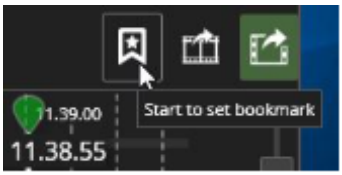
A bookmark can be created quickly by pressing the **Create fast bookmark** button or with the keyboard combination Ctrl+Alt+B.



This will create a 10-second-long bookmark to the position of the playback indicator with the content that was open on the tab where the button was pressed.



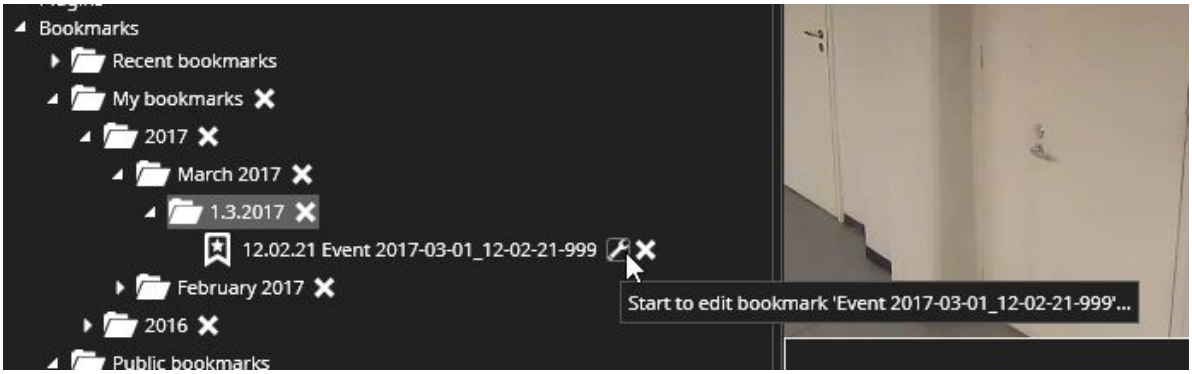
A second way to create a bookmark is to take the content to the export mode activity panel and then click on the "**Start to set bookmark**" button.



9.2 Editing a bookmark

The bookmark can be later edited if desired.

1. Open Bookmarks from the device tree
2. Select needed bookmark and click **Start to edit bookmark** icon

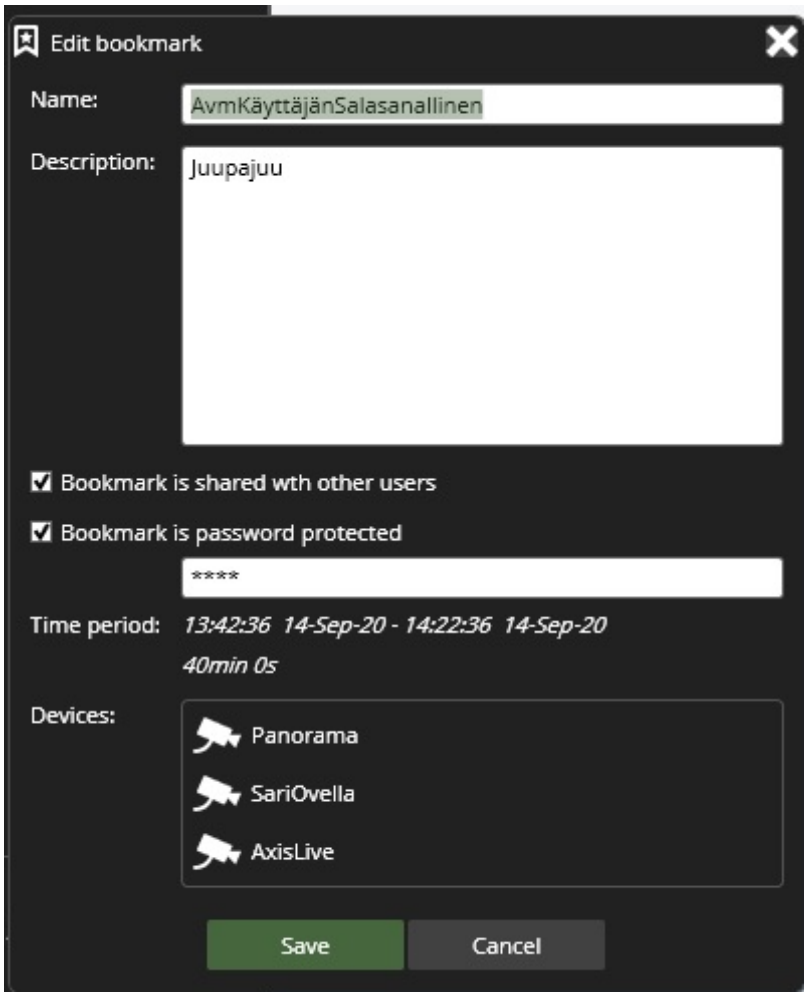


The bookmark editing view is a separate dialogue.

You can edit values:

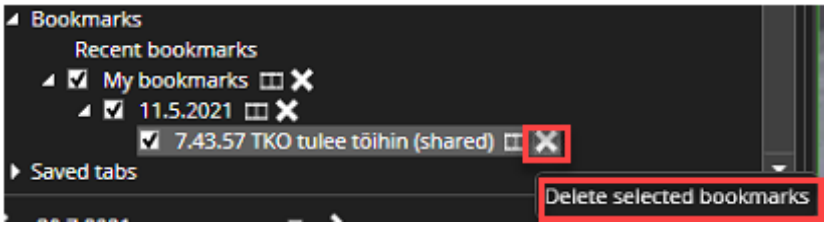
- Name
- Description
- Bookmark is shared with other users
- Bookmark is password protected

When you have finalized the modification, please click **Save**



9.3 Deleting a bookmark

Bookmarks can be deleted one by one or by folder with the ”X” control in the device tree.



The bookmark menu will show which bookmarks have been shared with other users.

9.4 Bookmarks in the timeline panel

If so configured, bookmarks are displayed on the timeline panel and can be accessed also from there with a right mouse click.

Also, if other users have shared bookmarks, the user who did the sharing is shown in parenthesis after the bookmark title.

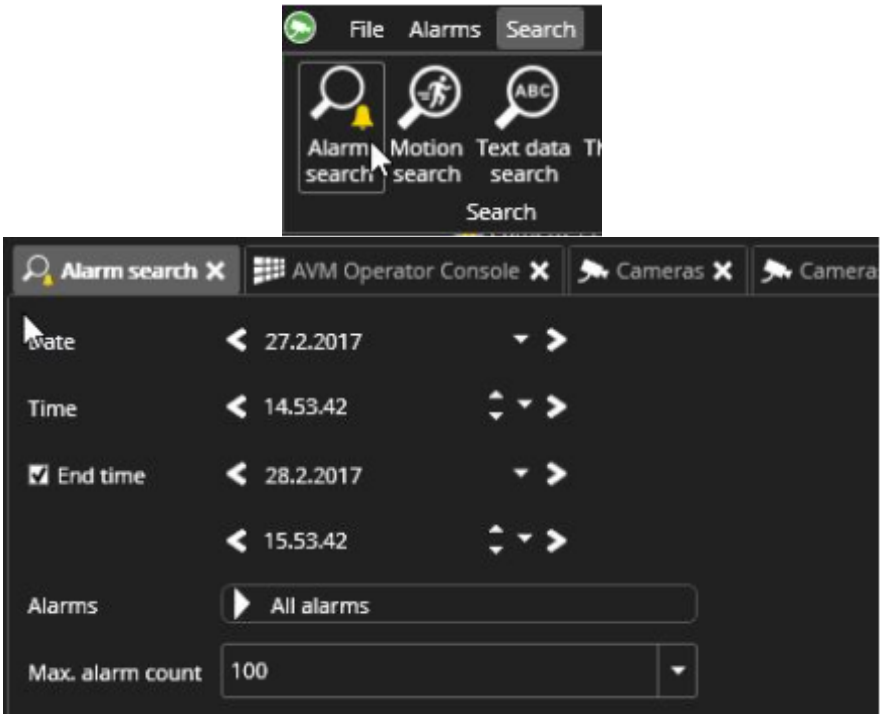
10 Search Tools

10.1 The search tab contains multiple search tools:

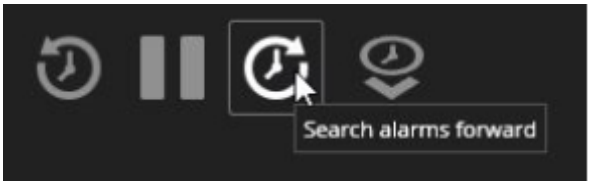
- Alarm Search
- Motion search
- Person search
- Text data search
- Thumbnail search
- Watchdog Event Search

10.2 Alarm Search

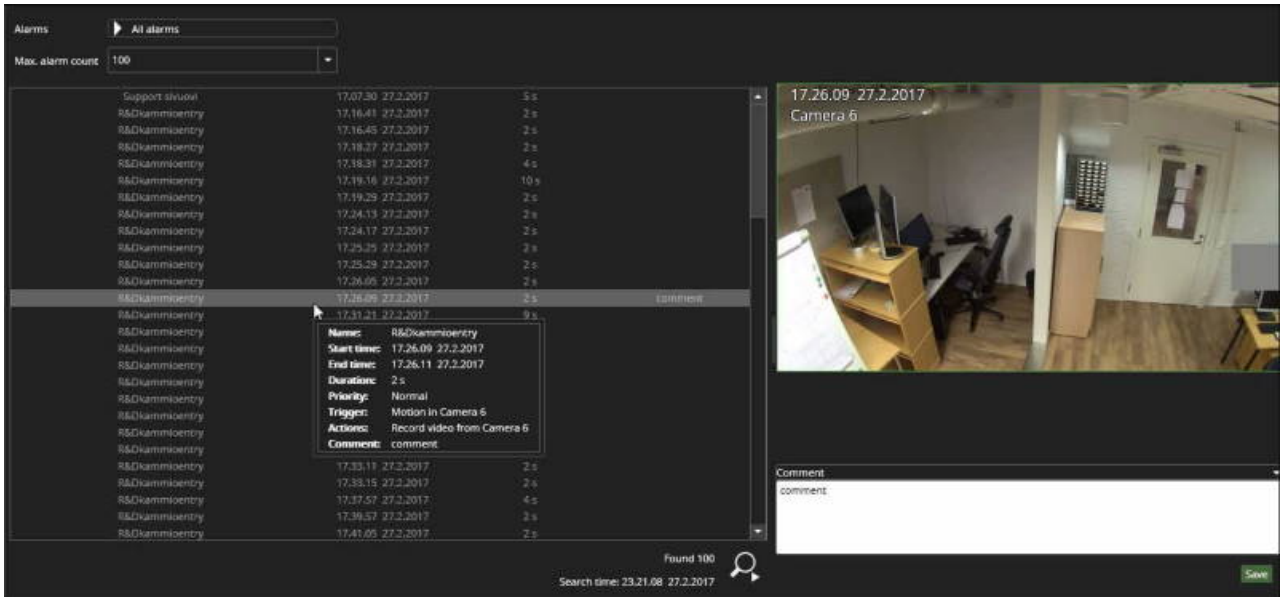
Alarm Search can be opened from the" **Search**" menu.



The alarm search tab is a separate tab plugin. There are options to set the alarm search start time with Date and Time selections on the right side of the alarm search tab.Below the Time Settings, there is an alarm pull-down list. It contains all alarms that are included in the selected profile.The user can search for one alarm or several alarms. There is also an option to search for all alarms.On the right side of the alarm search tab, there are buttons to start the actual search. There is a search backwards and search forward button with a clock icon.The search goes backwards or forwards from the set time. Next to the search backwards and forward buttons, another button searches for the most recent alarms.



When a search is running, the pause button between the search backwards and search forward becomes active, and the user can stop or pause the search.After alarm search time and date searches are changed, the last found item becomes the new time.This way, the user can repeat the exact search further if necessary.Alarm results are displayed in a list that shows the alarm name, alarm start time, duration and comment.The user can sort the list by clicking on the title fields.



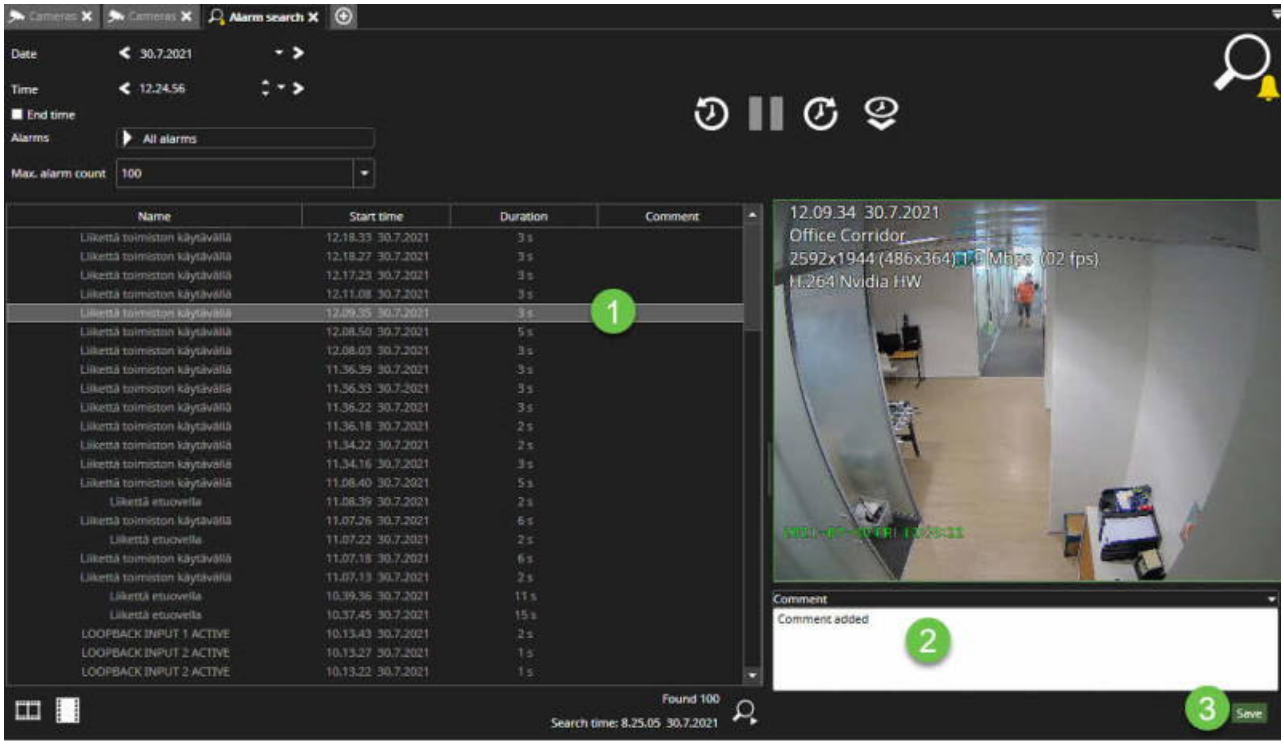
Selecting a single alarm shows detailed information of the alarm in a tooltip.When an alarm is selected, the cameras and other devices mapped to it are displayed in the alarm preview field to the right of the result list.The playback controls can be used to review results. Each click will refresh the contents on the right.The tooltip shows the name, start time, end time, duration, priority, trigger, action and alarm description and alarm acknowledgements if these are set to alarm and the comment.Double-clicking on an alarm occurs in the list, opens up the alarm in the alarm view tab.

10.2.1 Commenting alarms

Comments can be added to alarms in the alarm search view.

1. Select alarm from the list
2. Click with the mouse in the comment field below the preview area, write the comment, and press "Save".
3. Click **Save**

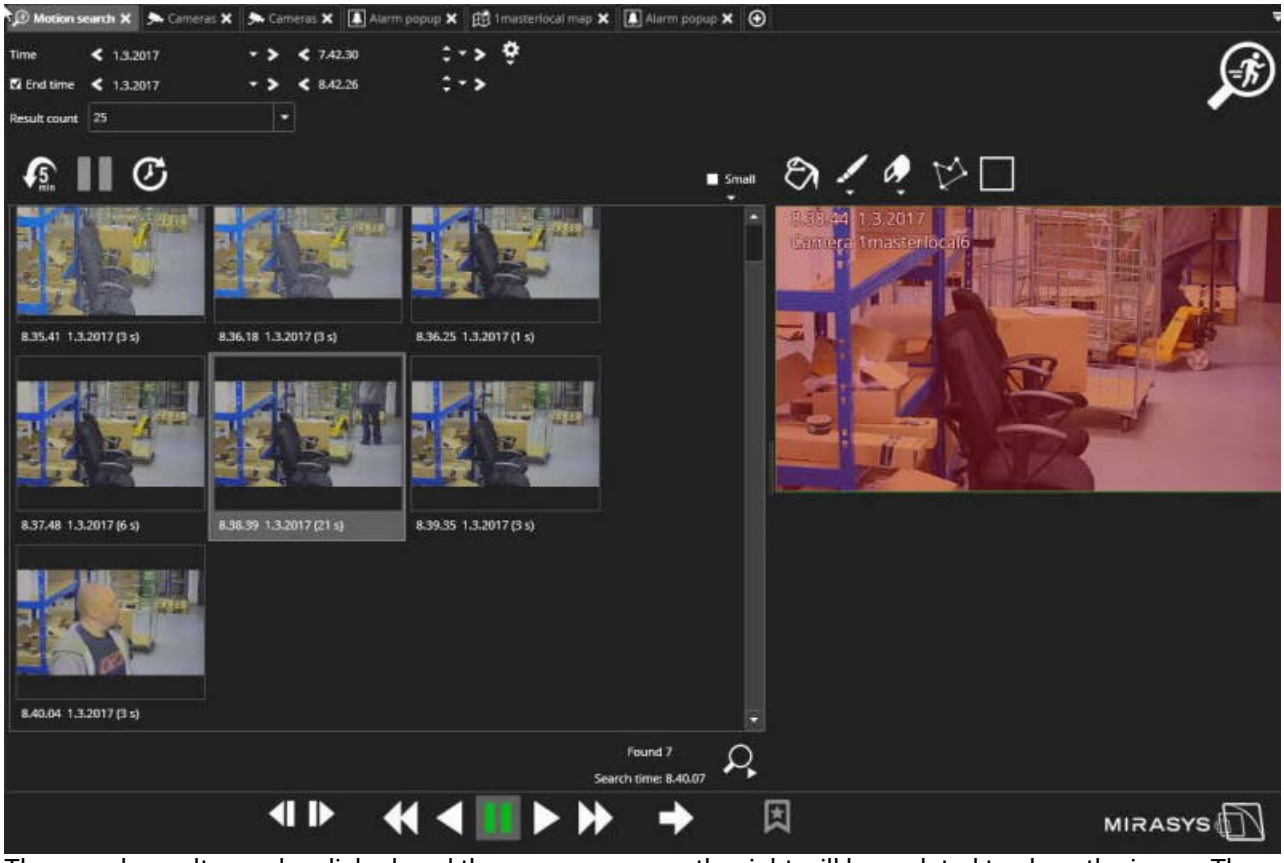
Another way to add a comment is to start writing the comment after selecting the result list's alarm. In this case, the Enter key will save the comment.



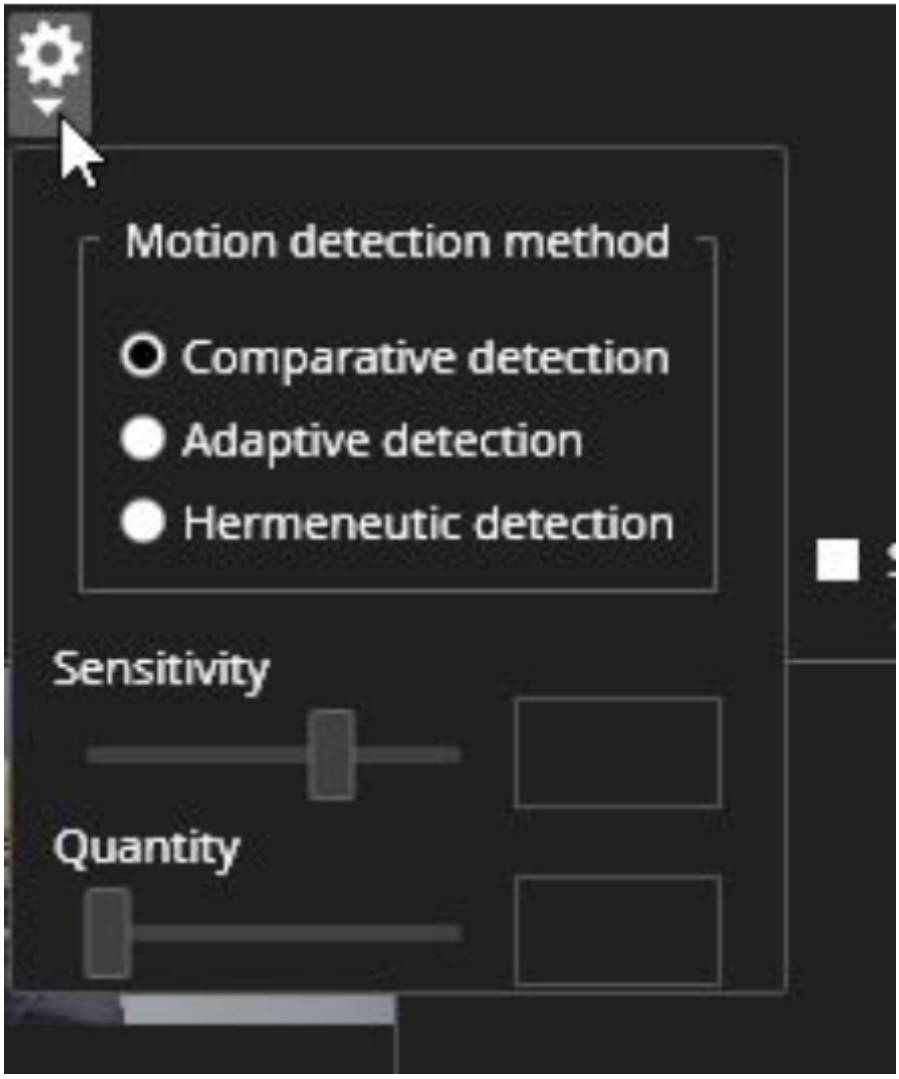
The comment is displayed on a single line in the result list and a separate Comment field below the alarm component preview area.This way, it is possible to use the Enter key to enter newline characters.

10.3 Motion Search

With the Spotter Motion Search plugin, the user can open a new tab and select Motion search.A camera can be selected by double-clicking a camera in the device tree or by dragging and dropping it to the Motion search tab. Motion search works only if camera playback is allowed.



The search results can be clicked, and the camera area on the right will be updated to show the image.The playback controls can be then used to review the event. It is possible to play all results in sequence.
The playback will jump to the following result at the end of the previous one.The search settings can be adjusted with the "Settings" button.

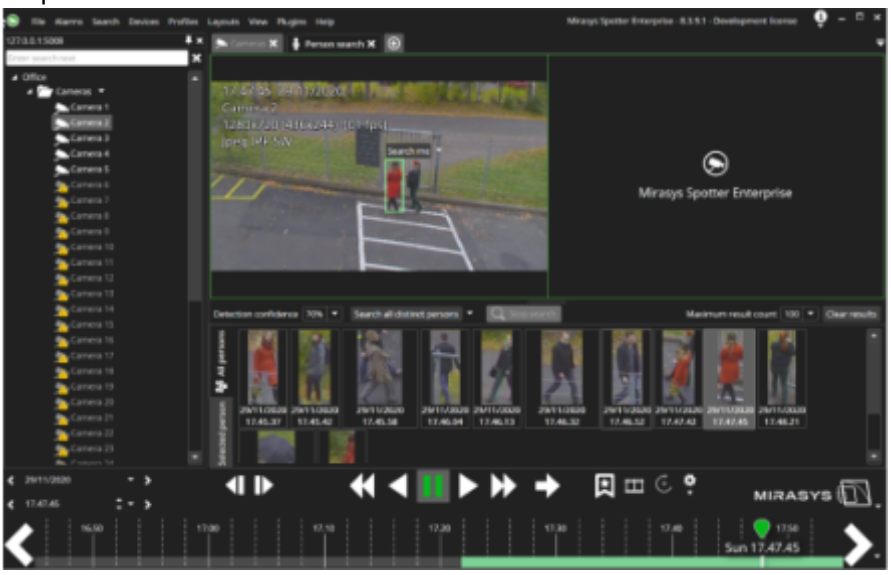


Comparative detection:	For stable indoor conditions
Adaptive detection:	For outdoor conditions with changing light levels
Hermeneutic detection:	A sophisticated method for environments with image "noise" (such as heavy weather). Requires more system resources than other methods.

If the user wants to search for more results, there is a "Search more" button in the lower right corner. Search continues from the time of the last found item.

10.4 Person search

- Requires license



10.4.1 There are three modes

1. Playback mode: all persons are detected (this is the default mode)
2. Person search mode: the selected person is searched from played videos
3. All persons search mode: search all persons, try to display the same person only once

10.4.2 Thumbnails

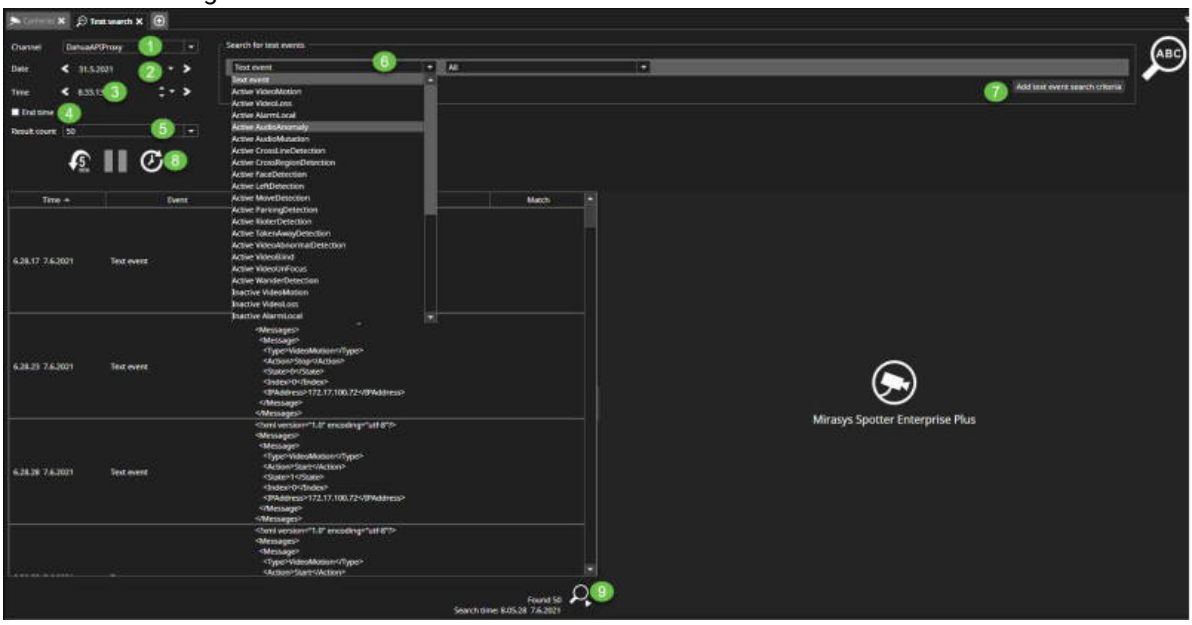
Found persons are shown in a thumbnail list. There are separate lists for all persons and selected person search results.

- Thumbnail mouse click (or Enter key) shows the thumbnail location in the video
- Thumbnail mouse double click opens the thumbnail video playback in the new tab

10.5 Text data search

1. Select channel for the search
2. Select the search start date
3. Select the search start time
4. Select the search end time, if needed

5. Select result count(default 50)
6. Select searched event
7. Add text event search criteria, if needed
8. Start text search
9. From the lower right corner can be found the total amount of searched events



10.6 Thumbnail Search

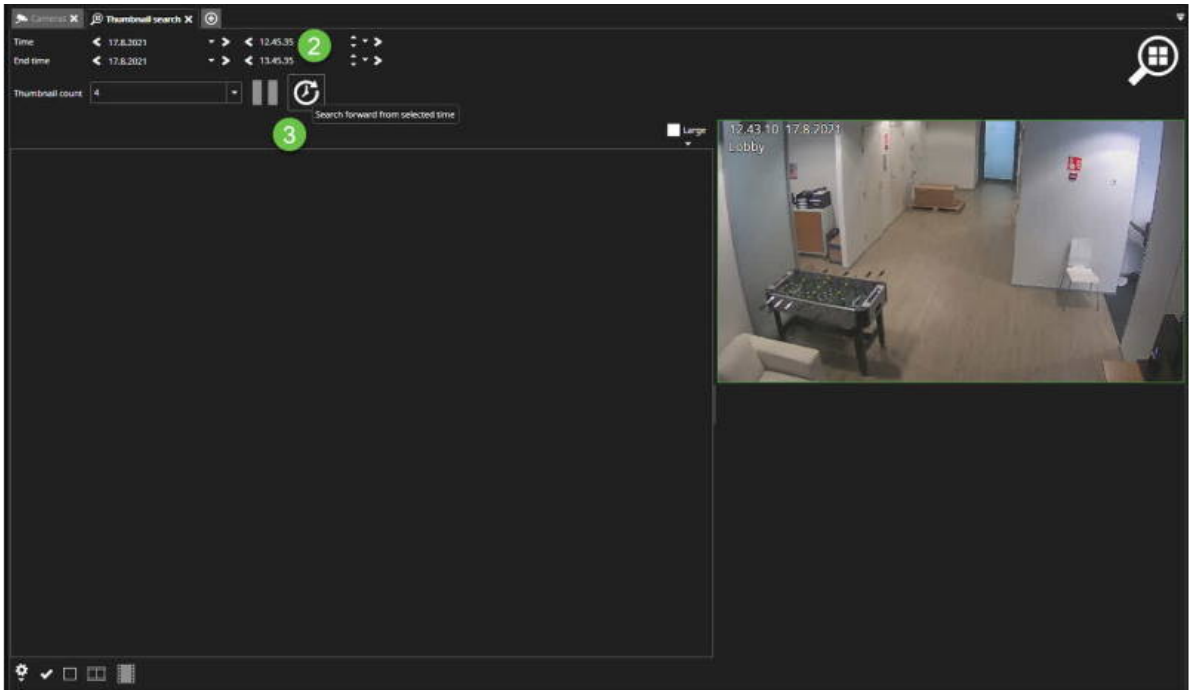
A Thumbnail search gives the user a quick way to inspect camera material visually. It is mainly meant for scenarios where some visual change in the camera view can be noticed, and the user wants quickly to find the time when this change has happened. When the Thumbnail search is started, it fetches thumbnails from stored video and displays them on the results view.

10.6.1 Using Thumbnail search

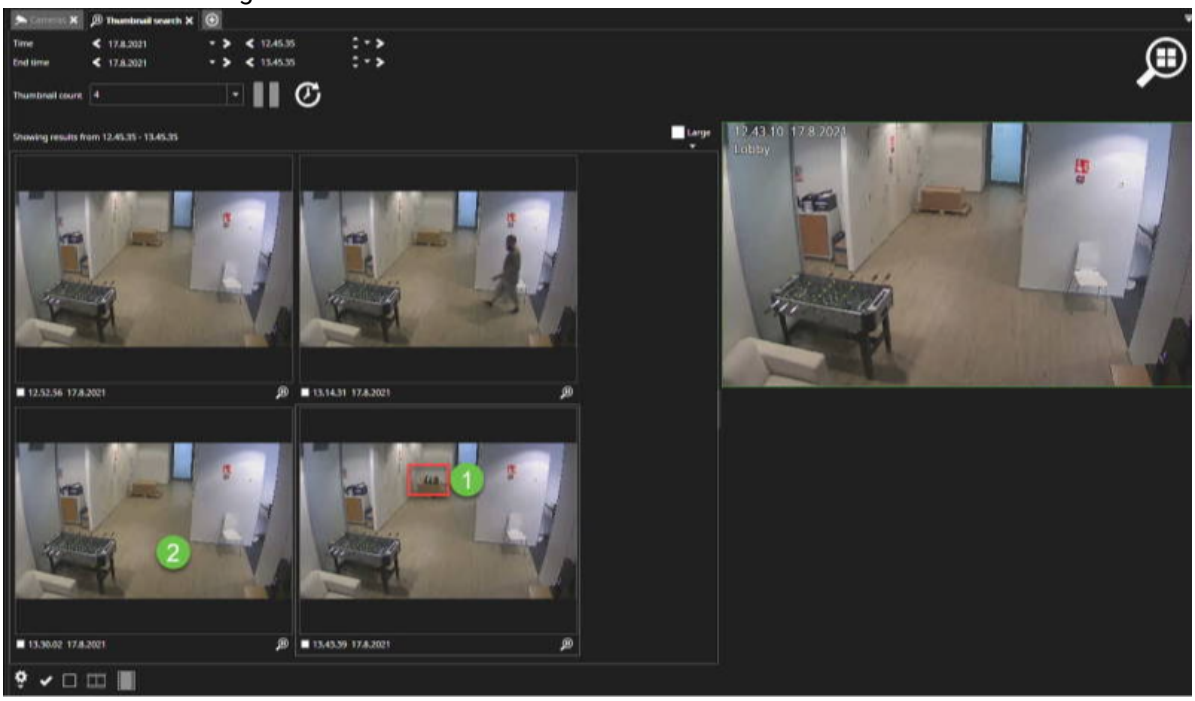
1. Open Thumbnail search

1. Select camera from the device tree

2. The set time period for the search
3. Click **Search forward from the selected time**

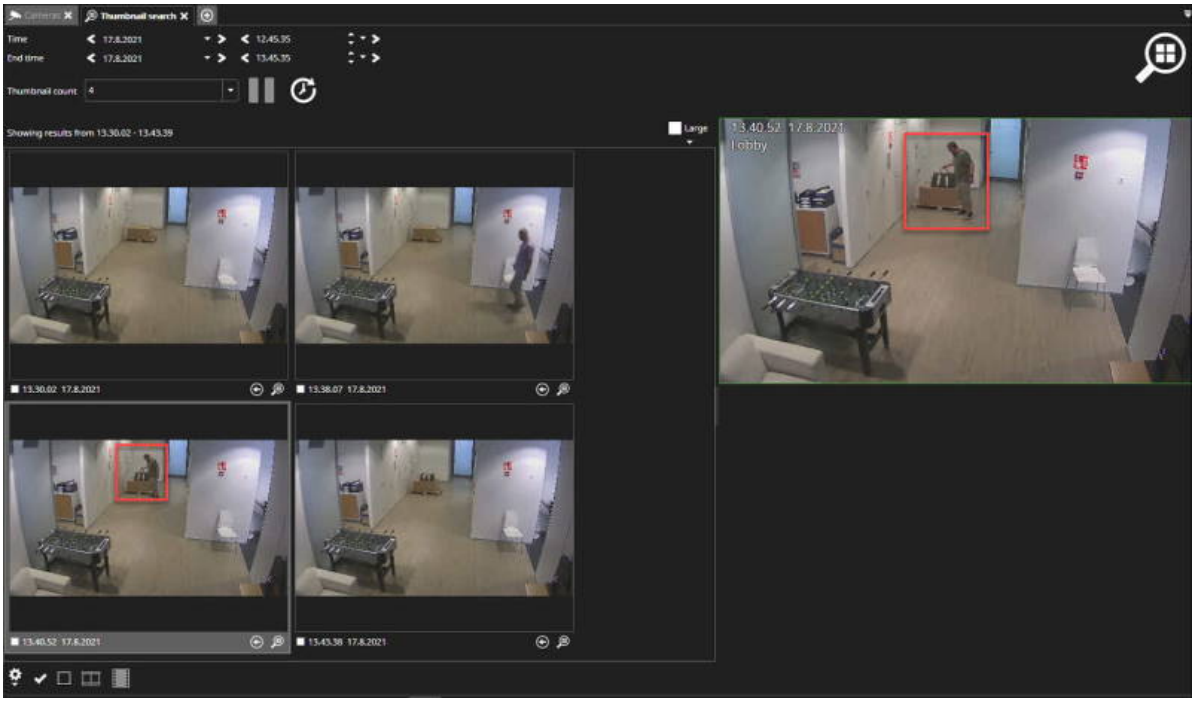


1. When you find change from the image
2. Please click the image after that



1. Thumbnail search shows time just before the change

2. You can start playback and use normal playback controls.



11 Layouts Management

11.1 Layouts contain all content settings of Spotter and are helpful when the user has perfected a monitoring view and wants to save it for future use.

Layouts contain, for example, the following:

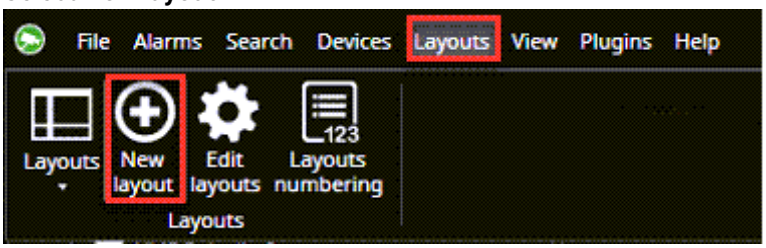
- Spotter window location and size (full-screen or regular)
- View component visibility settings
- Virtual camera settings
- Toolbar option settings such as image showing, 360 camera settings, VCA visualization settings and image control settings
- Camera tour settings
- Playback position, i.e., date and time
- Tab names and order
- Plugin specific settings, for example, Agile Virtual Matrix (AVM) settings and content

11.2 Frequently Used Keyboard Shortcuts:

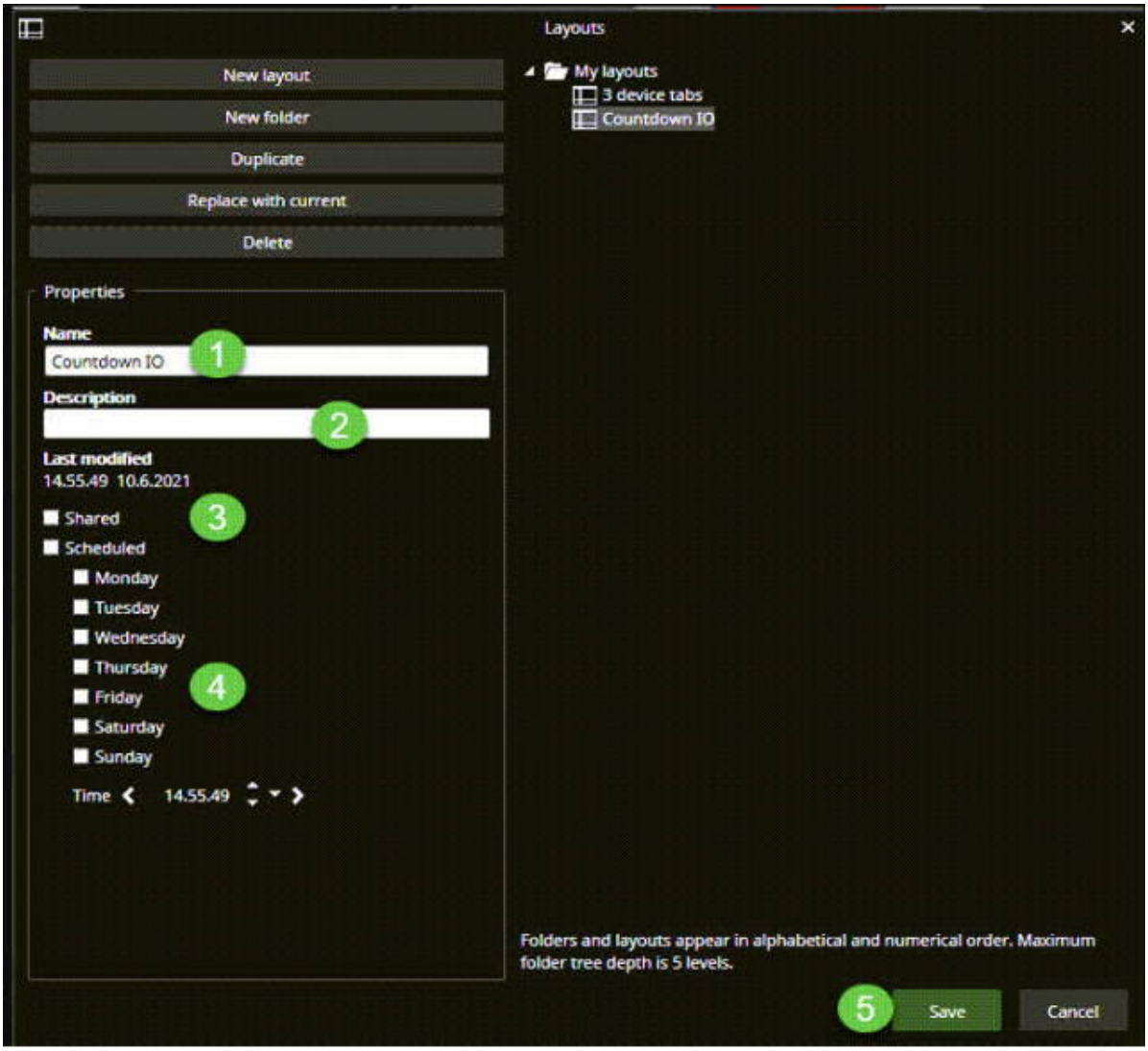
Shortcut	Description
Ctrl+L	Open layout menu (layout name selection can be changed with arrow keys, Esc closes menu without selecting layout).
Ctrl+ M	Takes the user to new layout saving.
Ctrl+Up	Load previous layout (same order as in the layout menu).
Ctrl+Down	Load following layout (same order as in the layout menu).

11.3 Saving the layout

1. Open all needed components to the work area
2. Click **Layouts**
3. Select **New layout**

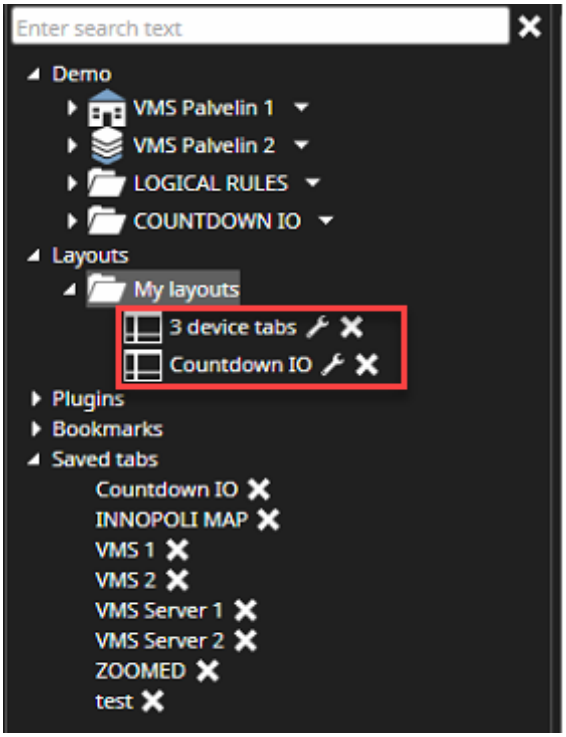


1. Enter the name of the layout
2. Enter the description, if needed
3. Set sharing options, if needed
4. Set schedule options, if necessary
5. Click **Save**



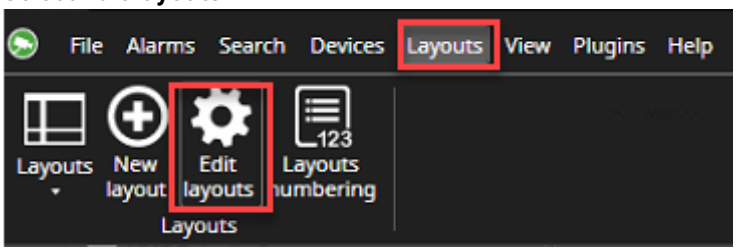
11.4 Opening the layout

1. Open Layouts from the device tree
2. Double-click top of the layout name

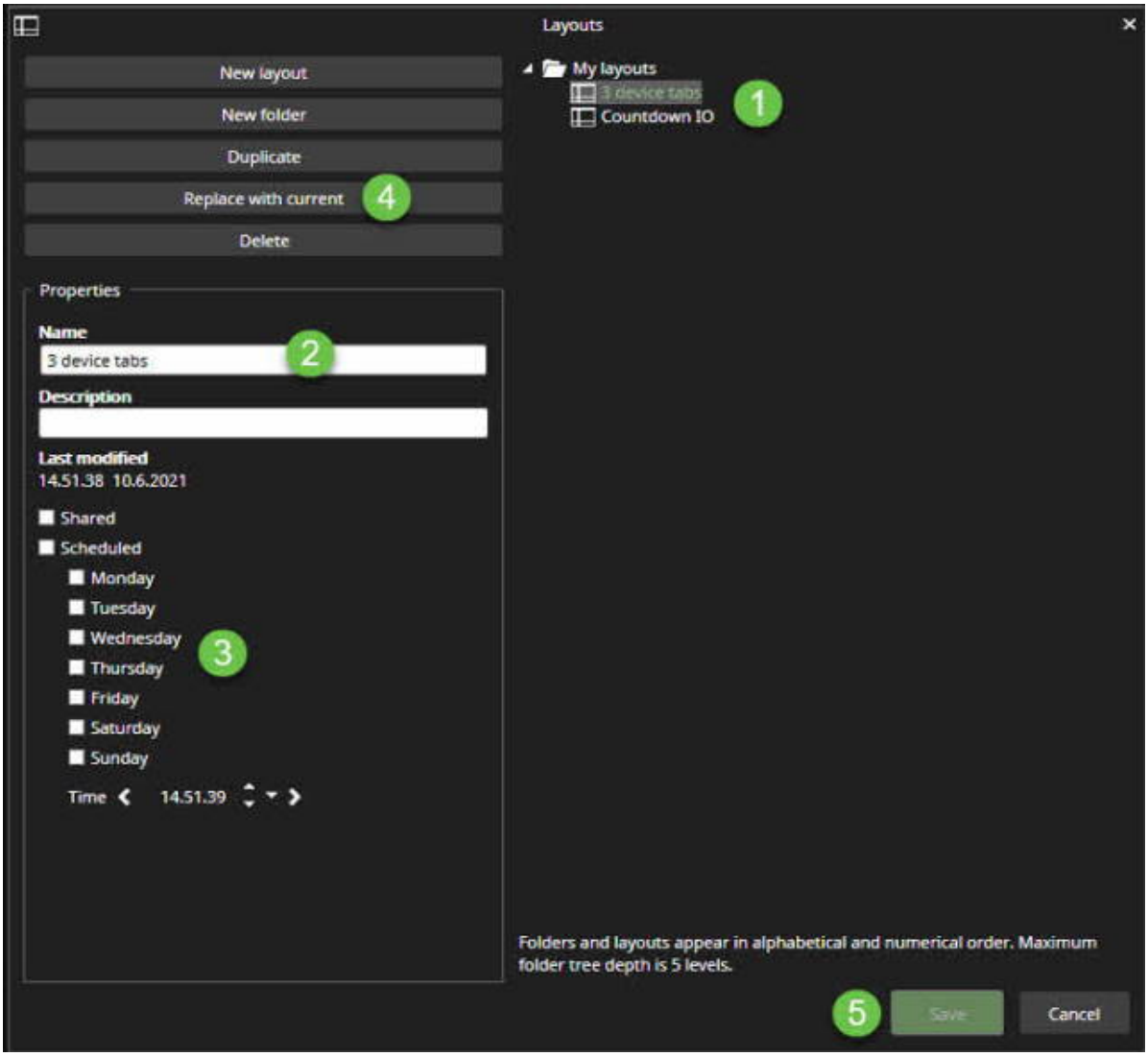


11.5 Editing the layout

1. Select needed devices into the Spotter working area
2. Go to the **Layouts**
3. Select **Edit layouts**

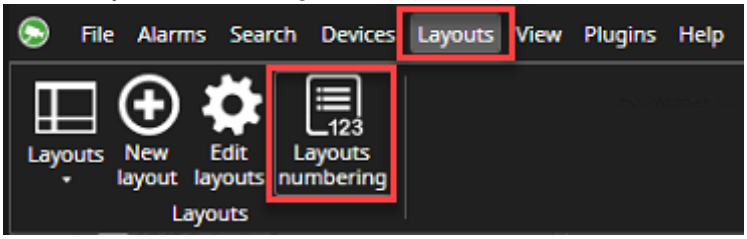


1. Select the layout from the list
2. Modify the name, if needed
3. Set schedule settings, if needed
4. Click **Replace with current**
5. Click **Save**



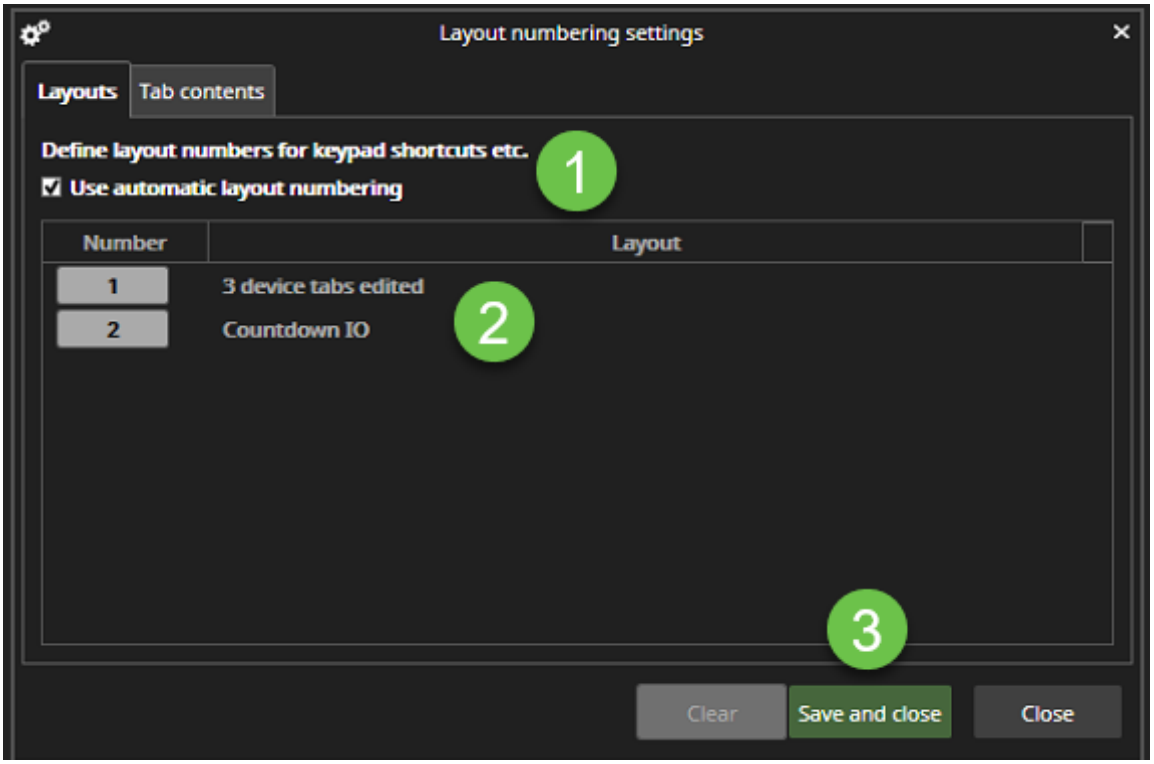
11.6 Layout numbering

1. Open **Layouts**
2. Select Layouts numbering



1. Set Use automatic layout numbering, if needed or disable to use manual numbering

2. Set manual numbering for the layouts
3. Click **Save and Close**



12 Device Tabs Management

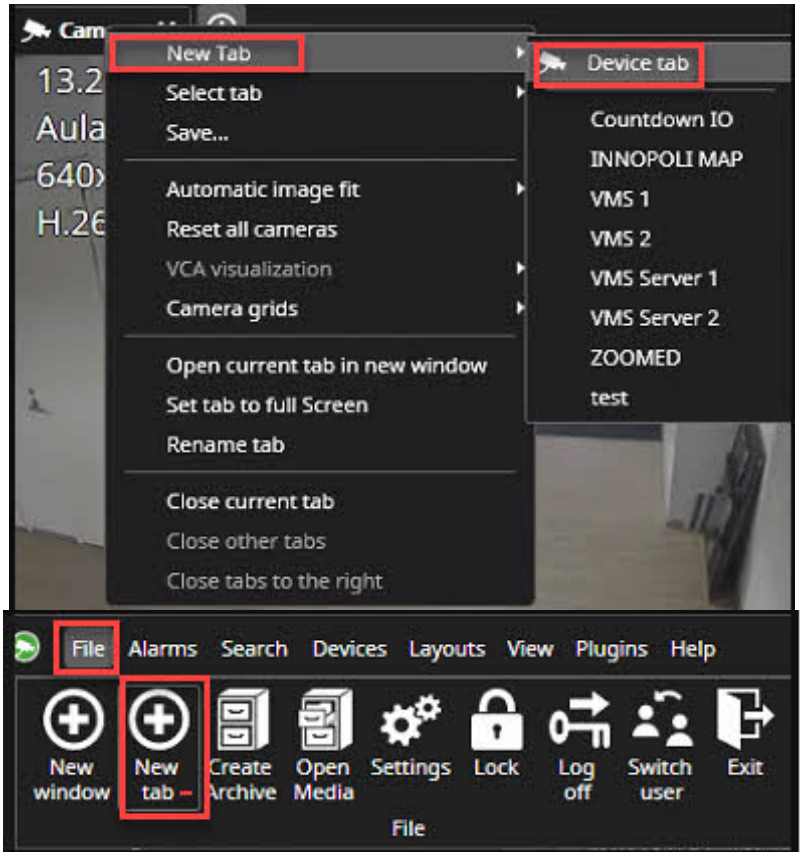
Only streams of cameras that are on the open tab are sent to the Spotter.Cameras on the "hidden" tabs are not using network bandwidth to the Spotter but will resume instantly when the tab is activated.Tabs can be reordered by dragging them to a different position.They can also be dragged outside the Spotter window to move the content to a new, automatically created window.If the Ctrl key is pressed when dragging, a copy is made instead of moving.

12.1 Frequently Used Keyboard Shortcuts:

Shortcut	Description
Ctrl+Shift+T	Open tab menu.
Ctrl+Shift+W	Close current tab.
Ctrl+Tab	Select the next tab. If the currently selected tab is the last, select the first tab in the window. The addition (+) tab is not selected.
Ctrl+Shift+Tab	Select the previous tab. If the currently selected tab is the first tab, select the last tab in the window. The addition (+) tab is not selected.
Ctrl+Alt+V	Hide/show tab controls.

12.2 Add new device tab

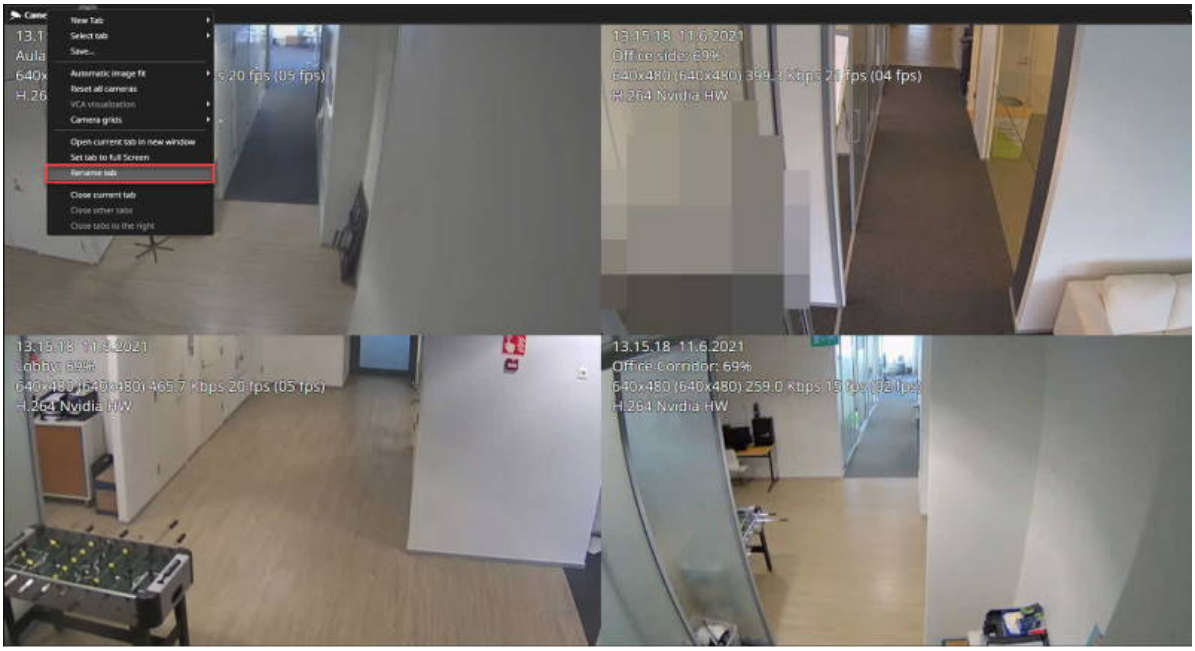
The work area can have multiple device tabs.New tabs are created by clicking the "New tab" control or from the File menu.



12.3 Renaming the device tab

The tab menu can be accessed with right-click

1. Right-click top of the device tab name
2. Select **Rename tab**



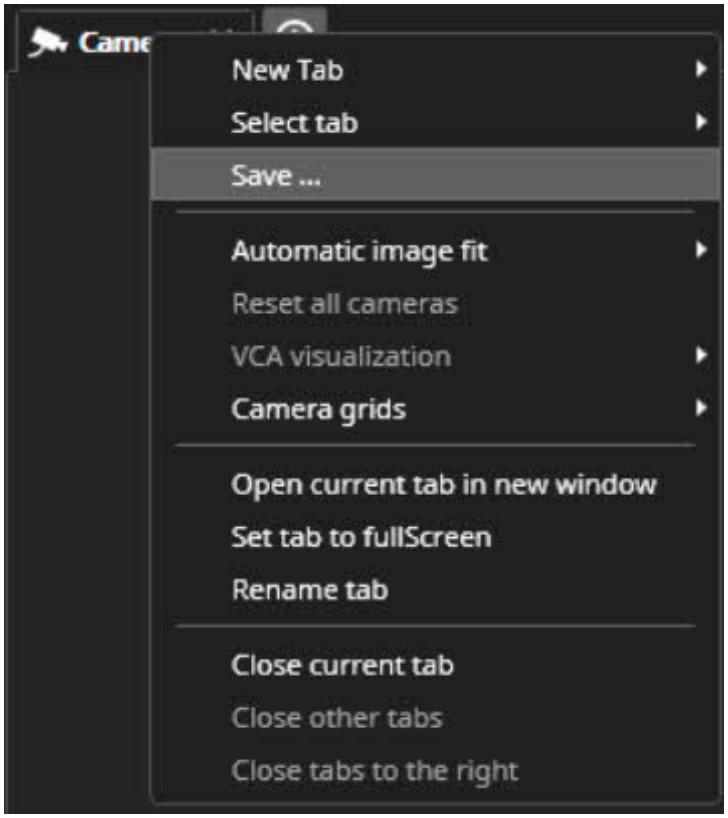
Enter the name of the tab and press enter after the renaming of the device tab, the user can easily organize needed cameras to correct the device tab.

12.4 Saving the device tab

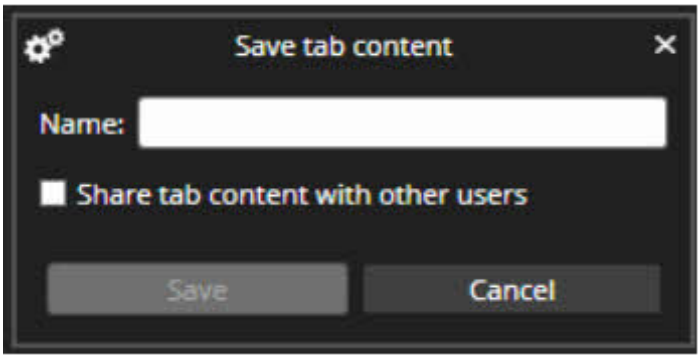
12.4.1 Saving the device tab

Device tab saving gives the user fast access to needed devices from the device tree

1. Open needed cameras to the device tab
2. Right-click top of the device tab name
3. Select **Save...**



1. Enter the name of the save tab
2. Click **Save**



12.4.2 Share tab content with selected users

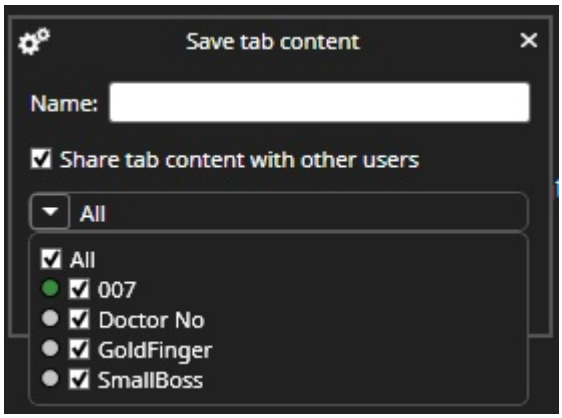
12.4.2.1 Users can share tab content with selected users after saving a tab in Spotter.

- A list of potential users is presented for selection, including the option to share the tab with all users.

- Users are listed alphabetically, with logged-in users (indicated by a green dot) displayed first, followed by those not logged in (indicated by a grey dot), also in alphabetical order.
- The Spotter profile tree displays all tabs saved by the user, tabs shared by others to all users, and tabs specifically saved for the logged-in user, filtered by accessible profiles.
- Sharing can be restricted based on the assigned user role.

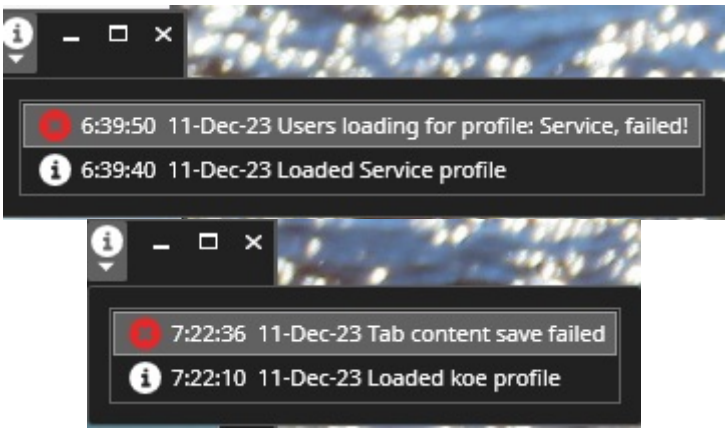
12.4.2.2 How to share tab content

1. To share tab content with other users, go to **Save tab content** and check the box **Share tab content with other users**. A list of users in alphabetical order is displayed. The list has two parts, with the logged-in users (indicated by a green dot) displayed first in alphabetical order, and the logged-off users (indicated by a grey dot) displayed second.
2. Check the box displayed before the user(s) you want to share the tab content with.
   If you want to share tab content with all users, check the box **All**. This will share the tab content with all users under the same profile.



12.4.2.3 Saving failure or User information request failure

In case of tab content saving failure or user information request failure, error messages in the information list is printed:



12.5 Opening the saved device tab

12.5.1 Opening the saved device tab

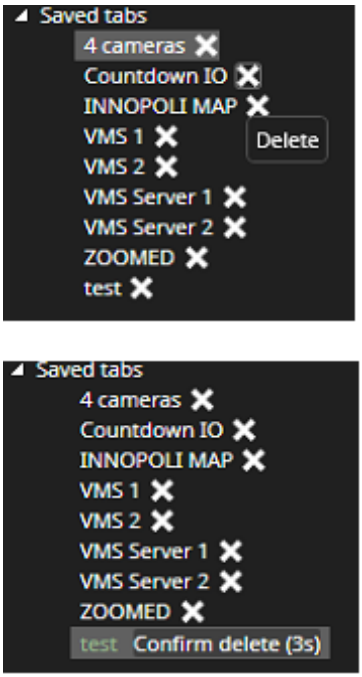
1. Open the **Saved tabs** from the device tree
2. Double-click correct saved tab name

After the loading of the saved tab, Spotter shows all devices, which were opened during the saving. If the device tab was renamed, that name is also shown.

12.6 Deleting the saved device tab

1. Open the **Saved tabs** from the device tree

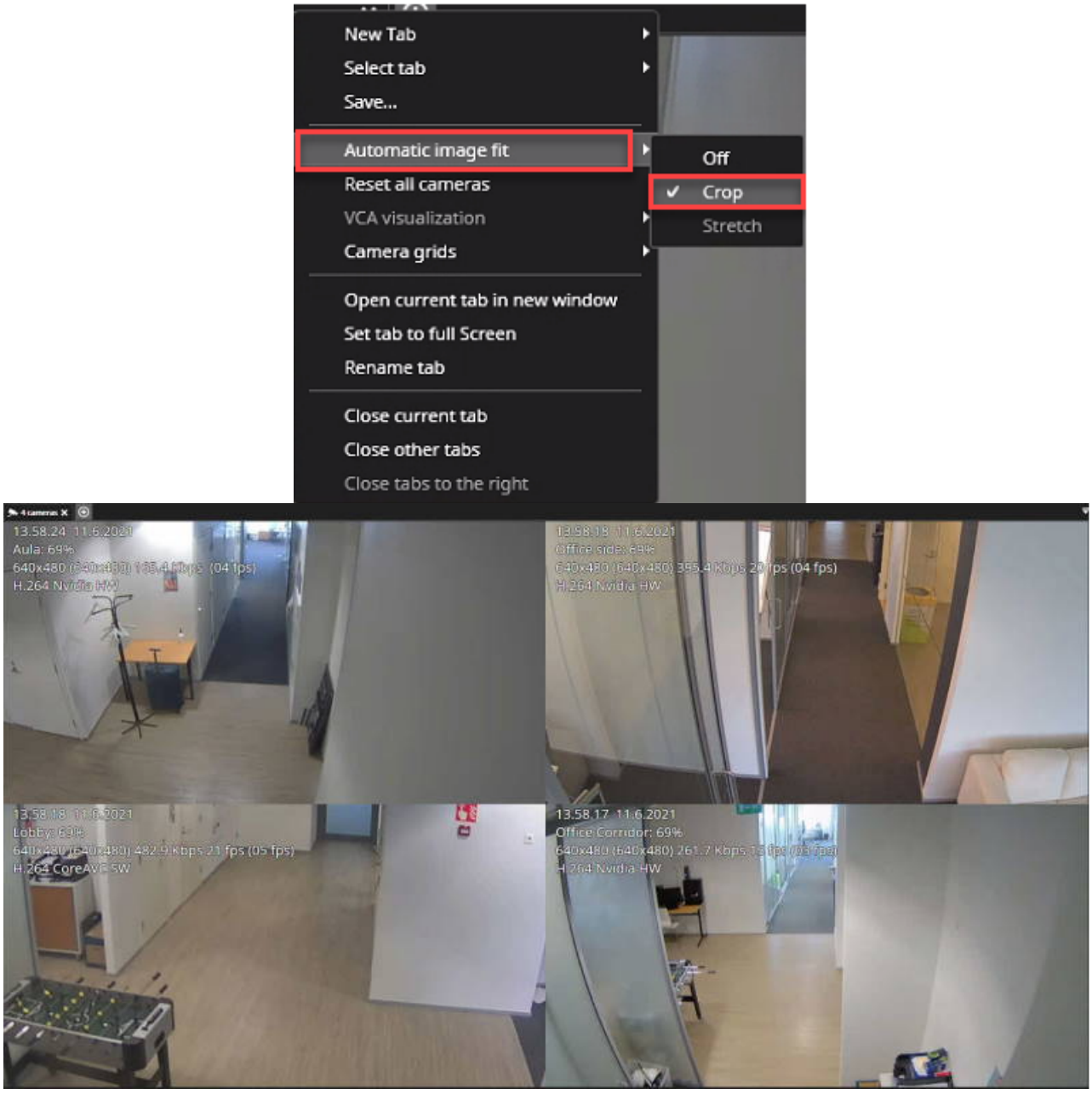
2. Click **X** from that saved tab, which is needed to delete
3. Confirm delete



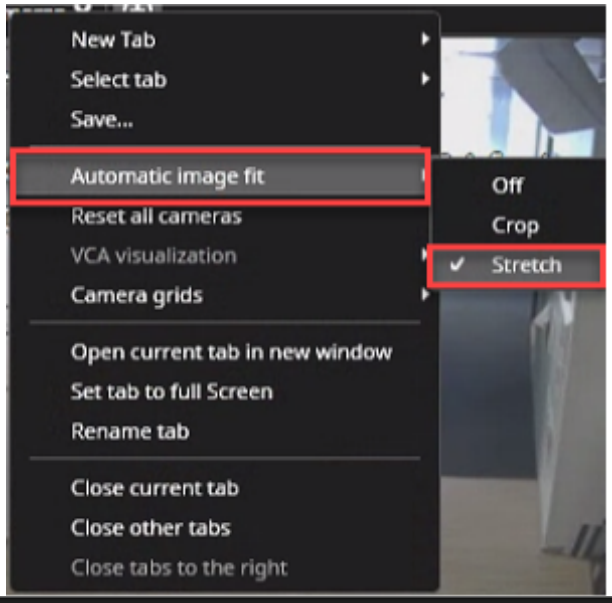
12.7 Automatic image fit

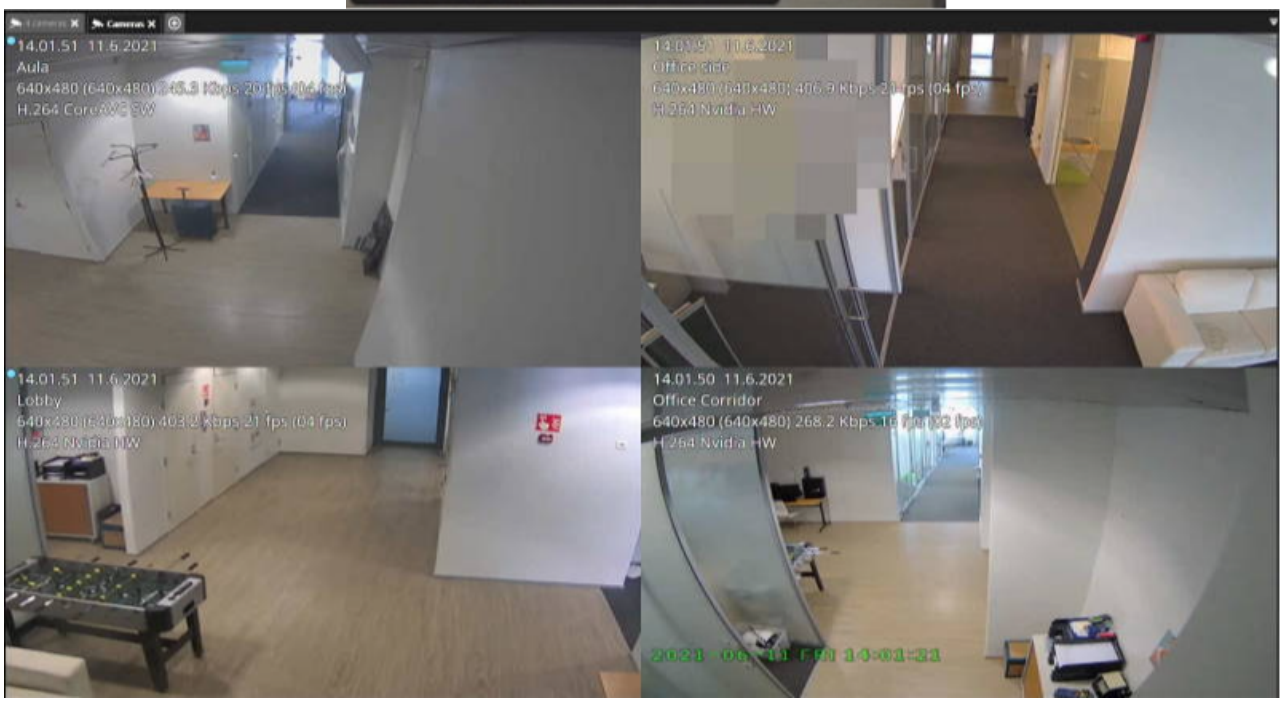
The default image fit setting can be adjusted in the tab menu and **Automatic image fit**.The default option for new device tabs is "**Crop**".The setting can be changed to "**Off**" or "**Stretch**".The **Stretch** option is not available for the automatic grid.

12.7.1 Automatic image fit: Crop

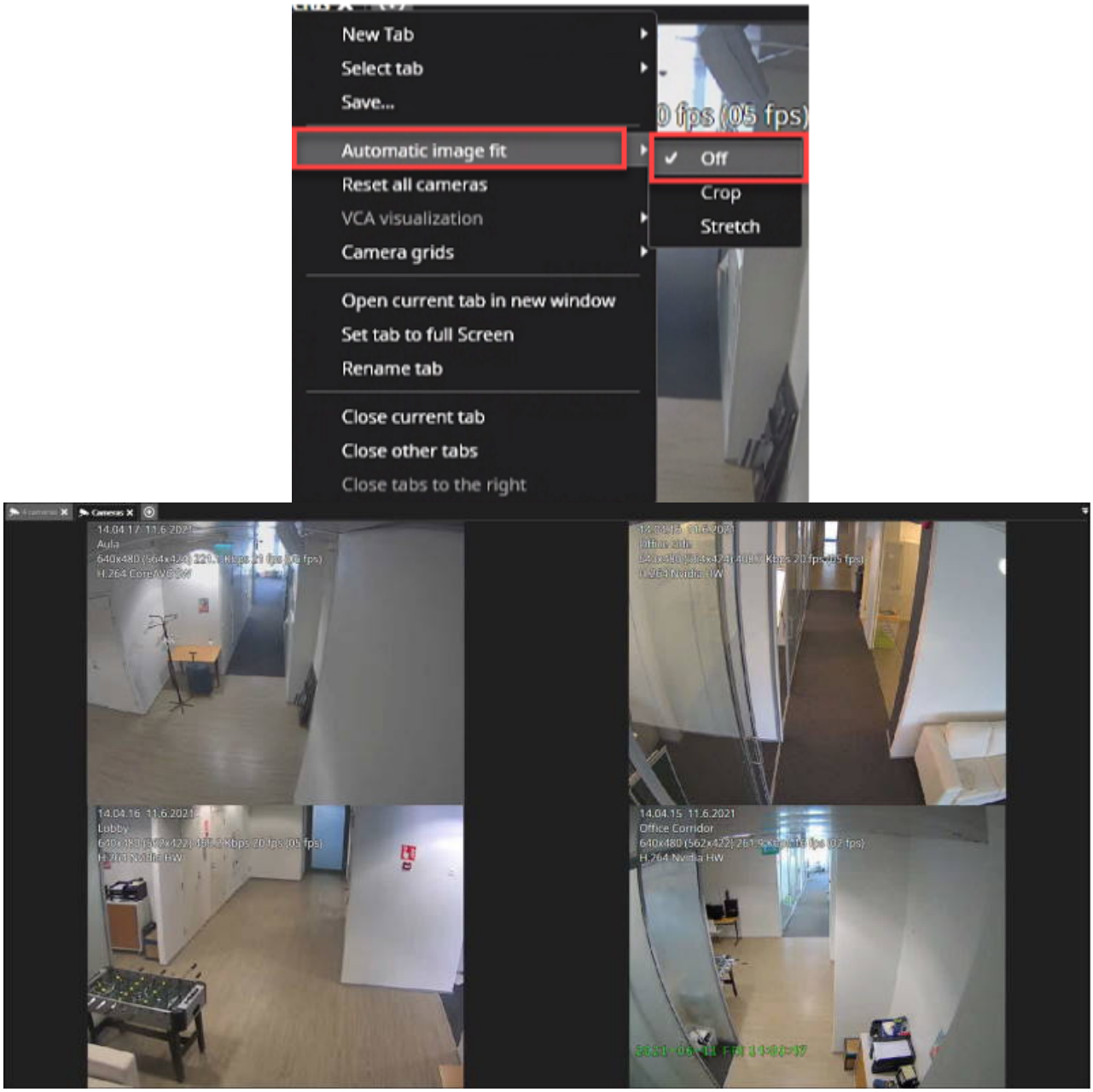


12.7.2 The automatic image fit: Stretch





12.7.3 The automatic image fit: OFF



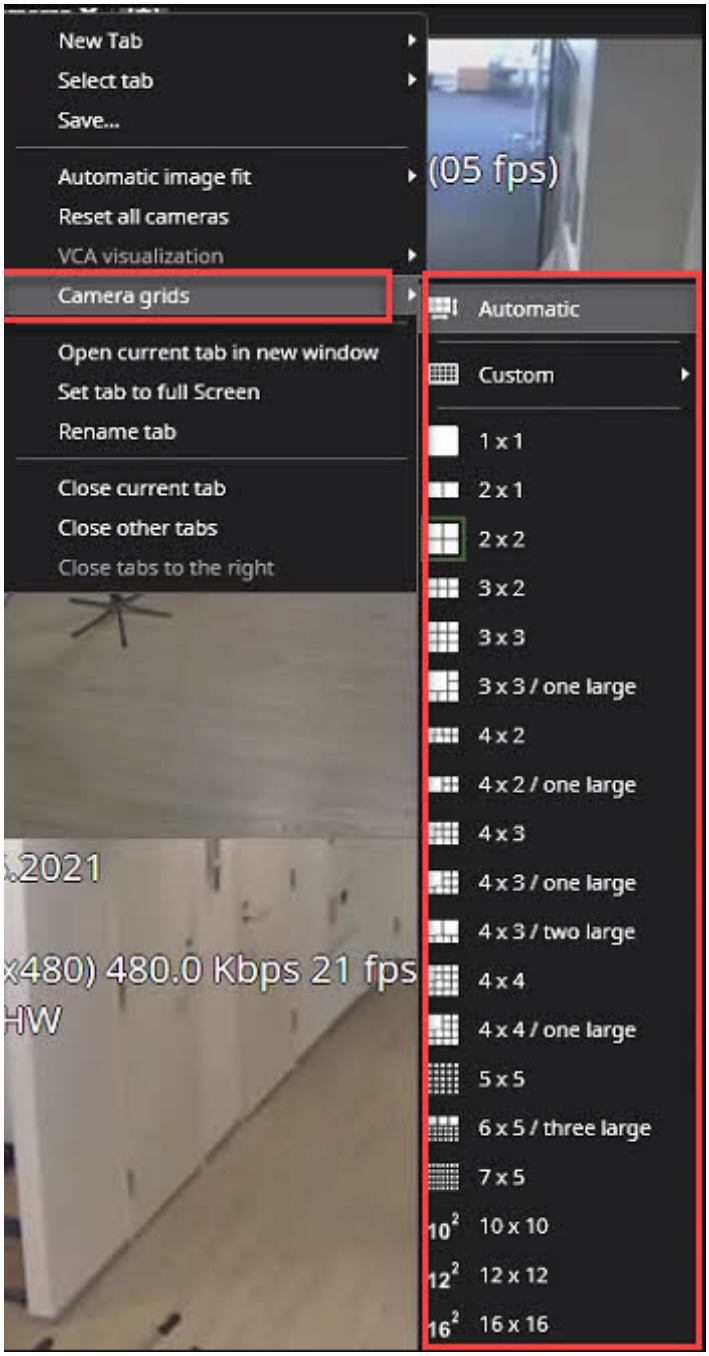
Automatic cropping will crop the image to fit the current aspect ratio of the work area.
This works best in automatic view mode if there are 4 or 9 cameras on the screen. In static grid mode, the auto-cropping makes cameras fit the aspect ratio of the fixed grid cell.This option is only available for fixed or custom grids.

12.7.4 Frequently Used Keyboard Shortcuts:

Shortcut	Description
Ctrl+Shift+S	Sets the auto stretch on and off for the current tab.
Ctrl+Shift+C	Sets the auto crop on and off for the current tab.

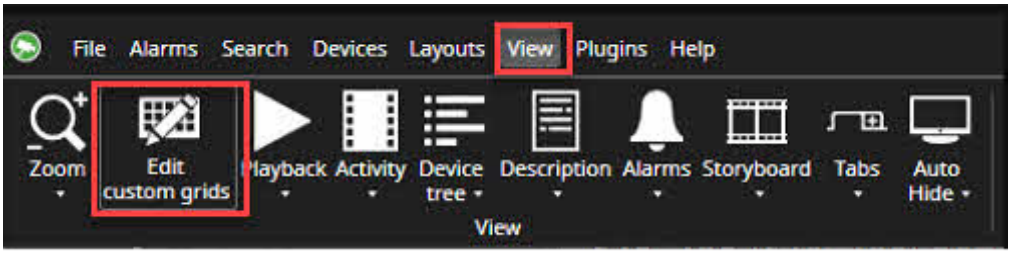
12.8 Camera Grids

The default view mode of the work area is automatic. Cameras appear all using the same size in this mode, and the position and size change automatically as more cameras are added. There are also fixed grids available, where some cameras can be more significant than others, and cameras stick to the fixed view mode grid and do not move around like in automatic mode. The fixed grids are available from the tab menu



12.8.1 Custom camera grids

1. Click View
2. Open **Edit custom grids**

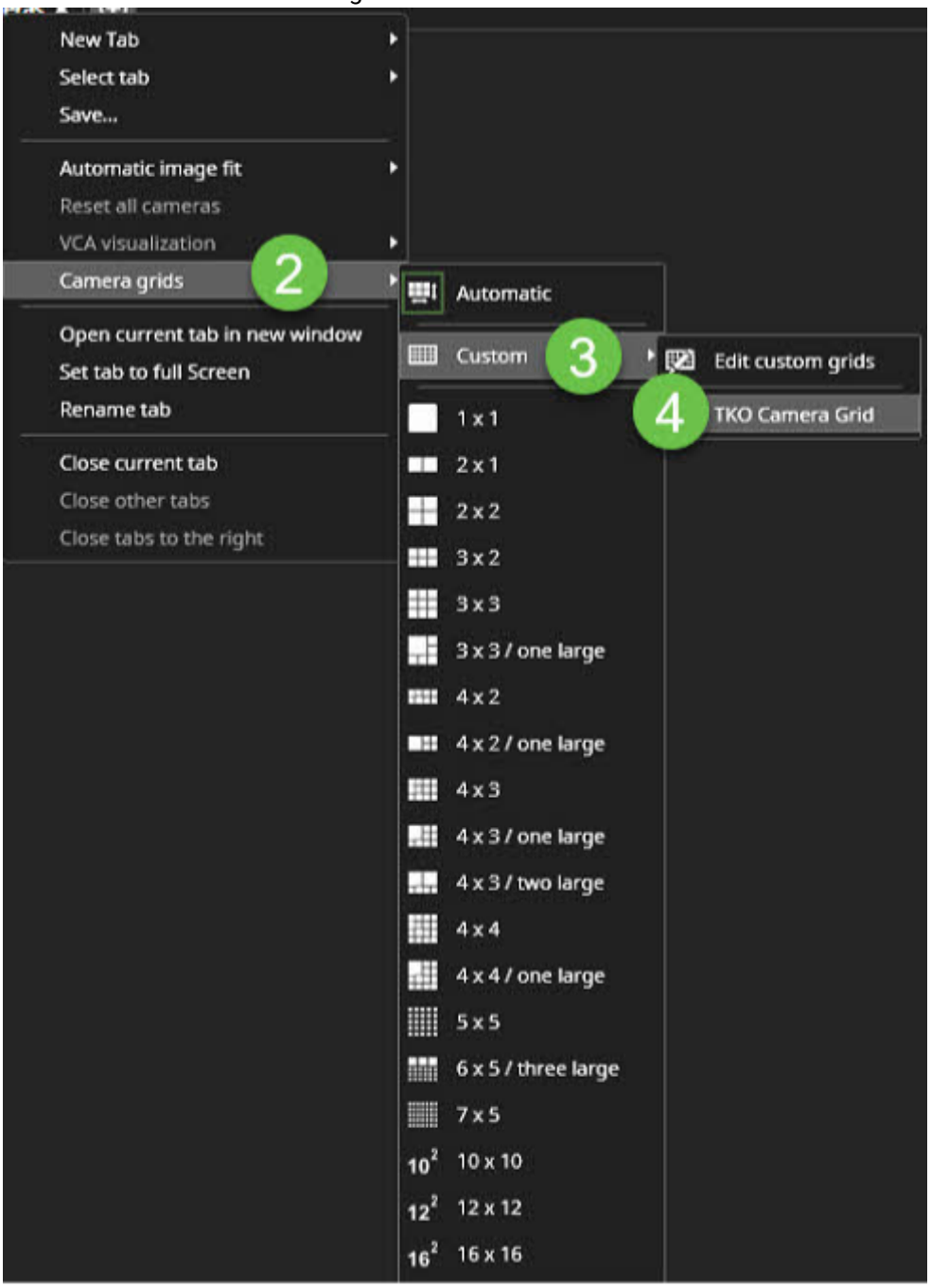


1. Enter the name of the camera grid
2. Set dimensions
3. Set the needed amount of the windows and their size
4. Click **Save and Close**

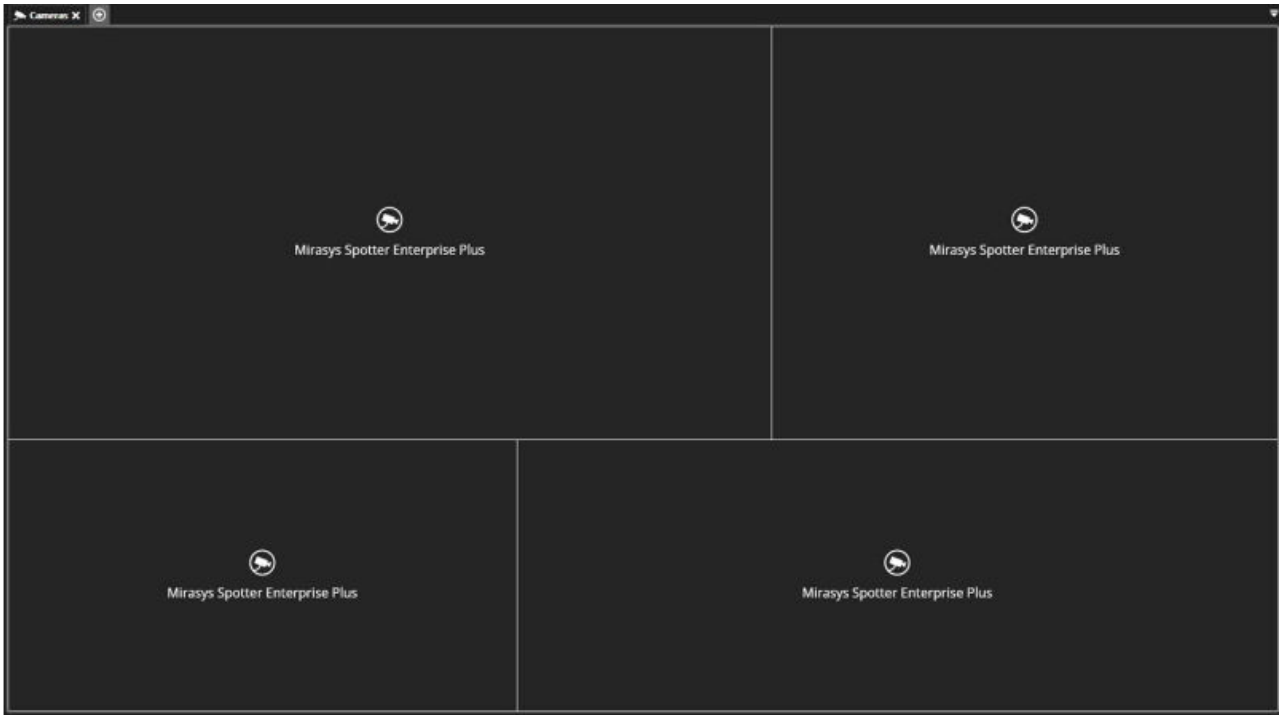
12.8.2 Using custom camera grids

1. Right-click top of the device tab name
2. Open **Camera grids**

3. Select **Custom**
4. Select needed custom camera grid name



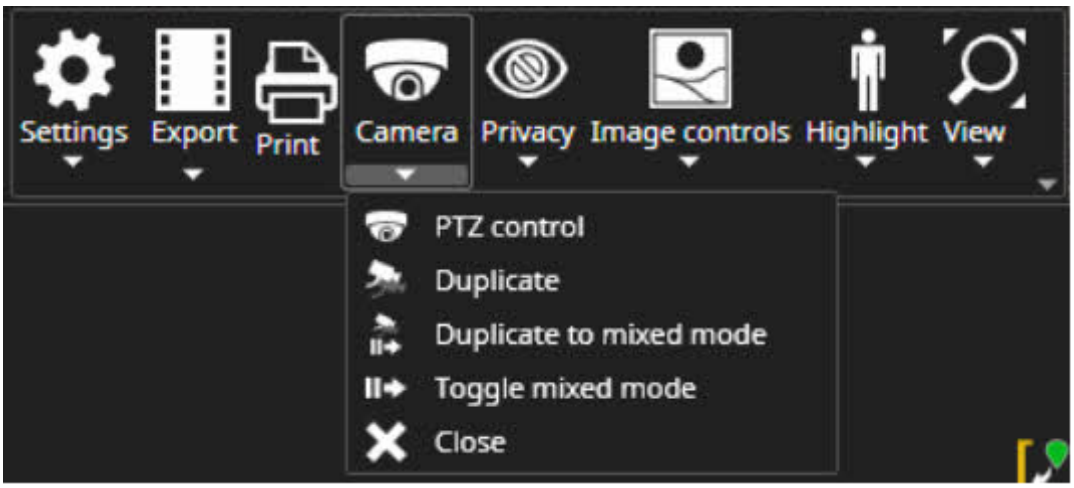
After the loading, the user can see a custom grid view


Cameras
Mirasys Spotter Enterprise Plus
Mirasys Spotter Enterprise Plus
Mirasys Spotter Enterprise Plus
Mirasys Spotter Enterprise Plus

13 PTZ Control and Management

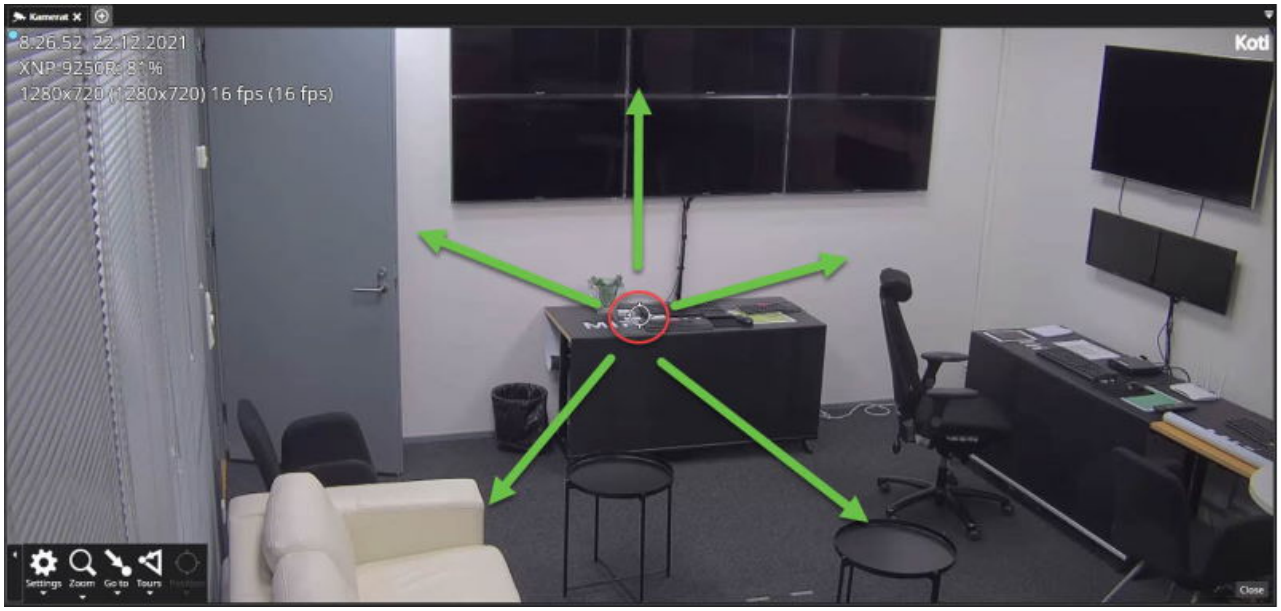
13.1 Enabling PTZ Control

1. Open needed camera to the real-time view
2. Open camera toolbar
3. Click **Camera** and select **PTZ control**

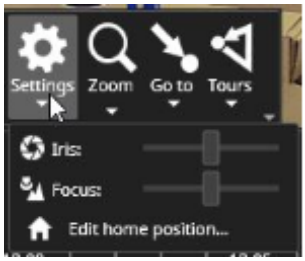


13.2 Controlling PTZ camera

PTZ camera can be controlled with the mouse left button and dragging in the needed direction or with keyboard arrow keys.



13.3 Settings



The PTZ settings menu contains iris and focuses slider controls and editing the camera home position.The home position can be selected from the currently saved presets or tours.lt[2] is also possible to define how long the camera takes until it returns to the home position and if the switch to the home position is made only if it is not in some other tour or preset position.

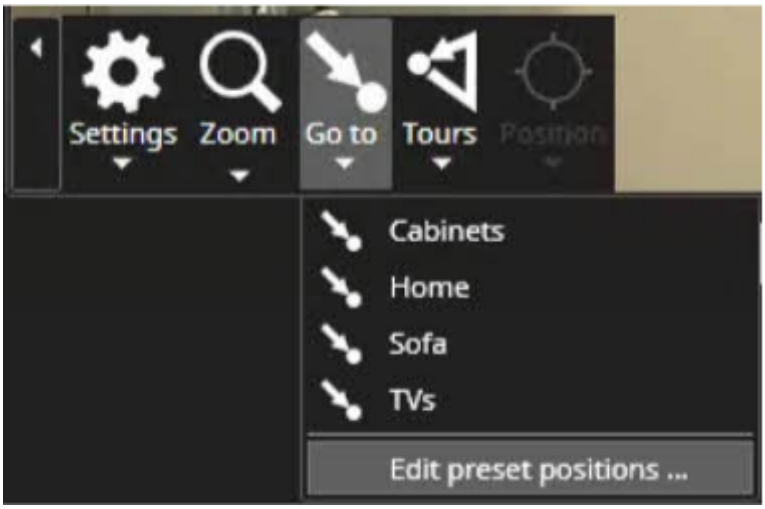
13.4 Zoom

The zoom settings menu allows controlling the camera zoom. The camera zoom can also be controlled from the keyboard or the mouse wheel.

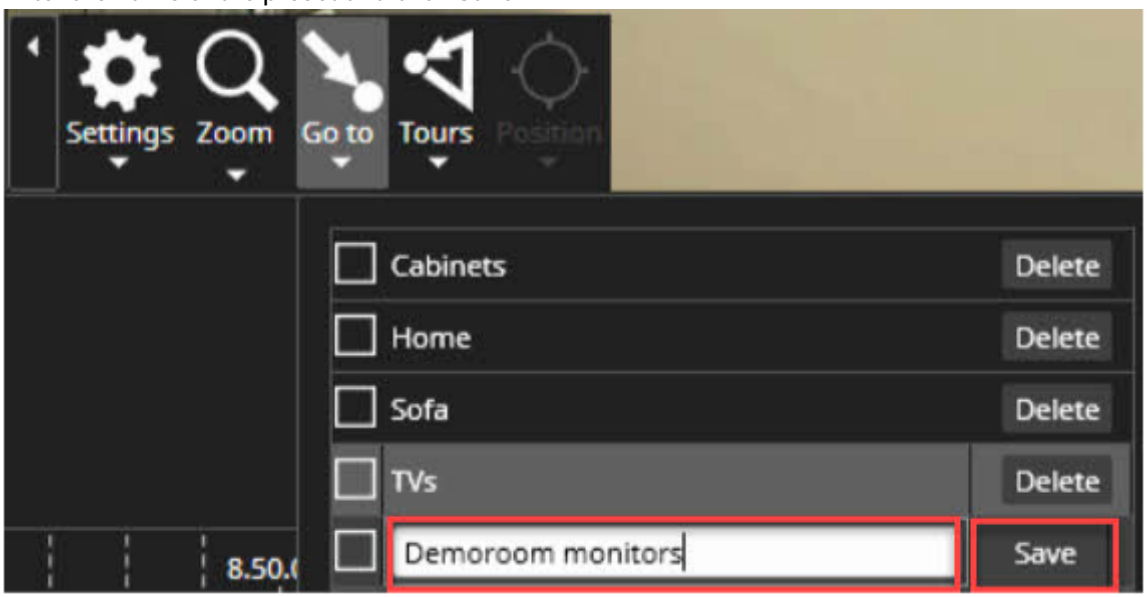
2 http://tours.lt

13.5 Creating a preset

1. Open needed camera to the real-time view
2. Open camera toolbar
3. Click **Camera** and select **PTZ control**
4. Control PTZ camera to the needed position
5. Click **Go to** and select **Edit preset positions**

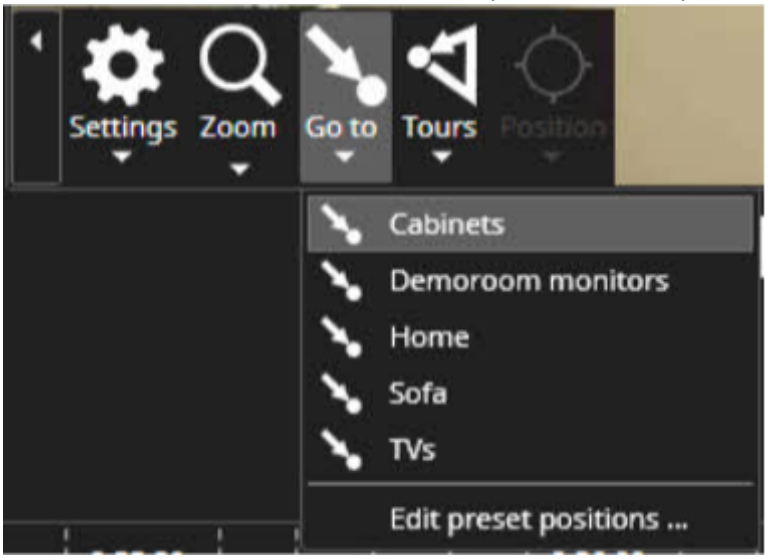


1. Enter the name of the preset and click **Save**



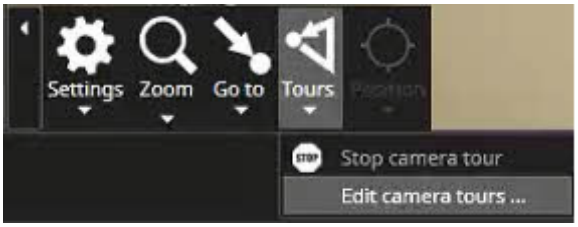
13.6 Using the presets

1. Click **Go to** and click mouse left button top of the needed preset

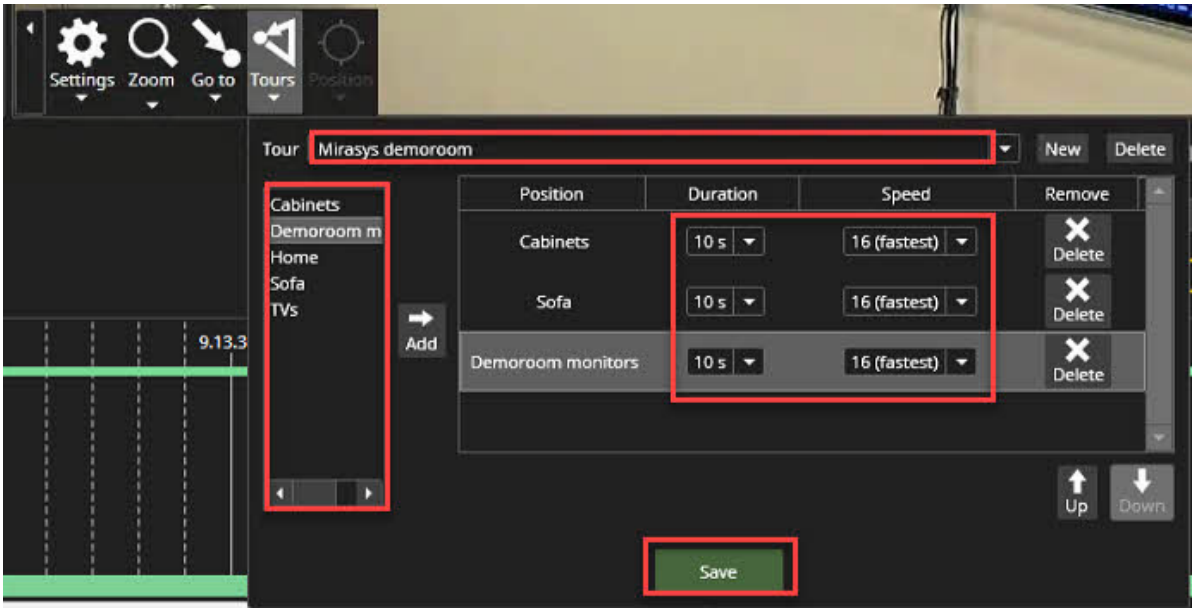


13.7 Creating a camera tours

1. Click **Tours** and select **Edit camera tours**



1. Set the name of the tour
2. Select presets for the tour
3. Set duration for each camera
4. Set transition speed between the presets
5. Click **Save**



13.8 Using a camera tours

1. Open needed camera to the real-time view
2. Open camera toolbar
3. Click **Camera** and select **PTZ control**
4. Click **Tours a**nd activate the needed camera tour

13.9 Editing camera tours

1. Open needed camera to the real-time view
2. Open camera toolbar
3. Click **Camera** and select **PTZ control**
4. Click **Tours a**nd select **Edit camera tours**
5. Select tour from the list

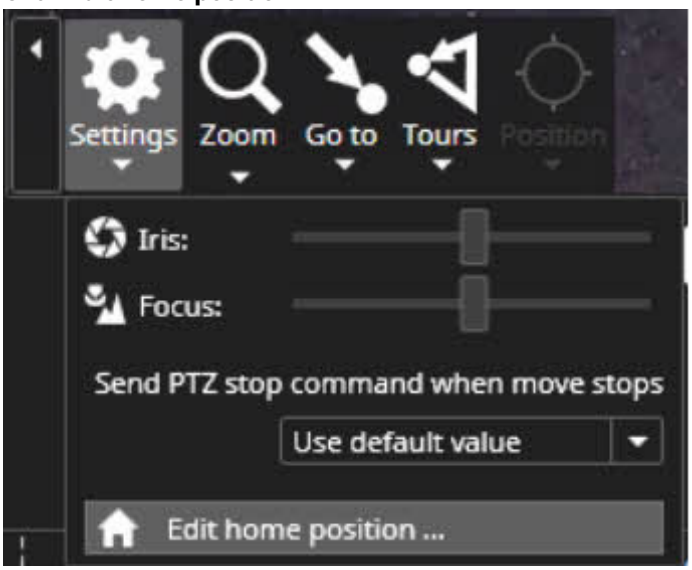
6. Do modifications and click **Save**

13.10 Deleting camera tours

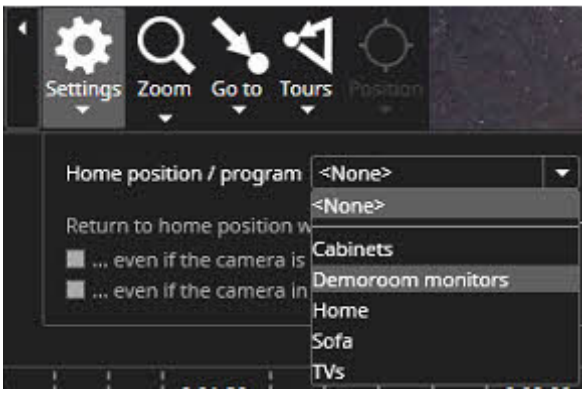
1. Open needed camera to the real-time view
2. Open camera toolbar
3. Click **Camera** and select **PTZ control**
4. Click **Tours a**nd select **Edit camera tours**
5. Select tour from the list
6. Click **Delete**
7. Click **Save**

13.11 Setting up PTZ camera home position

1. Open needed camera to the real-time view
2. Open camera toolbar
3. Click **Camera** and select **PTZ control**
4. Click **Edit home position**



1. Select the correct home position or program from the list



1. Define settings for:
    a. **Return to home position when the camera is not used in:**
    b. **...even if the camera is in a preset position**
    c. **...even if the camera in the program tour**

14 Alarm Management

14.1 The alarms tab contains below functions:

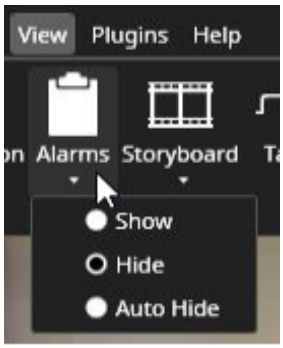
- Alarm list behavior
- Alarm view
- Alarm popup
- Alarm search

14.2 Alarm List

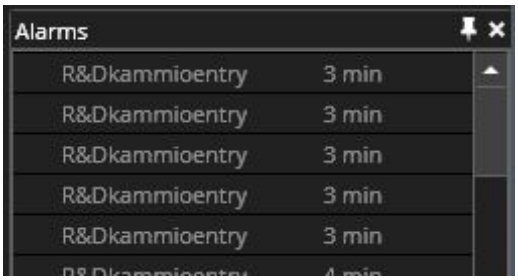
In Spotter, each Spotter window can have its alarm list.

14.2.1 The alarm list visibility

The alarm list visibility is controlled from the **View** menu.



The alarm window shows the name and the priority of each alarm.



Behind the alarm name, there is a timer that shows how long ago the alarm was started.The unit can be in seconds, minutes and hours.

14.2.2 Frequently Used Keyboard Shortcuts:

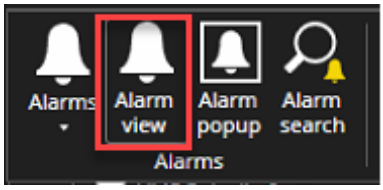
Shortcut	Description
F5	Focuses on the first alarm.
Ctrl+F5	Show/hide alarm window.
Enter	Opens the alarm in the alarm view tab.
Space	Acknowledges the focused alarm.
Ctrl+Alt+A	Hide/show the alarm list.

14.2.3 Opening alarm from the alarm list

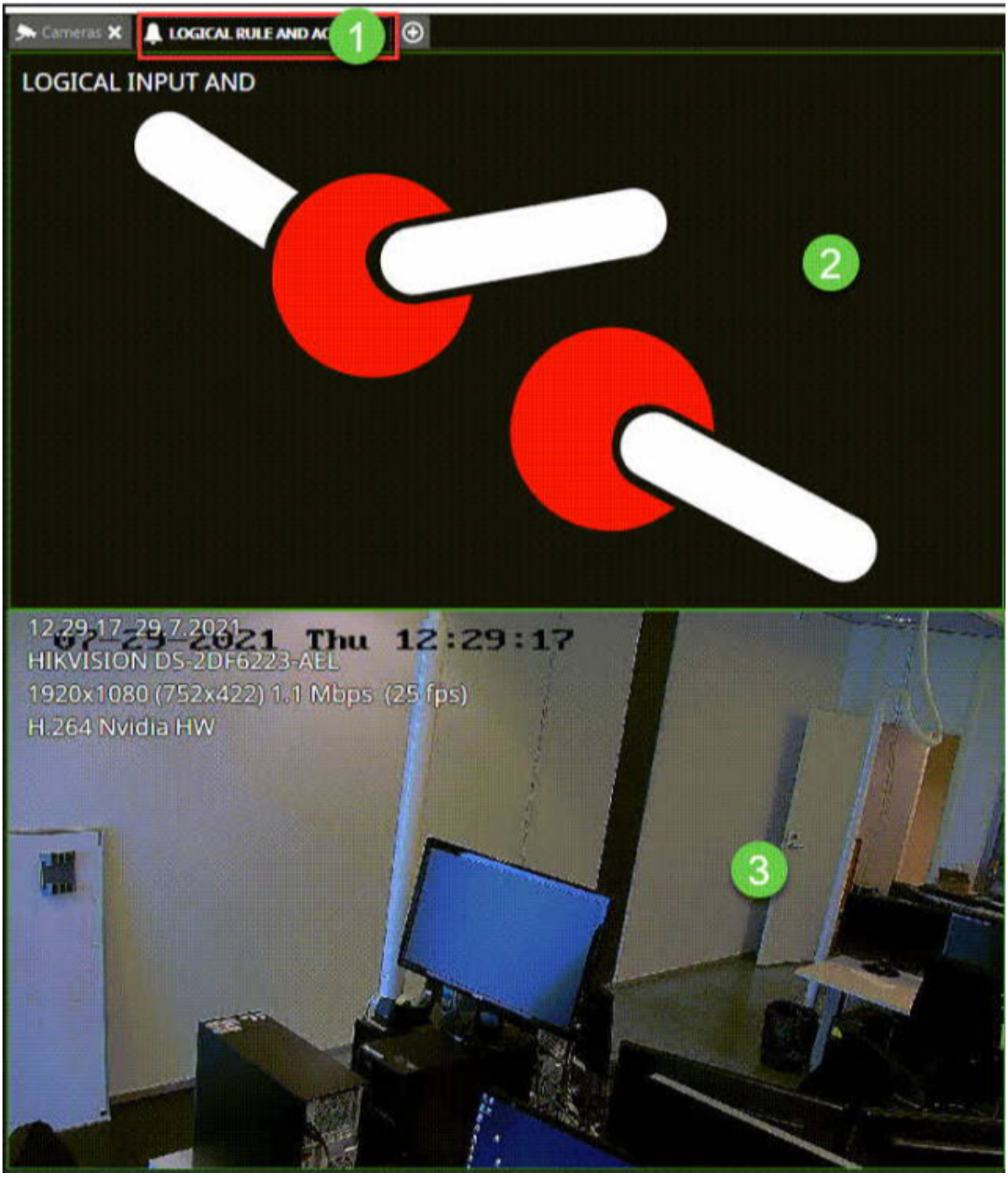
14.2.3.1 Opening alarm from the alarm list

Double-click the alarm nameThe spotter will open automatically Alarm view tab

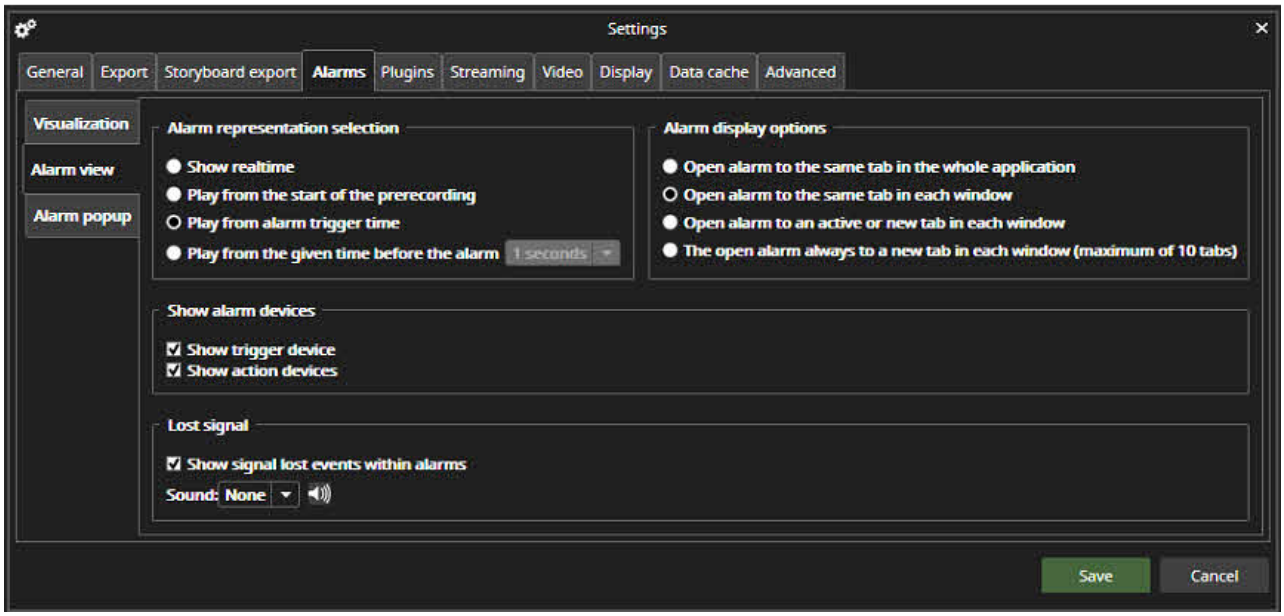
The alarm view tab shows all components, which are related to the alarm(alarm trigger and actions) when the alarm is opened from the alarm list.



1. Name of the alarm
2. Trigger of the alarm
3. All action components of the alarm



Alarm view settings can be configured from Spotter\Settings\Alarms\Alarm view



14.2.3.2 Alarm representation selection

The Alarm representation selection defines what time the alarm is being played when it is opened from the alarm list. The possibilities are:

- Show real-time
- Play from the start of the alarm pre-recording time
- Play from alarm trigger time (default option)
- Play from the given time before the alarm(1- 60 seconds)

14.2.3.3 Alarm display options

It is also possible to define how the alarm is opened. The possibilities are:

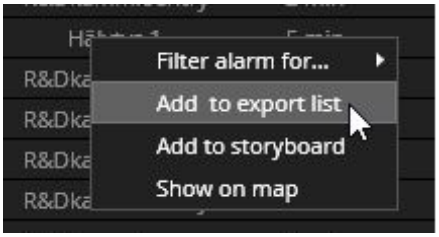
- Open alarm to the same tab in all whole application
- Open alarm to the same tab in each window
- Open alarm to an active or new tab in each window
- Open alarm always to a new tab in each window(maximum of 1 10 tabs)

14.2.3.4 Lost signal

- Show signal lost events within alarms

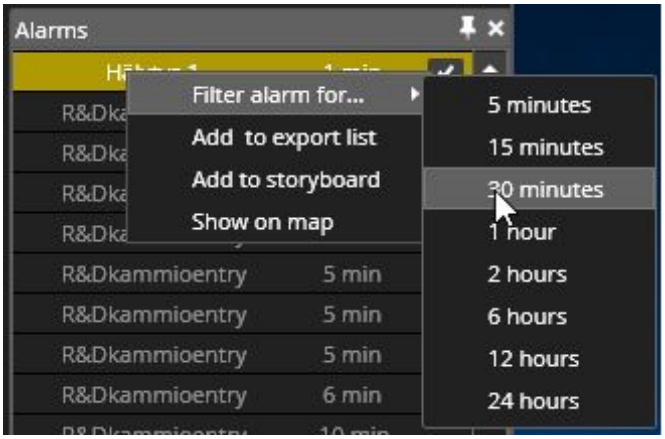
14.2.4 Alarm Export

Alarms are exported by dragging the alarm from the alarm list or the alarm view to the export area.
The alarm list also has an option in the single alarms right-click menu to add an alarm to the export area.



Alarm export contains pre-event and post-event recording times

14.2.5 Alarm Filtering



The alarm window also can filter alarms. Filtering can be done by selecting an alarm and opening the right-click menu. The user can filter an alarm for 5, 15, or 30 minutes, or 1, 2, 6, 12 or 24 hours.The alarm is removed from the standard alarm list during the filtering, and new occurrences are not shown.The alarm sound and alarm pop-up are also disabled during filtering.The maximum number of filtered alarms is 50.

The filtered alarms are moved to a filtered list underneath the alarm window. The filtered list can be in an open or closed state.Each filtered alarm has a counter that shows how much longer the alarm remains filtered.There is also a button to remove alarm filtering. Filtered alarms can be unfiltered at any time.Although alarms are inactive in the filter window, they still show an alarm state.If a filtered alarm is inactive, it is greyed out, and when it is active, it has a white font.If there are no filtered alarms, the filtering window is not displayed underneath the alarm window.The filtering window is displayed in all Spotter windows if it has also the alarms window open.The alarm view can be opened for filtered alarms by a mouse double-click or drag and drop.

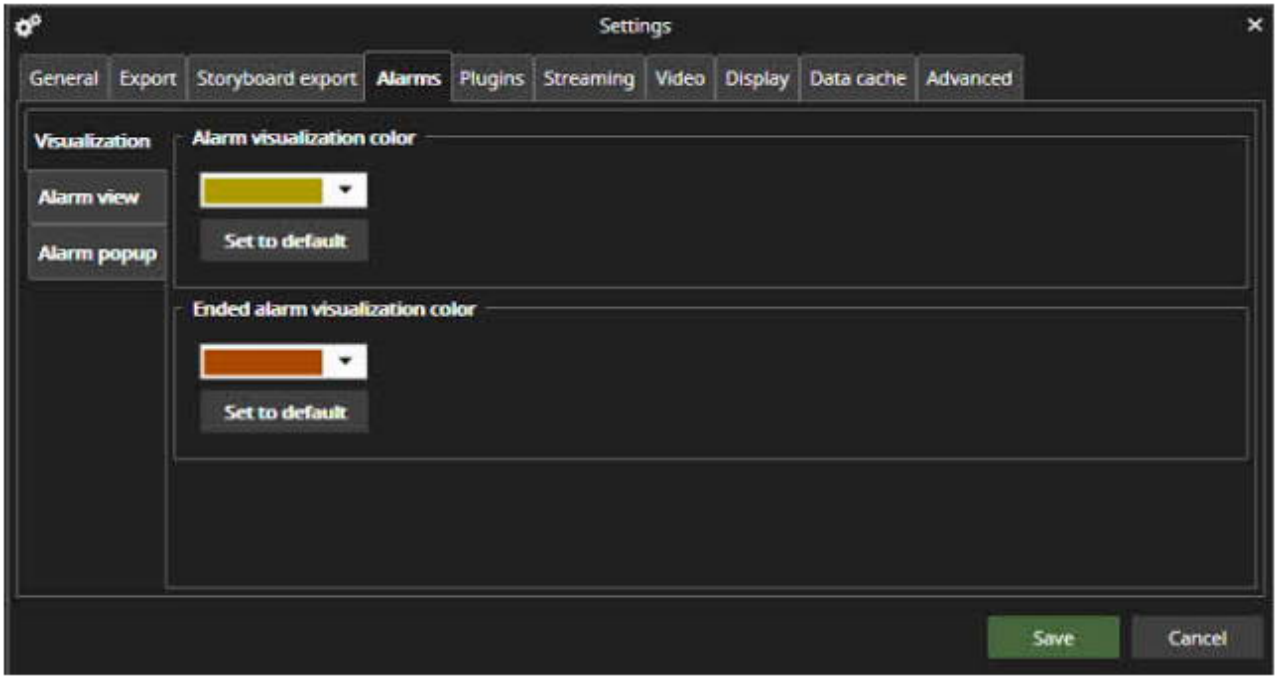
14.2.6 Acknowledge alarm

It is also possible to acknowledge alarms. For active alarms, there is an "**Acknowledge alarm**" button.The button is visible for all alarms during their duration. It is also possible to set this option active in the System Manager application's Alarm settings. In that case, the alarm is active until the user acknowledges it.The maximum amount of alarms in the alarm window is 100.If the limit is exceeded, then the oldest inactive alarm is removed.Underneath the alarm window, there is a pull-down window with options to show all alarms (default) or only active alarms.

14.3 Alarm visualization

Alarm visualization settings can be configured from Spotter\Settings\Alarms\Alarm visualization

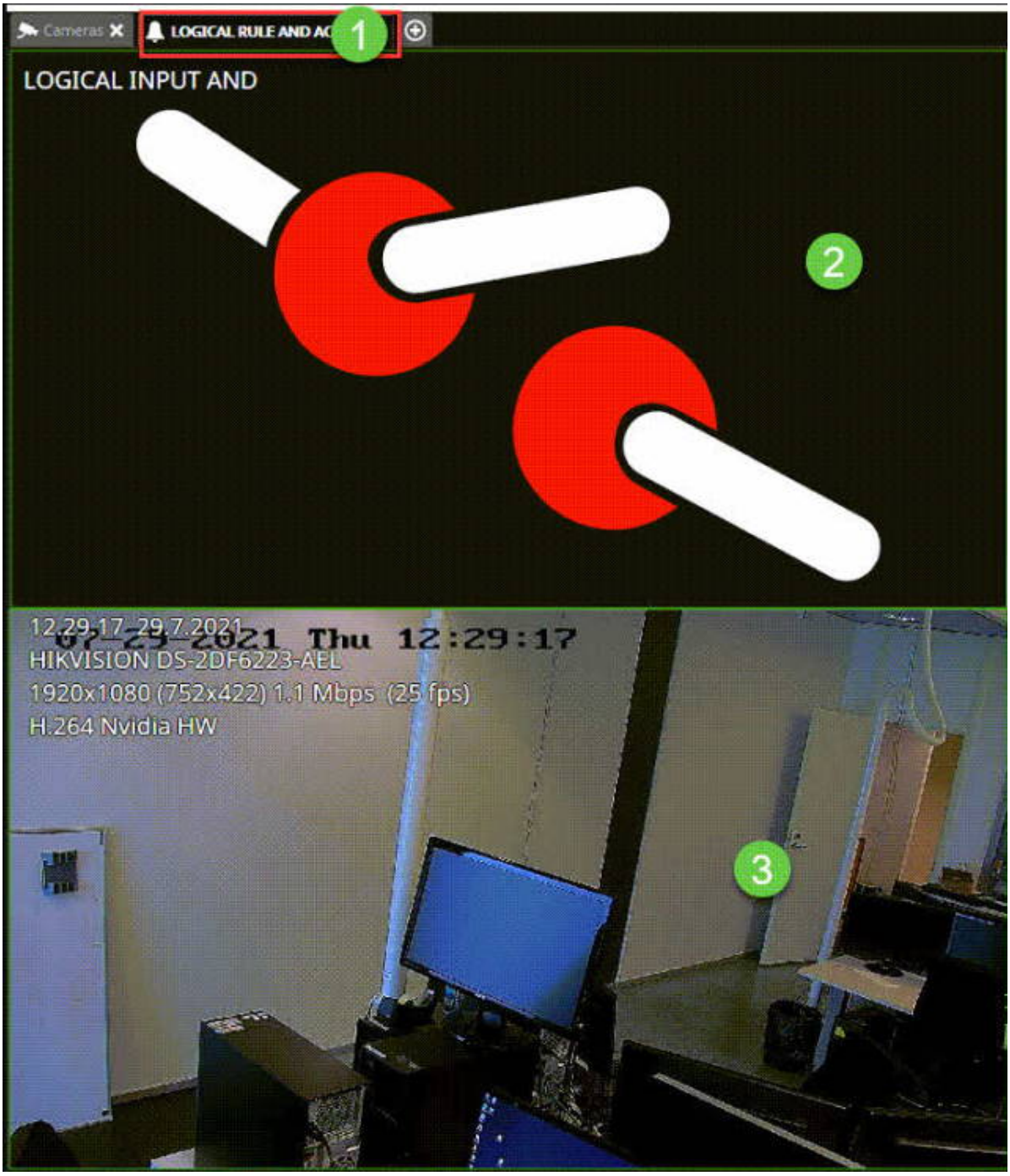
Alarm visualization allows a selection of the alarm highlight colour for active and ended alarms.



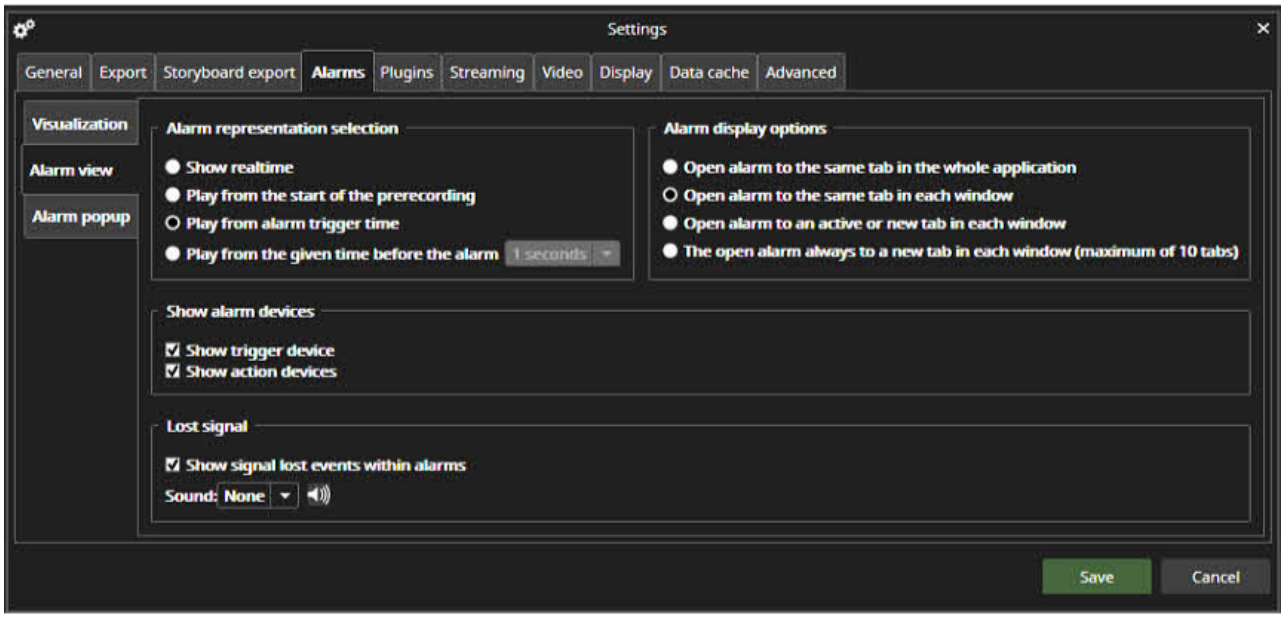
14.4 Alarm view

The alarm view tab shows all components, which are related to the alarm(alarm trigger and actions) when the alarm is opened from the alarm list.

1. Name of the alarm
2. Trigger of the alarm
3. All action components of the alarm



Alarm view settings can be configured from Spotter\Settings\Alarms\Alarm view



14.4.1 Alarm representation selection

The Alarm representation selection defines what time the alarm is being played when it is opened from the alarm list. The possibilities are:

- Show real-time
- Play from the start of the alarm pre-recording time
- Play from alarm trigger time (default option)
- Play from the given time before the alarm(1- 60 seconds)

14.4.2 Alarm display options

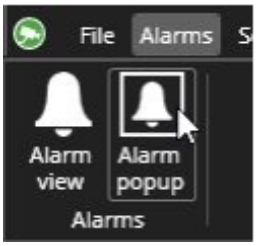
It is also possible to define how the alarm is opened. The possibilities are:

- Open alarm to the same tab in all whole application
- Open alarm to the same tab in each window
- Open alarm to an active or new tab in each window
- Open alarm always to a new tab in each window(maximum of 1 10 tabs)

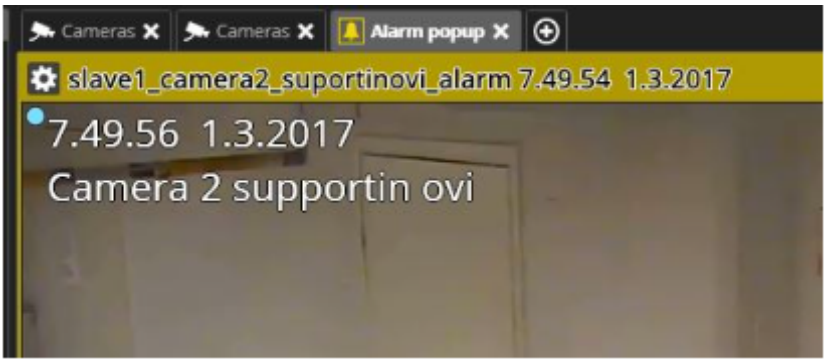
14.4.3 Lost signal

- Show signal lost events within alarms

14.5 Alarm popup

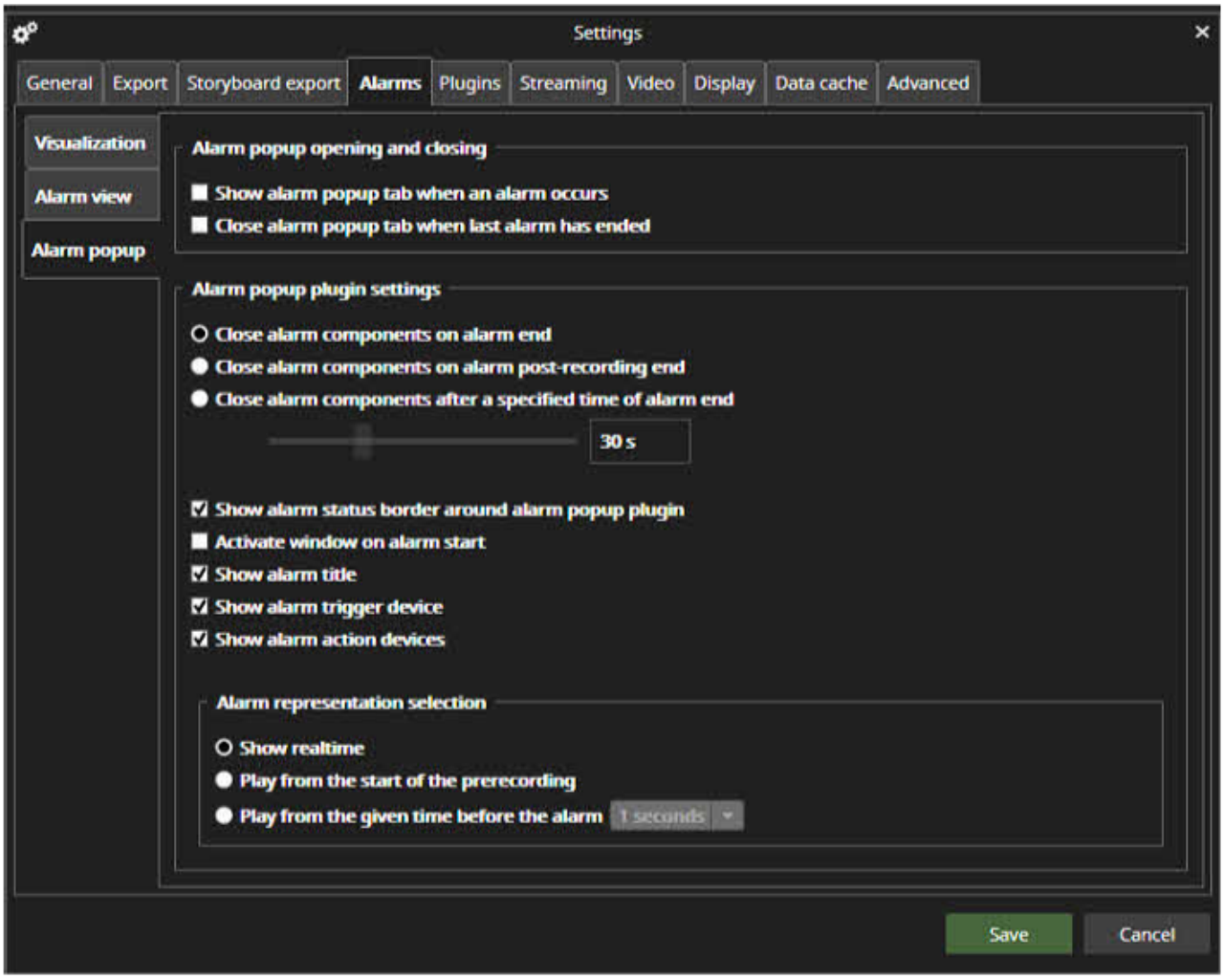


The alarm popup plugin can be used to alert a user when a new alarm is activated.The popup window can be a new tab or placed in a camera grid cell.The popup can be opened from the Alarms menu or the device tree.



When the alarm popup tab is open, any new alarm components are automatically opened to it, and they remain there for as long as the alarm is active.The popup is by default highlighted with yellow colour when an alarm is triggered.

Alarm popup settings can be configured from Spotter\Settings\Alarms\Alarm popup



Alarm popup settings define how the Alarm popup view opens and closes.

The default setting is that the Alarm popup is not opened and closed automatically if it is not open.

14.5.1 Alarm popup opening and closing

If the user wants the Alarm popup not to open normally and only open when an alarm happens, he should select the first checkbox.

If the user wants the Alarm popup closed automatically after the last active alarm ends, he should check the second checkbox.

14.5.2 Alarm popup plugin settings

The second part of the Alarm popup settings defines how long the alarm components are displayed in the popup tab. The possibilities are:

- Alarm components are closed when the alarm ends (default option)
- Close alarm components on alarm post-recording end
- Close alarm components after a specified time of alarm ended(5 seconds – 30 minutes).

- Show alarm status border around alarm popup plugin
- Activate window on alarm start
- Show alarm title
- Show alarm trigger device
- Show alarm action devices

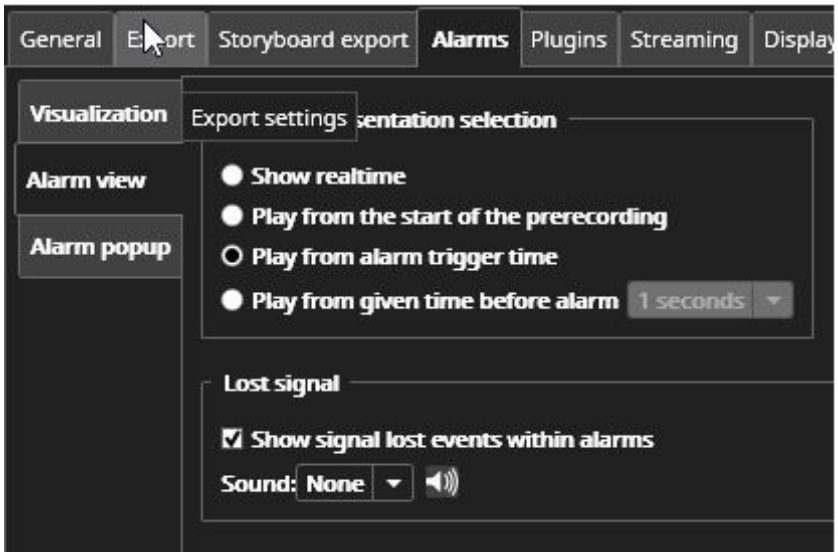
14.5.3 Alarm representation selection

- Show real-time (default)
- Play from the start of the prerecording
- Play from the given time before the alarm(1-60 seconds)

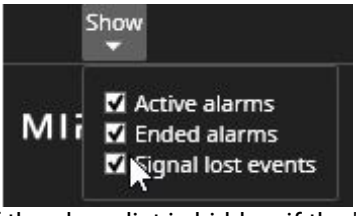
System administrators can also define a custom colour for each alarm in the System Manager application.There is no difference in the colouring between an ended alarm or an ongoing alarm for such alarms.The custom colour is reflected in time slider grouped alarms only if all alarms in the group are of the same colour.There are various settings for alarm popup behaviour. The standard settings for all popups are adjusted from Spotter Settings.The filter settings for individual popup tabs are adjusted from the popup tab settings.The user can define whether the tab is automatically opened if it is not open or whether the window containing the popup tab is brought to the foreground if it is already not in the foreground.Also, the time of how long the alarm devices are visible can be controlled.

14.6 Signal Lost Alarms

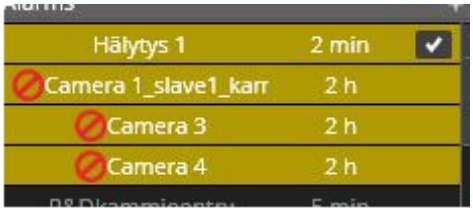
It is also possible to show cameras that lose the video signal as alarms in the Spotter window.This is achieved by activating the setting "Show signal lost events within alarms" in Spotter Settings' alarms tab. In the same place, the user can choose from preformatted alarm sounds, which sound is played when the signal lost event occurs.



Signal lost events are shown in the alarm list if the "Show" configuration is set to show them. By default, the signal lost alarms are not shown, so to get the feature working, the user needs to open the alarm list and select the signal lost from the configuration list.



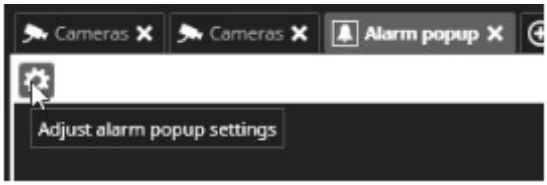
The setting is saved into layouts.Even if the alarm list is hidden, if the "show" filter is configured to show the signal lost event, the sound file is played when the event happens.If the alarm list is configured to show the signal lost as an alarm, it appears with the lost icon.



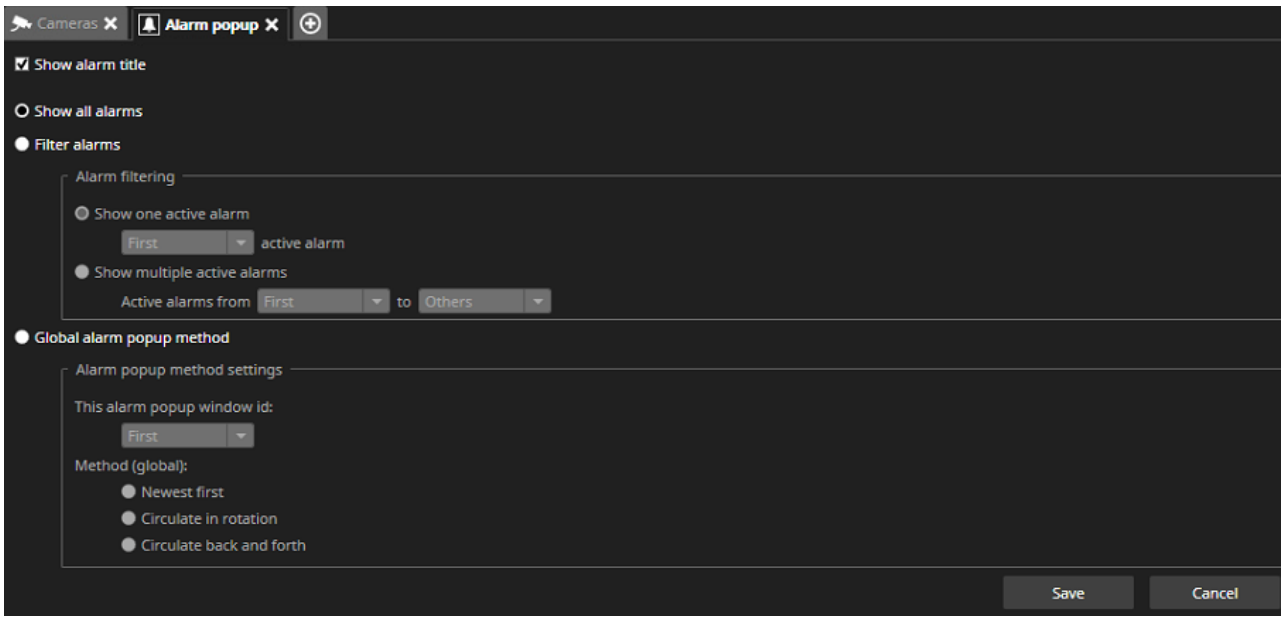
When the signal returns, the event is still visible, but now it is shown as ended (greyed out).The tooltip shows further information.

14.7 Showing the Alarm Name in Alarm Popup View

The alarm name can be controlled from both Spotter settings (system default) and alarm popup-specific settings. When the user is "administrator" or has System Manager rights in the user group, he can see the Alarm Popup setting view.



Clicking this will open the Alarm popup in setting view:



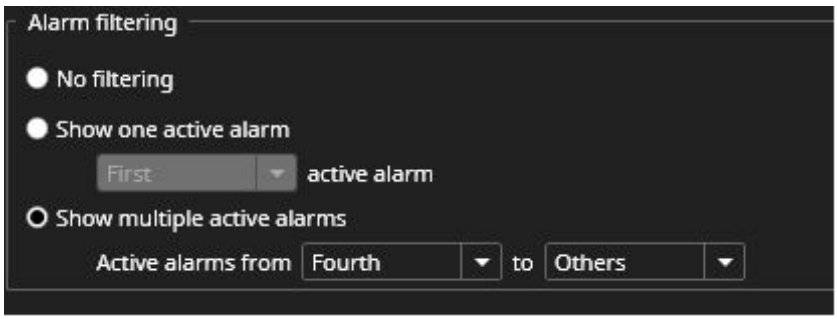
The visibility of the alarm title can be controlled here for this single instance of the Alarm popup. When activated, it displays the alarm name with the popup. If there are multiple active alarms, their names are listed on top of each other.

14.8 Use of Multiple Alarm Monitors

With the same Alarm popup settings as above, it is possible to configure the system to use multiple alarm monitors so that only a single alarm (or multiple if desired) is shown on each monitor. The system can be configured, for example, to have four separate alarm monitors. Then alarm monitor number 1 will show the oldest alarm, monitor 2 will show the second oldest alarm, and 3 will show the third oldest alarm. Monitor 4 can, for example, be configured to show the rest of the alarms.

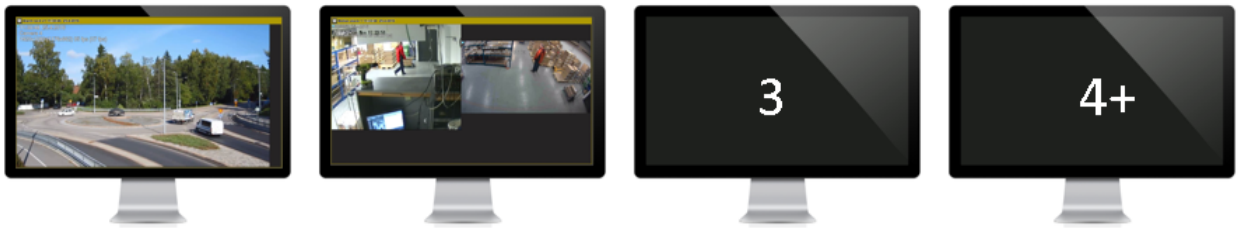
The configuration is done by defining which alarm the Alarm popup should show. For configuring alarm monitor 1, the first active alarm should be selected in the filtering.

For the second and third, a new alarm popup should be opened and then the filtering adjusted accordingly. For the 4th and additional alarms, the setting should be changed like this:

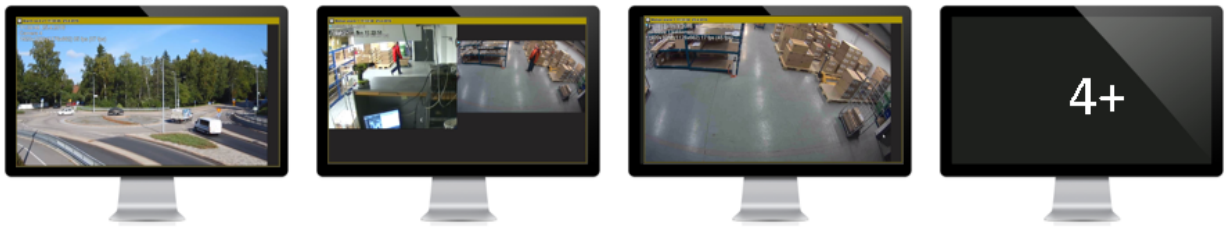


With these four-alarm popup windows open and configured, the layout should now be saved. When there are no active alarms, the alarm monitors display a clarification number to know which monitor. When there is only one alarm active, it is displayed on the first monitor.

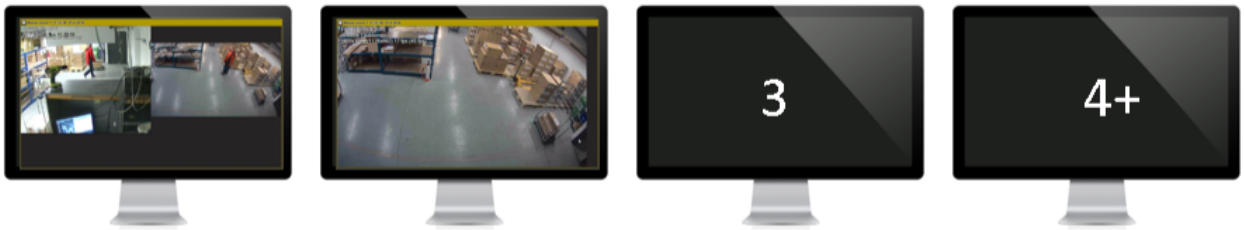
If two alarms are active, the oldest is displayed on the first monitor, and the newer alarm opens on the second monitor.



The third alarm is on the third monitor.



When the oldest alarm ends, it will be closed from the first monitor (1).The monitors will automatically refresh so that the alarm previously in monitor 2 is now in monitor 1, and so on.



If the alarm settings have been defined so that alarm components are kept open longer than the alarm duration, the move of alarms will happen only when the alarm components are closed.

In this case, the alarm colour in monitor one will change from the active alarm colour to the ended alarm colour.The alarm popup filter setting is saved to layouts and saved tabs.When using AVM, it is recommended to create a camera tab, open the alarm popup to the camera tab, configure the filter, and then save it with the appropriate name.The tab can then be opened to AVM using the AVM Operator Console.

It is also possible to configure the multiple alarm monitors to show the Alarm popup and Profile map side by side by configuring the Profile map to use similar filtering settings as the alarm popup.

15 System Monitoring

15.1 System Monitoring contains:

- Camera Audit
- Diagnostic
- Watchdog Event Search

15.2 Camera Audit

Camera health audit is a plugin that allows the operators to ascertain that every camera of the system works appropriately – plus that the cameras have not been turned/tampered/blocked.

15.2.1 The main report page provides information on the

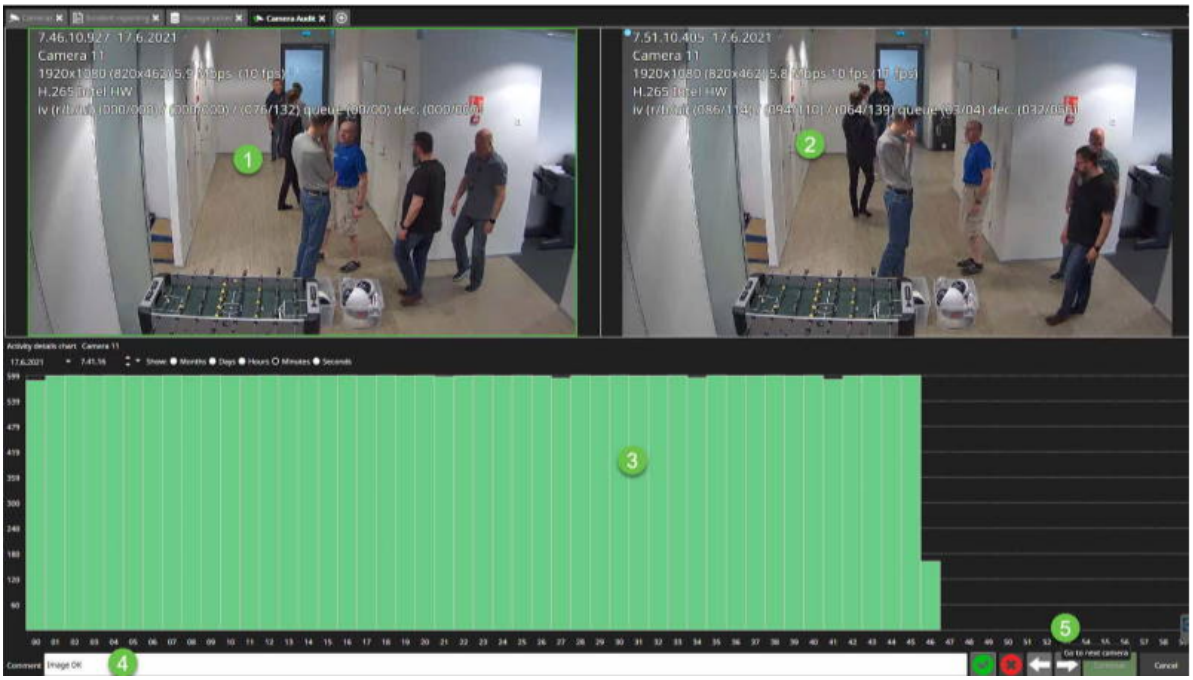
1. Name of the camera
2. Footage start time
3. Footage end time
4. Footage Days/Hours
5. Current status of the camera
6. 90 days image loss
7. Reference image
8. Current image
9. Audit status
10. Comments

15.2.2 Auditing the cameras

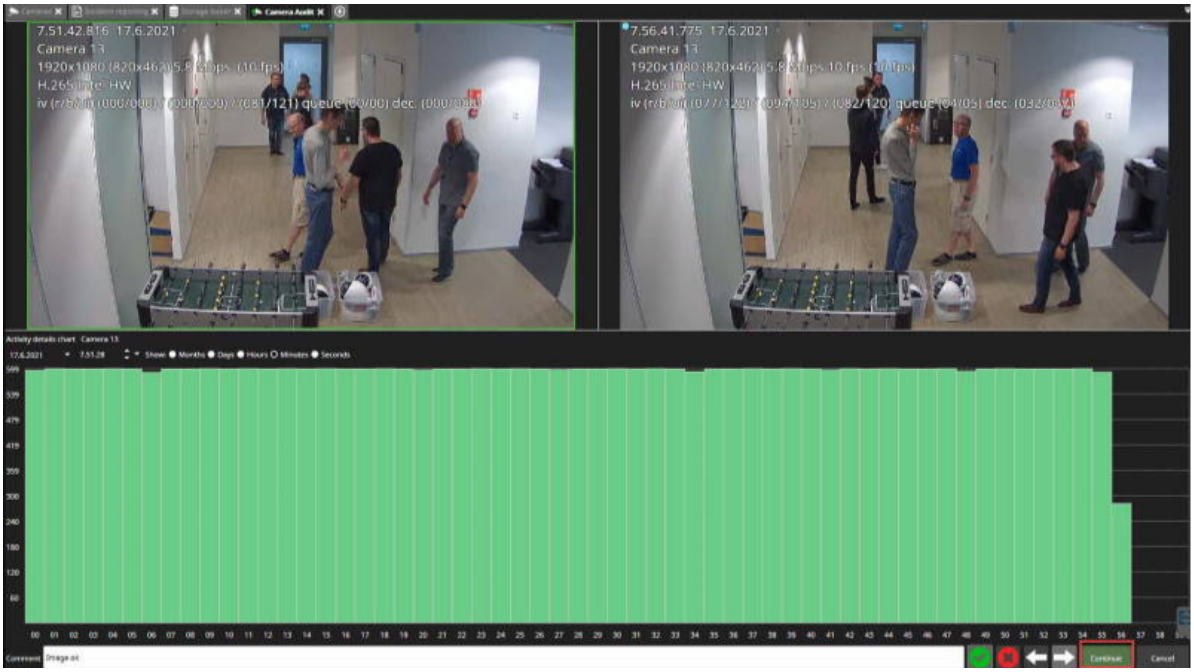
1. Select cameras by control- and shift-clicking
2. Click **Audit selected cameras**

The camera audit view shows the following information:

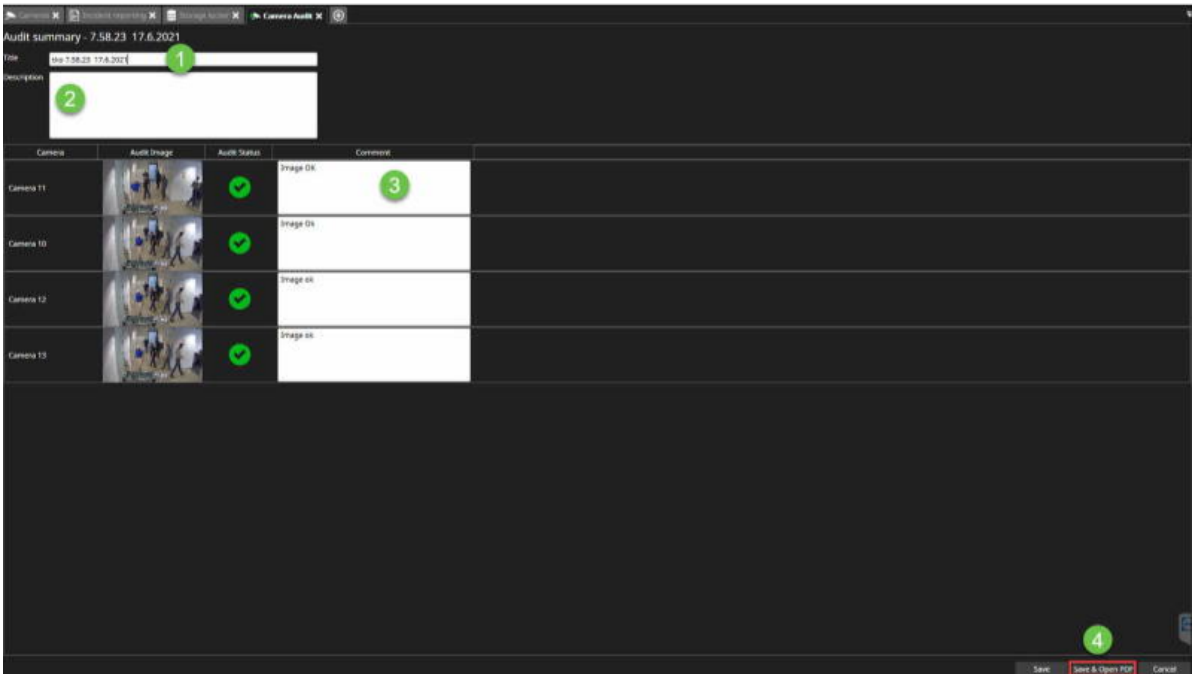
1. Playback view from the camera
2. Real-time view from the camera
3. Amount of the frames received from the camera
4. You can add a comment to the camera audit report
5. Click **Go to the next camera** continue



1. Repeat the actions with all cameras and click **Continue**



1. Enter the title of the camera audit
2. Type the description, if needed
3. Edit the comments, if needed
4. Click **Save & Open PDF**

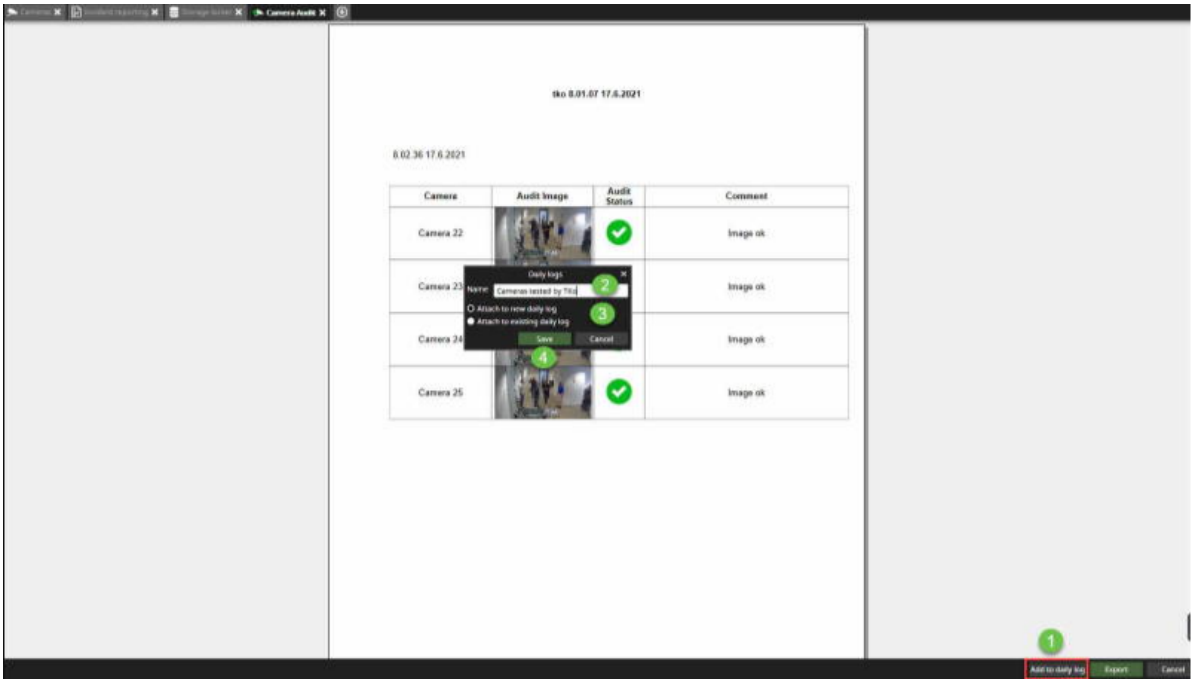


From the PDF view, you can do the following actions:

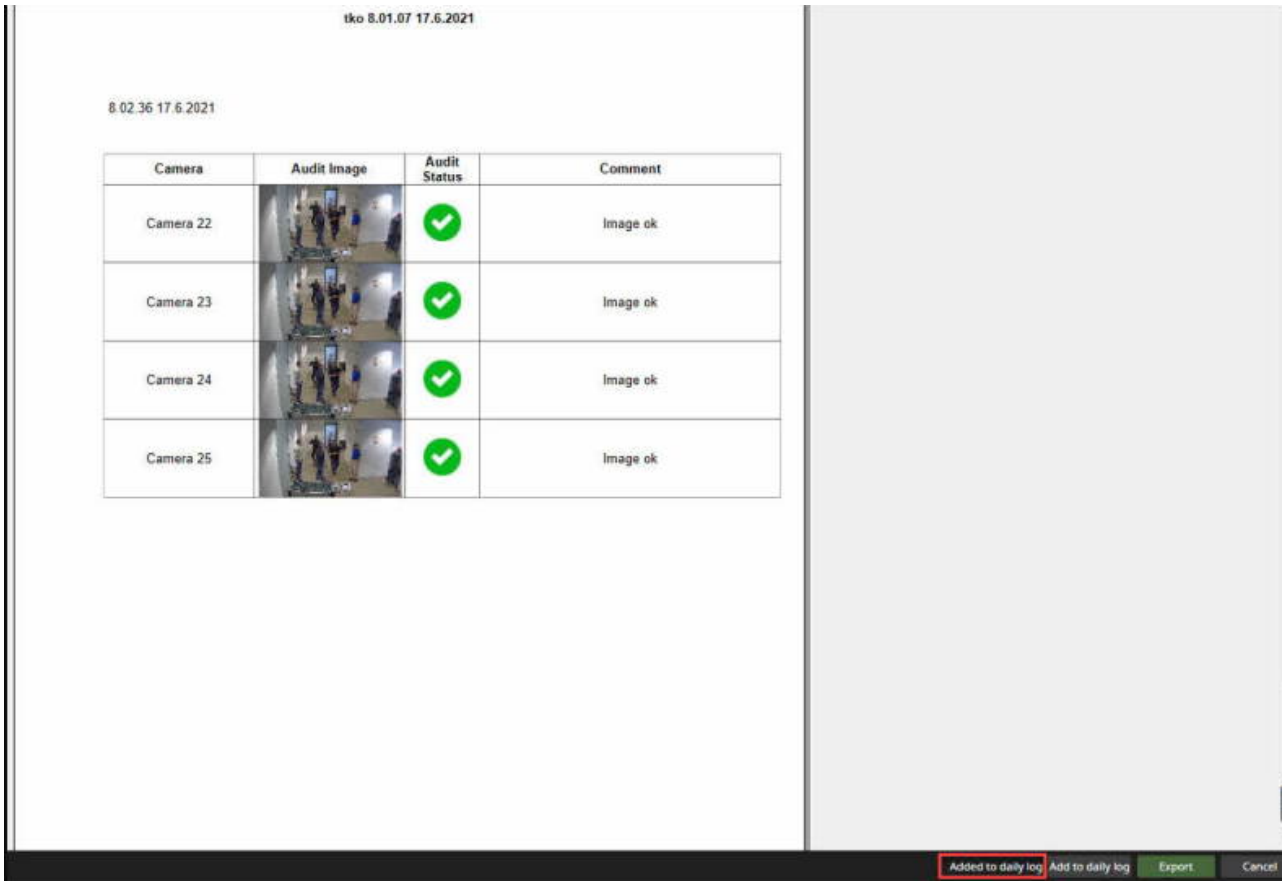
1. See an overall view of the camera audit report
2. Add camera audit report to the daily log
3. Export camera audit

15.2.2.1 Add to the daily log

1. Click **Add to the daily log**
2. Set the name of the daily log
3. Select **Attach to new daily log or attach to an existing daily log**
4. Click **Save**



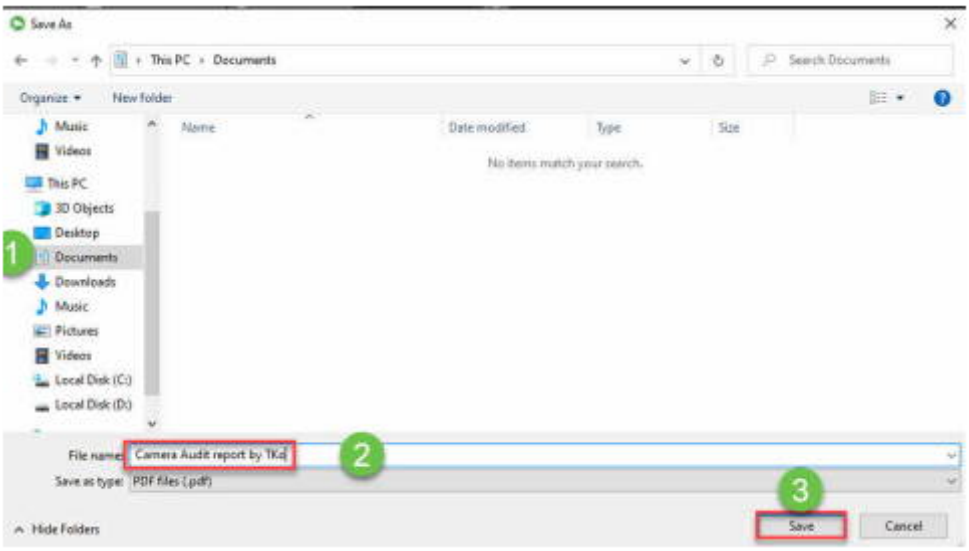
After the saving, you will see a message **Added to the daily log**



15.2.2.2 Exporting the camera audit report

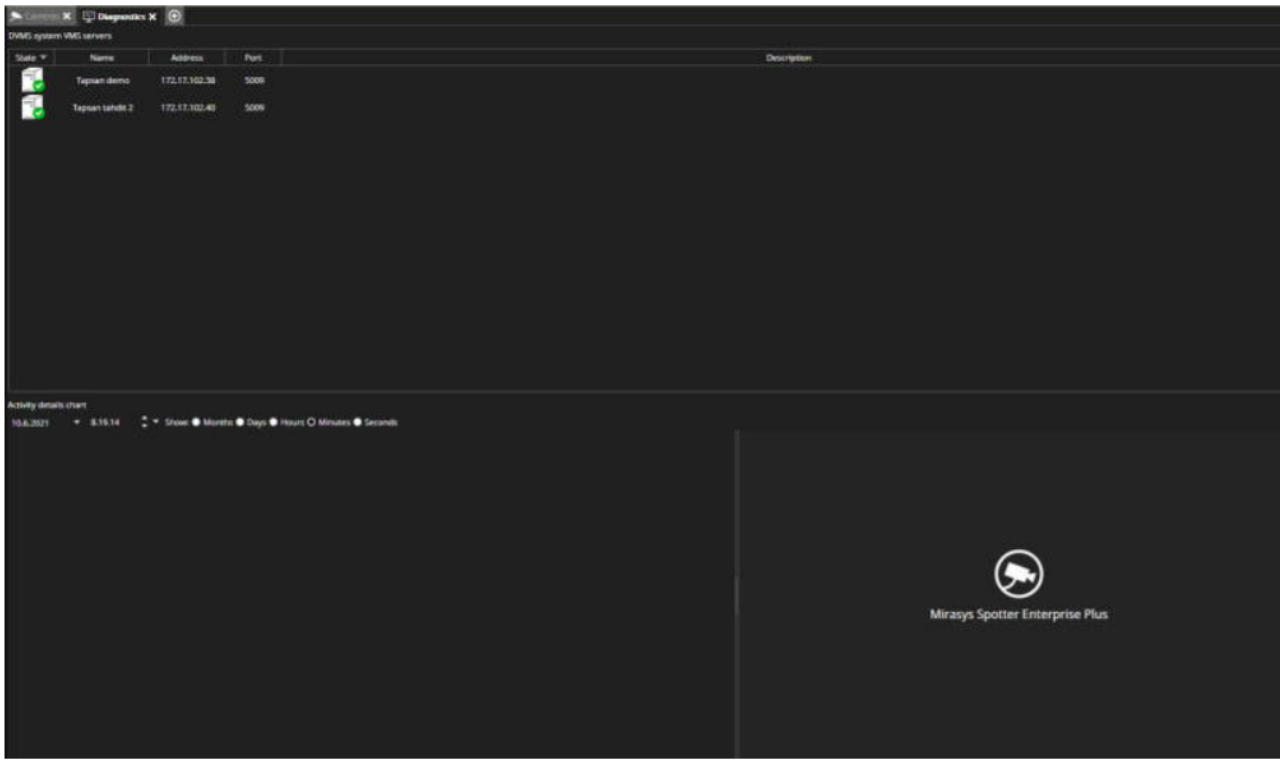
Click Export

1. Select the location
2. Set name for the camera audit export
3. Click **Save**



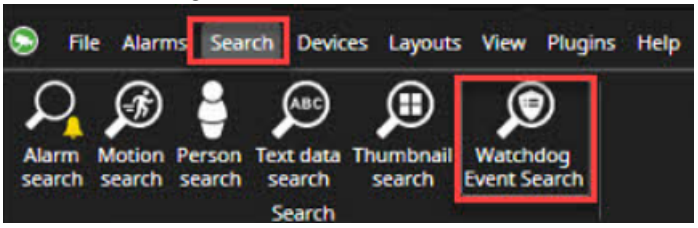
15.3 Diagnostic

Diagnostic shows the name, IP address and the status of the VMS servers, which are connected to the master server



15.4 Watchdog Event Search

1. Click **Search**
2. Select **Watchdog Event Search**



1. Select start date for the search
2. Select start time for the search
3. Set the search end time, if needed
4. Set the result count(Default 50)
5. Filter the Watchdog event types, if needed(Default all events are selected)
6. Filter the sources, if needed(Default all servers connected to the master are enabled)
7. Start search
8. All Watchdog Events are shown in the list
9. The user can sort out the found event using header columns

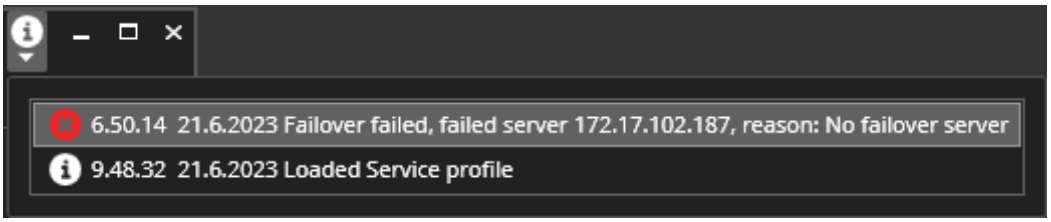

1
2
3
4
5
6
7
8
9

16 Failover Logs

16.1 Failover log in Spotter

To see failover events in Spotter, the user role for that must be enabled in System Manager Spotter user role settings. By default, failover events are not shown in Spotter.

When failover events are received in Spotter, the log is shown in the Notifications drop-down menu. The notifications icon blinks a few seconds every time a new notification is added.



Failover event is sent only once in cases:

- Recorder failure detected, but the recorder is already in the failover process.
- Recorder failure detected, but no failover recorders are free in the system.

The situation cleared when the failover for the recorder was done.

16.2 Failover events

Failover events are categorized with severity. The severity of the information is shown with different icons.

16.2.1 Information - white info icon

- Failover in progress
- Failback in progress
- Material copy in progress
- Failover ready
- Failback ready
- Material copy ready

16.2.2 Warning - yellow warning icon

- Failover failed, reason: Skipped, failover already running

16.2.3 Error - red error icon

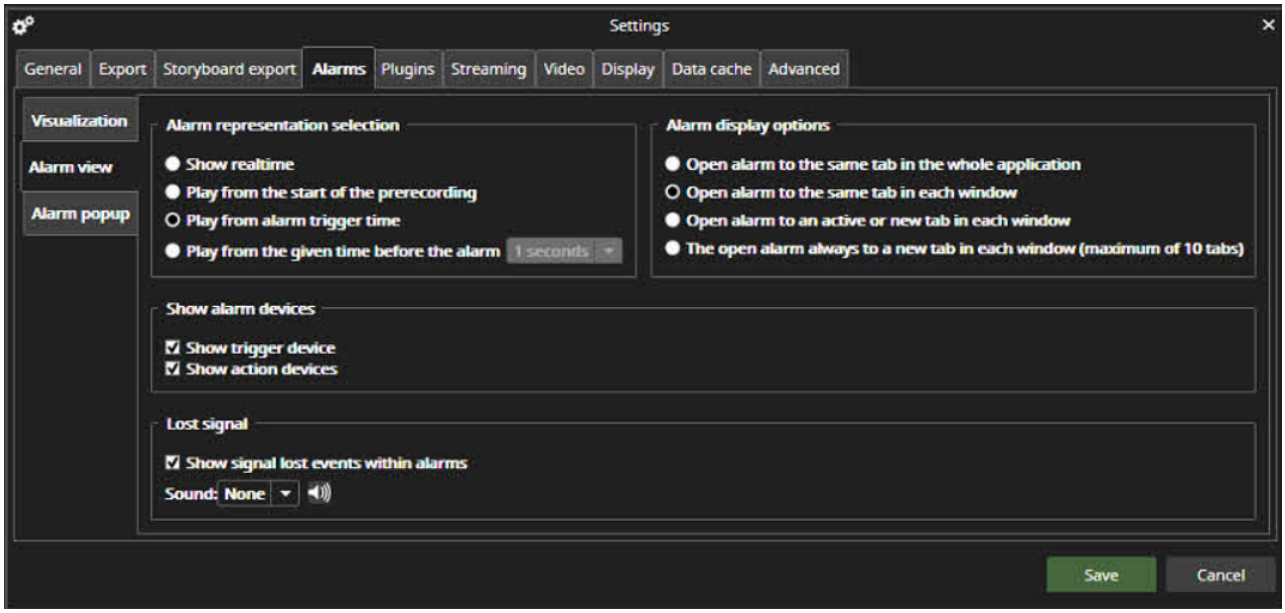
- Failover failed
- Failback failed
- Material copy failed

Errors are shown with detailed info part

- Failover server in the wrong state
- Incompatible
- Internal error
- Invalid log state
- No failover serve
- No failover server connection
- No license
- No recorder
- No recorder settings
- Operation canceled
- The server is in the wrong state
- Settings saving failed

17 Plugins

17.1 Spotter Alarm View



17.1.1 Alarm representation selection

The Alarm representation selection defines what time the alarm is being played when it is opened from the alarm list. The possibilities are:

- Show real-time
- Play from the start of the alarm pre-recording time
- Play from alarm trigger time (default option)
- Play from the given time before the alarm(1- 60 seconds)

17.1.2 Alarm display options

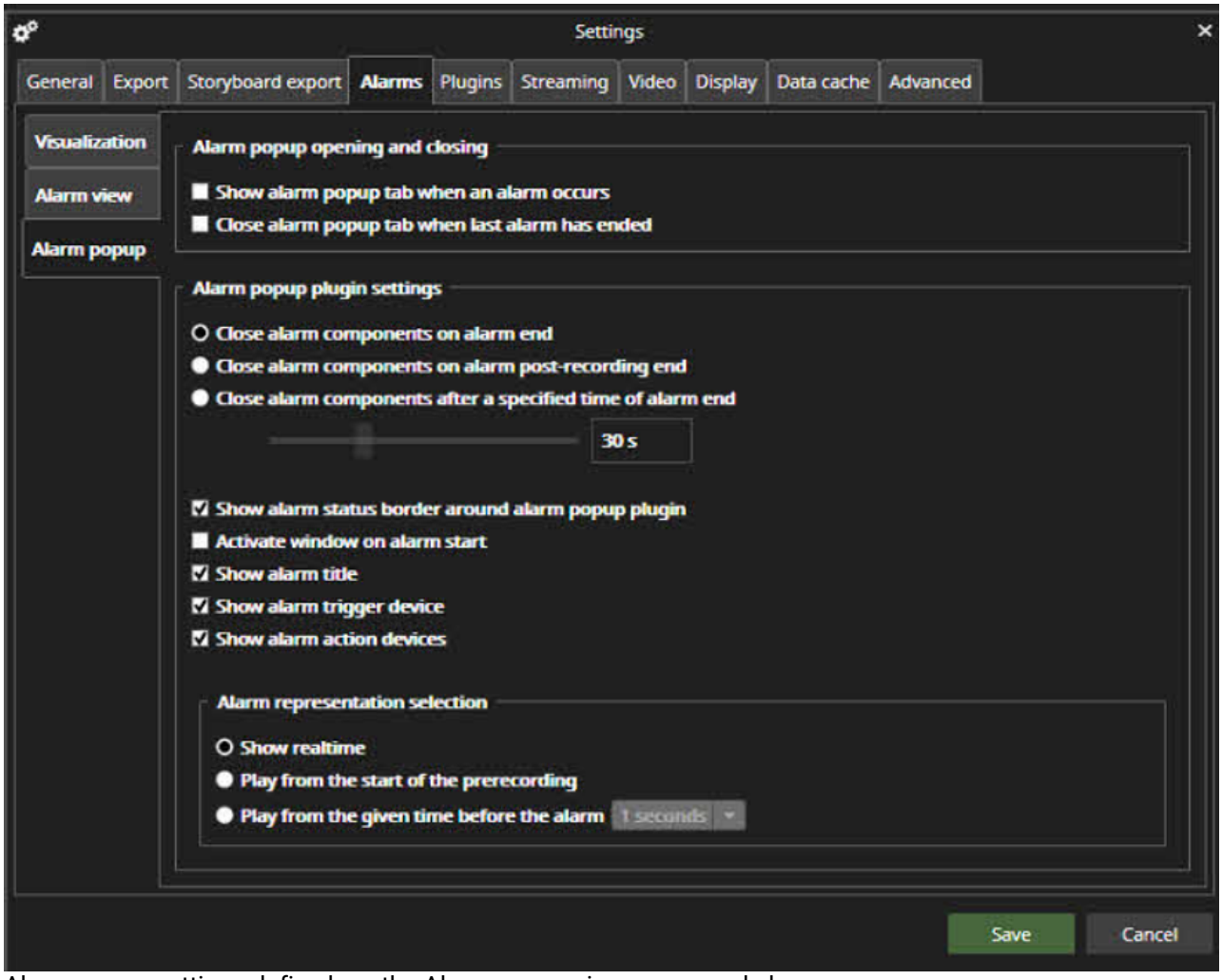
It is also possible to define how the alarm is opened. The possibilities are:

- Open alarm to the same tab in all whole application
- Open alarm to the same tab in each window
- Open alarm to an active or new tab in each window
- Open alarm always to a new tab in each window(maximum of 1 10 tabs)

17.1.3 Lost signal

- Show signal lost events within alarms

17.2 Spotter Alarm Popup



Alarm popup settings define how the Alarm popup view opens and closes.

The default setting is that the Alarm popup is not opened and closes automatically if it is not open.

17.2.1 Alarm popup opening and closing

If the user wants the Alarm popup to not open normally and only when an alarm happens, he should select the first checkbox.

If the user wants the Alarm popup closed automatically after the last active alarm ends, he should check the second checkbox.

17.2.2 Alarm popup plugin settings

The second part of the Alarm popup settings defines how long the alarm components are displayed in the popup tab. The possibilities are:

- Alarm components are closed when the alarm ends (default option)
- Close alarm components on alarm post-recording end
- Close alarm components after a specified time of alarm ended(5 seconds – 30 minutes).
- Show alarm status border around alarm popup plugin
- Activate the window on the alarm start
- Show alarm title
- Show alarm trigger device
- Show alarm action devices

17.2.3 Alarm representation selection

- Show real-time (default)
- Play from the start of the prerecording
- Play from the given time before the alarm(1-60 seconds)

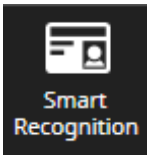
17.3 Smart Recognition

Smart Recognition plugin shows the face and license plate recognition events with information about matched identities and identity lists.

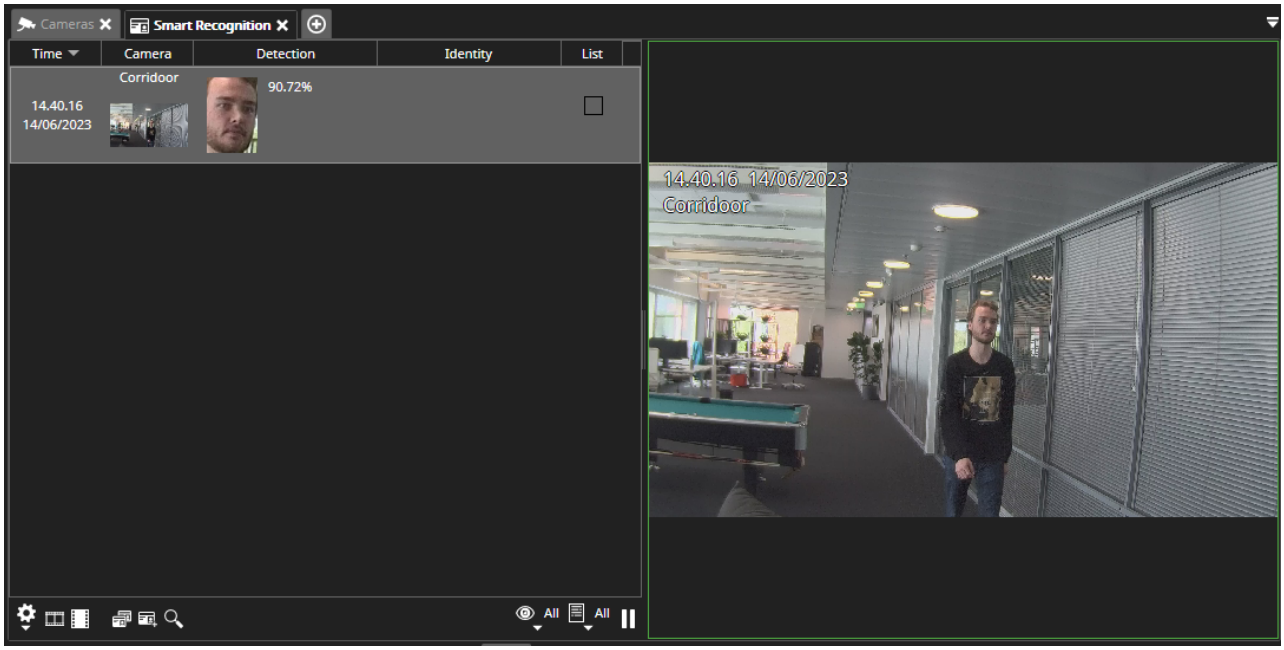
Both license plate and face recognition requires license for each recognition stream.

17.3.1 Open the plugin and view live detection events

Click the Spotter plugin toolbar item to open the plugin:



Smart Recognition plugin is opened and starts to receive live detection events. These events are shown in the event list with detection and identity details.



17.3.1.1 Recognition events

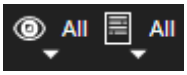
The plugin shows the recognition events in a list with the following fields.

- **Time** - Time and date of the recognition.
- **Camera** - Name of the camera and thumbnail of the full image.
- **Detection** - Face or license plate recognition event thumbnail, recognized information, and recognition confidence value.
- **Identity** - Matched identity information if any.
- **List** - Identity list information that the matched identity belongs to if any.

List content can be arranged by field type by clicking the list header.

17.3.1.2 List filters

Filters can be used to select which events are shown in the recognition event list. Filtering can be done by



- **Event type** - All events, face recognition events, or license plate recognition events
- **List type** - All lists, selected lists, not in any list

Recognition events can be paused by checking the pause option.

17.3.1.3 Export

The selected event can be added to the storyboard or to clip export. Recognition event pre and post-record time can be adjusted from the drop-down settings button.

17.3.1.4 Add face or license plate to identity

A recognized license plate or face can be added to a new identity or existing identity. These functionalities are only possible if the user is authorized to change the identity information. By clicking the add new identity or add to existing identity buttons, the Smart List Management plugin is opened. See more information in the Smart List Management plugin documentation.

17.3.1.5 Quick search

Recognized license plates or faces can be searched by using the Smart Search plugin. In the Smart Recognition plugin, there is a quick search button that opens the Smart Search plugin. The recognized license plate or face information from selected recognition events is filled up automatically to easily perform a search for recognized faces and license plates.

17.4 Smart Search

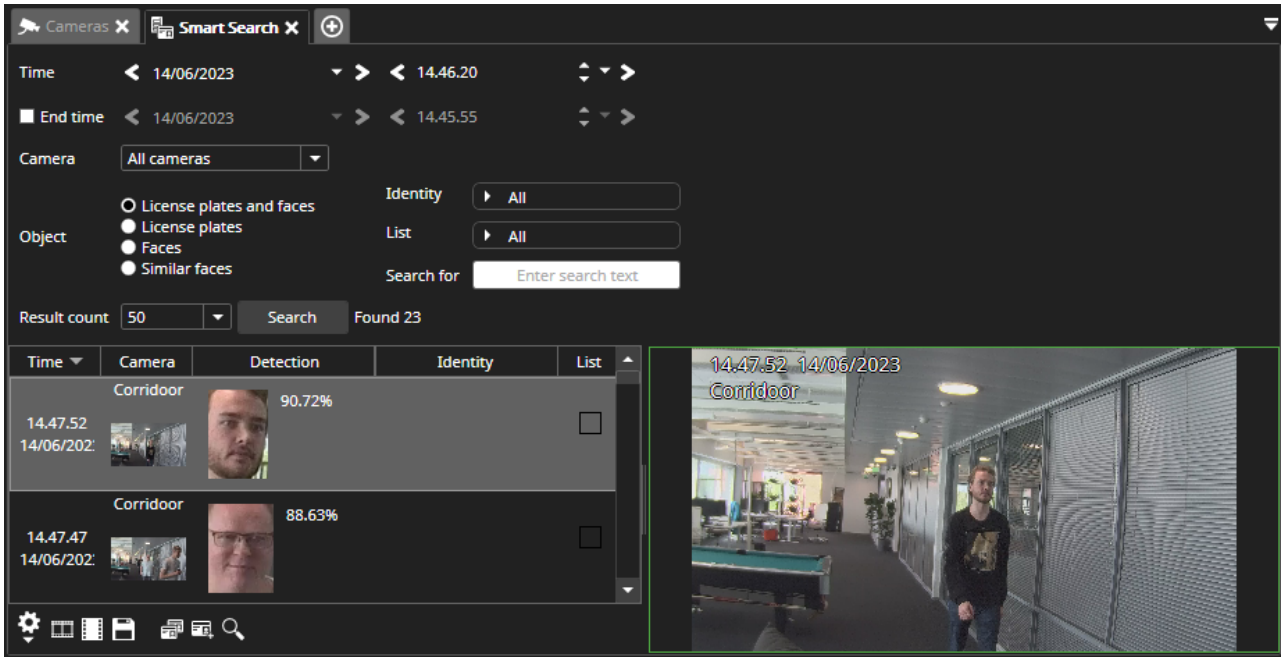
Smart Search plugin is used for searching face and license plate recognition events.

> Both license plate and face recognition requires license for each recognition stream.

17.4.1 Open the plugin and view live detection events

Click the Spotter search toolbar item to open the plugin:

Smart Search plugin is opened and it can be used to search for detection events that have occurred in the past. Found results are shown in results list with detection and identity details.



17.4.2 Search parameters

There are several search parameters that can be used to define when, where, and what is being searched.

- **Time** - Search start time and optional search end time.
- **Cameras** - All cameras or selected cameras.
- **Object** - Faces, license plate numbers, or both. Or search for similar faces.
- **Identity** - All, unknown or selected identities.
- **List** - All, unknown or selected identity lists.
- **Search for** - Free text search uses detected plate numbers and identity fields.
- **Result count** - Maximum number of result rows.

After selecting all appropriate search parameters, the search can be started by clicking the Search button.

17.4.3 Search results

Search results are shown in the recognition event list with the following fields.

- **Time** - Time and date of the recognition.
- **Camera** - Name of the camera and thumbnail of the full image.
- **Detection** - Face or license plate recognition event thumbnail, recognized information, and recognition confidence value.
- **Identity** - Matched identity information.
- **List** - Identity list information that the matched identity belongs to.

List content can be arranged by field type by clicking the list header.

17.4.4 Add to export

The selected event can be added to the storyboard or to clip export. Recognition event pre and post-record time can be adjusted from the drop-down settings button.

17.4.5 Add face or license plate to identity

Found license plate or face can be added to a new identity or existing identity. These functionalities are only possible if the user is authorized to change the identity information. By clicking the add new identity or add to existing identity buttons, the Smart List Management plugin is opened. See more information in the Smart List Management plugin documentation.

17.4.6 Quick search

Found license plate or face can be used for a more detailed search. By clicking the quick search button, search parameters are updated with the selected recognition event details to easily perform a search for found faces and license plates.

17.4.7 Export to PDF report

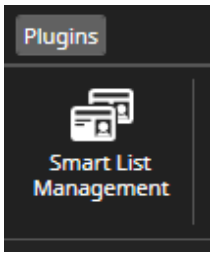
Search results with all recognition details can be saved to a PDF report file. The file can be saved locally or to Storage Locker. Notice that this depends on user role settings.

17.5 Smart List Management

The Smart List Management plugin can be used to define the identities and identity lists on the Spotter side for users with permission to do list management changes but cannot access the System Manager application.

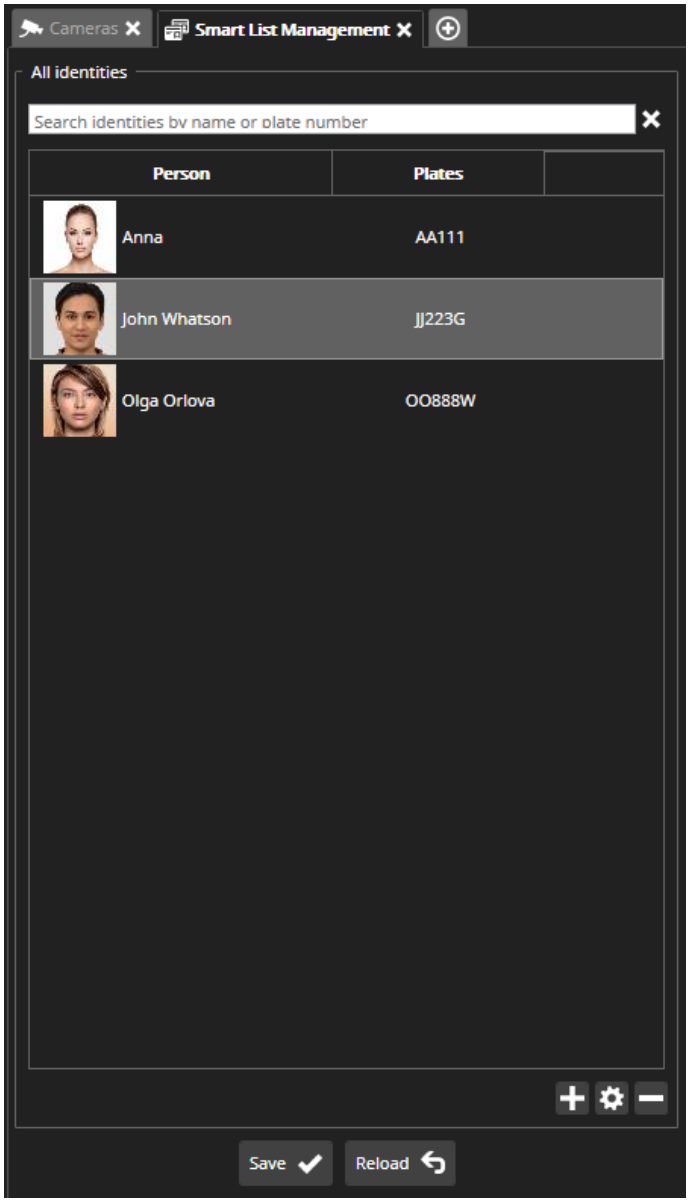
17.5.1 Open the plugin and access the list management

Click the Spotter plugin toolbar item to open the plugin:



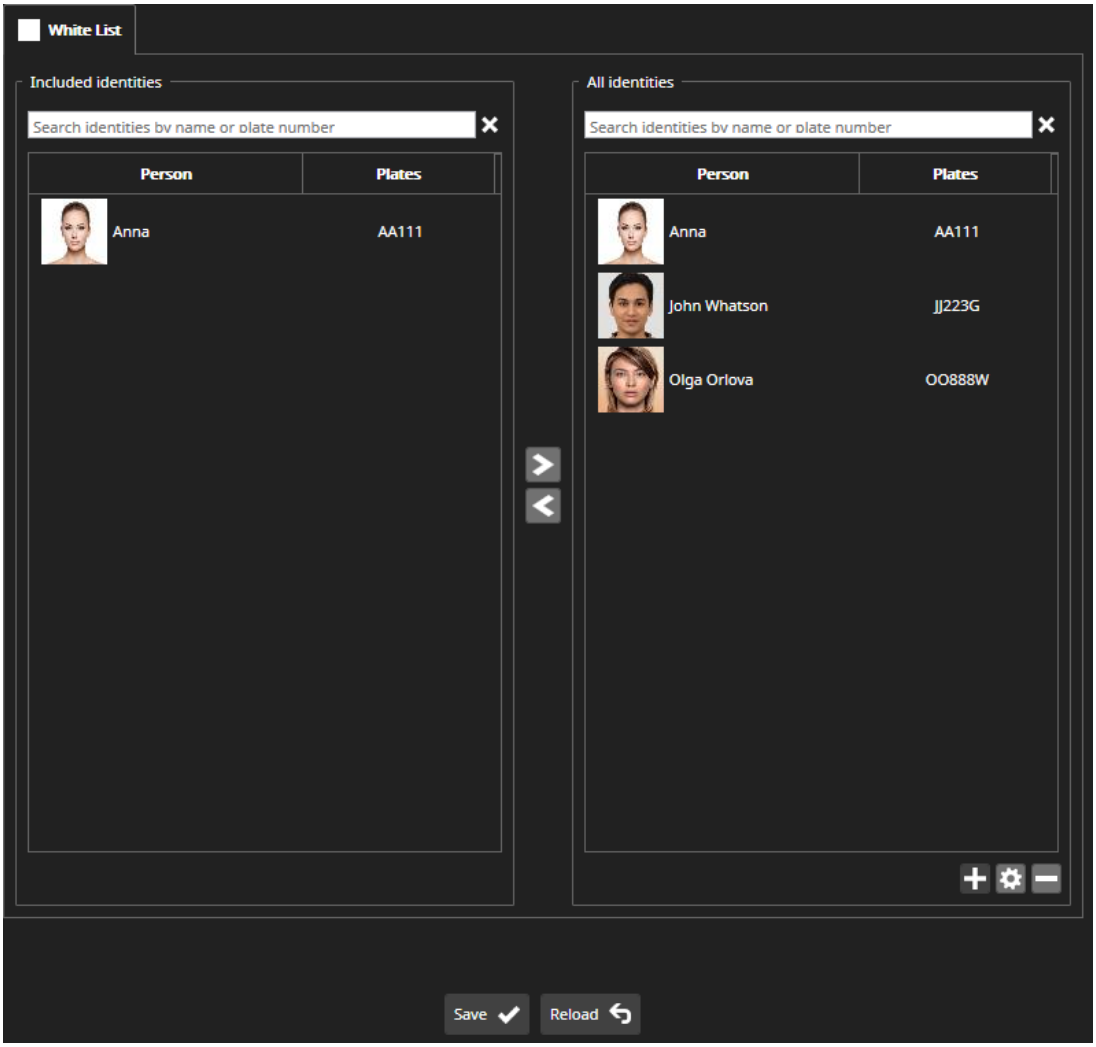
3 Plugin toolbar item

If a list management service is available and contains identities only (no identity lists are configured) and the user has permission to access identities, you will see the main plugin view dialog below:



4 The main view of the plugin (identities)

If a list management service is available and contains identity lists and you have permission to access them, you will see the main plugin view dialog below:



5 The main view of the plugin (lists)

17.5.2 Main plugin view

In the main view of the plugin, you can switch between lists, add identities to the selected list or remove identities from the list, and add and remove identities. In addition, you can modify the selected identity by double-clicking on it or using the “Modify identity“ button.

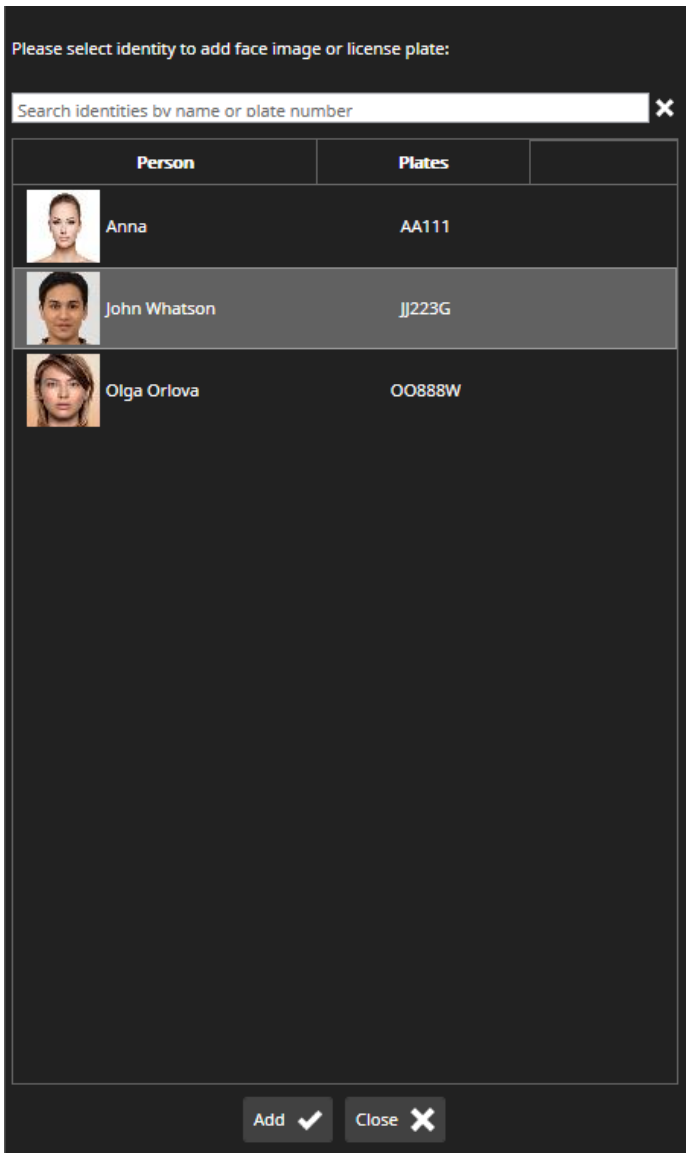
17.5.2.1 Search

Above the lists of identities, you can find the **Search** fields: when you type text in the search field, the list of identities is automatically filtered if the text is found in identity names or plates.

17.5.3 Add a new identity or modify a selected identity

In Spotter Smart plugins (Smart Recognition and Smart Search), you can add a new identity or add a new face or plate number to an existing identity by selecting a face or license plate detection event.

- By clicking the **Add Identity** button, the Smart List Management plugin will be opened, and in the “Add Identity“ view, you can fill the information and save a new identity
- By clicking the **Add face image or plate number to an existing identity** button, the Smart List Management plugin will be opened, and in the Identity Selection view and you can select which identity should be updated:

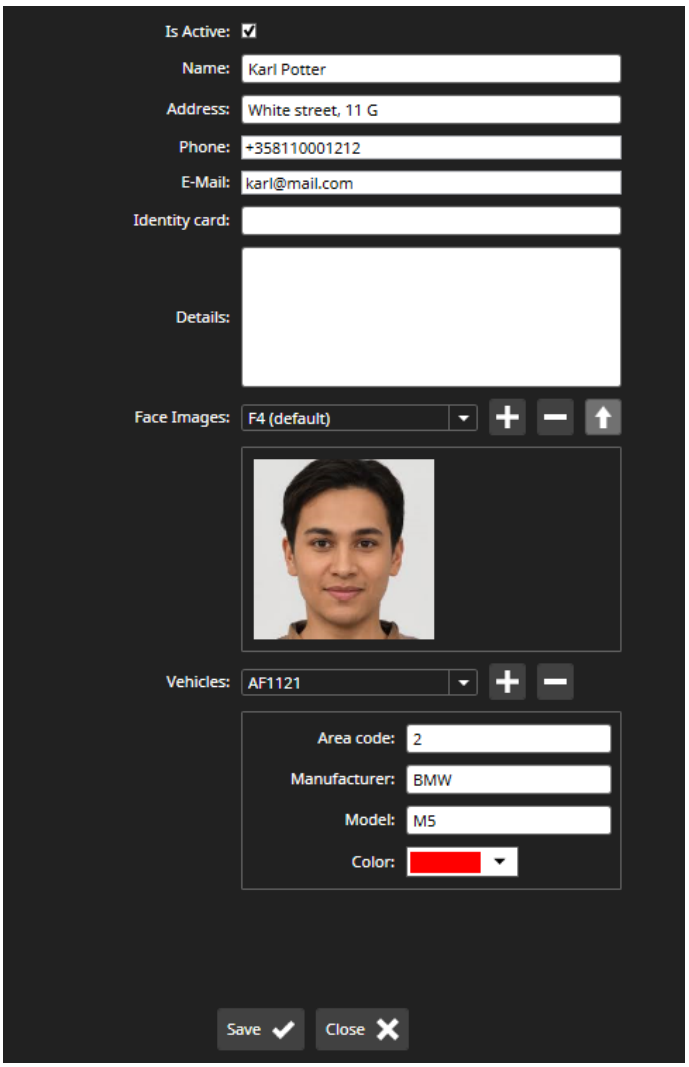


6 Identity selection view

After selection, you can click the **Add** button (or double-click the selected identity), and the Modify Identity view will be opened.

Adding the face or plate number is only possible if the user is authorized to change the identity information.

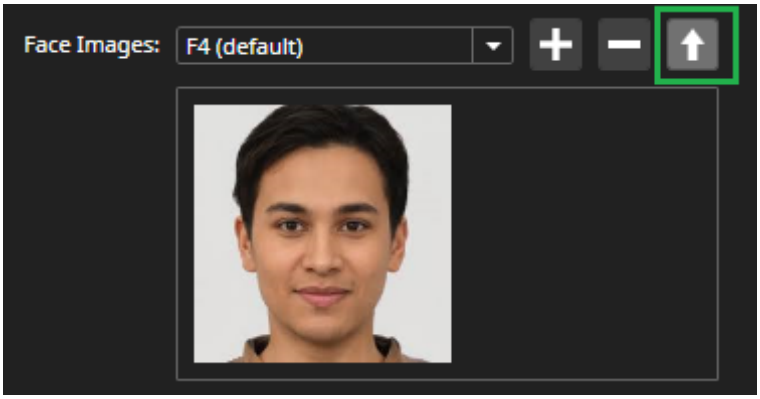
When you add a new identity or modify a selected identity, it will be opened in the Add/Modify view below:



7 View to add/modify the identity

Here you can fill in identity details, add/remove face images and add/remove vehicles.

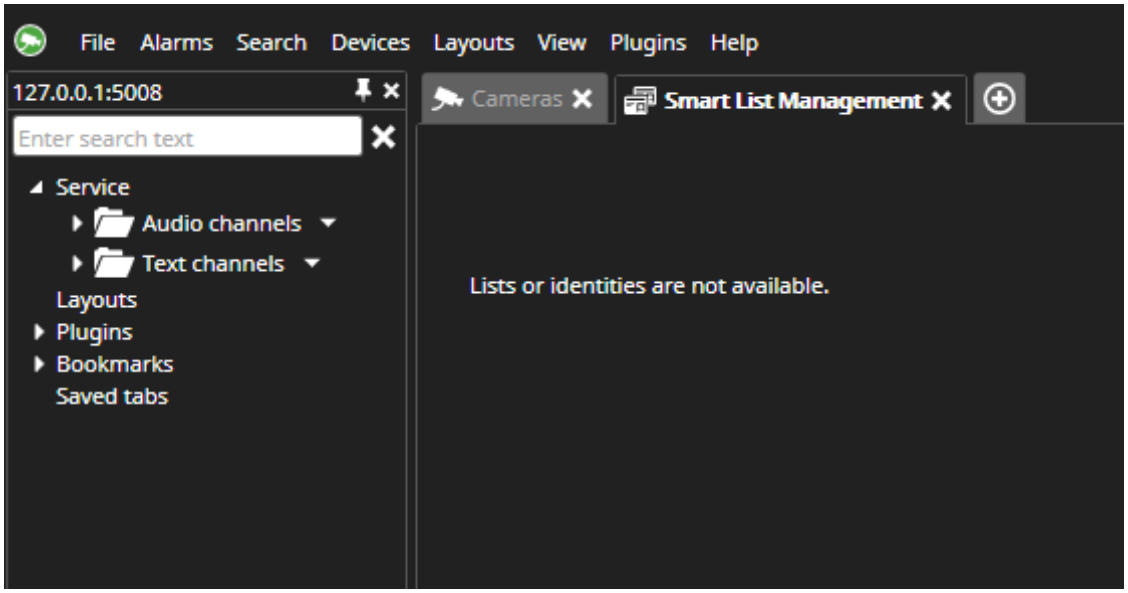
One face image is the default, so it is used as a thumbnail in all plugins and identity lists. To set the face image as default you need to select the face image in the combo box and click **Set selected face image as default button**:



8 Set selected face image as default

17.5.3.1 Service error/no identity lists

If something is wrong with the service or there are no identity lists, then you will see an empty dialog with the message below:



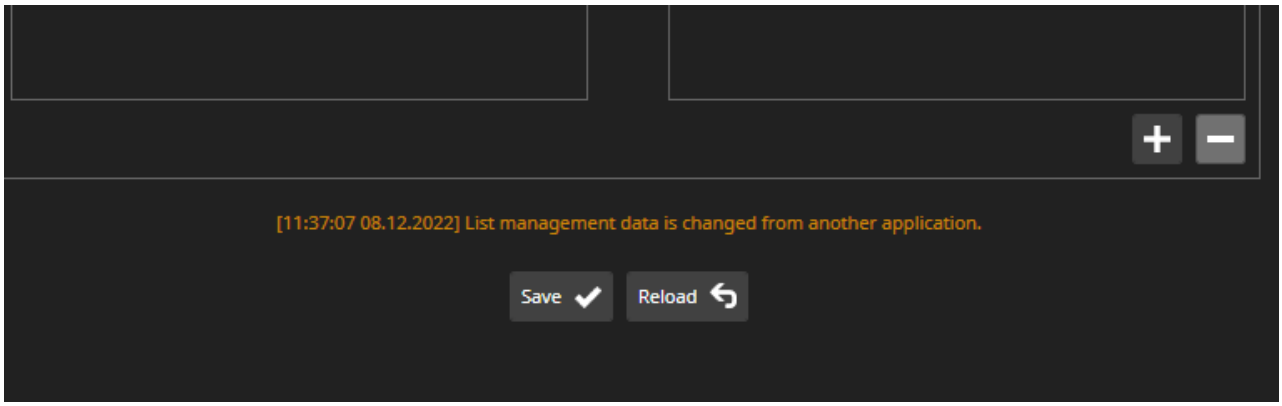
9 List management data is not available message

17.5.3.2 Save and reload

There are two buttons in the bottom part of the main view: **Save** and **Reload**. you can reload all data from the list management service by clicking the **Reload** button. In this case, all data (identities and lists) will be reloaded from the service, and all changes will not be saved. You should click **Save** to save the changes, and all data will be stored in the list management service.

17.5.3.3 Automatic data reloading

If the plugin receives a notification that list management data was changed by another user/application, then all data will be reloaded automatically, and you will receive the message below:

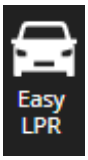


10 List management data is reloaded message

All views will be closed, and the main view will be displayed after reloading. If you had some unsaved changes, then after reloading, all these changes will be lost.

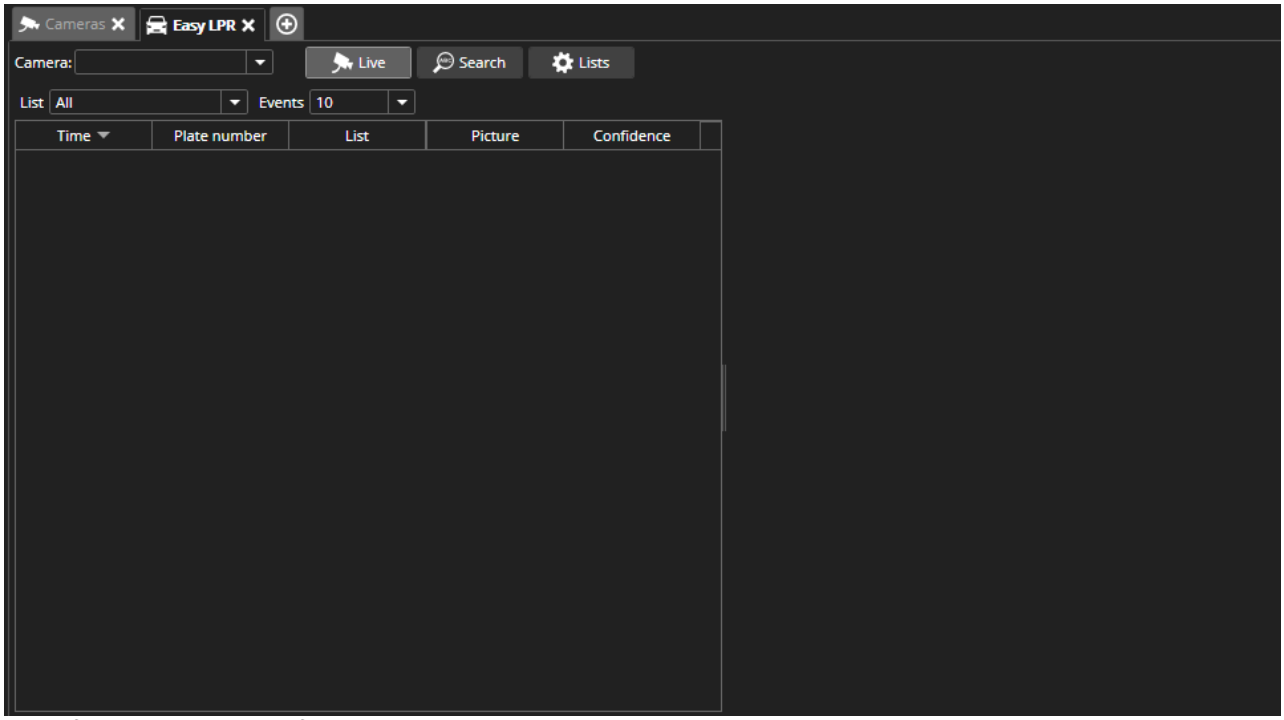
17.6 Spotter Easy LPR

Easy LPR Spotter plugin can be opened from Plugins:



Easy LPR contains the following functionalities:

- Live monitoring from the 1 camera at the same time
- The search of the number plates
- Lists Management
- Digital output controlling based on lists



By default, the Easy LPR functionality is related to LPR camera-generated events. Events are saved into the VMS server database, which is used to search events in Spotter's EasyLPR plugin.

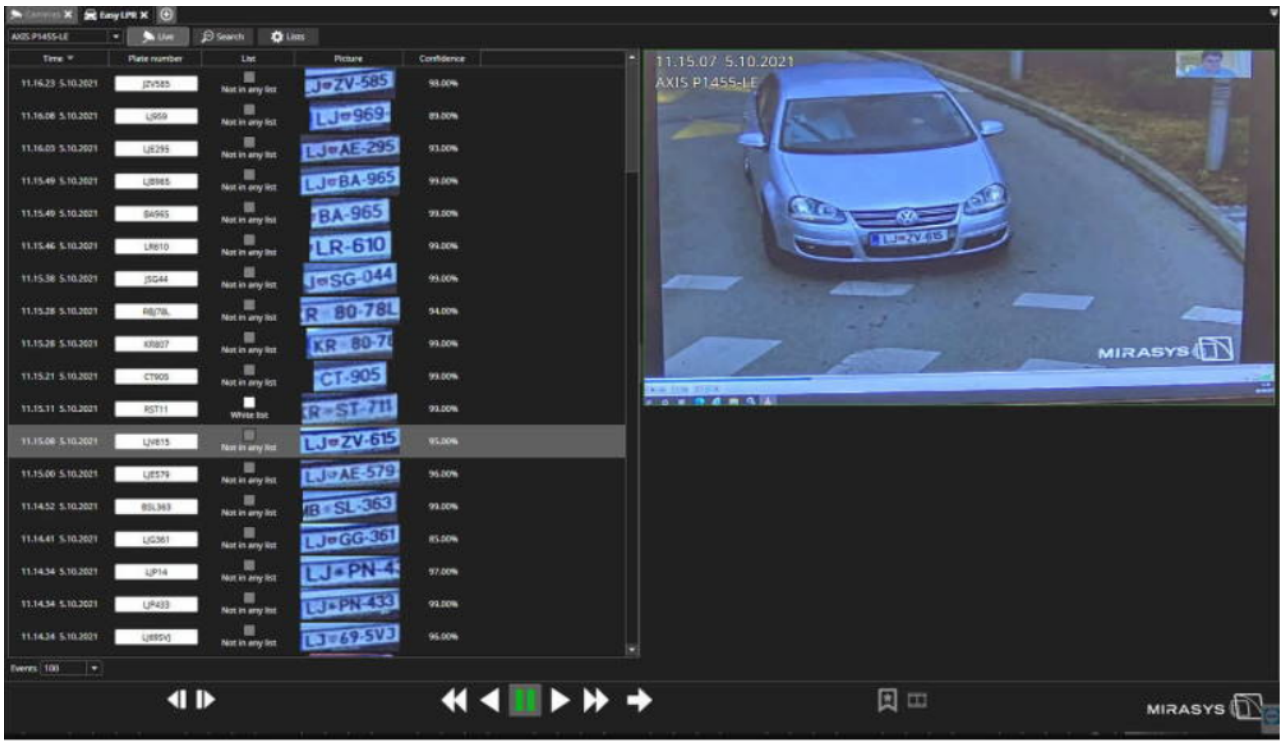
As an alternative, LPR camera-generated events can be used in the Smart LPR plugin and Smart List Management.

17.6.1 Spotter Easy LPR Live

The live tab shows the following information:

1. The selection of the LPR camera
2. Time of the plate detection
3. Plate number
4. Plate list
5. Picture of the plate number
6. Confidence of the plate reading
7. Live view from the LPR camera

When the plate information is clicked by the mouse, then the view changes to the playback mode and show the recorded situation.



17.6.1.1 Filtering the Live view (supported since V9.5.0)

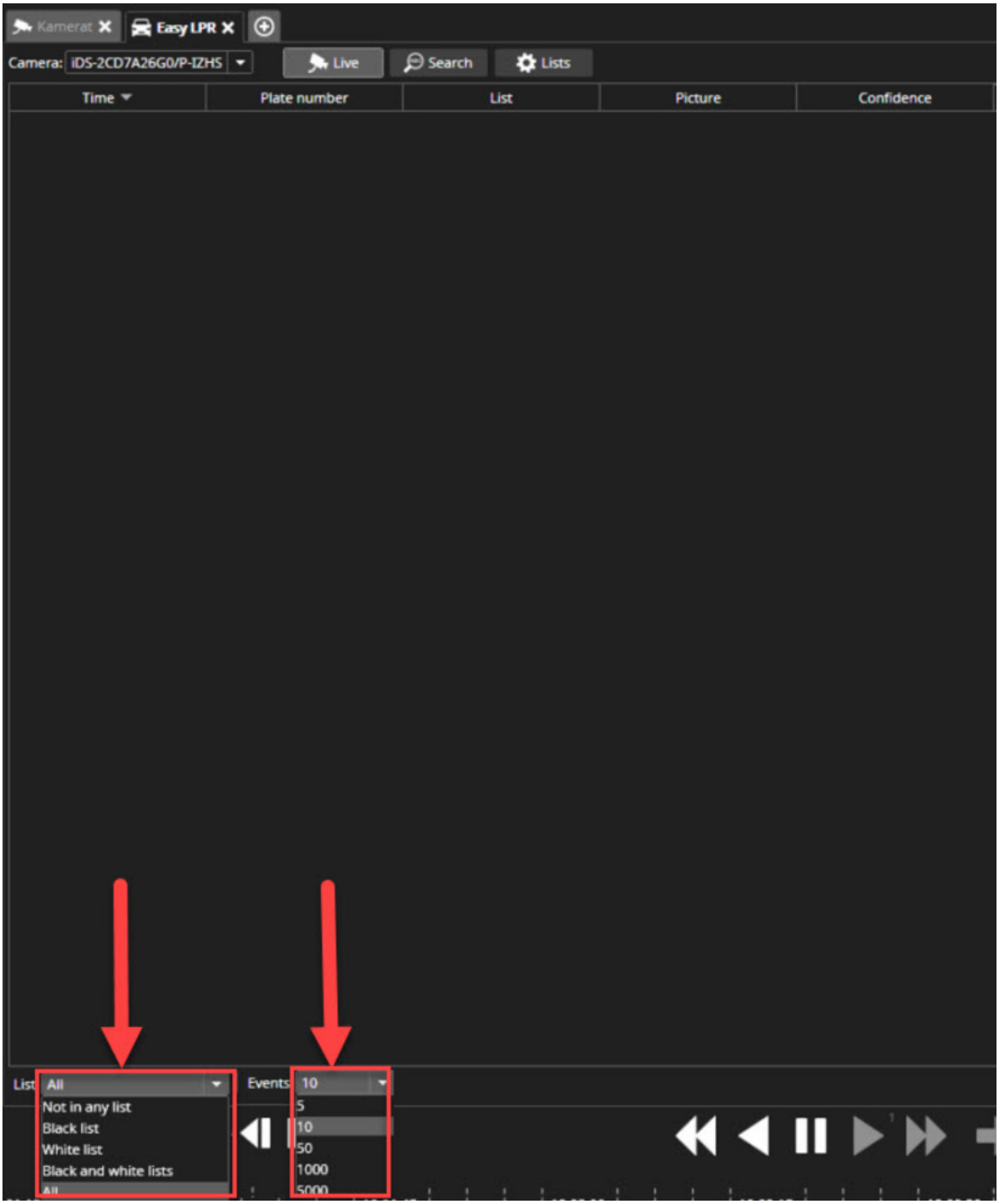
The user can which list are shown in the Live view. Options are:

- All

- Not in any list
- Black list
- White list
- Black list and White list

The user can set the amount of the result in the Live view. Options are:

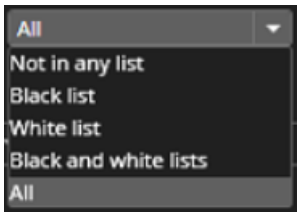
- 5, 10, 50, 1000 and 5000


Kamerat
Easy LPR
Camera: iDS-2CD7A26G0/P-IZHS
Live
Search
Lists
Time
Plate number
List
Picture
Confidence
List: All
Not in any list
Black list
White list
Black and white lists
Events: 10
5
10
50
1000
5000

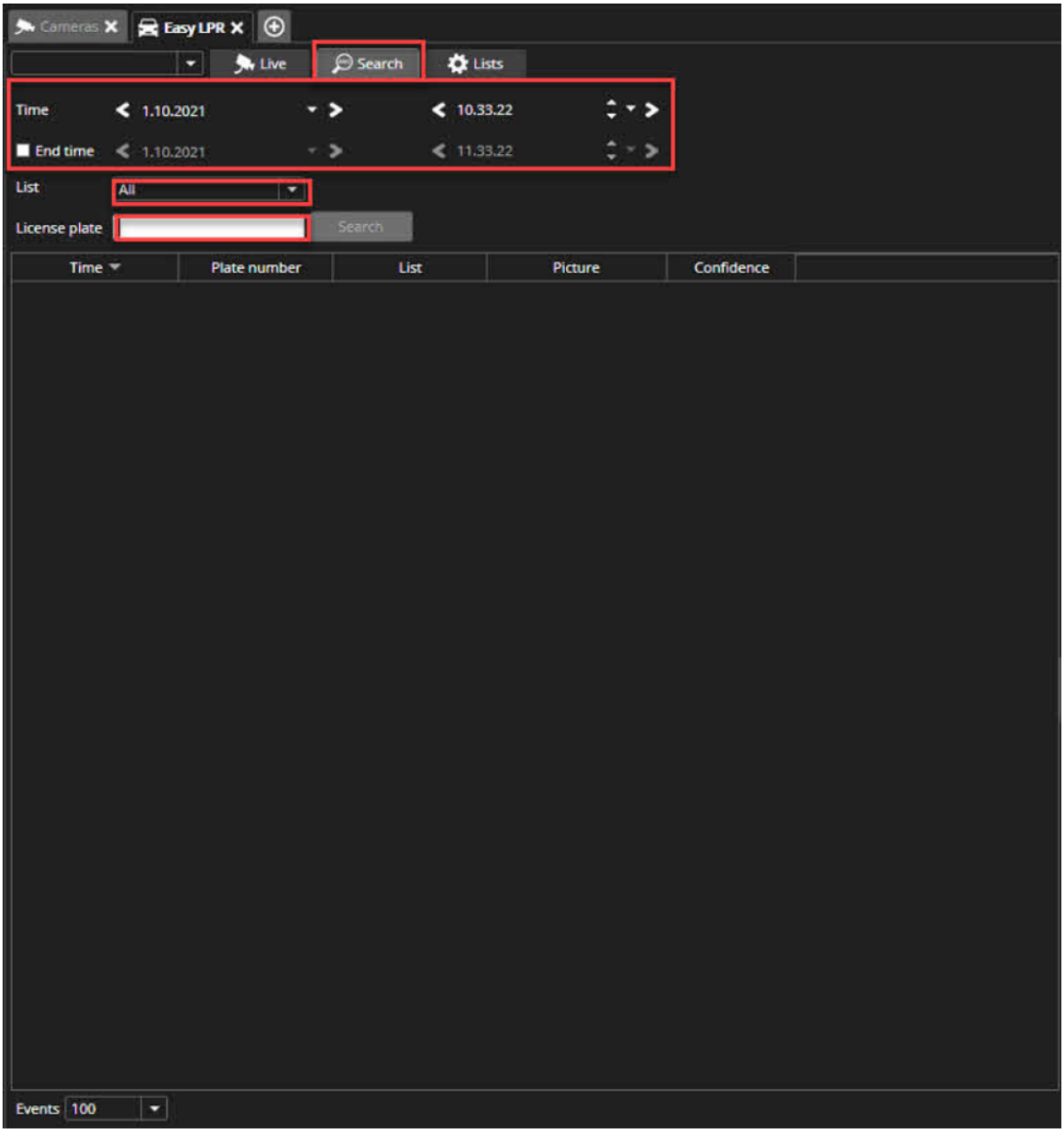
17.6.2 Spotter Easy LPR Search

17.6.2.1 Searching License plates

1. Open **Search** tab
2. Select LPR camera from the upper left corner
3. Select time and date
4. Enter **End time**, if needed
5. Select list for the search
    a. All
    b. Not in any list
    c. Black list
    d. White list
    e. Black and white list



1. Enter license plate(partial information is also accepted)
2. Click **Search**



Search will show all results. The user can playback selected time and use all normal playback functions.

17.6.3 Spotter Easy LPR Lists

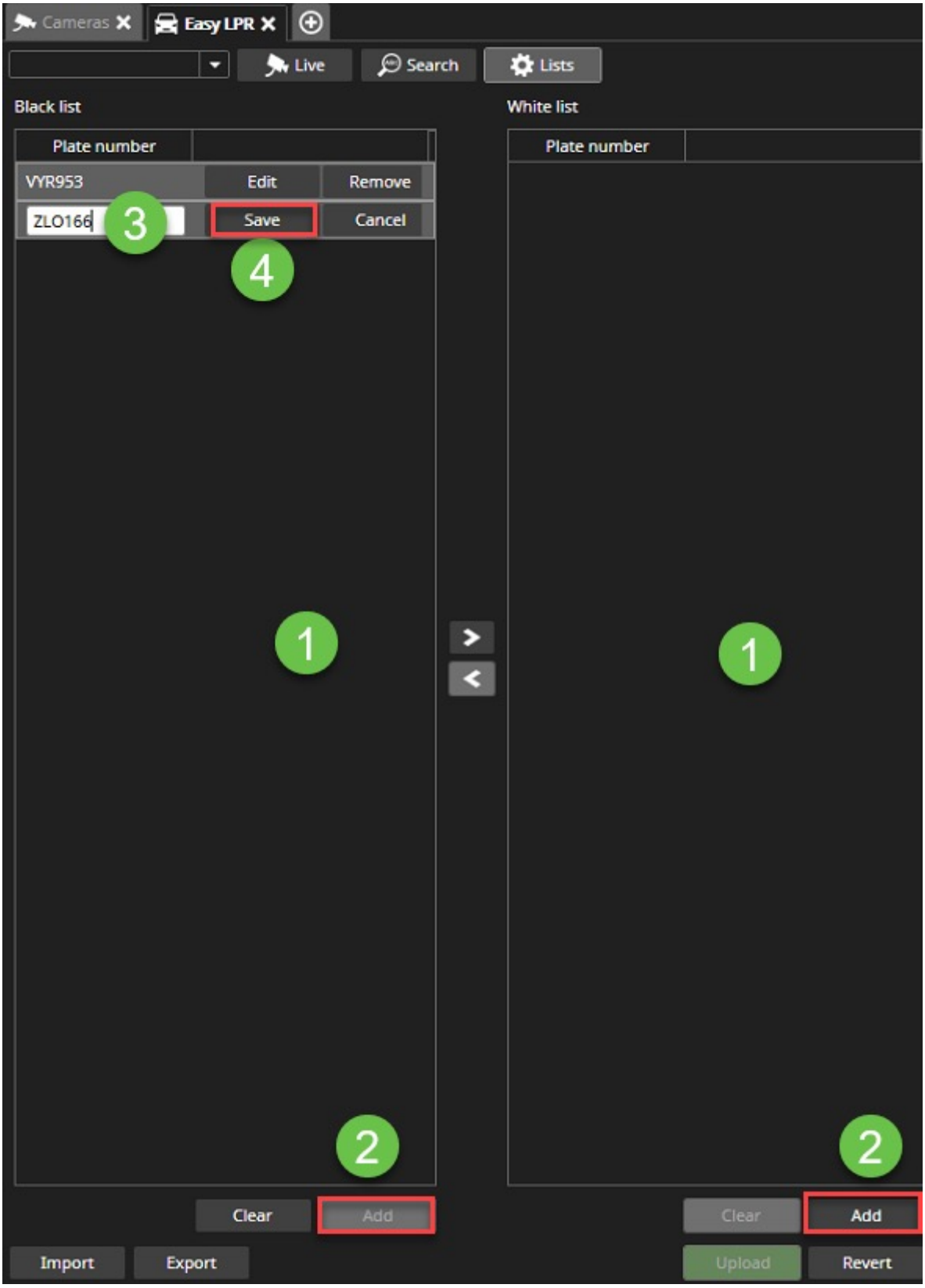
17.6.3.1 With the Easy LPR Lists Management, the users can do the following actions:

- Add plate number
- Edit plate numbers
- Move plate numbers between the lists
- Export plate numbers from the Spotter to the PC(CSV)
- Import edited plate number lists to the Spotter
- Upload lists from the Spotter to the LPR cameras

Please remember to upload lists to the cameras after any change.

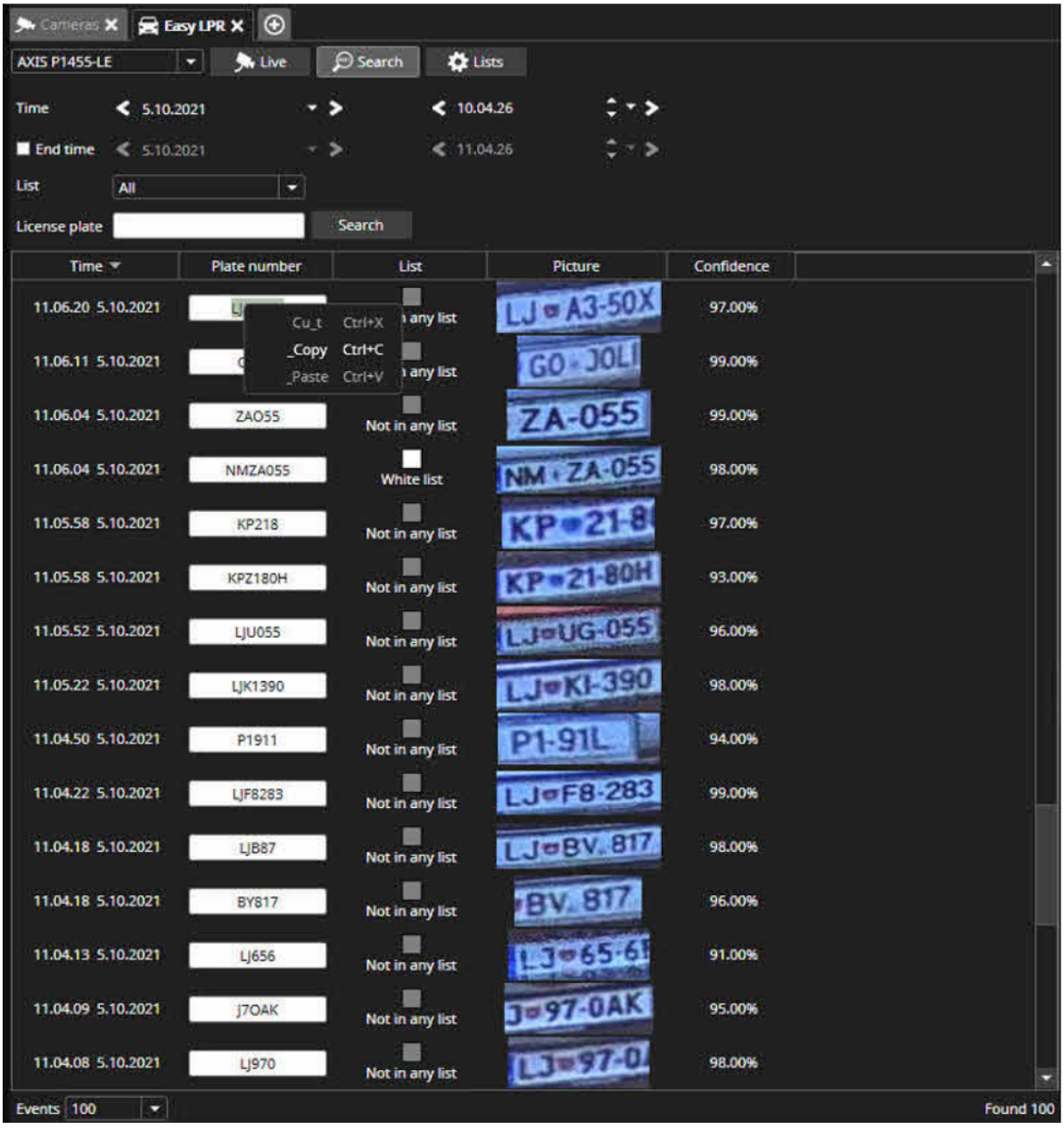
17.6.3.2 Adding plate number to Lists

1. Select the **Black list** or **White list**
2. Click **Add**
3. Type the plate number
4. Click **Save**


Cameras
Easy LPR
Live
Search
Lists
Black list
Plate number
VYR953
Edit
Remove
ZLO166
Save
Cancel
3
4
1
2
Clear
Add
Import
Export
White list
Plate number
1
2
Clear
Add
Upload
Revert

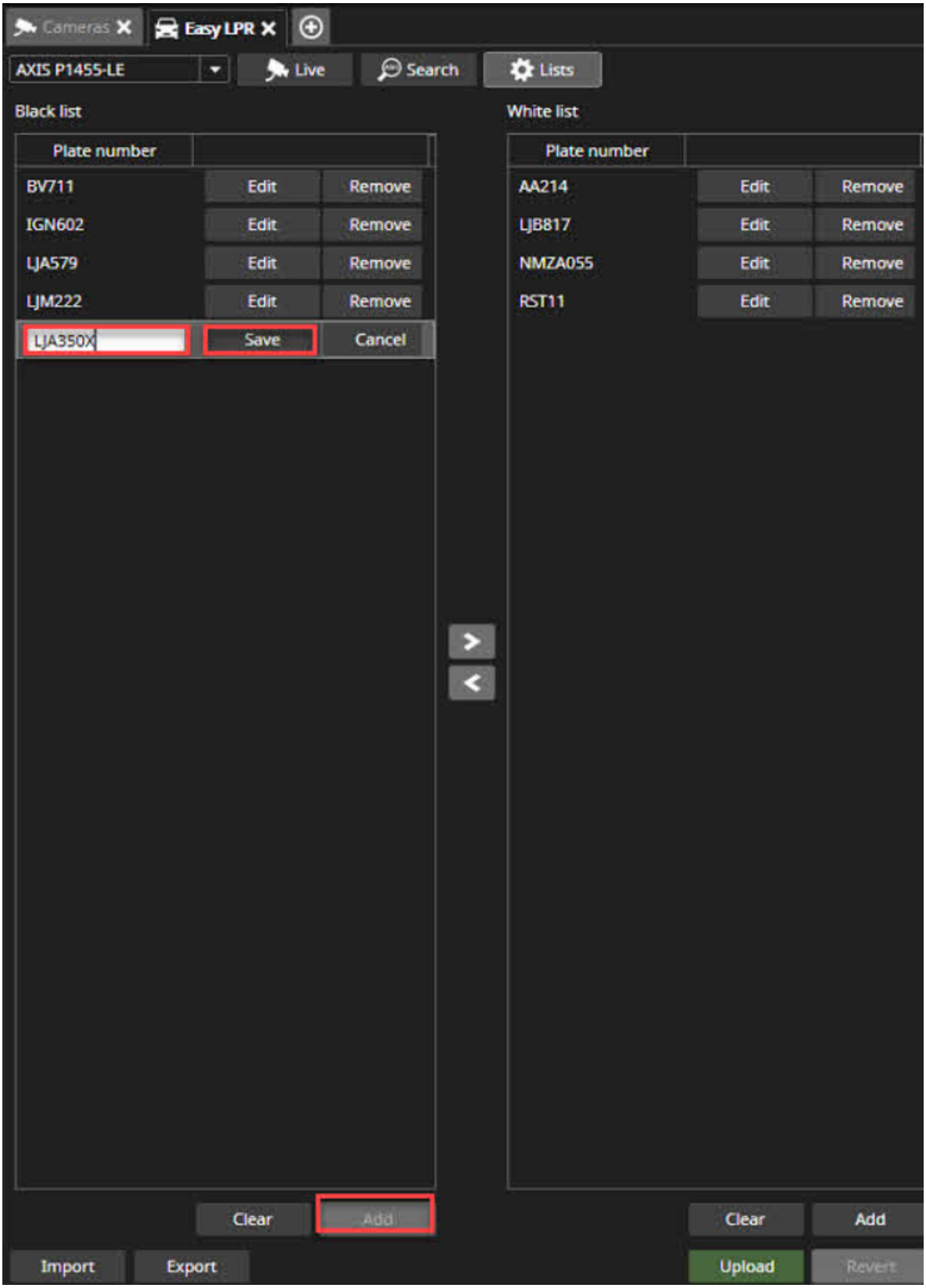
17.6.3.2.1 Adding plate number from the search view

1. Double-click plate number field
2. Right mouse click top of the plate number
3. Click **Copy**



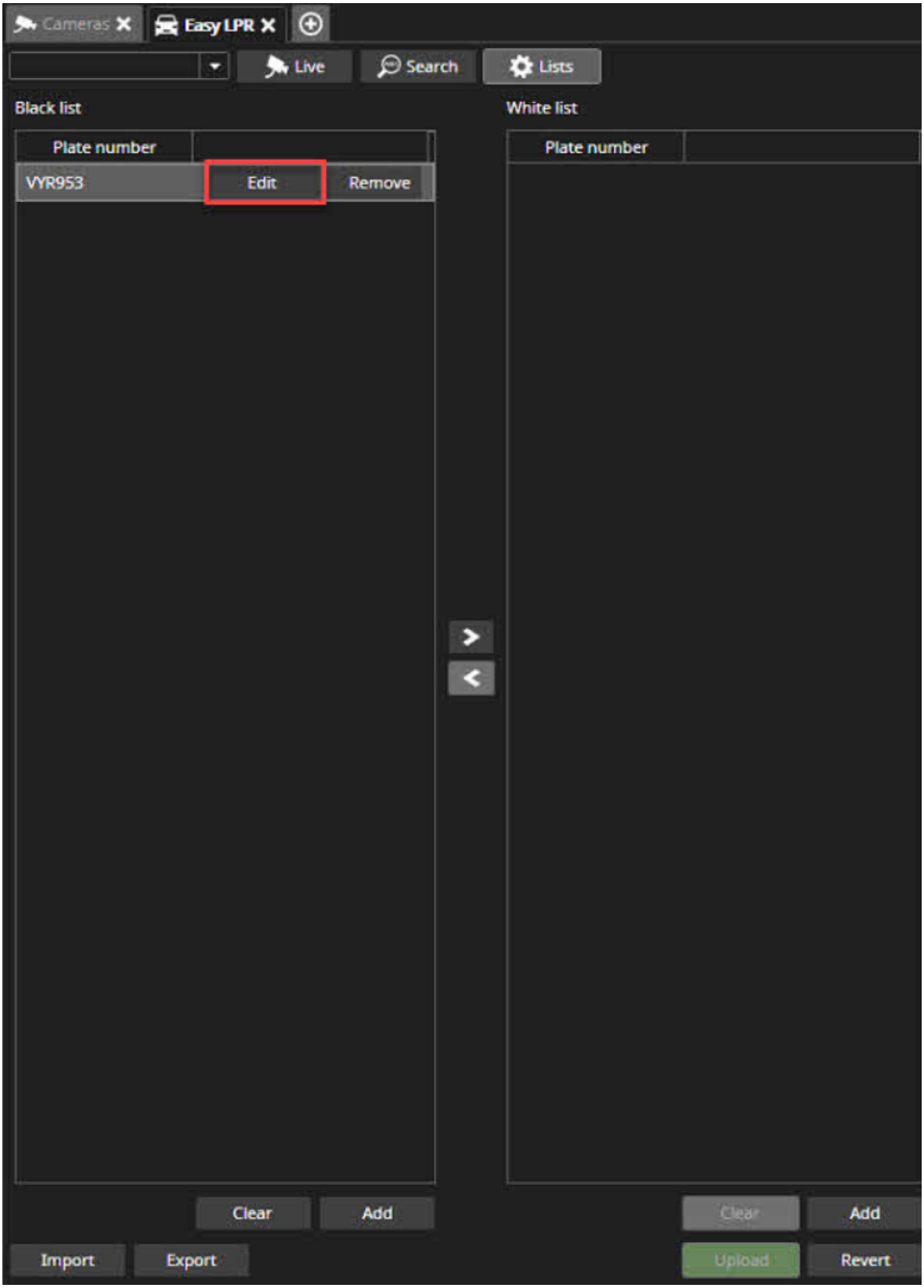
4. Open **Lists**
5. Select current list
6. Click **Add**

7. Paste plate number
8. Click **Save**

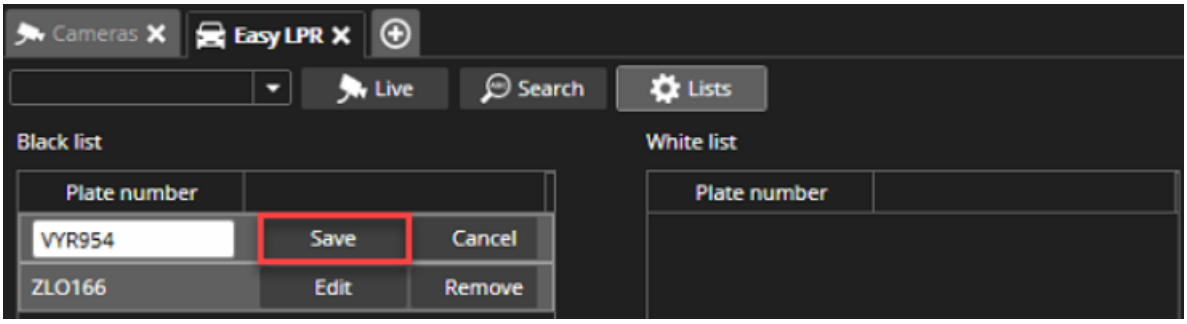

Cameras
Easy LPR
AXIS P1455-LE
Live
Search
Lists
Black list
Plate number
BV711 Edit Remove
IGN602 Edit Remove
LJA579 Edit Remove
LJM222 Edit Remove
LJA350X
Save
Cancel
White list
Plate number
AA214 Edit Remove
LJB817 Edit Remove
NMZA055 Edit Remove
RST11 Edit Remove
Clear
Add
Clear
Add
Import
Export
Upload
Revert

17.6.3.3 Editing plate number in Lists

1. Select the plate number
2. Click **Edit**

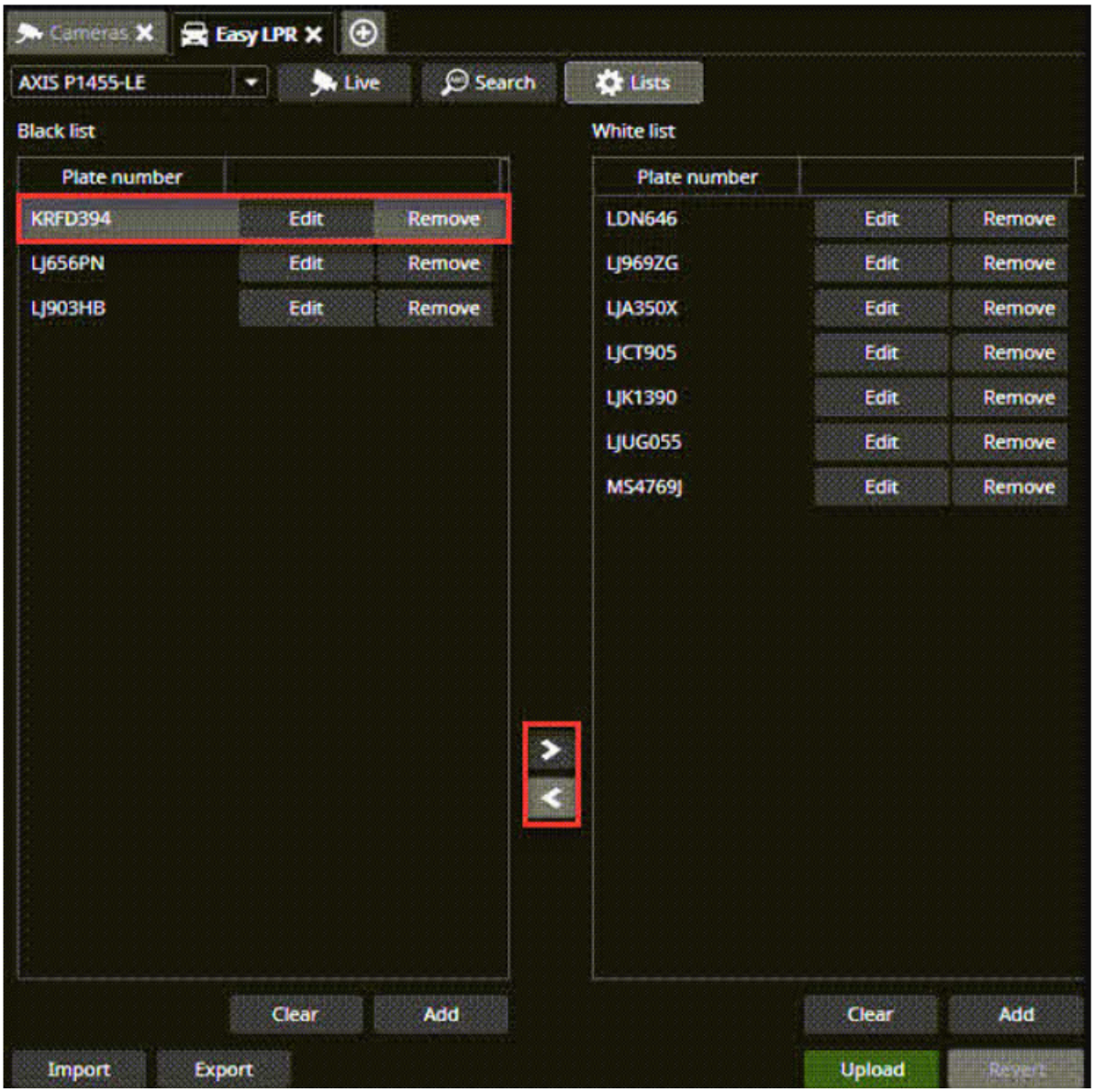


3. Do the modification and click **Save**



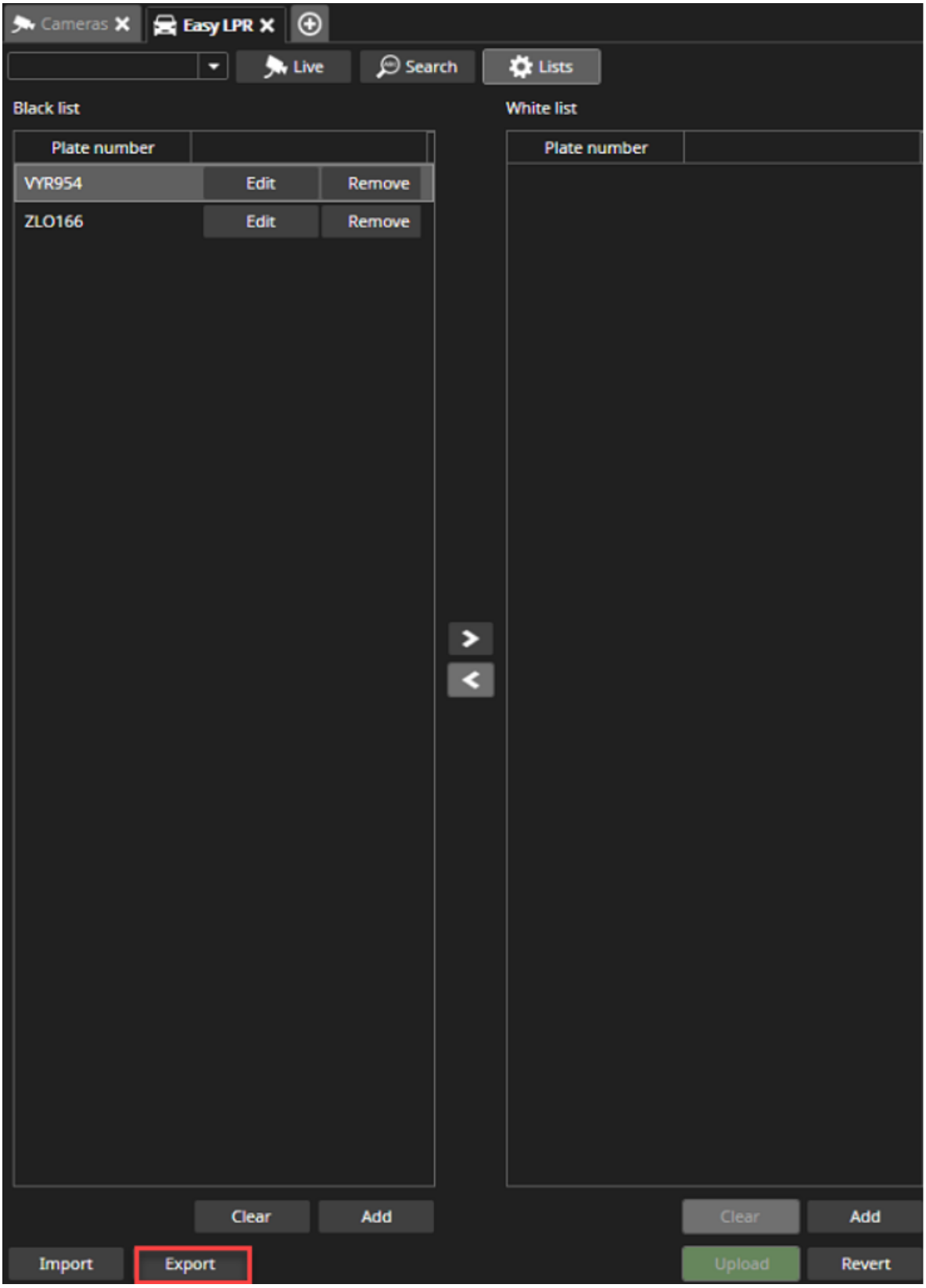
17.6.3.4 Moving between the lists

1. Select the plate number from the list
2. Click arrow to move needed list



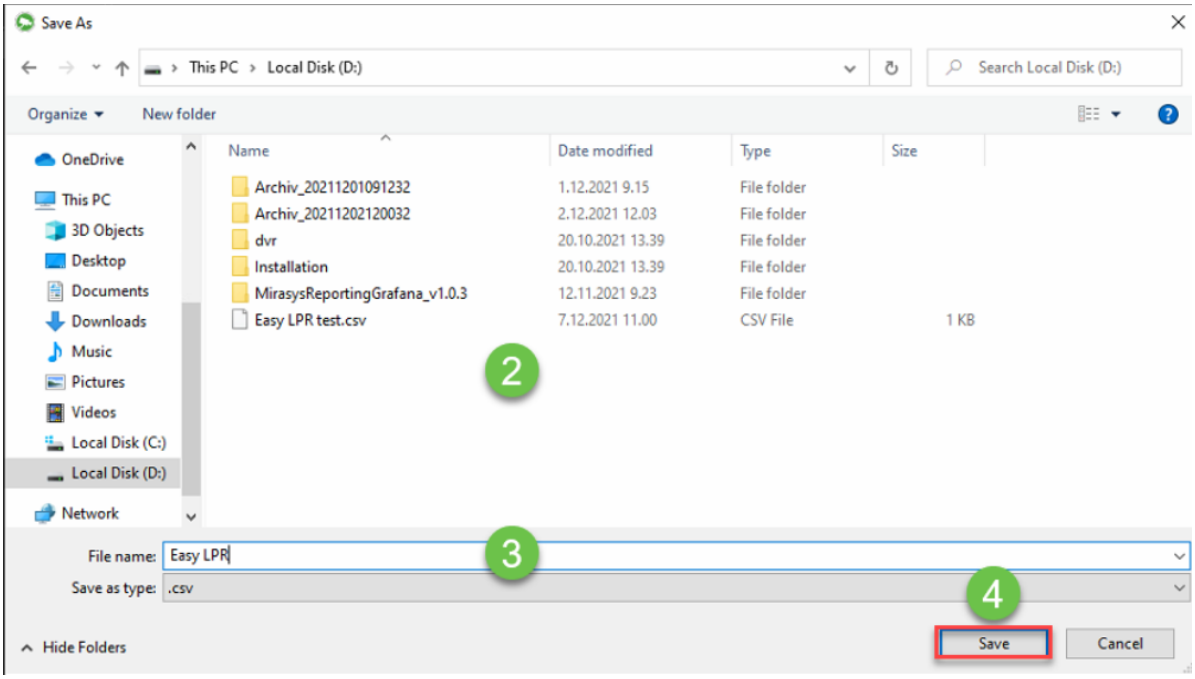
17.6.3.5 Exporting plate numbers

1. Click **Export**



2. Define the destination folder

3. Set the file name(.csv)
4. Click **Save**



17.6.3.6 Removing plate number

1. Select the plate number from the list
2. Click Remove


Cameras
Easy LPR
AXIS P1455-LE
Live
Search
Lists
Black list
Plate number
KRFD394
Edit
Remove
LJ656PN
Edit
Remove
LJ903HB
Edit
Remove
White list
Plate number
LDN646
Edit
Remove
LJ969ZG
Edit
Remove
LJA350X
Edit
Remove
LJCT905
Edit
Remove
LJK1390
Edit
Remove
LJUG055
Edit
Remove
MS4769J
Edit
Remove
Clear
Add
Clear
Add
Import
Export
Upload
Revert

17.6.3.7 Importing plate numbers in Lists

17.6.3.7.1 With the import, the user can import a large number of plate numbers at the same time

1. Open exported CSV file

CSV content is shown below:

Plate number, List (1 = black list / 2 = white list)

LJ656PN,1

LJ731CV,1

LJZV585,1

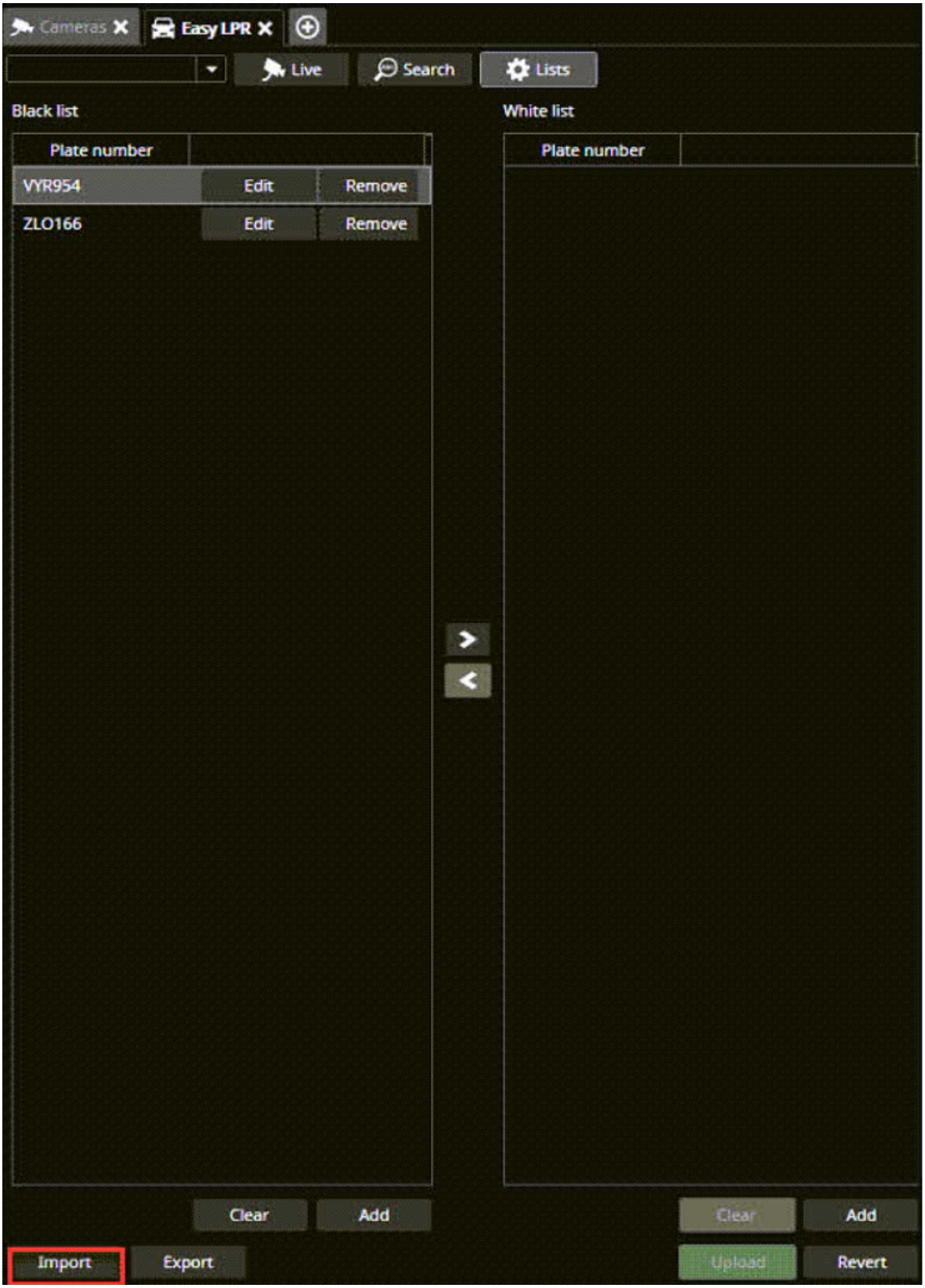
LJZV584,2

2. Add a new line with format ZLO166,2 for each new plate number

3. Select correct list(**List 1 = Black list, List 2 = White Lis**t)

4. Save changes

5. Click **Import**



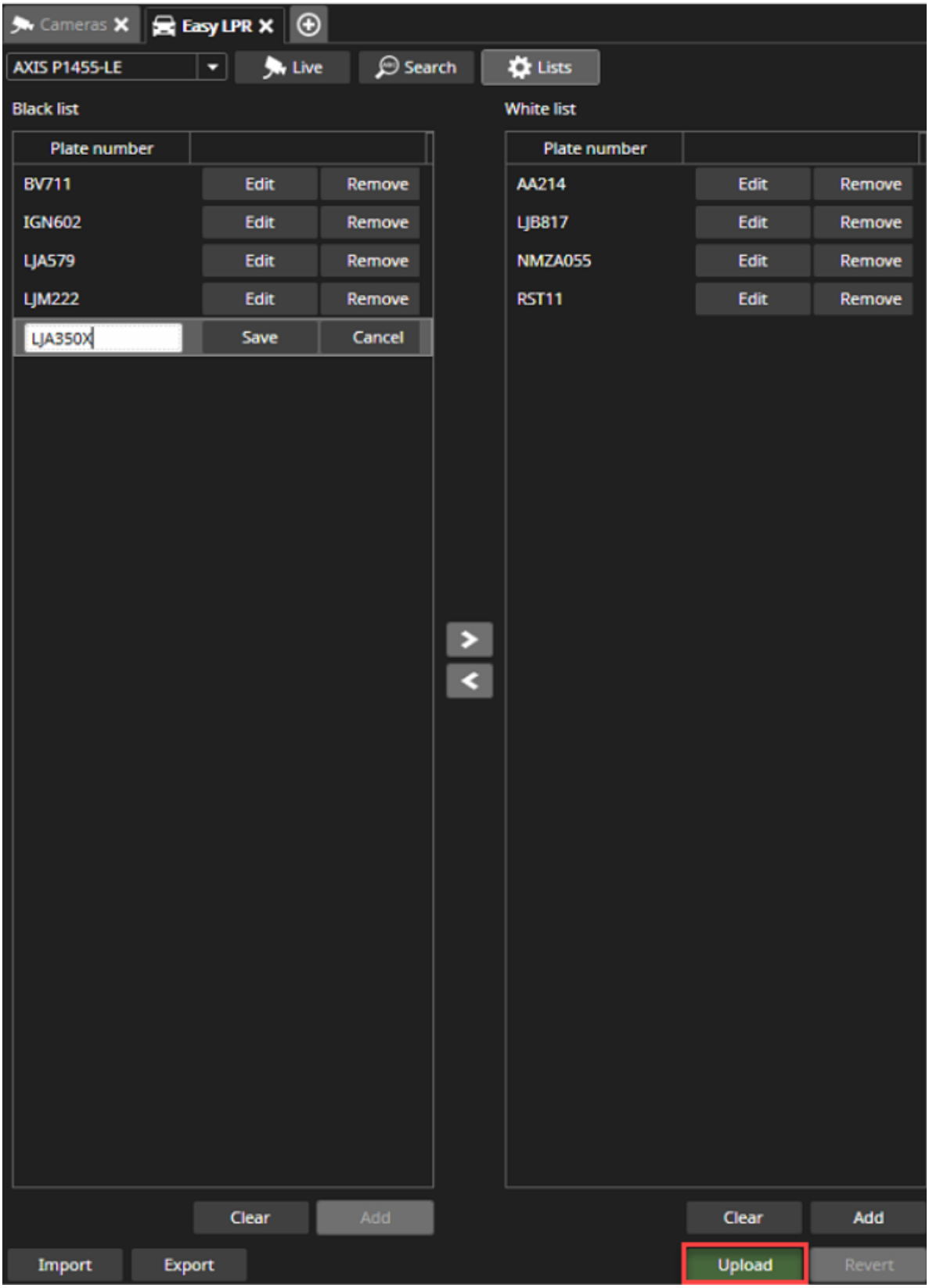
6. Browse to the location of the CSV file

7. Select the file and click **Open**

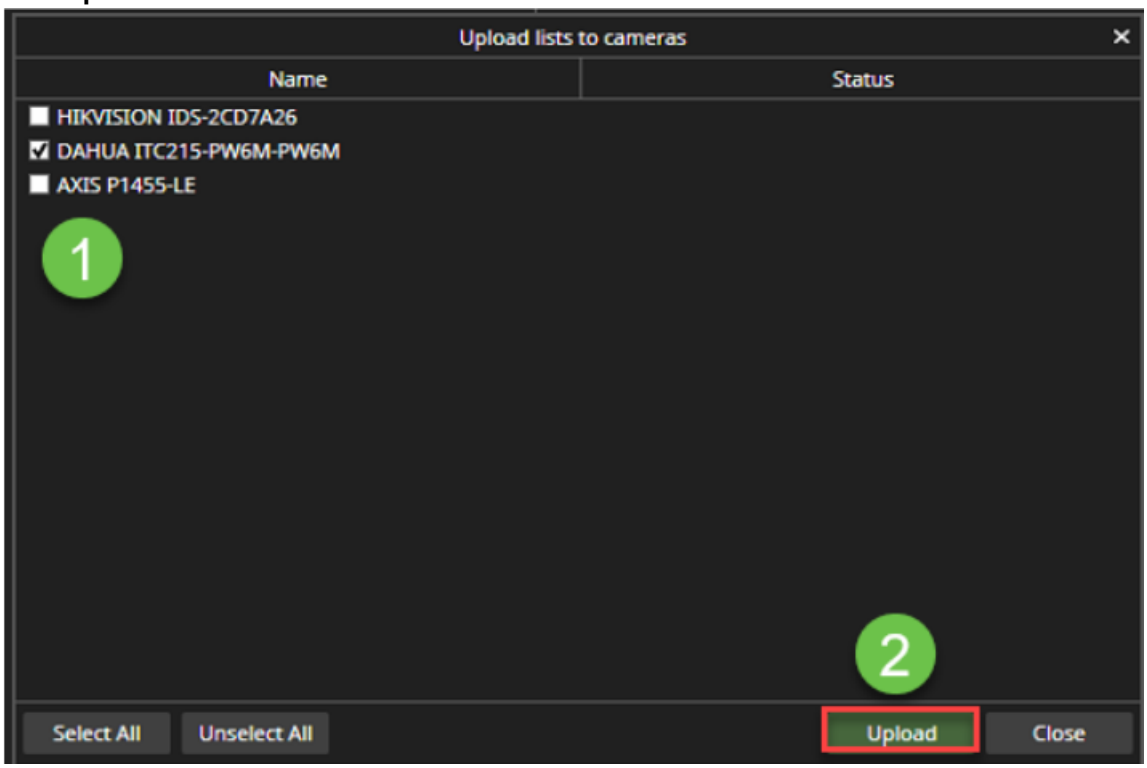
17.6.3.8 Uploading list

17.6.3.8.1 With the upload, the user can upload created black & white lists to the camera

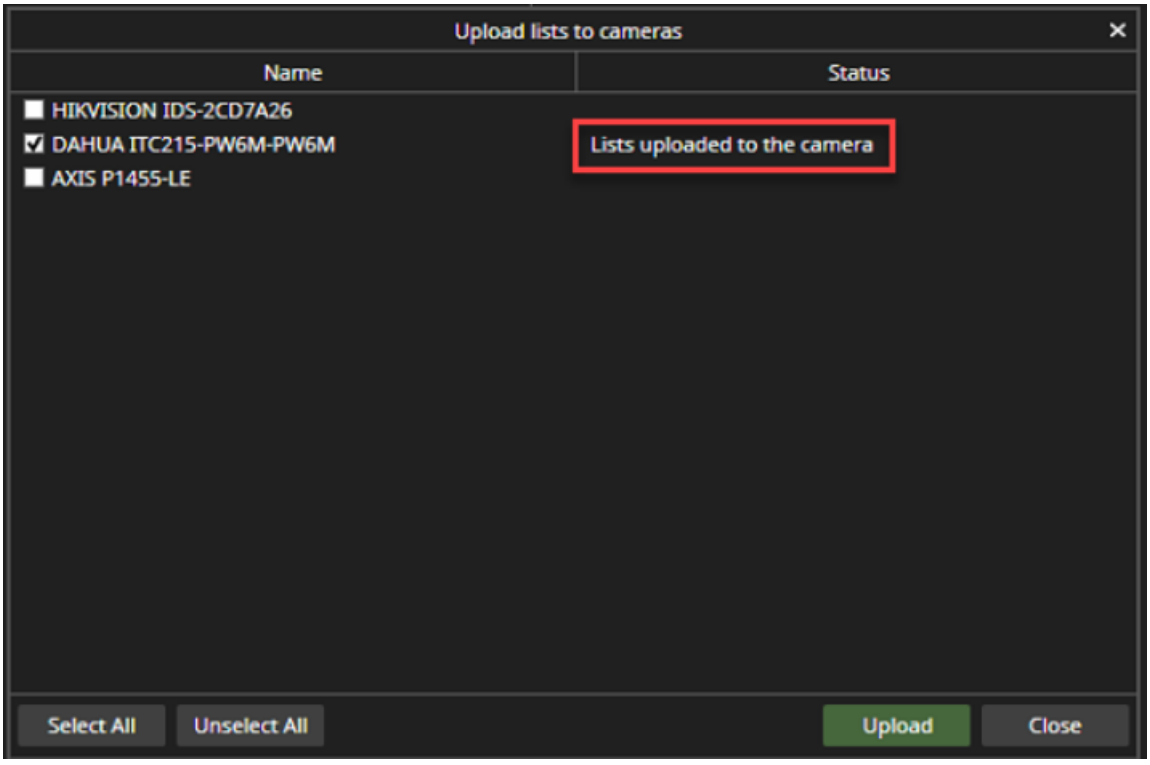
1. Select camera, which list will be uploaded
2. Click **Upload**


Cameras
Easy LPR
AXIS P1455-LE
Live
Search
Lists
Black list
Plate number
BV711
Edit
Remove
IGN602
Edit
Remove
LJA579
Edit
Remove
LJM222
Edit
Remove
LJA350X
Save
Cancel
White list
Plate number
AA214
Edit
Remove
LJB817
Edit
Remove
NMZA055
Edit
Remove
RST11
Edit
Remove
Clear
Add
Clear
Add
Import
Export
Upload
Revert

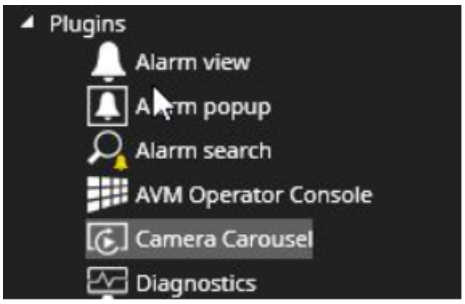
1. Select cameras, where lists are uploaded
2. Click **Upload**



After the upload, the status field shows the information **List uploaded to the camera**



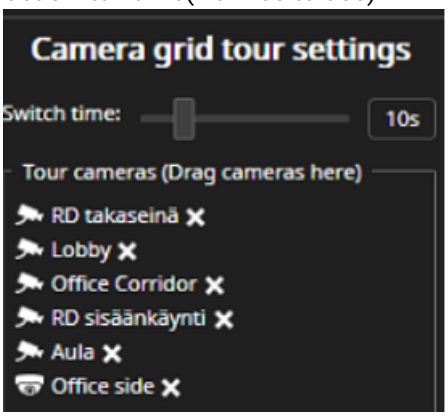
17.7 Spotter Camera Carousel



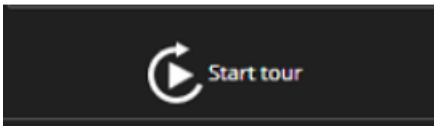
The Camera Carousel plugin allows users to create a lightweight camera tour on a single Spotter tab camera cell.

17.7.1 Camera grid tour settings

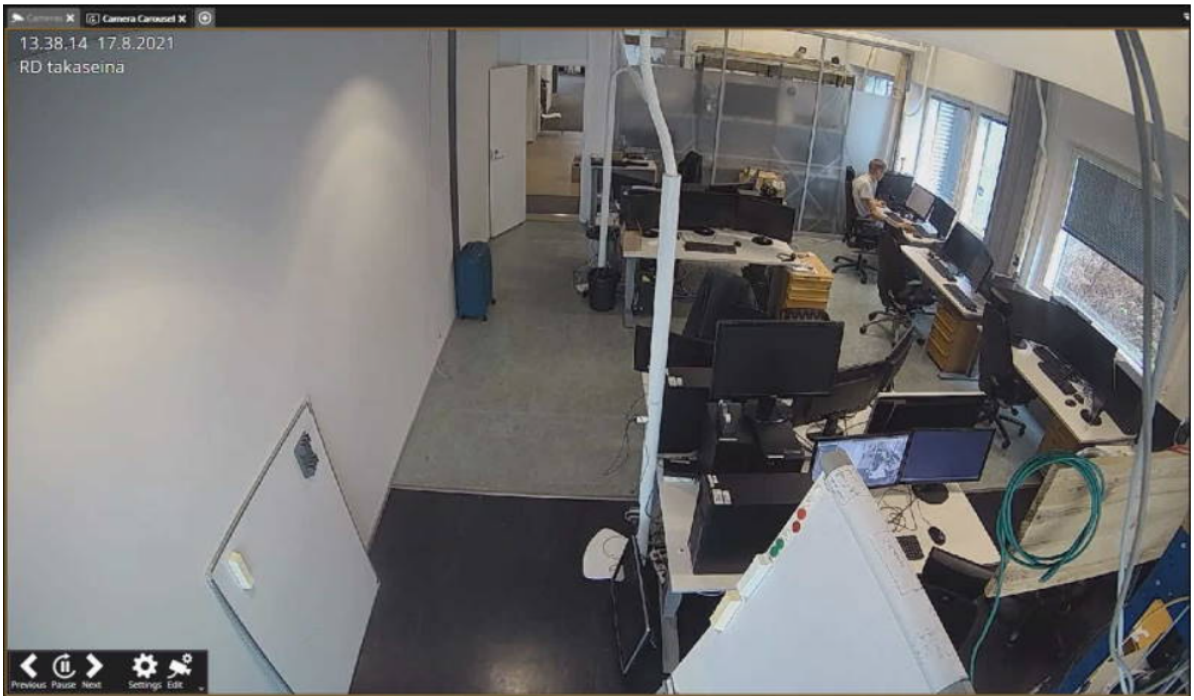
1. Open **Camera Carousel**
2. Drag needed cameras from the device tree to the camera carousel
3. Set switch time(from 5s to 30s)



4. Click Start tour

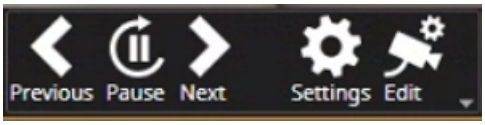


5. When the carousel is running, the camera grid cell is indicated with an orange border.



Mouse left-click opens toolbar with the options:

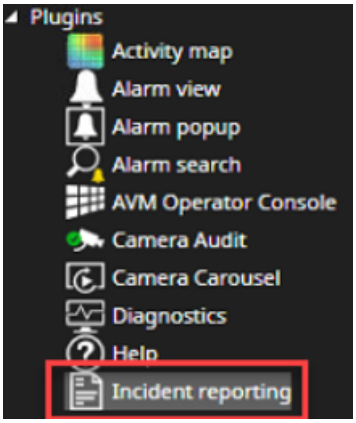
- Previous
- Pause
- Next
- Settings
- Edit



17.8 Incident Reporting

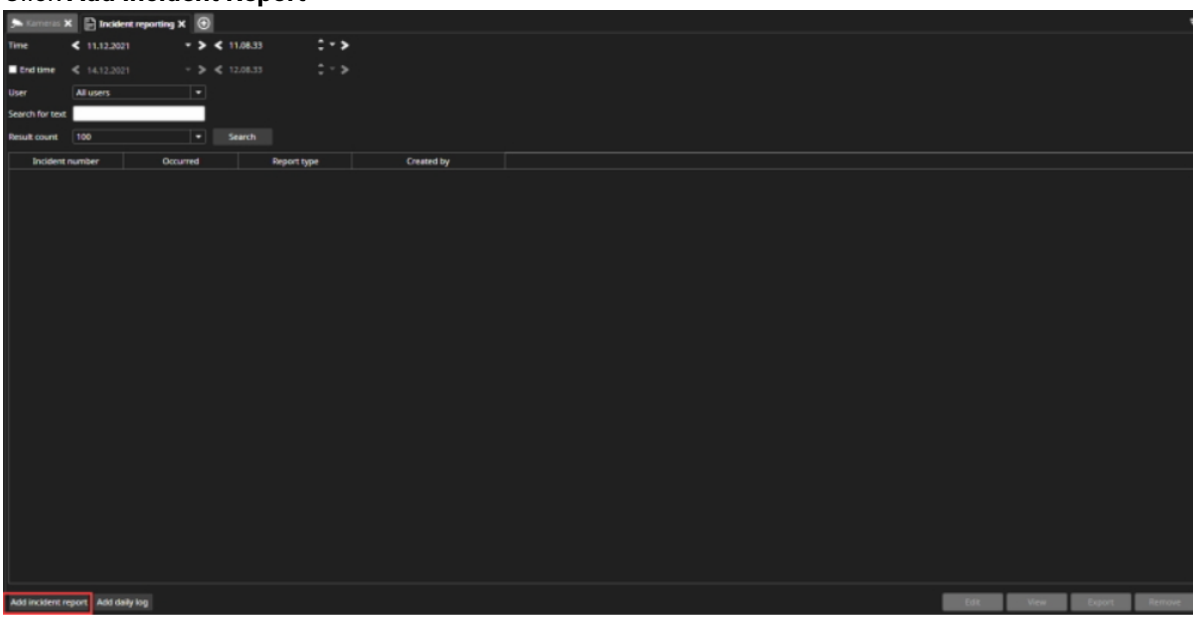
17.8.1 Opening the Incident Report

Open the Incident Reporting from the device tree



17.8.2 Creating an Incident Report

1. Click **Add Incident Report**



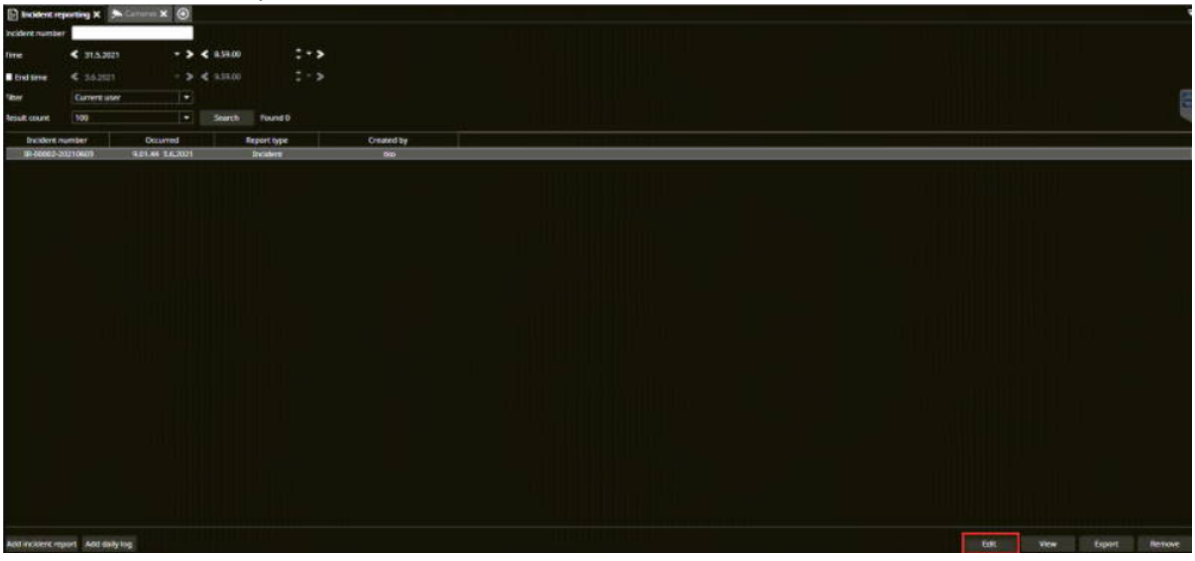
2. Select all necessary Incident Report details.

Department and **Incident location** fields are predefined by the administrator.

17.8.3 Adding evidence to the Incident Report

You can **add images, video clips and camera audit reports** as evidence.

1. Select the Incident Report from the list and click **Edit**



2. Click **Add evidence** from the lower-left corner

3. Click **Search** and select the evidence from the list
4. Click **Add**

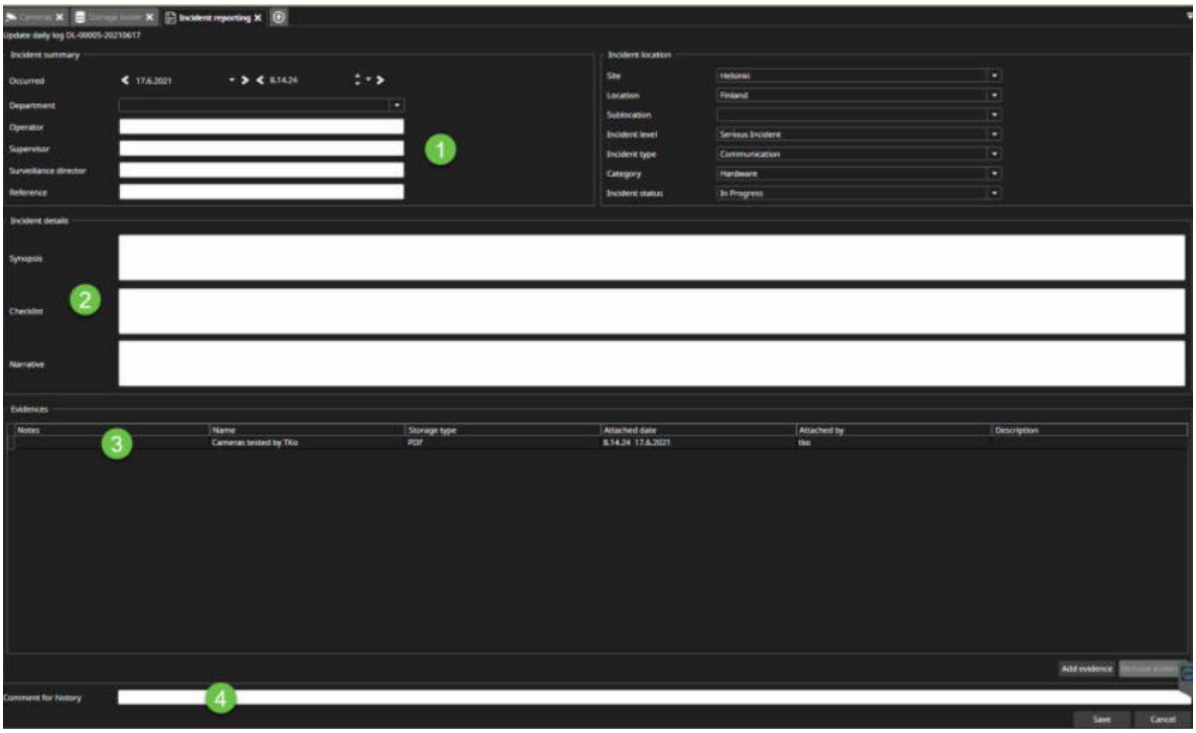
5. Click **Save** to finalize

17.8.4 Editing the Incident Report

You can edit any Incident Report, which you have access to later.

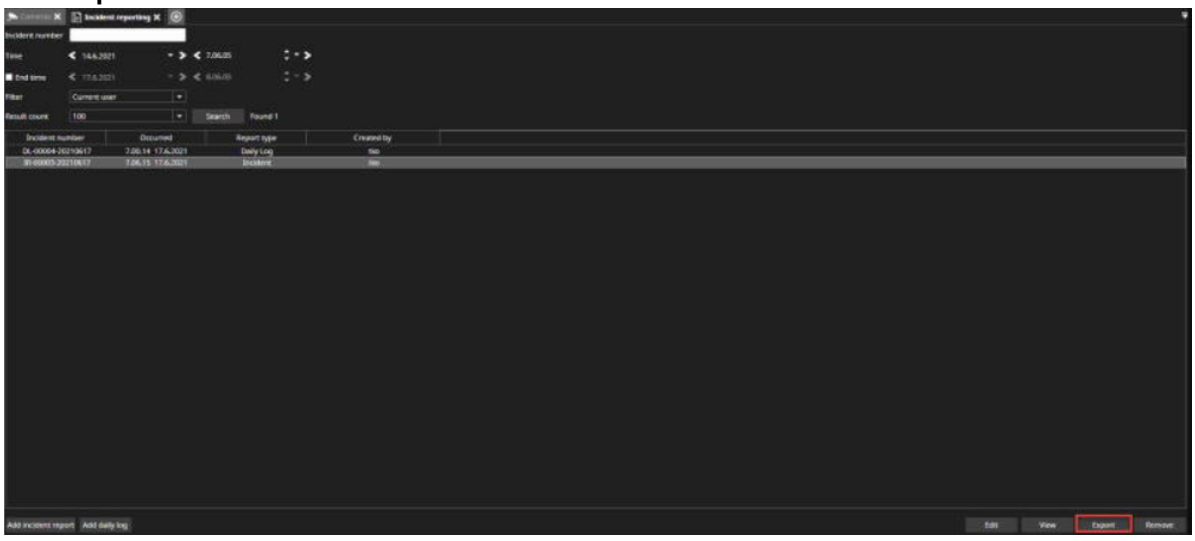
The editable fields:

- Incident summary
- Incident location
- Incident details
- Add notes to the evidence
- Comment to history

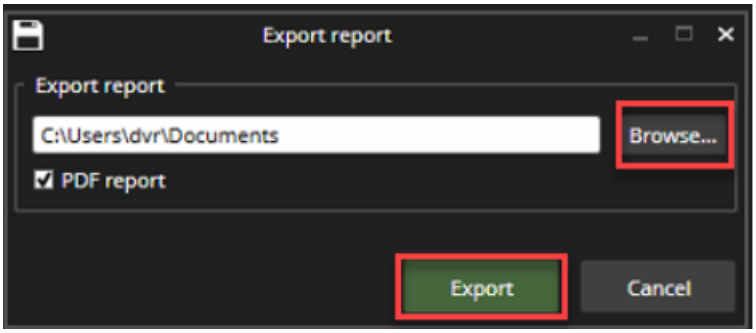


17.8.5 Exporting the Incident Report & Daily Log

1. Select Incident Report or Daily Log from the list
2. Click **Export**



3. Select the location
4. Click **Export**



17.8.6 Searching the Incident Reports

1. Enter free text to the **Search for text** field(text from Name, Description and Incident numbers fields)
2. Press **Enter** or **Search**

17.9 Monitor Manager

The Monitor Manager plugin is designed for controlling monitors attached to the local PC. It is mainly designed to use when the attached monitors are out of sight.

17.9.1 Enable Monitor Manager Plugin

To enable the monitor manager, you need to enable the AVM API in the Spotter settings.

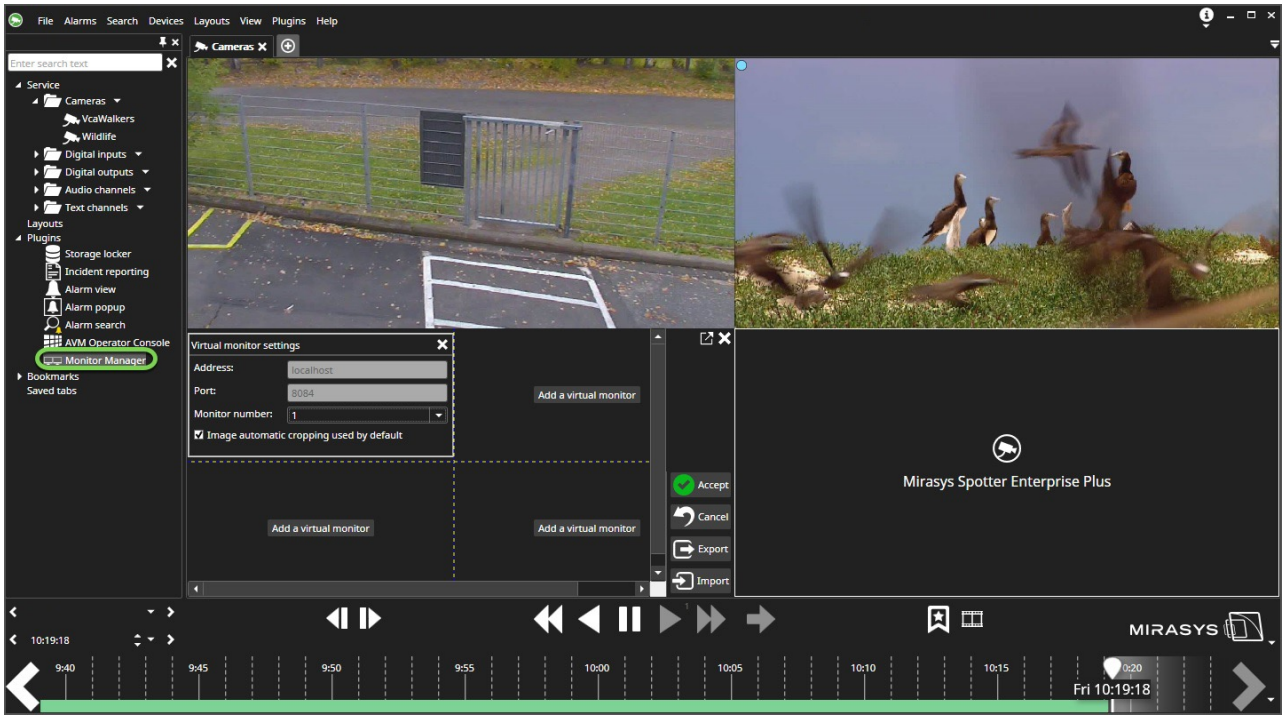
Go to **Spotter** > **File** > **Settings** > **Advanced** > **Enable External AVM API**

You will have to be logged in as an administrator to enable this.

17.9.2 Monitor Manager Device Grid

The user can control the Monitor Manager from the device grid while seeing the cameras in the same Spotter Window. Several Spotter windows and monitors are not necessary.

To use Monitor Manager in the device grid, open the Monitor Manager Plugin inside the device grid.



17.9.3 Time slider: Control Monitor Manager from Operator Console

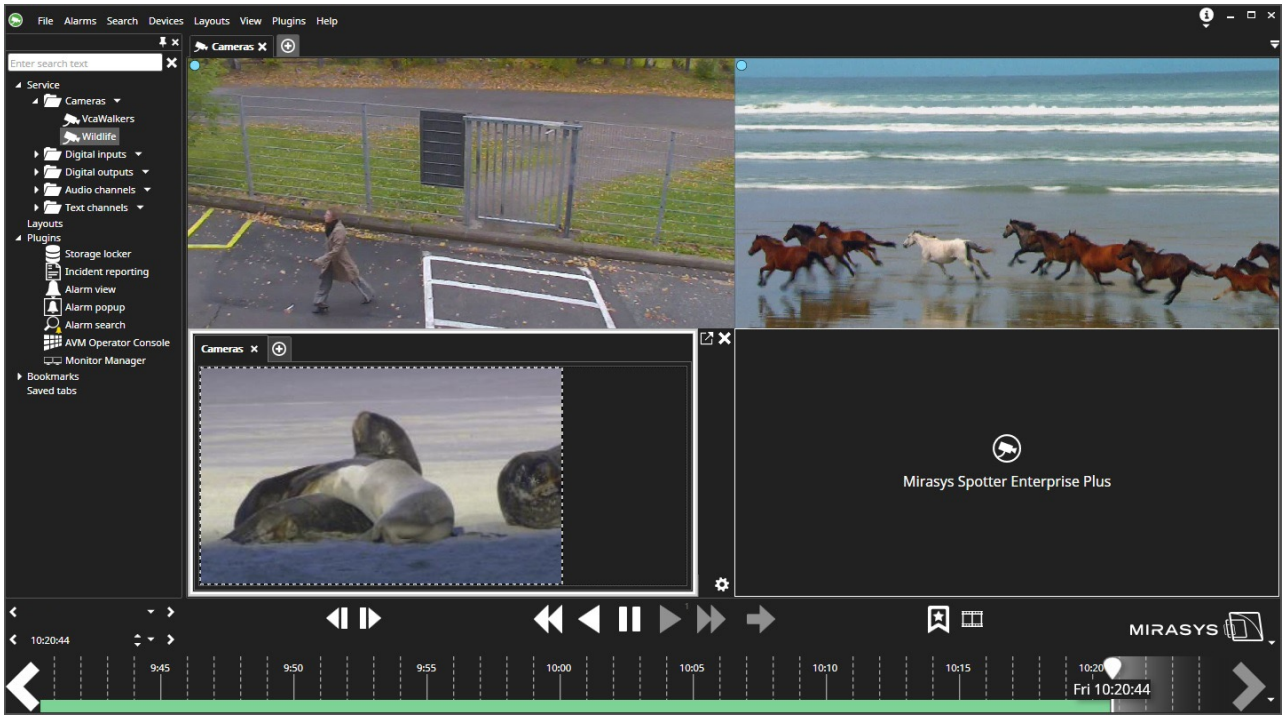
The time slider can be used for time search at the Monitor Manager operator console. When the user releases the time slider green balloon, the operator console sends a time to search to the Display Server.

17.10 Mirasys Video Wall Management (AVM)

17.10.1 Mirasys Video Wall Management Device Grid

The user can control the AVM from the device grid while seeing the cameras in the same Spotter Window. Several Spotter windows and monitors are not necessary.

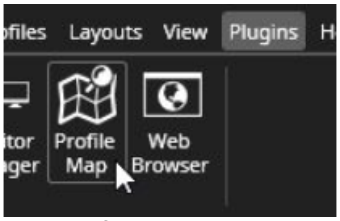
To use AVM in the device grid, open the AVM Plugin inside the device grid.



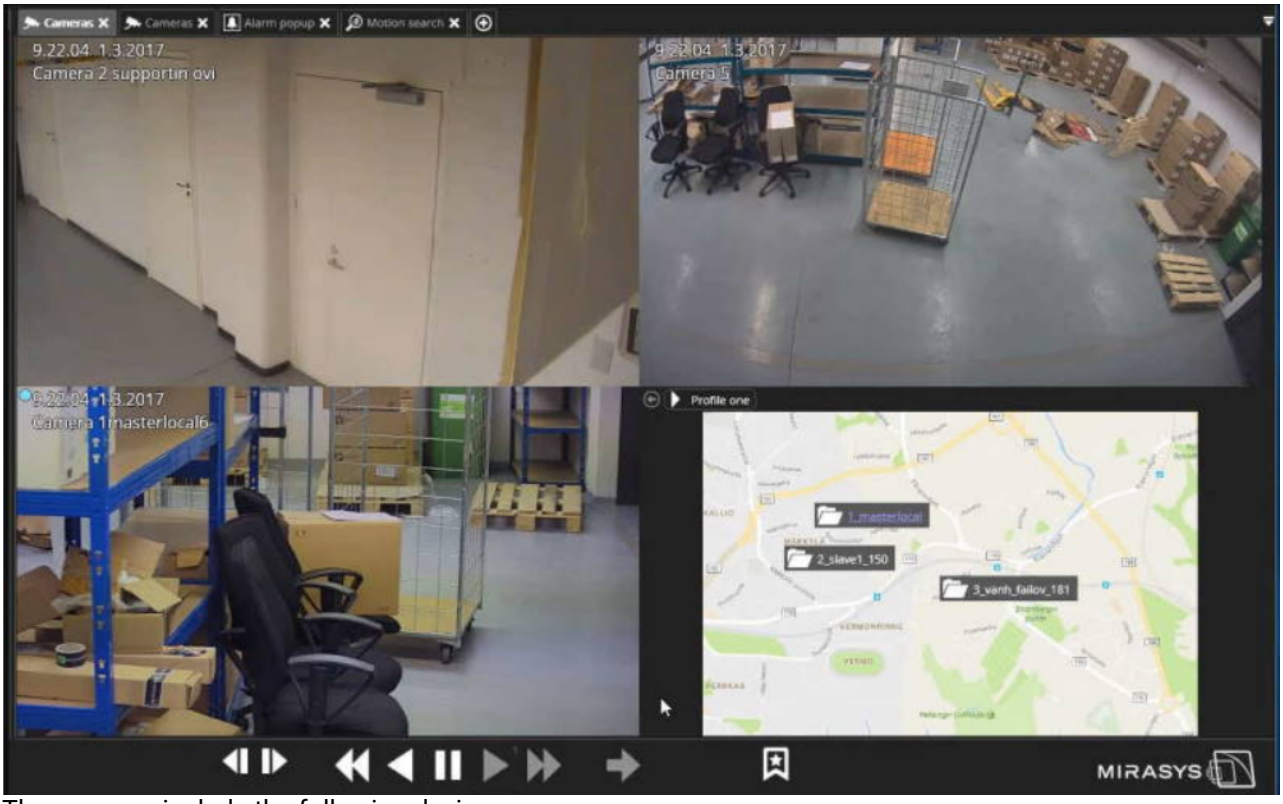
17.10.2 Time search AVM from Operator Console.

The time slider can be used for time search at the AVM operator console. When the user releases the time slider green balloon, the operator console sends a time to search to the Display Server.

17.11 Profile Maps



If the selected profile has a map defined, the Profile map plugin can show the map and its devices. The map can be a separate tab, or it can be embedded in a camera grid cell.



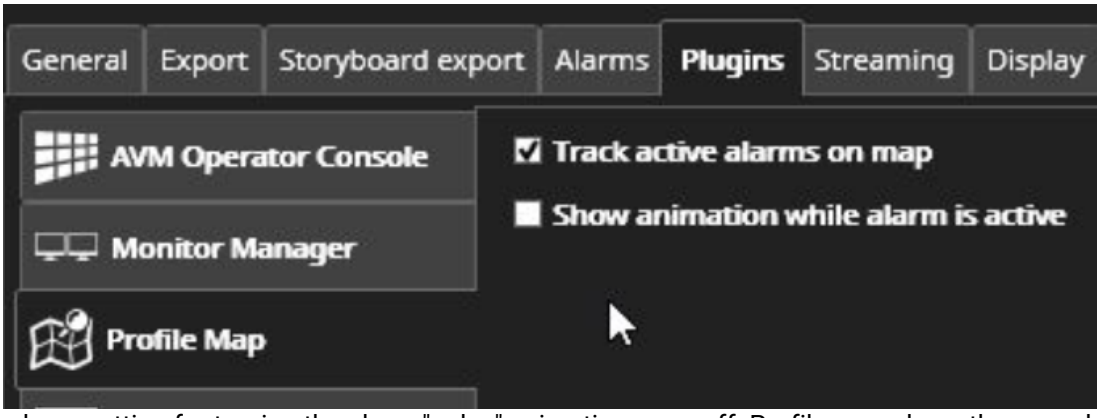
The map can include the following devices:

- Camera folders
- Cameras
- Audio
- Inputs
- Outputs
- Text data

The devices on the map show status information the same way as in the profile tree. Alarms of all priorities are highlighted.

Double-clicking the device on a map opens it to a new tab.If a map is open and the user double-clicks an item in the profile tree, it is highlighted.

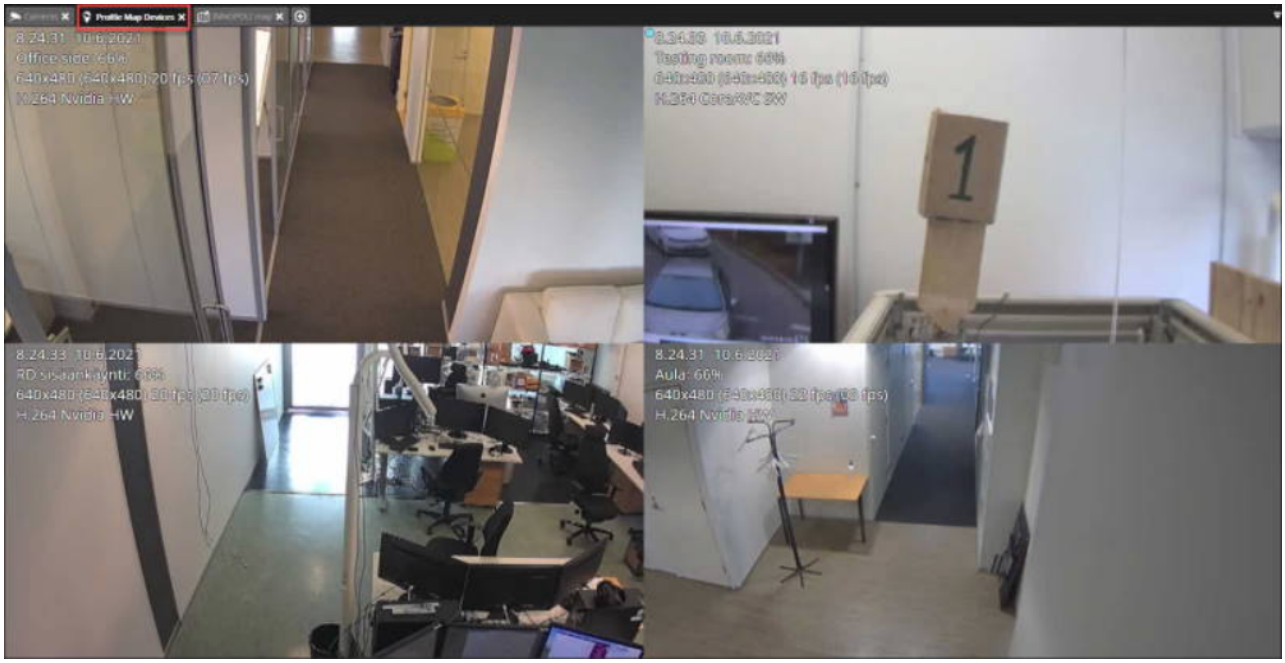
The device tree also has a "Show on map" option for each device in the right-click menu.The Profile Maps plugin can react to an alarm by switching the view to show the map view where a trigger for the alarm. This setting is controlled from Profile Maps settings.



There is also a setting for turning the alarm "pulse" animation on or off. Profile maps have the same kind of alarm filtering settings as the Alarm popup so that in the multiple alarm monitor case, it can be set to filter a certain number of active alarms for the map position reaction.

17.12 Profile Map Devices

When a customer opens the camera from the Profile Map, the Profile Map Devices tab is opened automatically and shows those cameras in real-time view.

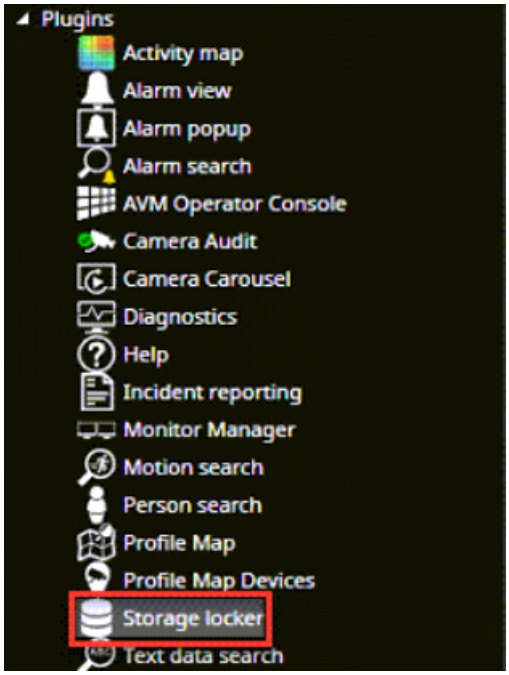


Profile Map Devices default grid type is defined in the **Spotter settings\Plugins\Profile Map Devices**

17.13 Spotter Storage Locker

17.13.1 Opening the Storage Locker

Open the Storage Locker from the device tree



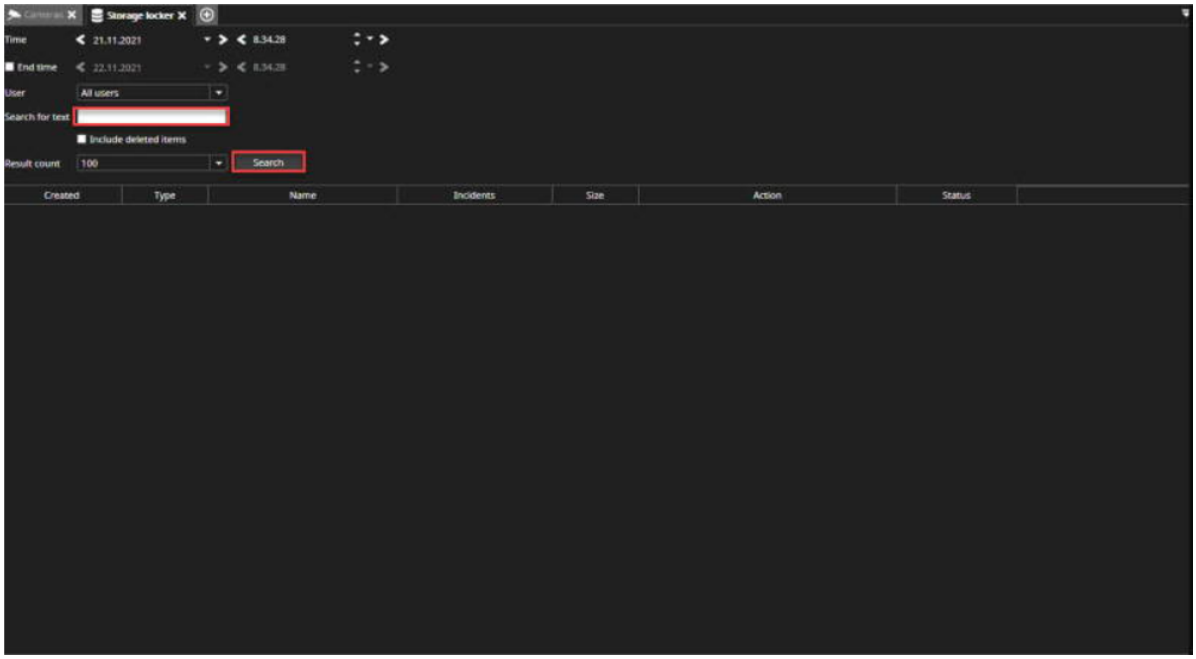
Storage locker plugin can be used to

- Search stored items
- Open a selected picture, video clip or camera audit report PDF file for viewing
- Save selected picture, video clip or camera audit report PDF file to disk
- Delete selected storage locker item
- Edit selected item's name and description

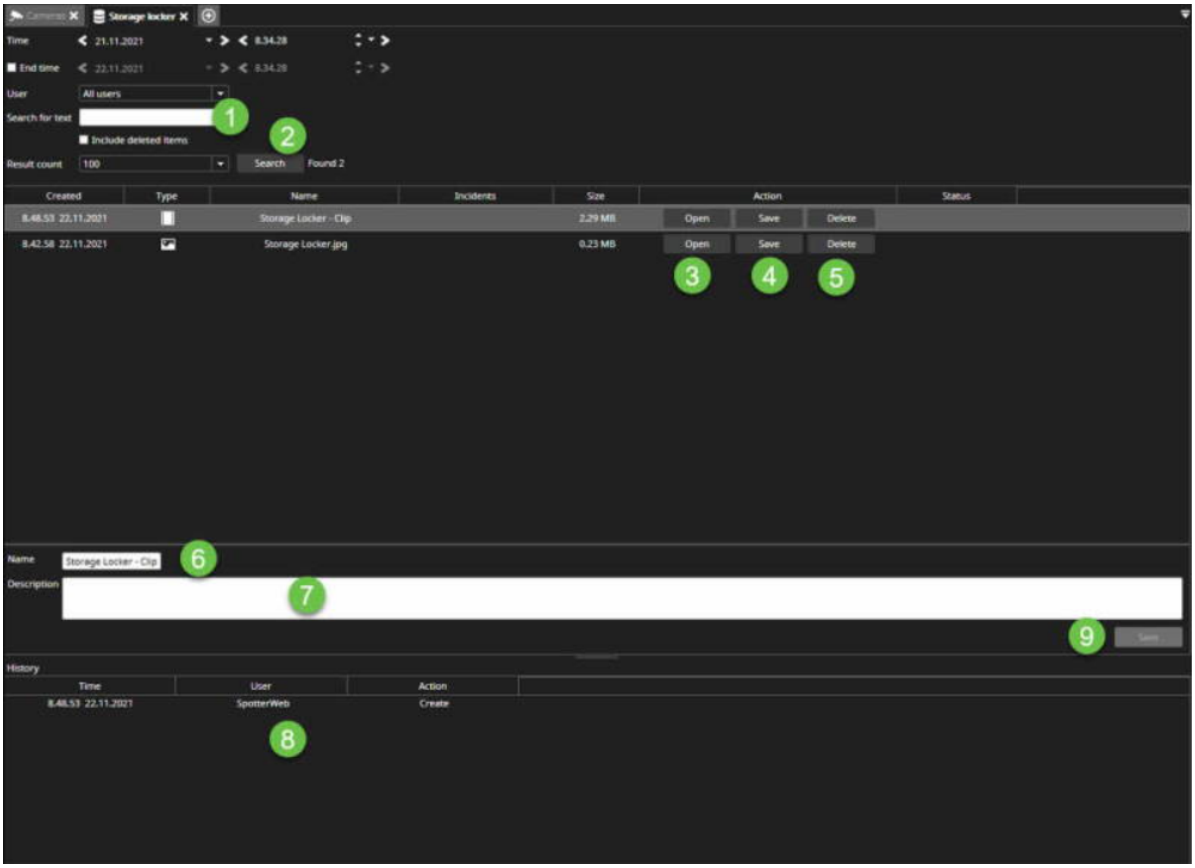
17.13.1.1 Searching the Storage Locker content

Searches user-specified text from Name, Description and Incident numbers fields

1. Enter free text to the **Search for text** field(text from Name, Description and Incident numbers fields)
2. Press **Enter** or **Search**



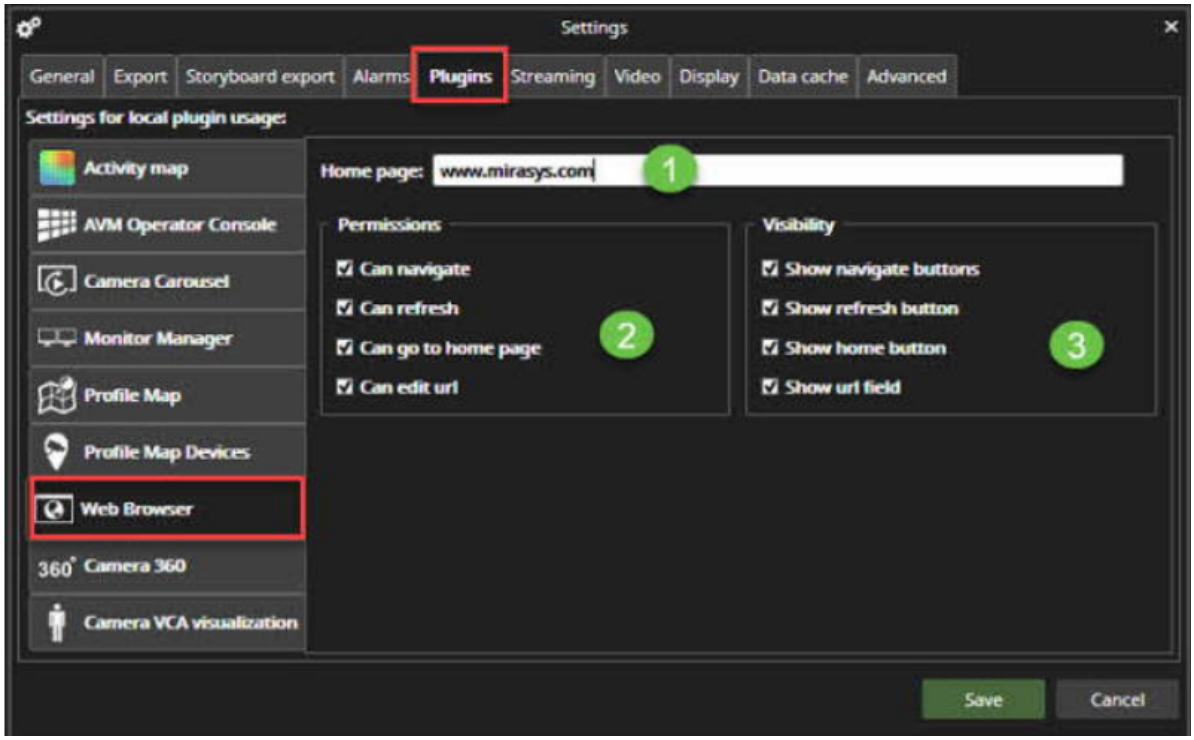
1. You can enter the Incident number, Name or Description
2. Start searching by clicking **Search**
3. **Open:** Open image, video clip or daily log
4. **Save:** Export content to the needed location
5. **Delete:** Delete the content
6. You can also change the name
7. Add a description
8. From the History area, you can see audit trail history
9. Click **Save** from the lower-left corner to finalize changes



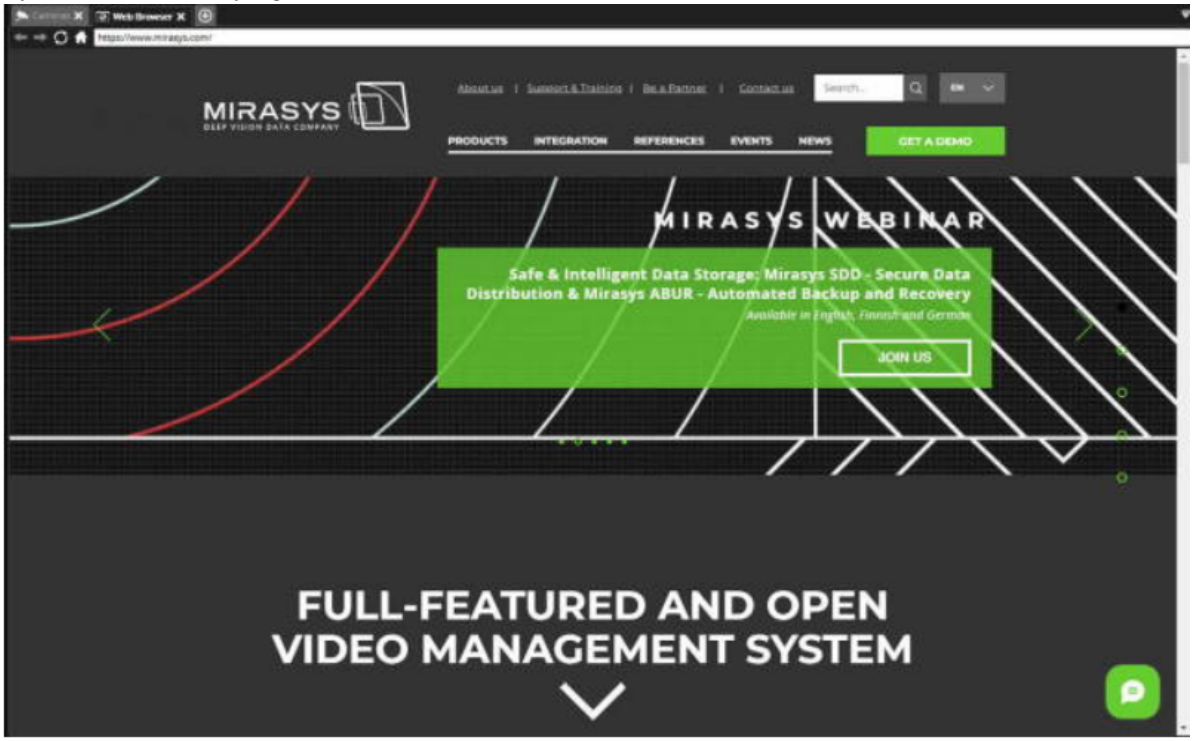
17.14 Spotter Web Browser

First, go to the **File\Settings\Plugins\Web Browser**

1. Set the **Home page**
2. Set the permissions for the browser
3. Set the visibility settings
4. Click **Save** to finalize changes



5. Go to the Plugins folder
6. Open Web Browser plugin



18 Input devices

18.1 DirectX devices

Spotter supports DirectX input devices that can be used mainly to control camera PTZ.

18.1.1 DirectX control devices

Spotter supports DirectX input devices (joysticks). They can control different Spotter functionalities, normally PTZ cameras.

The control devices have various axes and buttons. The driver detects these by using DirectX interfaces.

Operations (changes in device button states and Axis positions) are detected through the DirectX interface.

18.1.1.1 Control device settings

From the Spotter main menu, choose Spotter Device settings and then Control Device settings. In the device settings, you get a list of detected input devices.

Each input device can have common settings. Common device settings are:

- Use absolute axises
- Dead zone setting

Each device can have a number of different setups, but only one can be selected at a time. Input device setup maps input device button and axis changes to Spotter operation.

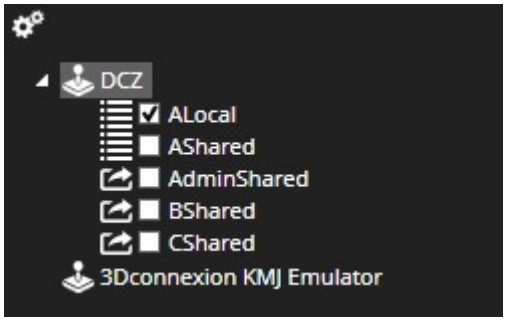
18.1.1.2 Shared device setups

In Adder, a shared folder is added under user device configuration to split own ad shared setups.

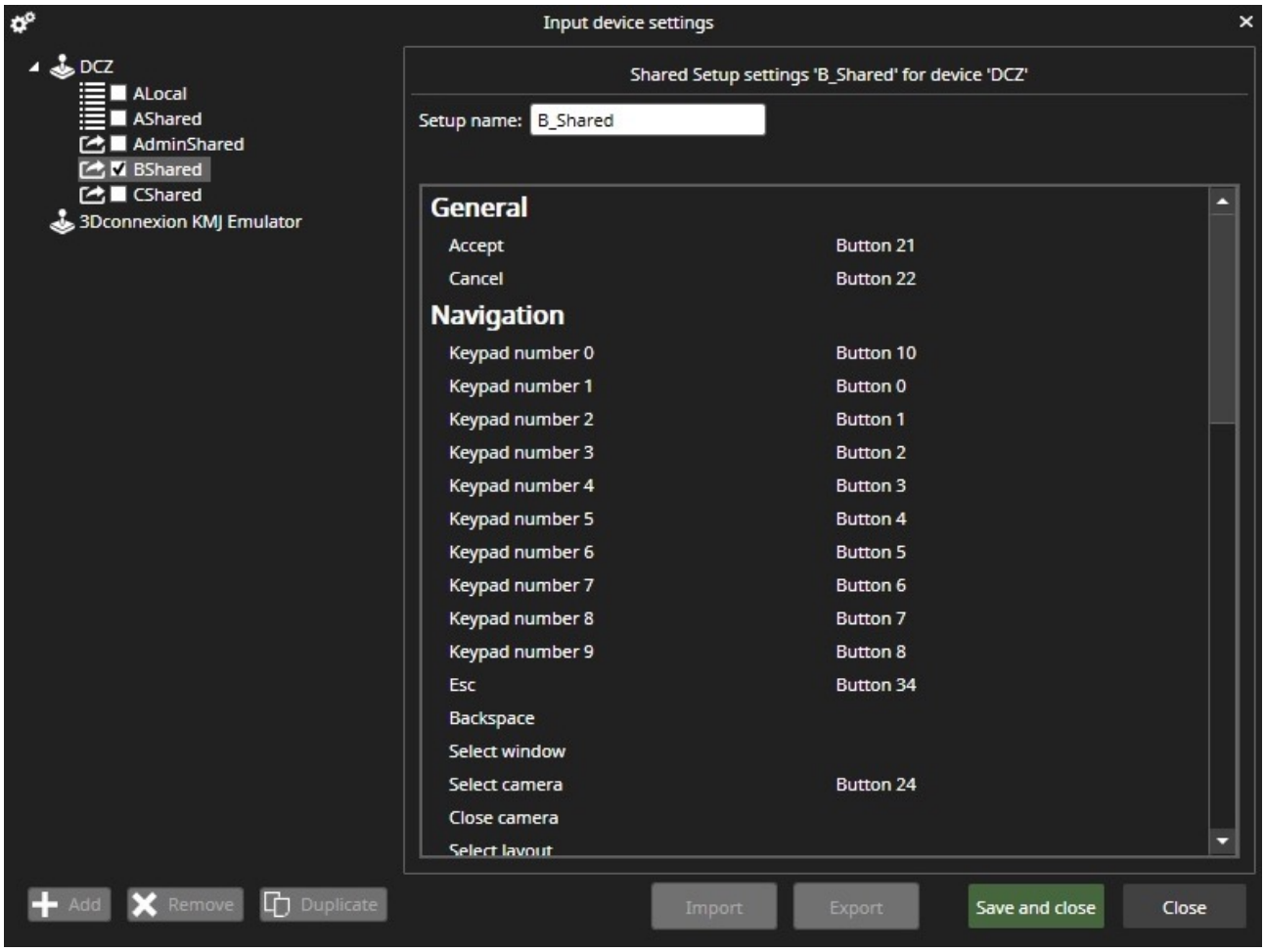
In Carp, a new boolean property of IsShared is added.

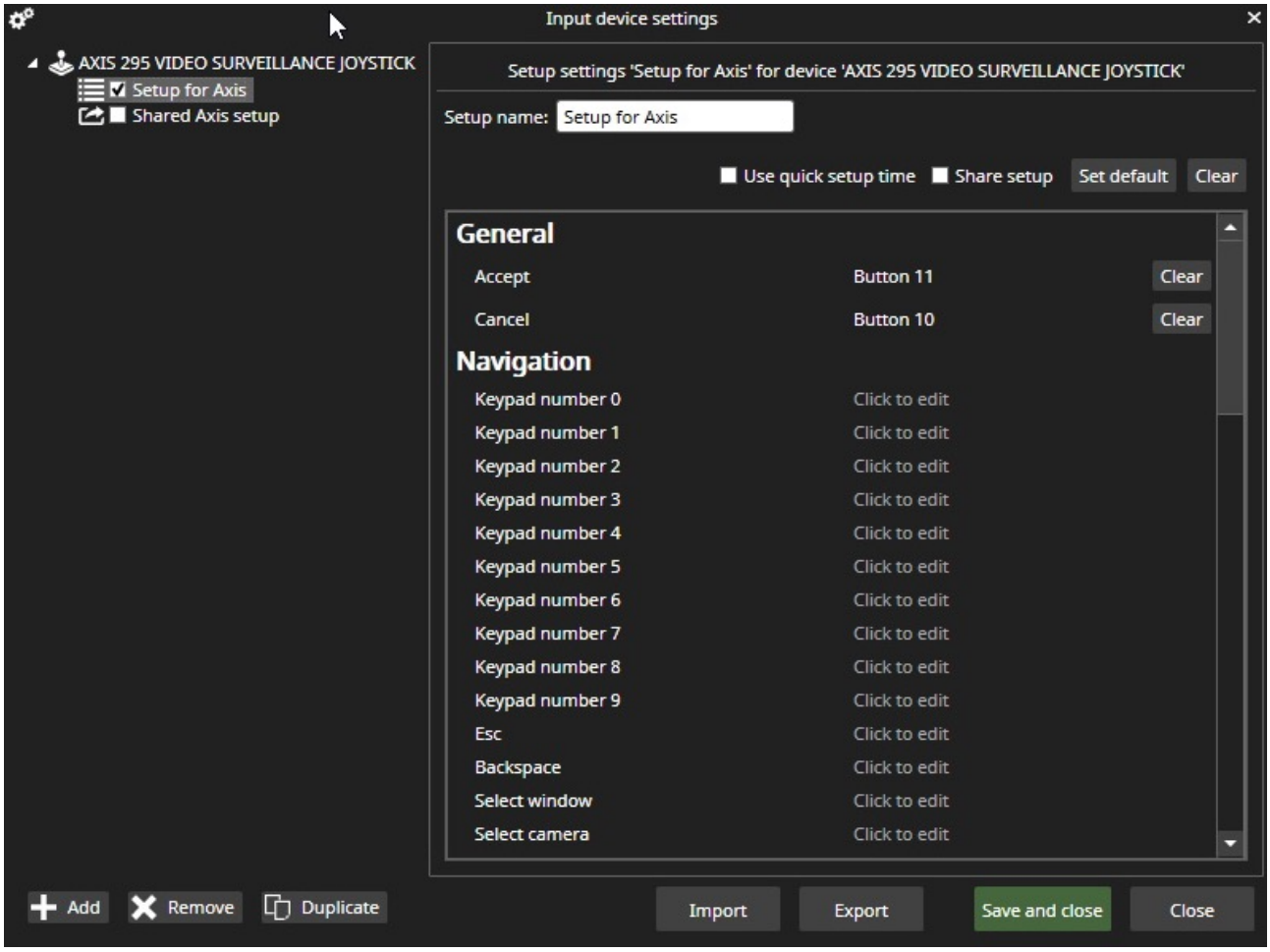
18.1.2 Spotter

In Input device settings, own and shared joystick settings are shown with different icons:



When shared settings are selected, only SaveAndClose and Close buttons are enabled. The content of the settings can not change.





18.1.2.1 Default setup support

Clear

To clear the setup

Default

To set the default setup

This only works if there are default setup defined for the detected device.

Default setups were added to devices

- DCZ
- CH Products IP Desktop Controller
- AXIS 295 Video surveillance joystick

Default input device setups are disassembled to folder C:\Users\<WindowsUser>\AppData\Roaming\DVMS\DVR Application\DefaultPTZConfig. When the "Default" button is clicked, the default setup from the folder is read, and its config is loaded to UI. The default setup format is the same as when importing and exporting device setups.

18.1.2.2 Virtual joystick default setup

Default setup buttons:

- C1: The last camera remembers the last camera selection, so it goes to the last camera and calls up in the “active Selected Camera” position
- C2: Previous camera, UP, or PREVIOUS button will change “Active Selected Camera” to the PREVIOUS in the selected profile folder in the tree.
- C3: Next camera, DOWN button, will change “Active Selected Camera” to the next in the selected profile folder in the tree
- C4: Snapshot of active Camera Selected Saves a picture with date and time as name to the default location
- C5: Focus near
- C6: Focus far
- C7: Iris Open
- C8: Iris Closed
- C9: Window selected grid to full screen / back to normal
- C10: Ptz open / close
- C11: Quick Bookmark
- C12: Set selected window to Live
- C13: Quick Storyboard
- *: PTZ Home
- #: Navigate and select the camera

Right Buttons by jog shuttle Grid selection advance move to NEXT camera a. Right button when selected will go to the next camera in the grid as the “Active Selection” IE if they have 6 PTZs’ up. They hit the right button, which moves PTZ control to the NEXT camera, and the joystick can now control that camera.

Left Button by jog shuttle Grid selection advance move to PREVIOUS camera a. Left button when selected will go to the PREVIOUS camera in the grid as the “Active Selection” IE if they have 6 PTZs’ up. They hit the Left button, and it moves PTZ control to the PREVIOUS camera, and the joystick will now be able to control that camera.

18.2 AXIS joystick

AXIS joystick setup for Axis T8311, AXIS 8312, and AXIS 8313.

In Mirasys 8.33, default setups were added to the AXIS 295 Video surveillance joystick. Please read more here.

18.2.1 Refactoring in Mirasys 8.3.3

- The input device driver level was removed since Spotter only supports DirectX devices at the moment
- Input device settings buttons tooltips were added to give more information to the user about what buttons do
- The title was added to devise settings and setup settings

- Scrolling of the input device operations list was fixed to operate more smoothly

18.2.2 Default setup support

Two buttons were added to input device settings UI

Clear

To clear the setup

Default

To set the default setup

This only works if there are default setup defined for the detected device.

Default setups were added to devices

- DCZ
- CH Products IP Desktop Controller
- AXIS 295 Video surveillance joystick

Default input device setups are disassembled to folder C:\Users\<WindowsUser>\AppData\Roaming\DVMS\DVR Application\DefaultPTZConfig. When the "Default" button is clicked, the default setup from the folder is read, and its config is loaded to UI. The format of the default setup is the same as when importing and exporting device setup.

18.2.3 Axis T8311 default setup

Default setup buttons:

- X-axis: move left/right
- Y axis: move up / down
- Z axis: PTZ near / far
- J1: Ptz open/close
- J2: Select the camera
- J3: Quick select camera
- J4: Select the PTZ preposition
- L: Play backward
- R: Play forwards

18.2.4 Axis T8312 keypad default setup

Default setup buttons:

- Button 0 - Button 9: 0 - 9
- Button 10 (Tab): Navigate to select tab content
- Button 11 (Alt): Enter
- Button 12: Quick select window
- Button 13: Quick select camera
- Button 14: Ptz select preposition

18.2.5 Axis T8313 jogdial default setup

- Jog wheel: Play forward / backward
- Shuttle wheel: Step forward / backward
- Button 1: Quick bookmark
- Button 2:
- Button 3: Playback pause
- Button 4:
- Button 5 (L): Camera export image
- Button 6 (R): Quick storyboard

18.2.5.1 Changes in V9: Setup name added in selected device layout

To improve selected setup findings between different clients, the selected setup name is added to user layouts. If the setup instance id search does not match, then the search by setup name is tried.

18.2.6 Related links

https://www.axis.com/dam/public/57/bf/60/axis-t8310t8311t8312t8313--user-manual-en-US-38652.pdf

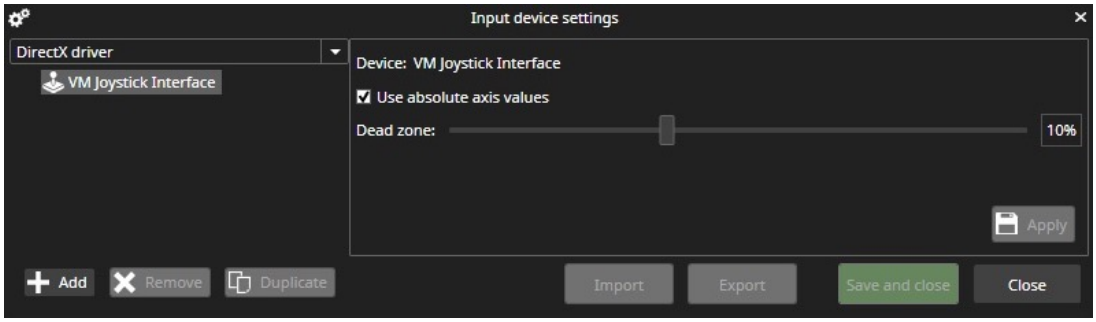
18.3 VM Desktop default setup (DirectX and AXIS)

VM Desktop default setup for DirectX devices and AXIS joystick

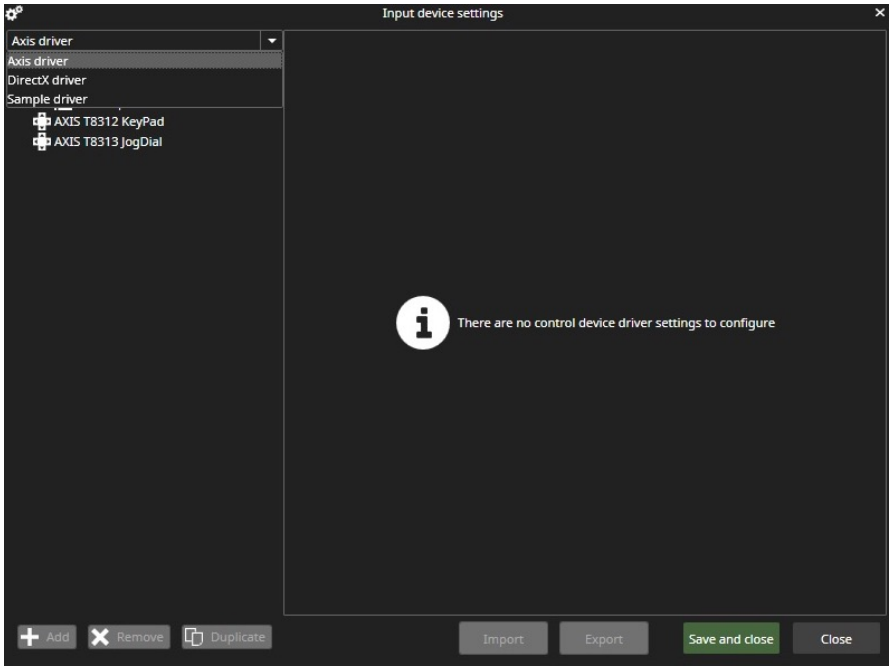
18.3.1 VM Desktop default setup

18.3.1.1 Device driver selection

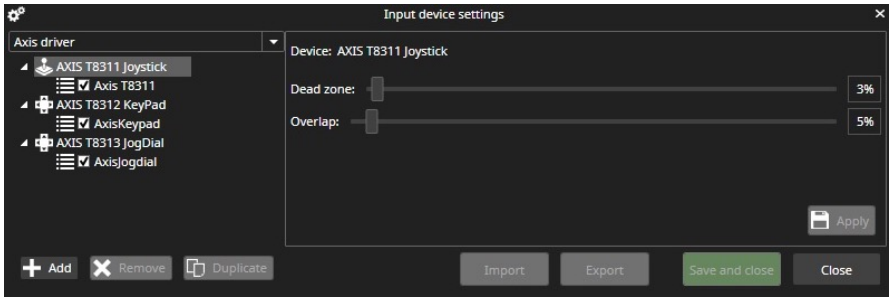
In the device driver setup page, only one driver is seen at a time, the default selected driver is the DirectX driver.



Used (= active) driver can select from combo box items:



Axis device driver supports AXIS T8311 Joystick, AXIS T8312 Keypad, and AXIS T8313 Jogdial.



Note!

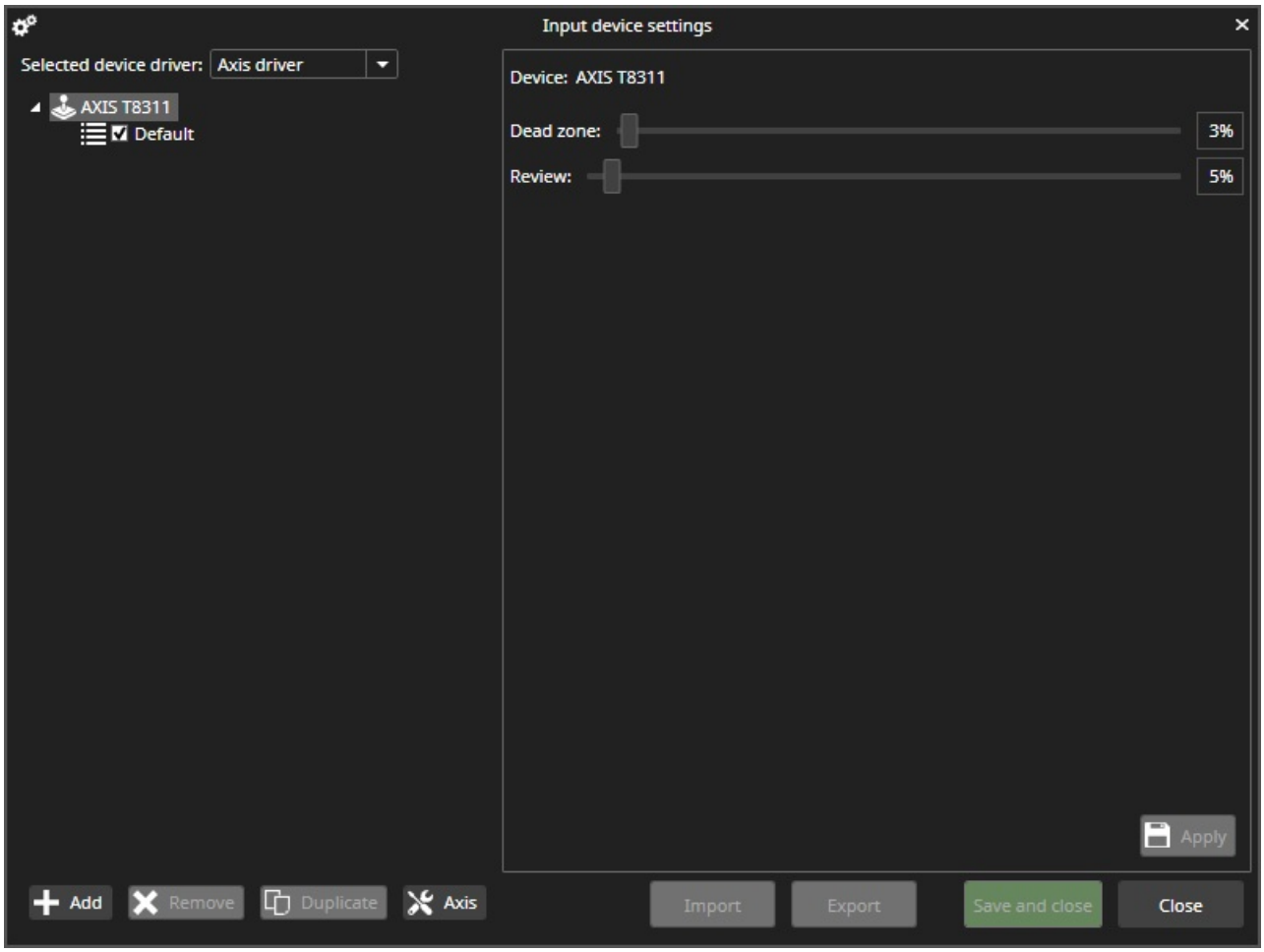
During Axis device driver test period, we detected a case (do not find out the reason) when Axis device driver was not viewing id driver selections and in Spotter.log there was an error message like: Exception in reading parameter information from installed control device driver

System.Reflection.TargetInvocationException: An exception has been thrown by the target of an invocation. ---> System.IO.FileNotFoundException: Retrieving the COM class factory for component with CLSID {7CC50CF7-AB83-4DF7-80A9-CA43FB554BBB} failed due to the following error: 8007007e The specified module could not be found. (Exception from HRESULT: 0x8007007E).
To solve this.

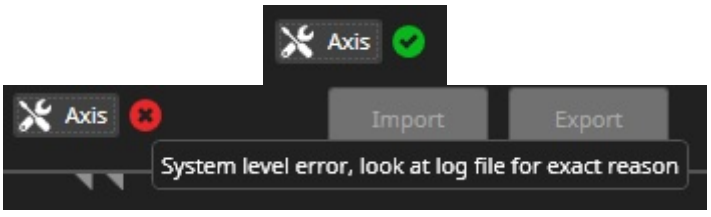
- start the command prompt with administrator rights and go to the similar directory as: C:\Users\xxxx\AppData\Roaming\DVMS\spotter\9.3.0\127.0.0.1_5008\ControlDevices
- run: REGSVR32 /U AxisJoystickModuleX64.dll and after that REGSVR32 AxisJoystickModuleX64.dll

18.3.1.2 Changes in VMS 9

Automatic Axis device driver registration at Spotter start-up is removed, and a new Axis registration button is added in Input device settings.



Status of registration operation can see from status icon:



19 Spotter 360 Cameras

19.1 360 De-Warping

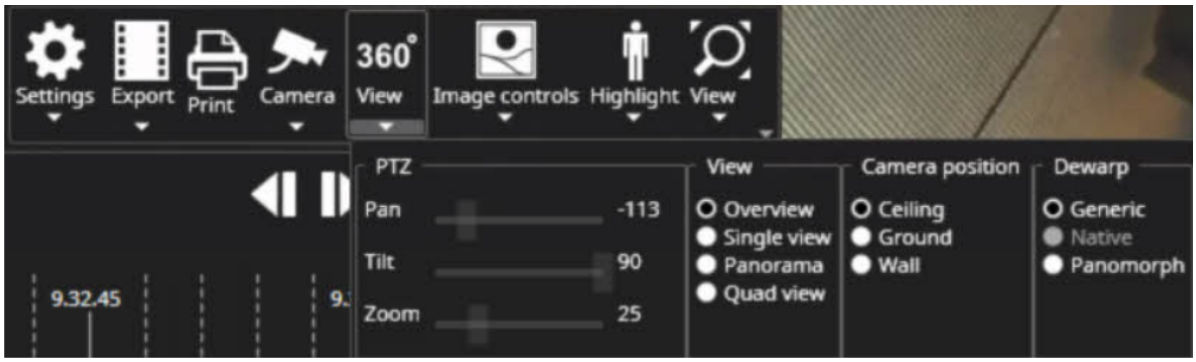
The 360 View toolbar control allows defining how a 360-camera image is de-warped (straightened) by the Spotter client.

The Plugin has controls to:

- Pan, Tilt and Zoom the de-warped image (available only for some de-warped modes and cameras)
- Select the de-warping mode
- Non-de-warped
- Single view
- Panorama (typically a double panorama, but some cameras only offer a single panorama view)
- Quad view (4 individual de-warped cameras that can be adjusted separately
- Camera mounting position control
- Lens selector

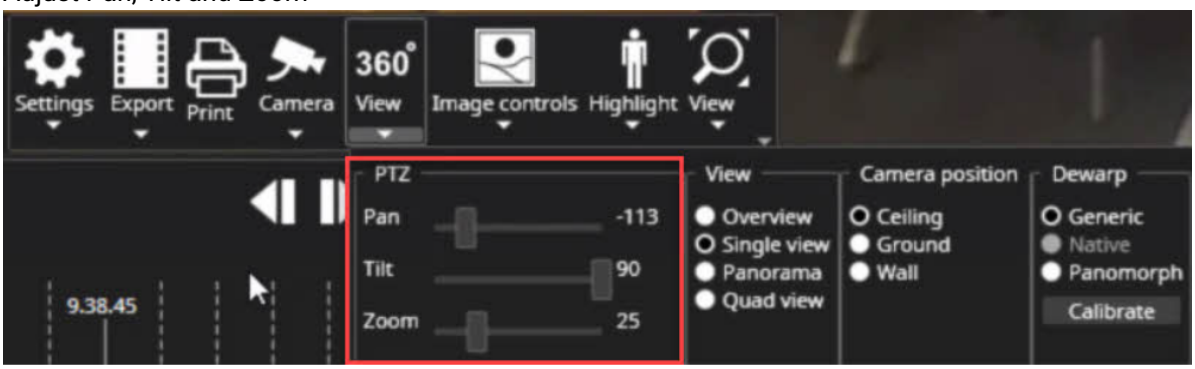
19.1.1 Configuring 360 camera de-warping

1. Open camera to the real-time view
2. Open camera toolbar
3. Select 360 View
4. Select Dewarp mode
5. Select Camera position(**Ceiling, Ground** or **Wall**)
6. Select View mode



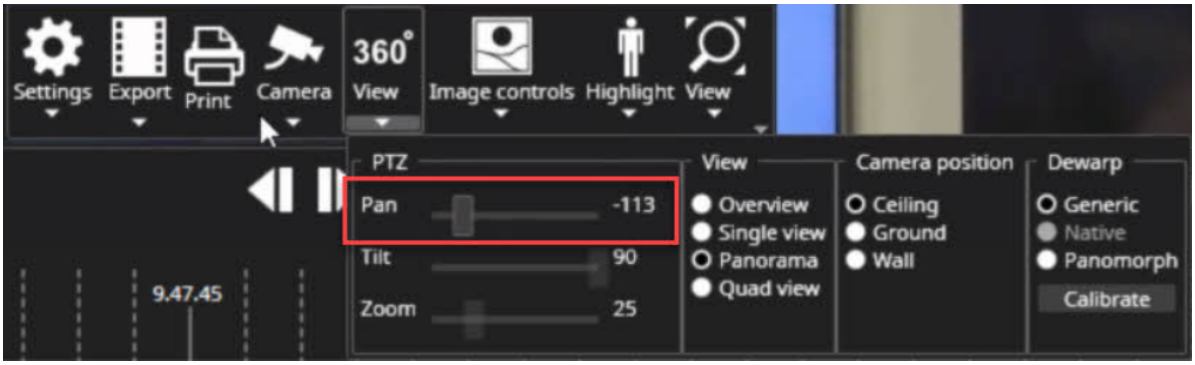
19.1.2 Single view

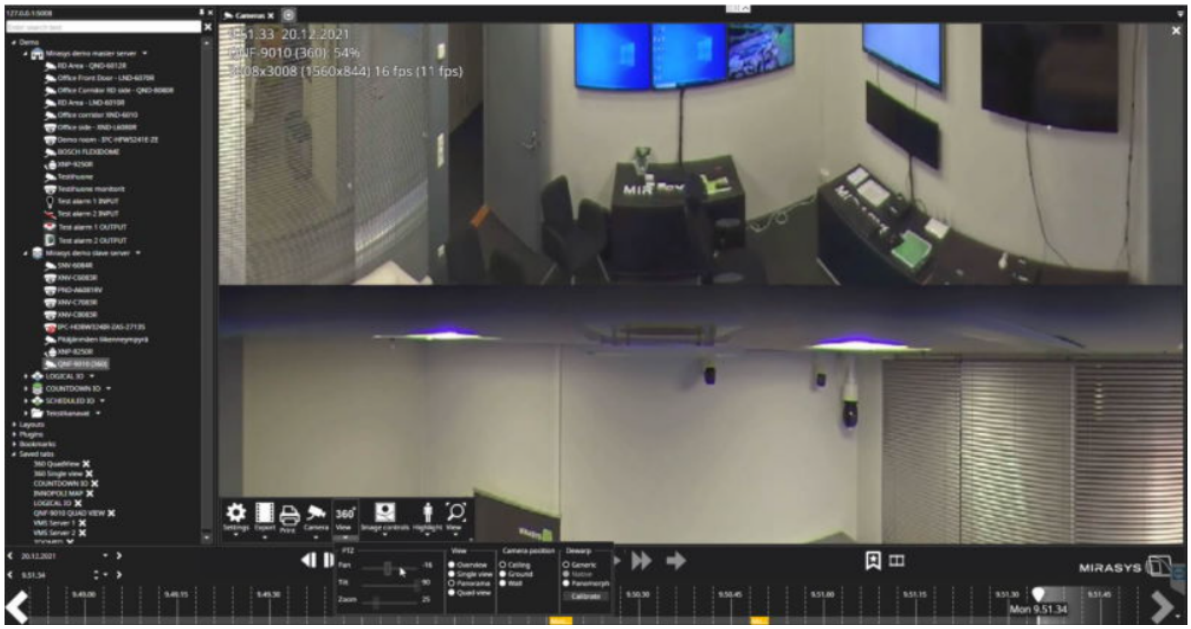
1. Select Single view mode
2. Adjust Pan, Tilt and Zoom



19.1.3 Panorama

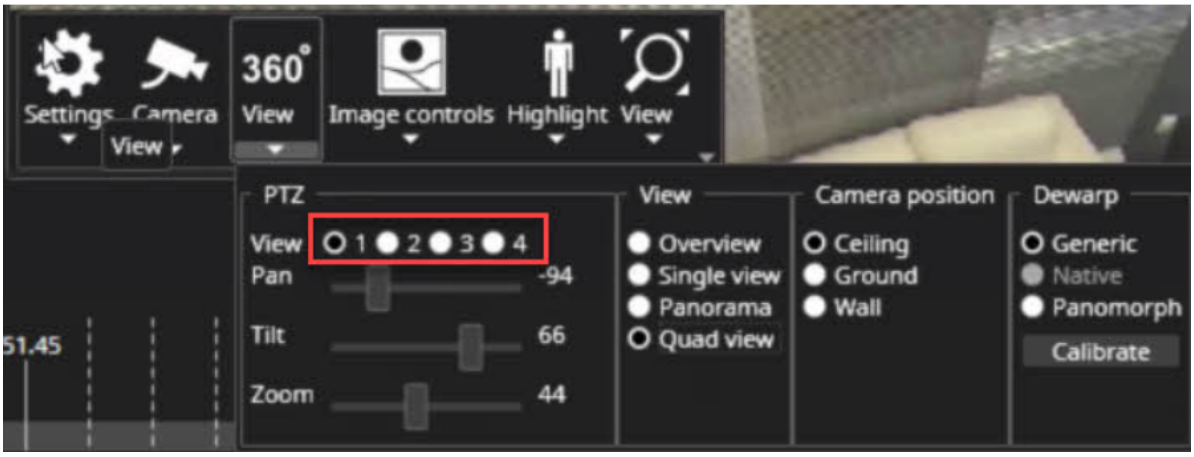
1. Select Panorama mode
2. Adjust Pan

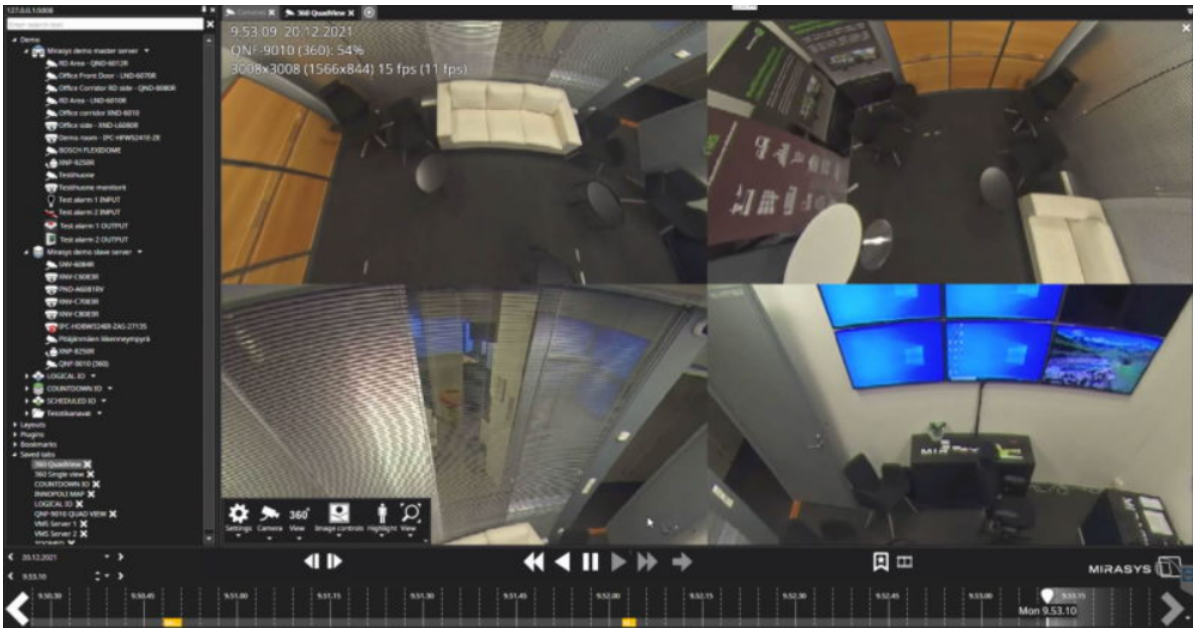




19.1.4 Quad

1. Select Quad view mode
2. Select view 1
3. Adjust Pan, Tilt and Zoom
4. Repeat same actions to View 2, 3 and 4





19.2 Direct Control of 360 Cameras

When 360 de-warping is in use, it is possible to click on top of the image and then move the mouse and use the mouse wheel to zoom. This will act as an ultra-fast virtual PTZ. When clicking again with the mouse, the control is released and the changes saved. The de-warp mode switches automatically to a single view when the camera is clicked. Sample view of a panorama de-warped camera:

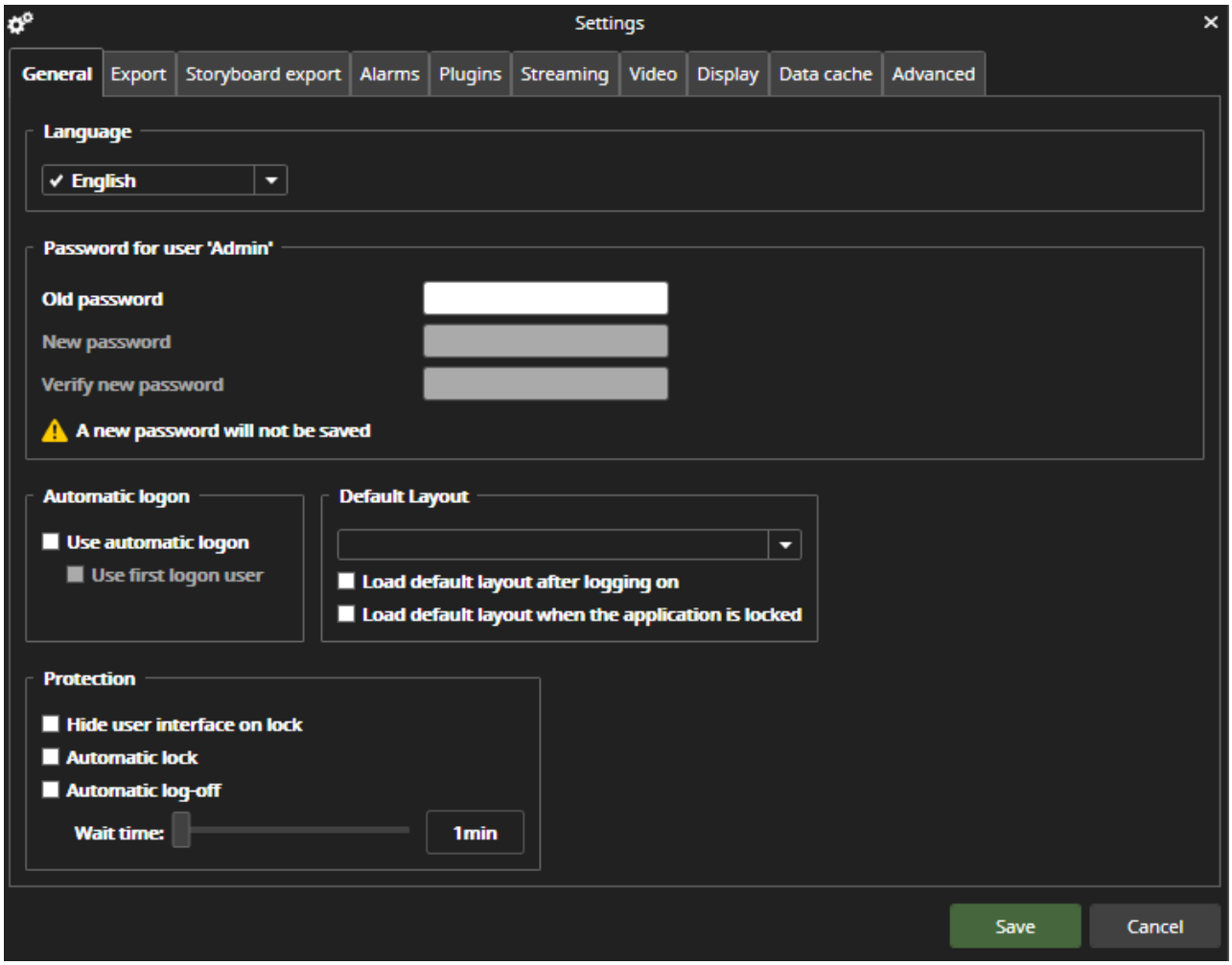

13:12:30 3.12.2015
Samsung 360

20 Spotter Settings

Various functions can be accessed from the **Settings** menu.

- General
- Export
- Storyboard export
- Alarms
- Plugins
- Streaming
- Video
- Display
- Data cache
- Advanced

20.1 Spotter General Settings



20.1.1 Language

You can select the used language from the drop-down list

20.1.1.1 Password settings

You can change the current user password

20.1.1.2 Automatic logon

- Use automatic log-on
    - When selected, Spotter logon is executed automatically

    - Example: User A logs on to Spotter and switch to User B. Under user B, select ‘Use automatic log-on,’ switch to User C, and under User, C log off Spotter. Next time when Spotter is started, it is automatically logged on as User C (was the user when logged off).
- Use the first log-on user.
    - When selected, Spotter logon is executed with the user who was the Spotter start-up logon user when this selection was made.
    - Example: User A logs on to Spotter, switch to User B under User B select ‘Use automatic logon’ and ‘Use first login user’, switch to User C, and under User C logs off Spotter. Next time when Spotter is started, it is automatically logged on as User A (the user who first logged on).

20.1.1.3 Default layout

You can select a layout from the layout drop-down list to a layout that is available to you

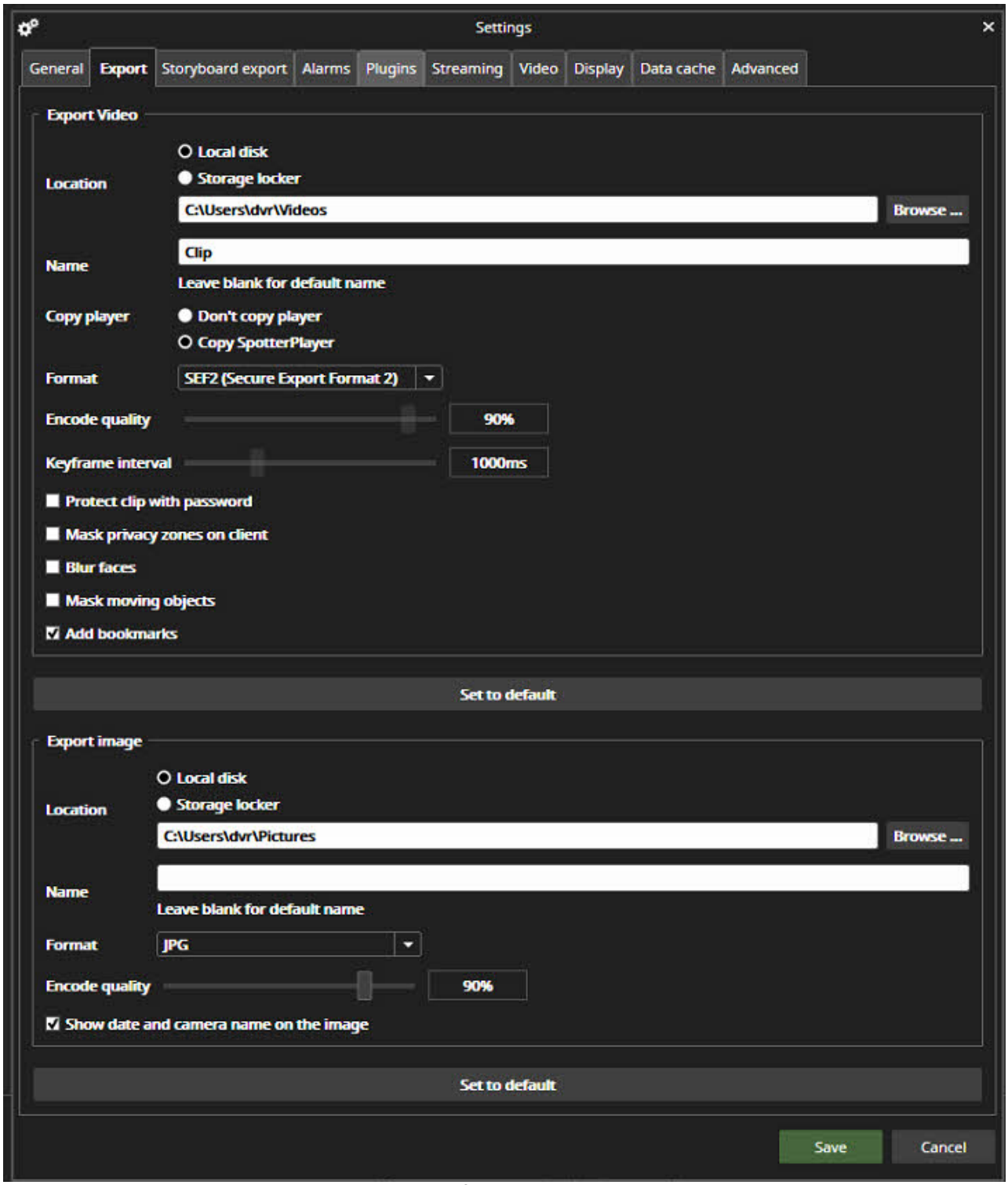
- Load default layout after logging on
    - If checked, load the selected layout after logging on
- Load default layout when the application is locked
    - If checked, load the selected layout when the application is locked

20.1.1.4 Protection

Can select behavior at lock and log off situations

- Hide user interface on lock
    - When selected, do not show the user interface when the application is locked, only an empty scene with locked information.
- Automatic lock and Automatic log off
    - When selected, lock/log off after selecting Wait time, between 1 minute to 24 hours.

20.2 Spotter Export Settings



The data export screen has settings contains the following settings:

20.2.1 Export video

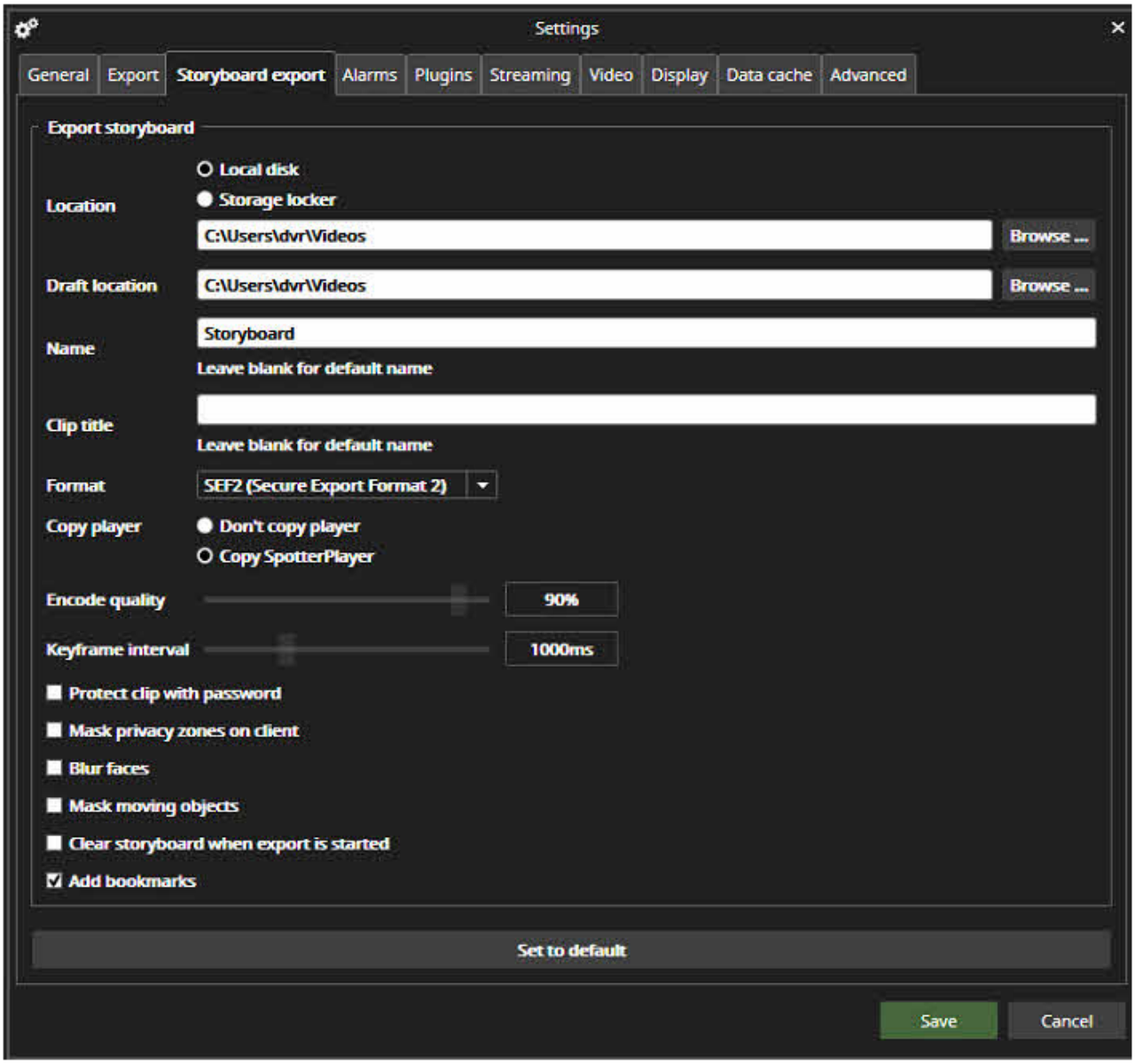
- The exported video default location
- The exported video default name
- Spotter Player copy settings
- Default format
- Protect clip with password
- Mask privacy zones on client
- Blur faces
- Mask moving objects
- Add bookmarks

20.2.2 Export an image

- The exported image default location
- The exported image default name
- Default format

20.3 Spotter Storyboard Settings

20.3.1 Storyboard Settings



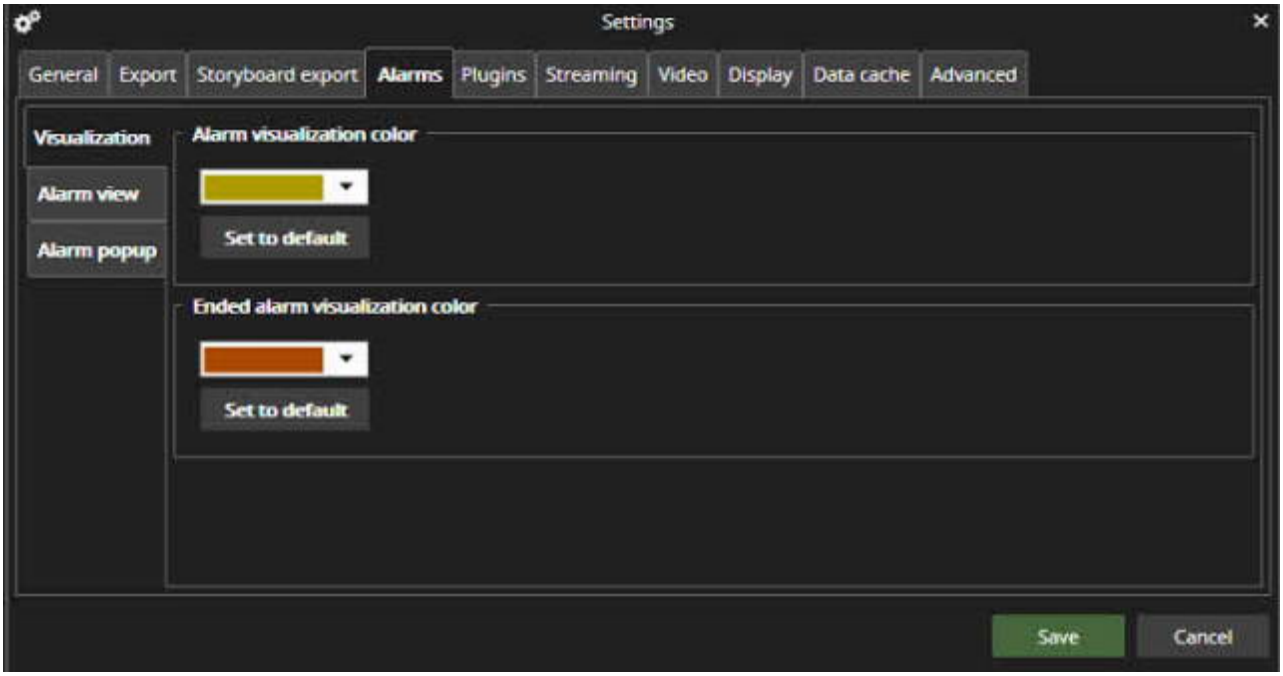
Storyboard settings contain the export target location and the target location for the draft storyboards. The name of the storyboard and the clips can be defined here. If the names are left blank, a default name with a timestamp is used.

20.4 Spotter Alarm Settings

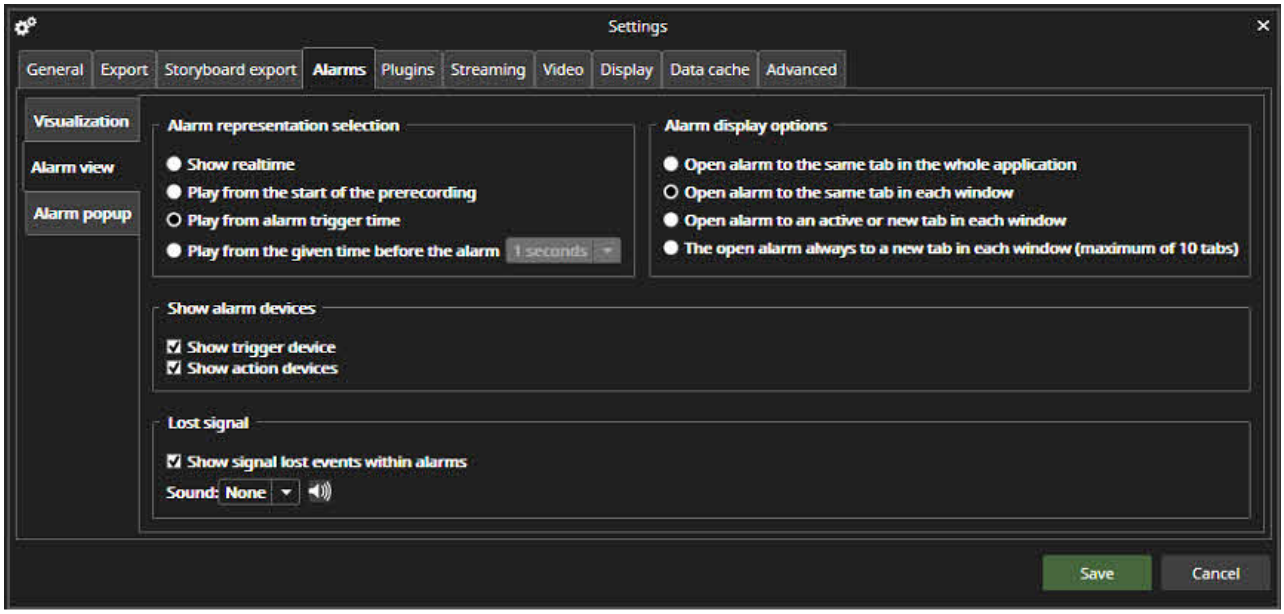
The alarm tab in settings is split for the Alarm visualization, Alarm view and Alarm popup sections.

20.4.1 Spotter Alarm visualization settings

Alarm visualization allows a selection of the alarm highlight color for active and ended alarms.



20.4.2 Spotter Alarm View settings



20.4.2.1 Alarm representation selection

The Alarm representation selection defines what time the alarm is being played when it is opened from the alarm list. The possibilities are:

- Show real-time
- Play from the start of the alarm pre-recording time
- Play from alarm trigger time (default option)
- Play from the given time before the alarm(1- 60 seconds)

20.4.2.2 Alarm display options

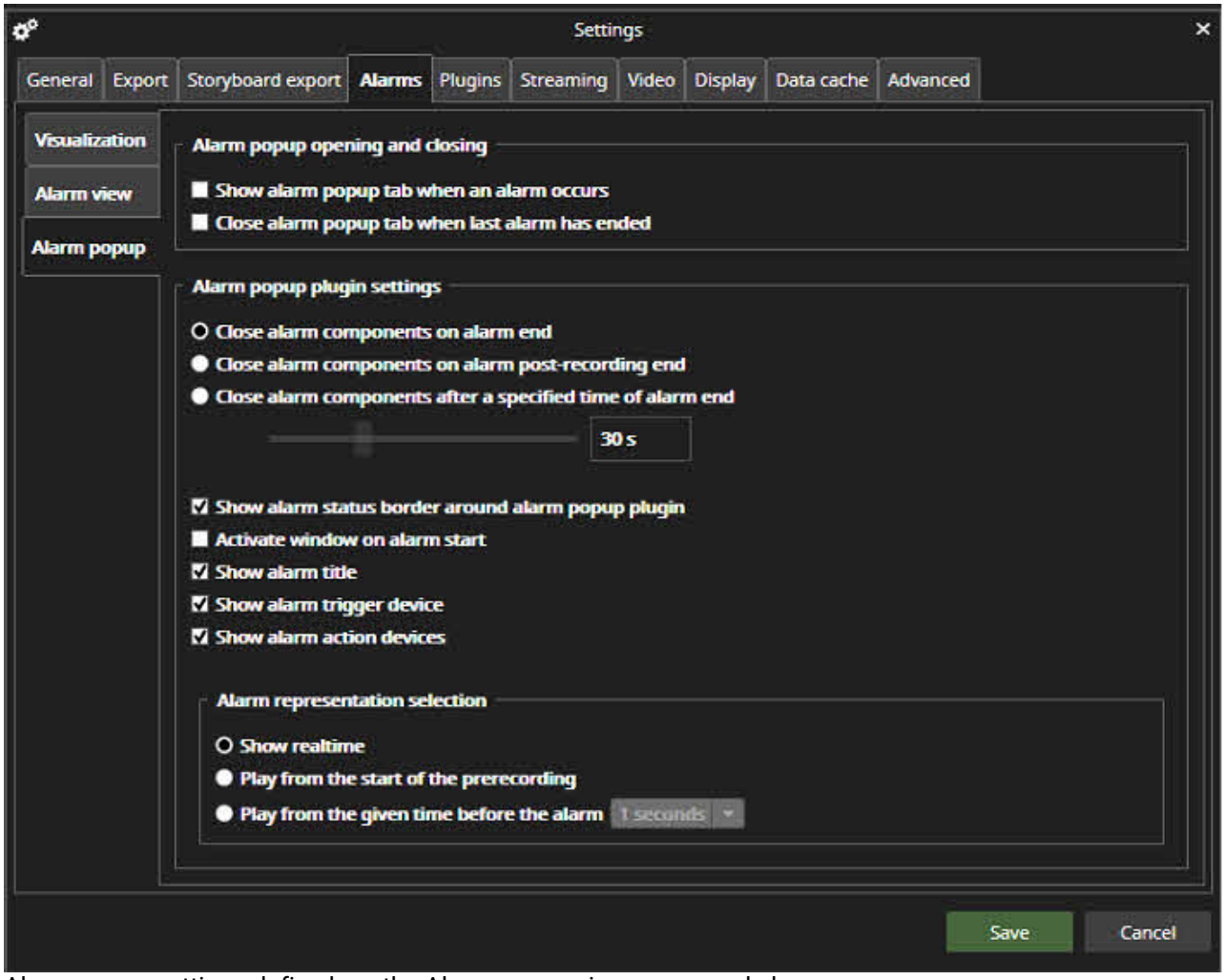
It is also possible to define how the alarm is opened. The possibilities are:

- Open alarm to the same tab in all whole application
- Open alarm to the same tab in each window
- Open alarm to an active or new tab in each window
- Open alarm always to a new tab in each window(maximum of 1 10 tabs)

20.4.2.3 Lost signal

- Show signal lost events within alarms

20.4.3 Spotter Alarm popup settings



Alarm popup settings define how the Alarm popup view opens and closes.

The default setting is that the Alarm popup is not opened and closed automatically if it is not open.

20.4.3.1 Alarm popup opening and closing

If the user wants the Alarm popup not to open normally and only open when an alarm happens, he should select the first checkbox.

If the user wants the Alarm popup closed automatically after the last active alarm ends, he should check the second checkbox.

20.4.3.2 Alarm popup plugin settings

The second part of the Alarm popup settings defines how long the alarm components are displayed in the popup tab. The possibilities are:

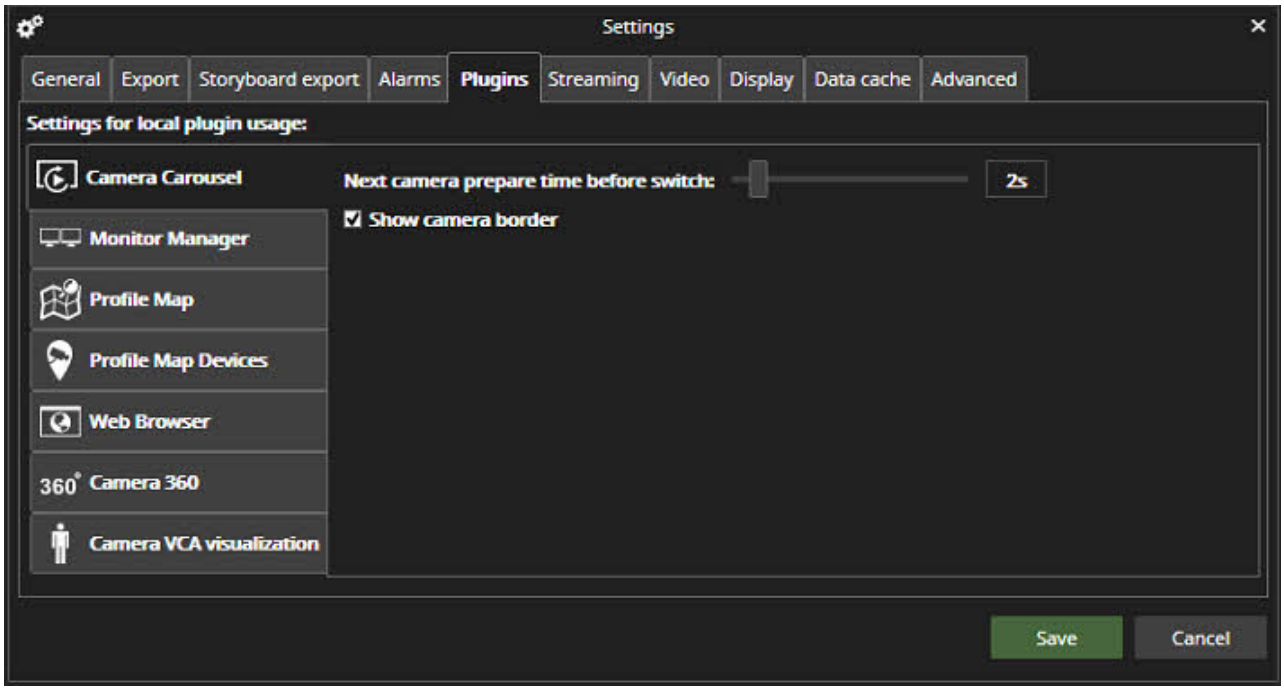
- Alarm components are closed when the alarm ends (default option)
- Close alarm components on alarm post-recording end
- Close alarm components after a specified time of alarm ended(5 seconds – 30 minutes).
- Show alarm status border around alarm popup plugin
- Activate window on alarm start
- Show alarm title
- Show alarm trigger device
- Show alarm action devices

20.4.3.3 **Alarm representation selection**

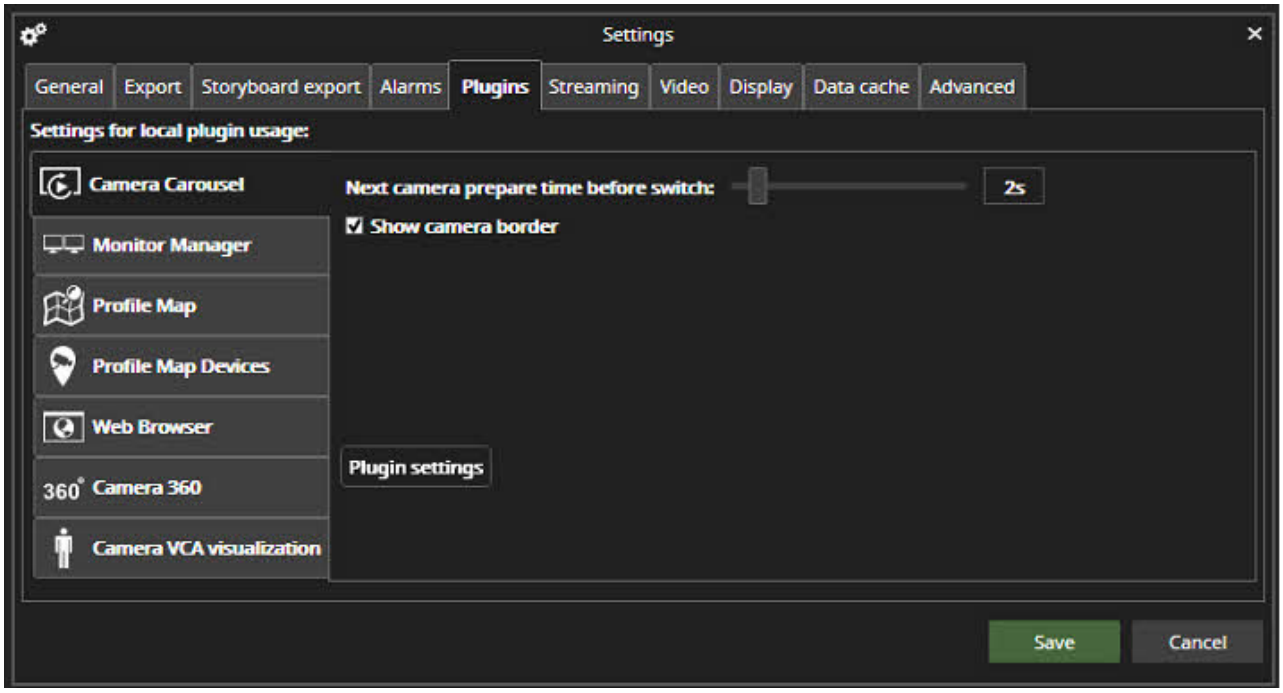
- Show real-time (default)
- Play from the start of the prerecording
- Play from the given time before the alarm(1-60 seconds)

20.5 Spotter Plugin Specific Settings

This setting view contains all settings for the installed Spotter plugins not specified elsewhere. The settings visible here can be different based on what Spotter plugins are installed.

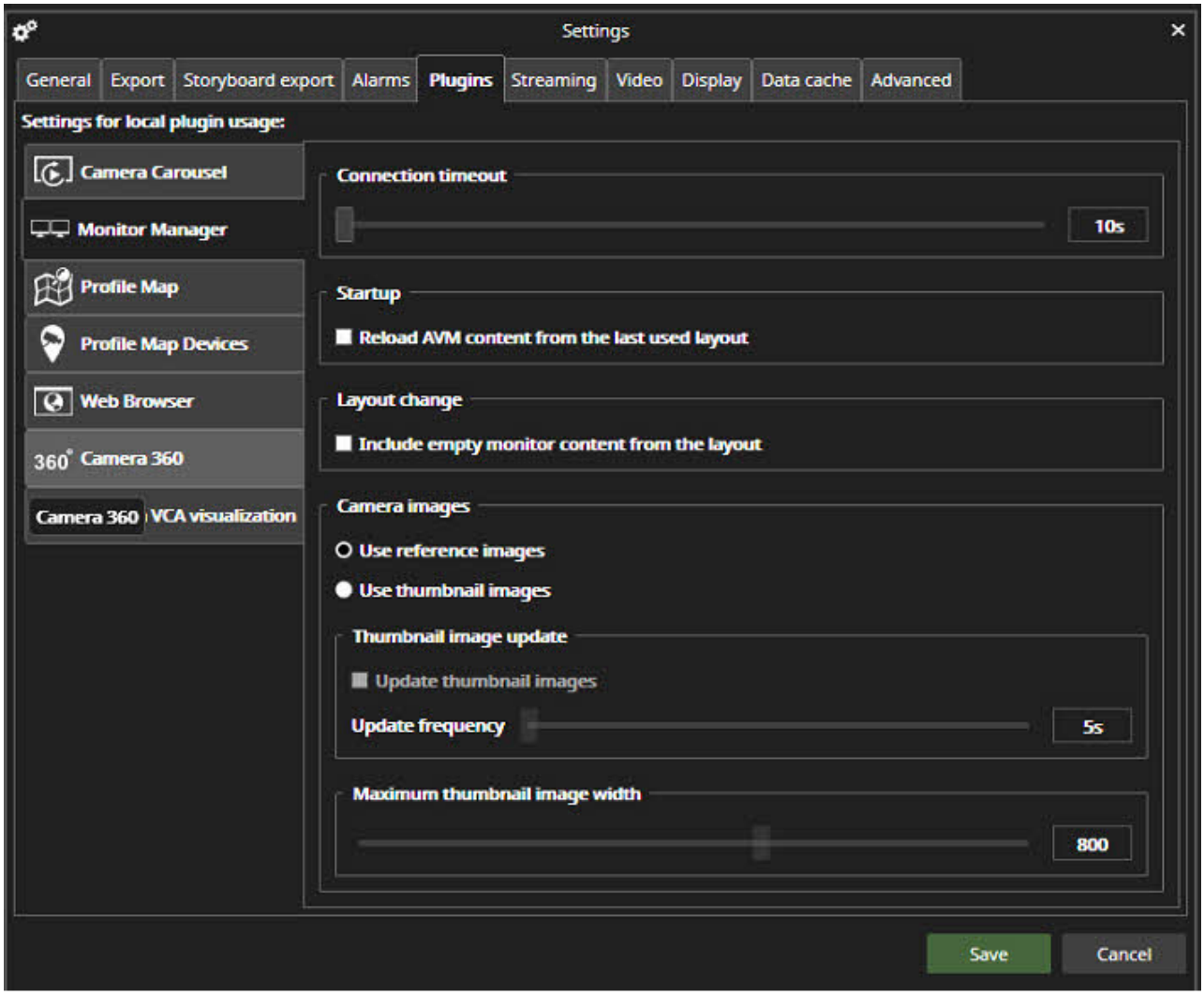


20.5.1 Spotter Camera Carousel settings



- Next camera prepare time before the switch
- Show camera border

20.5.2 Spotter Monitor Manager settings



20.5.2.1 Connection timeout

20.5.2.2 Startup

Reload AVM content from the last used layout

20.5.2.3 Layout change

Include empty monitor content from the layout

20.5.2.4 Camera images

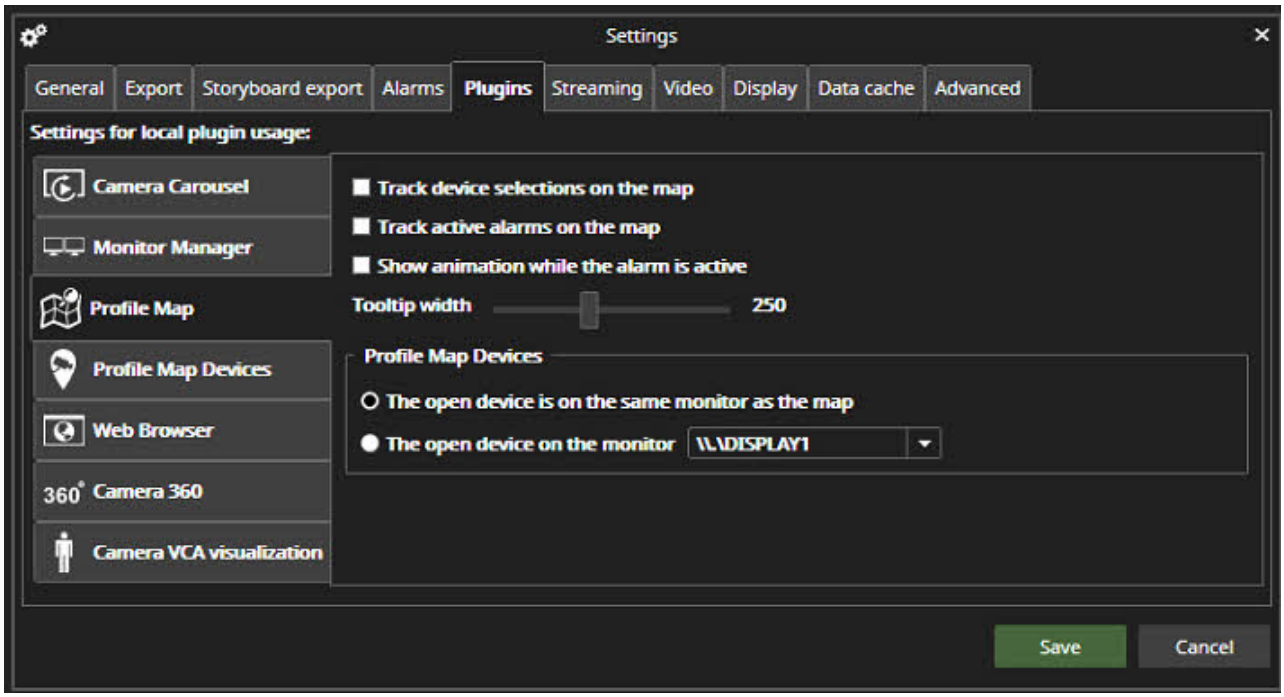
- Use reference images
- Use thumbnail images

20.5.2.5 Thumbnail images update

Update frequency

20.5.2.6 Maximum thumbnail image width

20.5.3 Spotter Profile Map settings

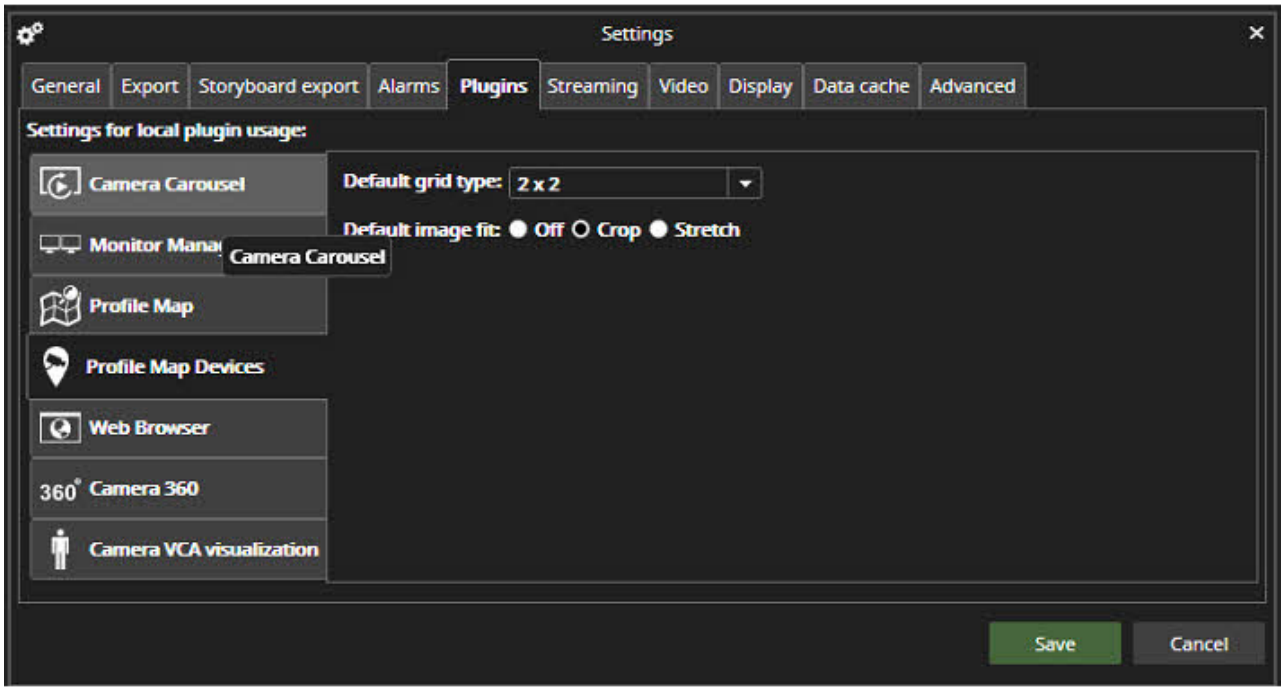


- Track device selections on the map
- Track active alarms on the map
- Show animation while the alarm is active

20.5.3.1 Profile Map Devices

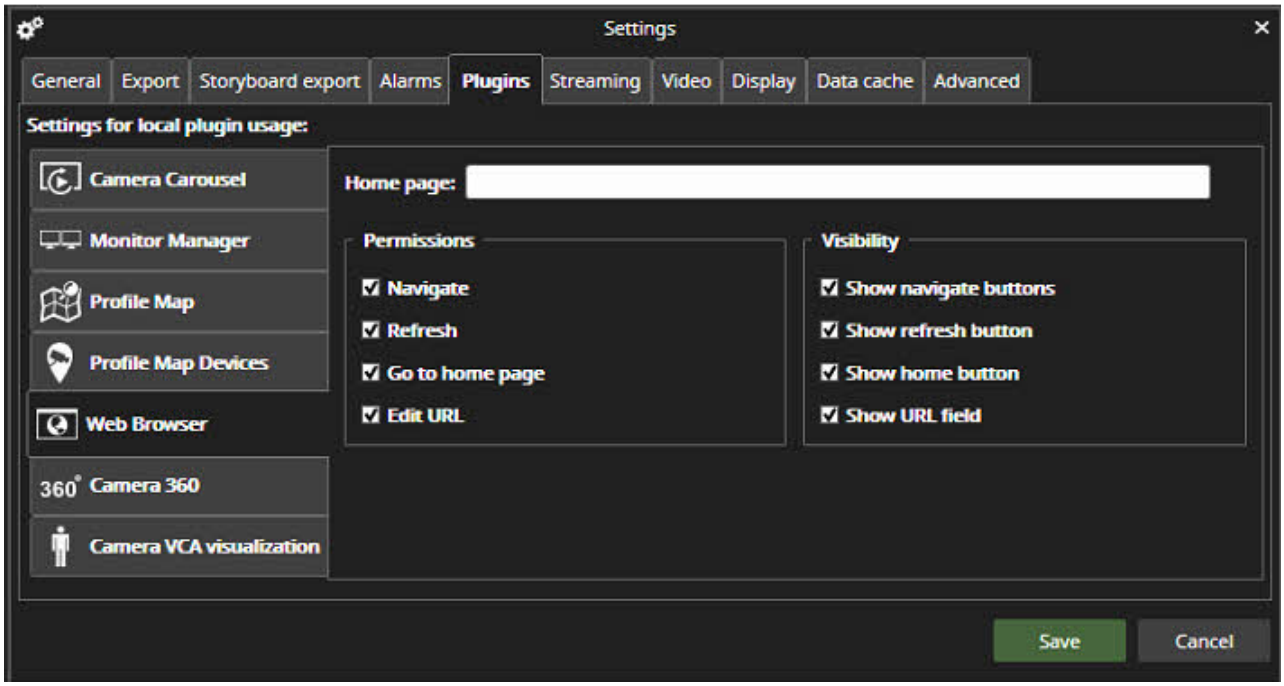
- The open device is on the same monitor as the map
- The open device on the monitor:

20.5.4 Spotter Profile Map Devices settings



- Default grid type
- Default image fit
    - Off
    - Crop
    - Stretch

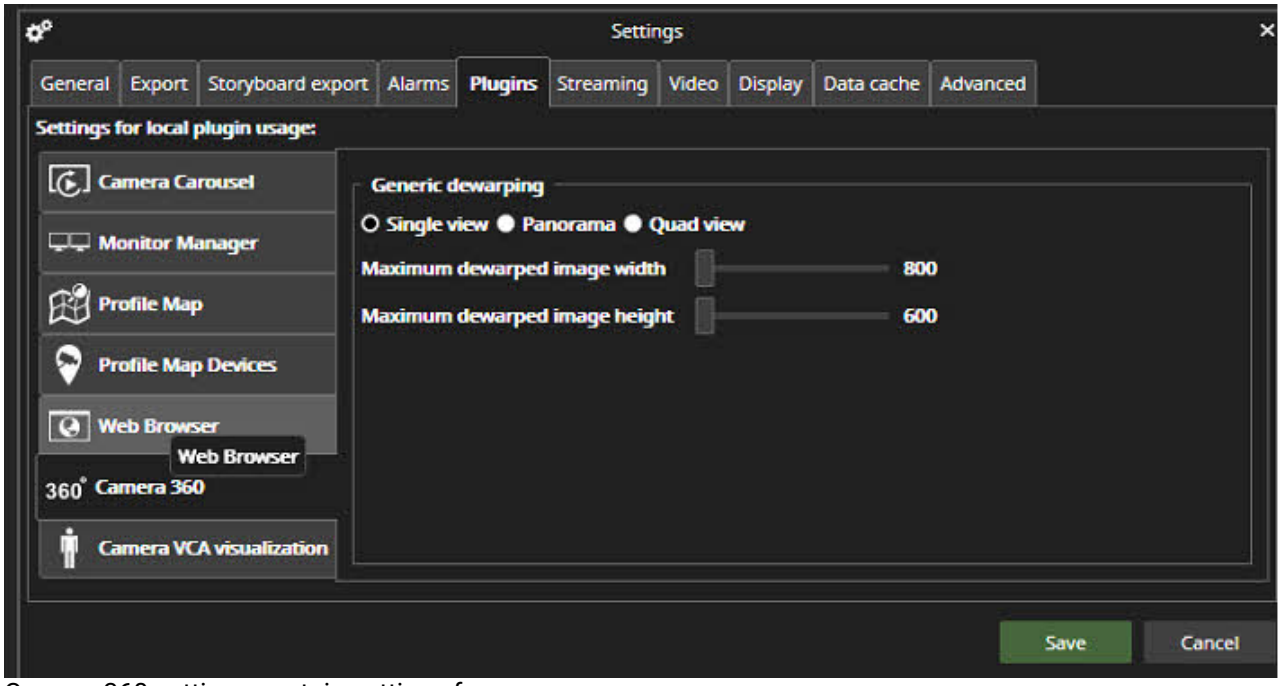
20.5.5 Spotter Web Browser settings



The Web Browser plugin has settings for

- It is setting the home page where the plugin will go when it is opened.
- Permissions and visibility of controls for controlling if the user can navigate, refresh, go back to the home page and edit the URL.
- It is selecting the version of Internet Explorer that is used.

20.5.6 Spotter Camera 360 settings

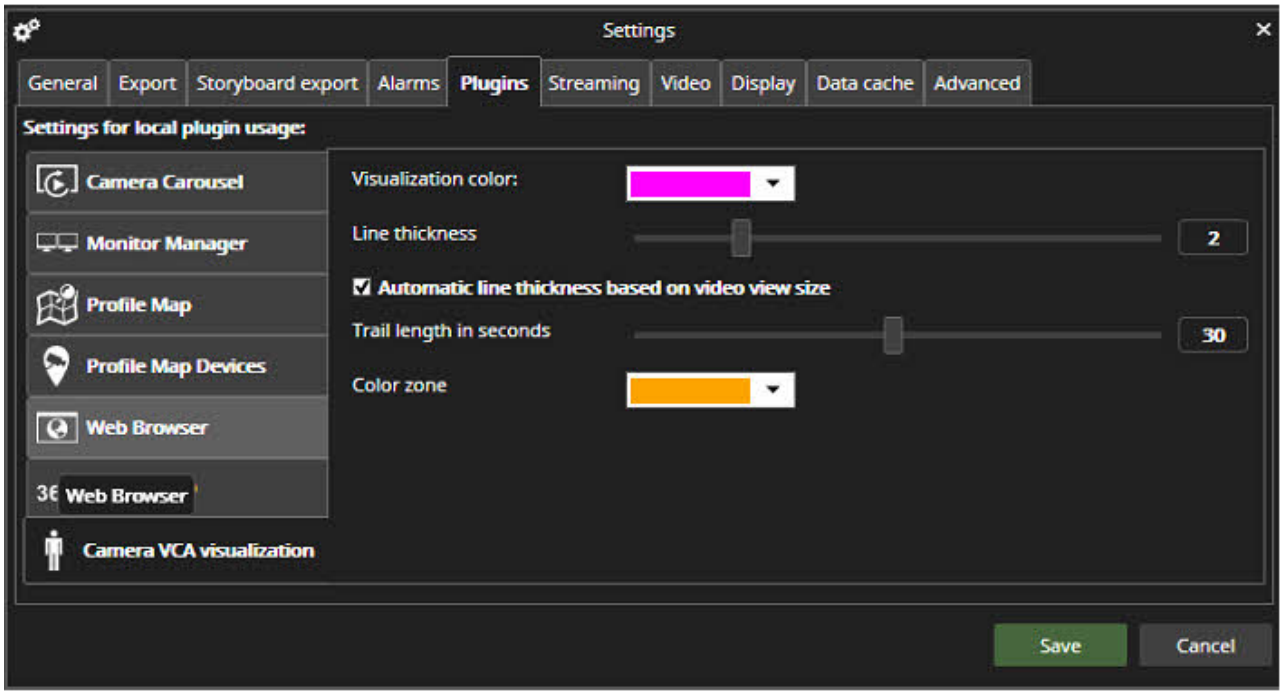


Camera 360 settings contain settings for:

20.5.6.1 Generic dewarping

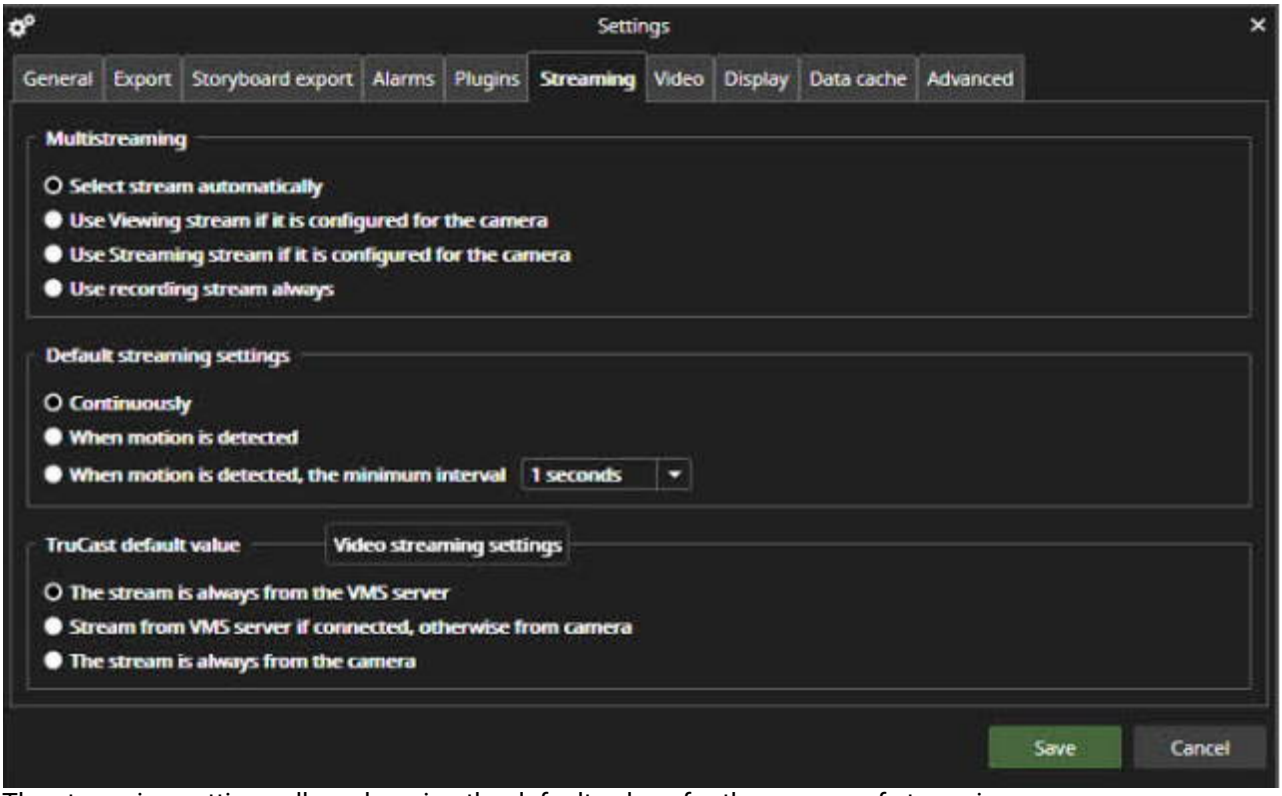
- Single view
- Panorama
- Quad view
- Maximum dewarped image width
- Maximum dewarped image height

20.5.7 Spotter VCA visualization settings



VCA visualization settings allow the user to change the colour of the VCA highlight and the movement trail, the movement trail length in seconds and the line thickness.
The VCA zone colour can be adjusted independently from the VCA highlight colour.

20.6 Spotter Streaming Settings

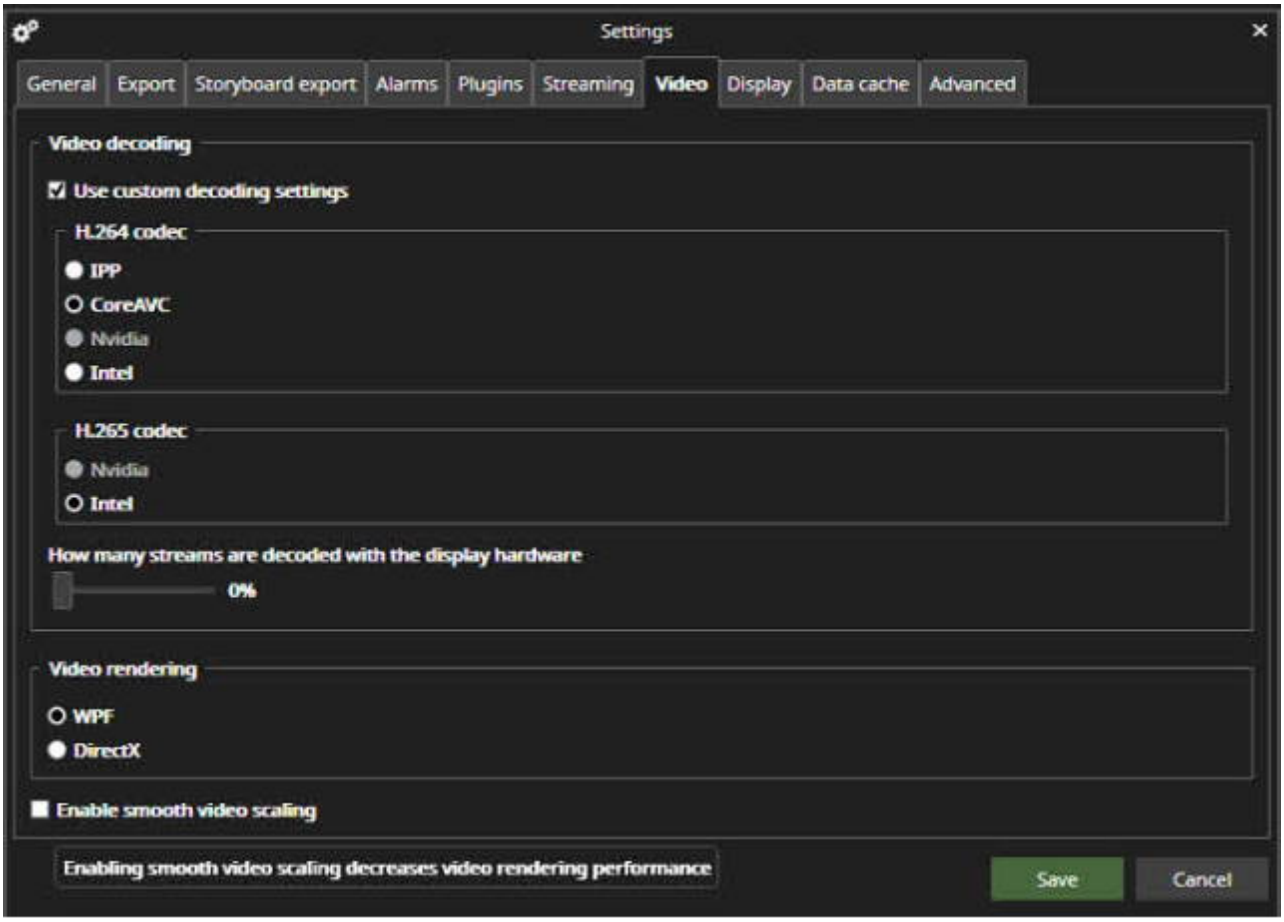


The streaming settings allow changing the default values for three areas of streaming.

- **Multistreaming**: Which stream from the camera is used for live viewing.
- **Default streaming settings**: Does Spotter draw all images always, or only based on motion detection.
- **TruCast default value**: Whether the live view stream is directly from the camera (TruCast) or the VMS Server.

The **TruCast** and **Default streaming settings** can also be adjusted individually per camera from the camera toolbar menu.
These settings will override any settings up until now done for cameras.
However, after changing these settings, it is possible to customize individual cameras to use different settings, which are memorized per camera.
Setting "**Select stream automatically**" in the multi-streaming settings means that Spotter will choose the stream whose resolution most closely matches the area that the camera has on the device grid.

20.7 Spotter Video settings



The video settings allow setting custom decoding and change rendering technologies to help improve performance depending on hardware.

20.7.1 Video decoding

Use custom decoding settings allows you to select a specific decoding setting and decide what per cent of streams are decoded using GPU.

20.7.1.1 H.264 codec

- **IPP:** uses CPU
- **CoreAVC:** Can use CPU or Nvidia CUDA
- **Nvidia:** requires Nvidia GPU
- **Intel:** uses CPU; if processor chip has Intel Graphics inbuilt GPU, it can also use GPU

20.7.1.2 H.265 codec

- **Nvidia:** based requires Nvidia GPU
- **Intel:** uses CPU; if the processor chip has Intel Graphics inbuilt GPU, it can also use GPU, slider affects how many cameras use CPU/GPU.

20.7.1.3 How many streams are decoded with the display hardware

Defines how percentages of cameras use CPU/GPU.
If decoding method Nvidia is chosen and the slider is set to, E.g. 50%, half of the cameras will be decoded using Nvidia and the other half will use CoreAVC if they are H.264 and Intel CPU if they are H.265

20.7.2 Video rendering

Allows to change video rendering to WPF (default) or DirectX

20.7.3 Enable smooth video scaling

It uses a different image drawing mechanism, and it will have a smoothening effect on video, especially if the framerate is high (over 20 fps).
However, the smooth video scaling setting should not be used if the user has multiple Spotter windows open. Smooth video scaling will make video image appearance better, but this setting increases the computer load slightly.

20.8 Spotter Display Settings

You can optimize the display for your requirements.

20.8.1 Display

- Show time
    - If set, show the image time on the video
- Show name
    - if set, show the camera name on the video

20.8.1.1 Text

- Font size
    - Select the text font size on the video
- Adapt font size to view the size
    - Adapt font size to the best match for view size
- Text Color
    - Select text color from the available color palette
- Text outline color and Text background color
    - Can adjust text lookout
- Text horizontal alignment and Text vertical alignment
    - Can select text position on video

20.8.1.2 Advanced

- Show milliseconds
    - Show milliseconds with time
- Show resolution
    - Show image resolutions
- Show frame rate
    - Show image framerate
- Show codec
    - Show image compression codec
- Show bandwidth
    - The show displayed video stream bandwidth
- Show advanced
    - Show advanced information can use when analyzing streaming behaviors

20.8.1.3 Window options

- Show EULA on the startup
    - If selected, show EULA on the startup
- Show exit dialog on the exit
- Show video export dialog on video export
- Show image export dialog on image export
- Show storyboard export dialog on the storyboard export

- Show video grid
    - Show video grid borders
- Highlight the selected camera view. Border size xx
- Track active devices on the device tree
    - If selected, highlight the active device on the device tree. Normally last selected is highlighted.
- Zoom control follows the selected camera view

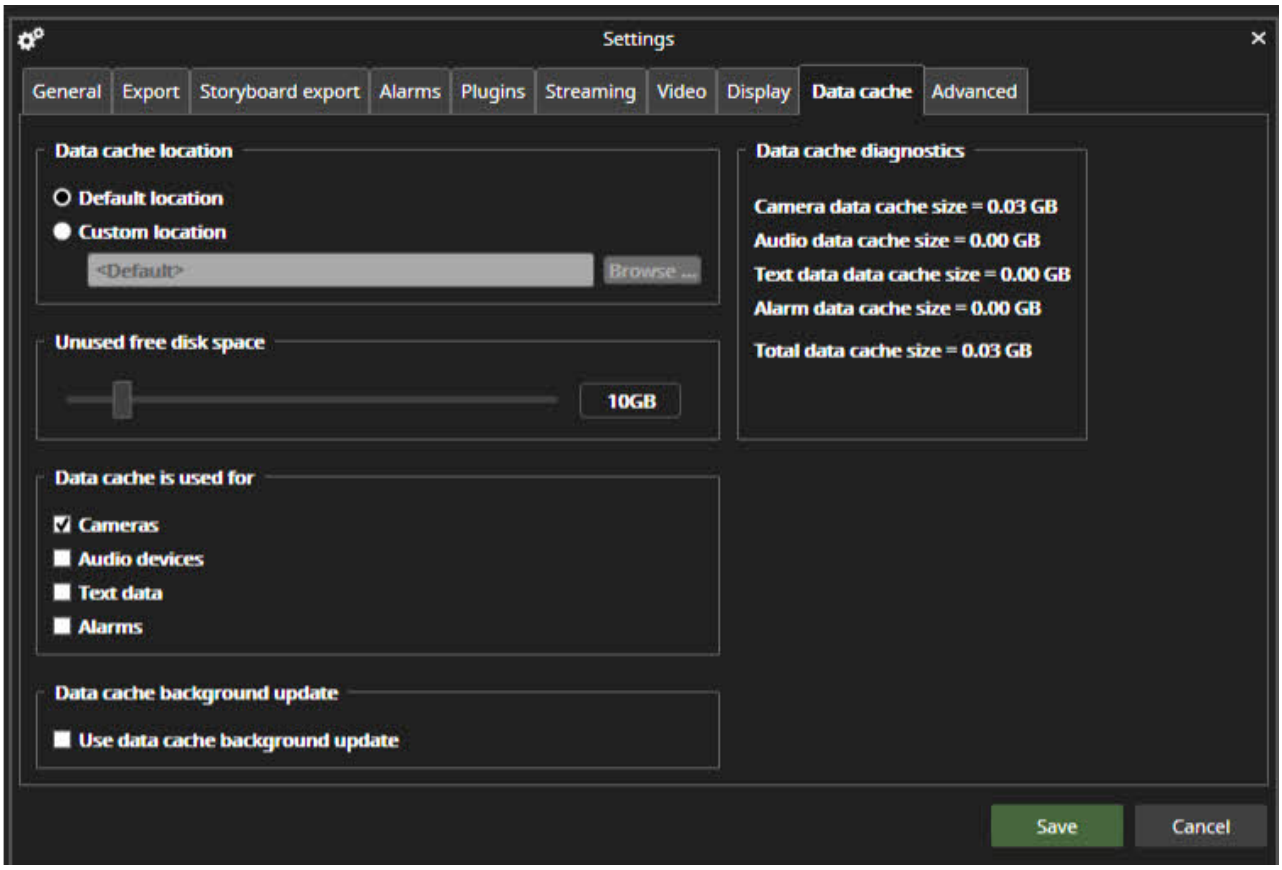
20.8.1.4 Tabs

- Default camera grid
    - Use the selected camera grid when opening a new tab
- Default image fit
    - Use selected image fit for newly opened cameras

20.8.1.5 Color scheme

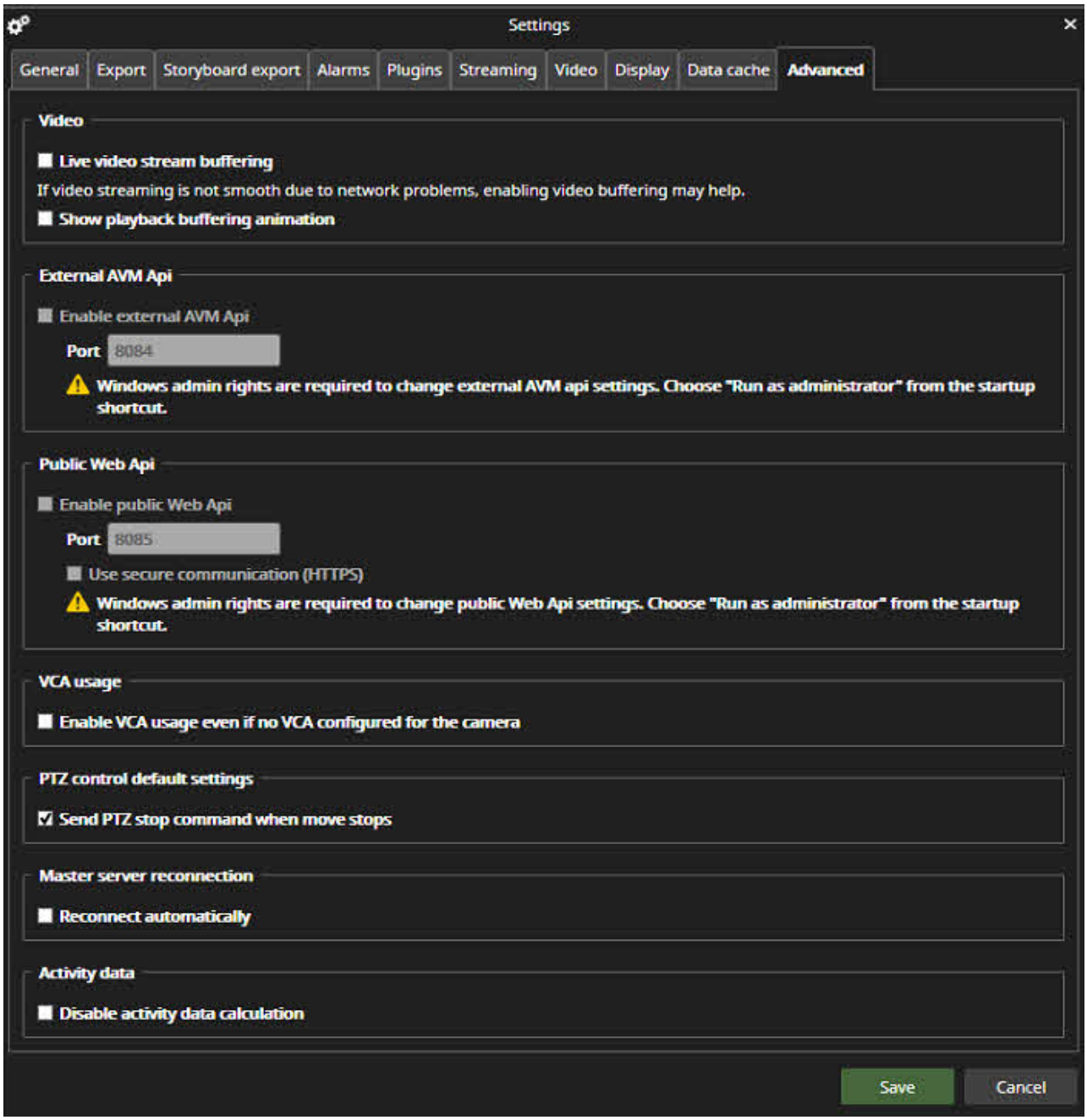
- Select a Dark or Light overall color scheme

20.9 Spotter Data Cache Settings



Data cache speeds up camera and audio device activity data, text data, and alarm data retrieval when in use.
The system uses either C-drive or some other system hard disk for caching camera data.
The camera activity bar (blue bar on the time slider) is updated faster with cached camera data. The cache is profiled specifically.
For larger systems, it is recommended to set up a separate hard disk to store the cache data.
The cached data can be controlled from the dialogue that defines what data is cached:

20.10 Spotter Advanced Settings



20.10.1 Video

Using video buffering can help if the video stream appears choppy. Buffering will attempt to queue image frames dynamically to even out any time differences in arriving image frames.
The memory use is increased slightly, as is any possible delay with the video compared to real-time.

20.10.2 External AVM API

The AVM API (Application Programming Interface) must be activated in AVM Display Server use.

20.10.3 Public Web API

20.10.4 VCA usage

20.10.5 PTZ control default settings

20.10.6 Master server reconnection

The Master Server reconnection setting, if activated, will keep Spotter open also in case of loss of connection with the Master Server.

20.10.7 Activity data

Disabling the activity data calculation will make the camera material bar disappear from the activity panel, reducing the system load slightly.
It can be disabled if the user has no intention to use the activity panel (for example, in the AVM Display Server case).
Spotter has advanced video buffering that smooths out the effect of bursts in-network or an ill-behaving camera where the image frames are not arriving smoothly and regularly from the camera to Spotter.
Without the buffering on, Spotter draws the live images as fast as they arrive without regard for the frame rate or the image.

20.10.8 Frequently Used Keyboard Shortcuts:

Shortcut	Description
F3	Show settings window.

21 Spotter Keyboard Shortcuts

Keyboard shortcuts to use with Spotter. All keyboard shortcuts are always available when using Spotter unless otherwise noted.

21.1 Spotter keyboard shortcuts

Overview of all shortcuts.

21.2 Windows

Shortcut	Description
Ctrl+N	New Window
Alt+F4	Close current Window
Ctrl+Alt+F4	Exit Spotter
Ctrl+Alt+F5	Log off Spotter
Ctrl+Alt+L	Lock Spotter

21.3 Alarms

Shortcut	Description
F5	Focuses to first alarm
Enter	Opens the alarm in alarm view tab
Space	Acknowledges the focused alarm
Ctrl+Alt+A	Show/Hide Alarm list

21.4 Dialogs

Shortcut	Description
Enter	Same as clicking OK-button in a dialog. If focus is on other button when Enter key is pressed, then the other button's action is executed instead.

21.5 Show/hide components

Shortcut	Description
F1	Show help plugin (if it exists).
Alt+F1	Show About window.
F2	Reset layout: Set main window to normal state (not maximized). 100% zoom. Show profile window, time panel and time slider. Close export panel in time slider. Focus is not in any component.
F3	Show settings window
Ctrl+F3	Show control device settings window
Shift+F3	Show number mappings settings window
F4	Opens the "Open media" dialog
Ctrl+F5	Show / hide alarm window
Ctrl+F6	Show / hide profile window
Ctrl+F8	Show / hide time panel
Ctrl+Alt+C	Toggle between playback panel UI modes.

Shortcut	Description
Ctrl+Alt+T	Toggle between timeline panel UI modes.
Ctrl+Alt+D	Show / hide device tree.
Esc	Close export panel on non full screen window
Shift+Ctrl+E	Show / hide description panel

21.6 Moving focus

Shortcut	Description
Tab	Move focus to next element within container component
Shift+Tab	Move focus to previous element within container component
F5	Move focus to first active alarm in alarm list. If no active alarm, move focus to first alarm in list. If alarm window is hidden, show it first
F6	Move focus to first item in profile tree. If device tree window is hidden, show it first
Alt+F6	Move focus to next item in profile tree.
Alt+Shift+F6	Move focus to previous item in profile tree.
F7	Move focus to first camera in current tab
F8	Move focus to time panel. If time panel is collapsed, open it first

21.7 Full-screen window

The following shortcuts work in a full-screen window.

Shortcut	Description
F1	Open help plugin (if it exists)
F2	Reset layout
F8	Move focus to time panel
Ctrl+F8	Show /hide time panel
Tab	Move focus to next control (next camera in tab)
Shift+Tab	Move focus to previous control (previous camera in tab)
Ctrl+P	Print video image
Ctrl+S	Save video image
Ctrl+Shift+D	Duplicate video view
Ctrl+Shift+Alt+D	Duplicate video view and set it to mixed playback mode
Ctrl+Tab	Select next tab
Ctrl+Shift+Tab	Select previous tab
Ctrl+T	Create new camera tab. When new camera is created, move focus to first item in device tree (to make it easier to add new cameras).
Ctrl+Shift+W	Close current tab

Shortcut	Description
Esc or F11	Restore from full screen to normal state
Ctrl+D	Date selection
Ctrl+G	Time selection
Ctrl+E	Activity selection
Ctrl+Right	Set playback time +30 seconds
Ctrl+Left	Set playback time -30 seconds
Ctrl+Shift+Right	Set playback time +5 minutes
Ctrl+Shift+Left	Set playback time -5 minutes
Ctrl+Alt+Shift+Left	Set playback time -1 hour
Ctrl+Alt+Shift+Right	Set playback time +1 hour
Ctrl+Shift+Y	Set playback time +1 day
Ctrl+Y	Set playback time -1 day
Ctrl+Enter	Set to current time
Ctrl+Space	Pause playback
Shift+Left	Decrease playback speed
Shift+Right	Increase playback speed
Ctrl+0...Ctrl+9	Camera selection
Ctrl+W	Close selected camera

Shortcut	Description
Alt+F6	Replace selected grid item with next profile folder item
Alt+Shift+F6	Replace selected grid item with previous profile folder item
Ctrl+Shift+Z	Replace selected grid item with last opened item
Alt+Enter	Maximize selected camera
Ctrl+Alt+1	Play forward on speed 1fps.
Ctrl+Alt+2	Play forward on speed 0.1x.
Ctrl+Alt+3	Play forward on speed 0.5x.
Ctrl+Alt+4	Play forward on speed 1x.
Ctrl+Alt+5	Play forward on speed 2x.
Ctrl+Alt+6	Play forward on speed 4x.
Ctrl+Alt+7	Play forward on speed 8x.
Ctrl+Alt+8	Play forward on speed 16x.
Ctrl+Alt+9	Play forward on speed 32x.
Ctrl+Alt+0	Play backward on speed 64x.
Ctrl+Alt+Shift+1	Play backward on speed 1fps.
Ctrl+Alt+Shift+2	Play backward on speed 0.1x.
Ctrl+Alt+Shift+3	Play backward on speed 0.5x.

Shortcut	Description
Ctrl+Alt+Shift+4	Play backward on speed 1x.
Ctrl+Alt+Shift+5	Play backward on speed 2x.
Ctrl+Alt+Shift+6	Play backward on speed 4x.
Ctrl+Alt+Shift+7	Play backward on speed 8x.
Ctrl+Alt+Shift+8	Play backward on speed 16x.
Ctrl+Alt+Shift+9	Play backward on speed 32x.
Ctrl+Alt+Shift+0	Play backward on speed 64x.
Ctrl+Shift+M	Toggle selected video mixed mode.

21.8 Tabs

Shortcuts	Description
Ctrl+Tab	Select next tab. If currently selected tab is last tab, select first tab in the window. Addition (+) tab is not selected.
Ctrl+Shift+Tab	Select previous tab. If currently selected tab is first tab, select last tab in the window. Addition (+) tab is not selected.
Ctrl+T	Create new camera tab. When new camera is created, move focus to first item in device tree (to make it easier to add new cameras).
Ctrl+Shift+T	Open tab menu
Ctrl+Shift+W	Close current tab

Shortcuts	Description
F11	Toggle the current tab to full screen size and back. Double-clicking the right mouse button does same thing as F11.
Esc	Restore maximized tab to normal size (when no camera is selected)
Ctrl+Shift+C	Automatic image cropping on / off
Ctrl+Shift+S	Automatic image stretch on / off
Ctrl+Shift+R	Reset all camera zooms to full zoom
Ctrl+Shift+B	Set object box on / off
Ctrl+Shift+A	Set object tail on / off.
Ctrl+Alt+V	Show / hide tabs.

21.9 Profile window

Shortcut	Description
Enter (when a camera is selected)	Add camera to tab
Enter (when a a folder is selected)	Add all cameras in the selected tab and Expand the folder
Left (when selected folder is expanded)	Close the folder
Left (when selected node is not expanded)	Select parent folder
Right (when selected folder is not expanded)	Open the folder

Shortcut	Description
Up and Down	Move selection up or down. When a camera is active, the buttons for that camera are shown in the tab (that camera becomes selected)

21.10 Playback time and speed

Shortcut	Description
Ctrl+D	Open date selection panel. Select date with arrow keys and accept selection with Enter. Both Enter and Esc closes date selection panel.
Ctrl+G	Open time selection panel. Select time with arrow keys and accept selection with Enter. When pressing a button, the panel stays open. Esc closes time selection panel.
Ctrl+Right	Set playback time +30 seconds
Ctrl+Left	Set playback time -30 seconds. If in realtime mode, switch to playback mode first, and set 1x speed.
Ctrl+Shift+Right	Set playback time +5 minutes
Ctrl+Shift+Left	Set playback time -5 minutes. If in realtime mode, switch to playback mode first, and set 1x speed.
Ctrl+Alt+Shift+Left	Set playback time -1 hour
Ctrl+Alt+Shift+Right	Set playback time +1 hour
Ctrl+Shif+Y	Set playback time +1 day
Ctrl+Y	Set playback time -1 day
Ctrl+Enter	Go to realtime mode. No action if already in realtime mode.

Shortcut	Description
Ctrl+Space	Pause / play
Shift+Right	Increase playback/fast forward speed. No action in realtime mode.
Shift+Left	Decrease playback/fast forward speed (when speed = 0, start play back/fast rewind). If in realtime mode, switch to playback mode and start playback at 0.5x speed.
Ctrl+Alt+Right or Ctrl+Alt+P	Display next video frame in playback mode
Ctrl+Alt+Left or Ctrl+Alt+O	Display previous video frame in playback mode
Ctrl+Alt+[number key 1..0]	Control different play forward speeds.
Ctrl+Alt+Shift+[number key 1..0]	Control different play backward speeds.

21.11 Misc

Shortcut	Description
Ctrl+L	Open layout folder in Spotter tree.
Ctrl+E	Open activity list menu and use arrow keys to select the activity and enter confirm the selection. Esc key closes the selection. Tab key closes the menu and selects the next control.
Ctrl+Up	Load previous layout (same order as in layout menu)
Ctrl+Down	Load next layout (same order as in layout menu)
Ctrl+Alt+B	Create quick bookmark

Shortcut	Description
Ctrl+B	Open bookmarks folder in Spotter device tree
Ctrl+Alt+Shift+M	Write to log detailed information about memory usage
Ctrl+M	New layout
Numbad number +Numbad x	Load layout with this number (layout numbering configured under: Layouts – Layout numbering)

21.12 Item selection in a tab

Shortcut	Description
Ctrl+1 to Ctrl+0	Set focus to n:th item in tab (0=10th)
Tab	Next item (if the tab has keyboard focus)
Shift+Tab	Previous item (if the tab has keyboard focus)
Ctrl+Shift+N	Next item
Ctrl+Shift+P	Previous item
Esc	Remove item selection

21.13 PTZ camera control

Shortcut	Description
Arrow buttons	Moving the camera left, right, up, down (also intermediate directions) Long press increases the moving speed

Shortcut	Description
Page up	Zoom out
Page down	Zoom in
Home	Full unzoom
End	Full zoom
Double enter	Maximize camera and take PTZ control for selected camera shortcut number.
Ctrl+H	Go to PTZ home position or start home tour.
Ctrl+Shift+H	Run all current profile dome cameras to home position. • Spotter role CanRunPtzCameraGroupToHome must be enabled for user group and IsDomeTakeControlAllowed flag for dome camera must be set.

21.14 I/O control

Shortcut	Description
Arrow buttons	Change focus between action button, content popup button and close button when focus in component panel
Space	Performs default action when item is selected from the profile tree

21.15 Camera tour

Shortcut	Description
F12	Toggle camera tour start and pause state
Ctrl+F12	Steps to next camera tour view
Ctrl+Shift+F12	Steps to previous camera tour view

21.16 Camera view

Shortcut	Shortcut
Alt+C	Toggle selected views automatic crop on / off
Alt+R	Reset selected views digital zoom

21.17 Camera window settings

Shortcut	Shortcut
Ctrl+W	Close current camera
Alt+Enter	Maximize current camera view
Double enter	Maximize/minimize current camera view (if camera is open)
Esc	Restore maximized tab to normal size (when no camera is selected)
Ctrl+P	Print image

Ctrl+S	Save image
Ctrl+Shift+D	Create duplicated camera view
Ctrl+Alt+Shift+D	Create duplicated camera view and put it to mixed playback mode.
Numeronäppäimistön numero + Enter	Add camera with given shortcut number
Numeronäppäimistön numero + plus-näppäin	Activate monitor/window with given monitor number
Numeronäppäimistön numero + miinus-näppäin	Close camera with given shortcut number

21.18 Export time

Shortcut	Description
Alt+I	Zoom to export time period.
Alt+Y	Go to export start time.
Alt+U	Go to export end time.
Alt+Ctrl+Y	Set current time to export start time.
Alt+Ctrl+U	Set current time to export end time.

22 Spotter About Screen

The Spotter About window contains information about the installed plugins and their licenses.