Digifort Professional Manual
Surveillance Client
Version 7.4.1
Rev. A

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Index

Part I Welcome to Digifort Professional Manual 11

1 Screen Shots ... 12
2 Who this manual is for ... 12
3 How to use this manual ... 12
4 Prerequisites ... 12

Part II The Surveillance Client 13

1 How to run the Surveillance Client ... 14
2 Surveillance Client Interface ... 15

Options Menu ... 15
Settings Button ... 15
Virtual Keyboard ... 15
Refresh Button ... 16
Full Screen button ... 16
Minimize Button ... 16
Power Off Button ... 16
Media Player Button ... 16
Analytics ... 16
LPR ... 17
Trigger Events button ... 17
Protected Recordings ... 17
Event log ... 17
List of local alarms ... 17
Audit Log ... 17
Camera and Object View Panel ... 18
Information Panel ... 18
Control Panel Selection ... 19
Control Panels ... 19
PTZ Control ... 19
Privacy Mode ... 19
Audio ... 19
Objects List ... 20
Layout List ... 20
Views Control ... 20
Bookmarks ... 20
Shortcuts ... 20
F2 Key ... 20
F3 Key ... 21
F4 Key ... 21
F5 Key ... 21
F11 Key ... 21
F12 Key ... 21
Ctrl + S ... 21
Ctrl + B ... 21
Ctrl + Y ... 21
Ctrl + F ... 21

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Ctrl + D 21
Ctrl + H 21
Ctrl + L 21
Ctrl + P 22
Ctrl + J 22
Ctrl + 0..9 22
Shift + Click 22

Part III Configuring the Surveillance Client 23

1 General Settings 24
Remember the last tile selected when opening the system 24
Remember last selected view when switching layouts 24
Keep objects on screen when changing layout 24
Launch the surveillance client at operating system startup 25
Hide toolbars at startup 25
Automatically hide toolbar on inactivity 25
Control bar 25
Toolbar 25
Screen 25
Theme 25
Object List 25
Show deactivated objects 25
Show views from selected screenstyle only 26
Auto expand nodes when searching objects 26
Local recording directory 26
Exporting and Screenshots 26
2 Configuring the servers to be monitored 27
Adding, changing and removing a server 28
3 Live monitoring settings 29
Live Monitoring 29
Camera Information 30
Image Resizing 31
4 Video / Audio settings 32
Video Settings 32
Audio Settings 33
5 Video Decoding via GPU 33
NVidia 33
Intel 34
6 Media Playback Settings 35
7 Motion Detection Settings 36
8 Multi Monitor Settings 36
9 Alarms 37
Alarm Notification 38
Auto-Arrange Alarm Windows 38
Local Alarm List 39
10 Digifort Keyboard Controller 40
11 Joystick Settings 40
General 41
Buttons 42
Axes 42

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Axes Sensitivity ... 43
Central Margin of the Axes ... 44
Testing Settings ... 44
12 Virtual Matrix ... 45
13 Visual Objects Links ... 46
Actions When Clicking on Links ... 47
14 Web Browser ... 47
15 Maps ... 48
16 Operational Maps ... 48
Actions When Clicking on Objects ... 49
17 Analytics ... 49
18 LPR ... 50
List of Recognized Plates ... 50
Details of Selected or Recognized Plate ... 51
Plate Filter ... 51
LPR Bridge ... 51
Zonas de LPR ... 51
19 Evidence ... 52
20 Video Synopsis ... 52
21 Disclaimer Message ... 53
22 Importing and Exporting Settings ... 53
Part IV Object List 55
1 Filters ... 56
2 Objects ... 56
Adding Objects to the Screen ... 56
Dragging Groups of Objects ... 58
Camera Status ... 58
Icons Grouping ... 59
Context Menu ... 60
3 Monitores ... 60
4 Servidores ... 61
Part V Layouts and Views 62
1 Creating Layouts ... 63
2 Creating Views ... 66
Timer Views ... 67
Part VI Cameras 69
1 PTZ ... 70
Moving using on-screen controls ... 70
Directional Arrows ... 71
Zoom Buttons ... 71
Sensitivity Bar ... 71
Focus Button ... 71
Iris Button ... 72

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Digital PTZ Button ... 72
Joystick Button ... 72
PTZ Lock Button ... 72
Home Position Button ... 73
Windshield wiper ... 73
Presets ... 73
Calling Presets ... 73
Creating Presets ... 73
PTZ Patrol ... 74
Auxiliary ... 74
PTZ Usage Status ... 74
Moving by Click and Center ... 75
Moving with Area Zoom ... 75
Moving with Visual Joystick ... 76
Moving with Physical Joystick ... 76
Moving with Digital Zoom ... 77
2 Audio ... 78
Listen ... 78
Speak ... 78
Audio Output Device Groups ... 79
List only devices on screen ... 80
Volume ... 80
3 Automatic Media Profile Switching ... 80
4 Privacy Mode ... 81
5 Image filters ... 82
6 Context Menu ... 83
Media Playback ... 83
Create Bookmark ... 84
Virtual Matrix ... 84
Media Profile ... 84
PTZ ... 84
Eventos Manuais ... 84
Screenshot ... 84
Motion Detection ... 84
Image Filters ... 84
Freeze Image ... 84
Analytics Metadata Search ... 84
Locate on Map ... 85
7 Performing Local Recordings ... 85
8 Operation with Object Links ... 85
Operating Modes ... 87
Replace the current object ... 87
Add the object in an empty space ... 87
Open a popup with the object ... 88
Drag and drop a link to a screen space ... 88
Triggering Events or Actions ... 89
Media Playback ... 90
9 Working with Fisheye and Panamorph Lenses ... 90
PTZ Operations ... 92
Part VII Media Playback 93

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1 Media Player Interface ... 94
2 Playing Videos ... 95
Time Selection ... 95
Camera Selection ... 96
From the player's camera list ... 97
From the main list of objects ... 98
From live objects ... 98
Cameras ... 99
Timeline ... 100
Interface ... 100
Move ... 101
Zoom ... 101
Time Selection ... 102
Bookmarks ... 102
Playback Controls ... 103
Forward and Reverse Control ... 104
PTZ for 360 Cameras ... 105
Audio Control ... 105
3 Motion Search ... 106
4 Thumbnails ... 108
5 Media Export ... 109
Exporting Videos ... 109
Native Format ... 110
MP4 ... 111
AVI ... 113
JPEG ... 115
WAV ... 116
Progresso ... 117
Playing exported videos in Native format ... 117
6 Sequence Export ... 119
7 Print ... 123
Report Viewer ... 126
8 Image Filters ... 126
9 Fast Video Playback ... 127
10 Archived Video Playback ... 128
11 Edge Video Playback ... 129
12 Local Video Playback ... 130
Part VIII Alarms 133
1 Observations ... 135
2 Playback ... 135
3 Local Alarm List ... 135
Part IX Bookmark 137
1 Creating Bookmarks ... 138
2 Bookmark Search ... 140
Date Filter ... 141

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Keyword Filter ... 142
Color Filter ... 143
Camera Filter ... 144
Server Filter ... 145
Combining Filters ... 146
Generating Bookmark Reports ... 146
Deleting Bookmarks ... 148

Part X Global Events 149

Part XI Manual Events 151

Part XII Virtual Matrix 154

1 Using the Virtual Matrix ... 155
Sending Single Objects via the Context Menu ... 156
Sending Single Objects Using Drag-and-Drop ... 157
Sending Objects from Maps ... 158
Sending Multiple Objects ... 158
Sending Views ... 158
Sending Objects on Screen ... 159
Sending Groups of Objects ... 159
2 Monitor List ... 160

Part XIII Synoptic Maps 161

1 Toolbar ... 163
2 Object Status ... 163
3 Camera Status and Preview Window ... 163
4 IO Device Status Window ... 164
5 Open Cameras ... 165
6 Triggers ... 166
7 Links to Maps ... 167

Part XIV Operational Maps 169

1 Toolbar ... 171
2 Events ... 171
3 Open Cameras and Maps ... 173

Part XV Analytics 175

1 Event Bar ... 176
2 Context Menu ... 177
3 Recording and Metadata ... 179
4 Analytics Records ... 180
Searching Records ... 180
Record Details ... 182
Searching With Filters ... 182
Date Filter ... 182

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Camera Filter ... 184
Object Class Filter ... 184
Event Type Filter ... 185
Zone Filter ... 186
Rules Filter ... 187
Server Filter ... 188
Combining Filters ... 189
Records Printing ... 189
Generating Charts ... 191
Chart Settings ... 191
Types of Charts ... 192
Series and Distribution ... 192
Chart Options ... 195
Generating Reports ... 199
5 Metadata Search ... 200
Filters ... 202
Date Filter ... 202
Camera Filter ... 203
Area Filter ... 203
Height Filter ... 204
... 204
Classification Filter ... 204
Color Filter ... 205
Age Filter ... 206
Person Features Filter ... 206
Server Filter ... 206
Advanced ... 207
Heat Map ... 207
Part XVI LPR 209
1 List and Information of Recognized Plates ... 210
2 Registering Plates ... 212
3 Changing Recognized Plates ... 213
4 Playing Video ... 214
5 LPR Records ... 214
Searching Records ... 214
Quick Search ... 215
Record Details ... 217
Show Plate Cutout in Results ... 218
Searching with Filters ... 219
Date Filter ... 219
License Plate Filter ... 219
Dealing with Repeat Plates ... 219
Simple Search ... 220
Advanced Search ... 220
... 221
Camera Filter ... 221
LPR Configurations Filter ... 222
Category Filter ... 222
Sort Filter ... 222
Manufacturer Filter ... 223
Model Filter ... 223

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Color Filter ... 224
Country Filter ... 224
List Filter ... 225
Reliability Filter ... 225
Owner Filter ... 226
LPR Bridge Filter ... 226
Server Filter ... 227
Generating Reports ... 227
Printing a Record ... 229
Reliability Chart ... 231
Hit Chart ... 233
Trace Plate Routes ... 234
6 LPR Zones ... 235
Adding Plates Manually ... 237
Removing Plates Manually ... 237
Records Search ... 238
Filters ... 239
Date Filter ... 239
Plate Filter ... 240
Zone Filter ... 240
Zone Group Filter ... 240
Server Filter ... 240
Records Printing ... 241
Part XVII Event Logs 243
1 Record Details ... 244
2 Filters ... 245
Date Filter ... 245
Alarm Input Filter ... 245
Communication Filter ... 246
Recording Filter ... 246
Motion Detection Filter ... 247
Audio Level Detection Filter ... 247
Manual Event Filter ... 247
Scheduled Event Filter ... 248
Global Event Filter ... 248
Device Event Filter ... 249
Analytics Event Filter ... 249
LPR Event Filter ... 250
LPR Zone Event Filter ... 251
Server Event Filter ... 251
Server Filter ... 251
3 Printing a Record ... 252
4 Reports ... 253
Operator Responses to Events Report ... 253
Device Failure Report ... 254
Part XVIII Audit Logs 256
1 Filters ... 257
Date Filter ... 258
Category Filter ... 258

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Event Type Filter ... 258
Event Filter ... 259
Object Type Filter ... 259
Keyword Filter ... 260
Server Filter ... 260
2 Record Details ... 261
3 Records Printing ... 262

Part XIX Recording Protection 264

1 Protecting a Recording ... 265
2 Protected Recordings Lookup ... 266
Filters ... 267
Date Filter ... 267
Expiration Filter ... 267
Camera Filter ... 267
User Filter ... 268
Server Filter ... 268
3 Records Printing ... 268

Part XX Changing the user password 271

Index 0

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Chapter 1

1 Welcome to Digifort Professional Manual

This User Manual and Technical References provides all the information necessary to effectively implement and use all the basic and advanced features found in the Surveillance Client.
This manual is constantly being updated and does not describe the functionalities of the Betas versions of the system.

1.1 Screen Shots

The screen shots contained in this manual may not be identical to the interface you will see using the software. Some differences may appear, not affecting the use of this manual. This is due to the fact that frequent updates and inclusion of new features are carried out aiming at the continuous improvement of the system.

1.2 Who this manual is for

This manual is intended for administrators and operators of surveillance stations.

1.3 How to use this manual

This manual is structured into chapters, topics and subtopics.

Important:

- If your edition is not Enterprise, some features shown may have limitations. To find out the differences of your edition, consult the Feature Matrix table on the website https://www.digifort.com/
- The screenshots in this manual are originally taken from the Enterprise edition. For this reason, even in other versions, some resource may present a snapshot with a different screen of the version of your software. We are constantly updating this manual and improving its content.

1.4 Prerequisites

For the complete absorption of the content of this manual some prerequisites are necessary:

- Handling computers and their peripherals.
- Microsoft Windows operating system handling.
- Knowledge of client-server architecture.
- Knowledge of computer network architecture.

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Chapter

2 The Surveillance Client

The Surveillance Client is the module responsible for monitoring cameras and receiving alerts configured by the administrator.
The system allows simultaneous monitoring of several cameras on the same screen through layouts, which can be created dynamically. It offers the ability to control moveable cameras with the PTZ (Pan Tilt Zoom) function and IO control, allowing the triggering of alarms, opening of electronic doors and receiving alerts from motion sensors.
Just like the Administration Client, the Surveillance Client also has the ability to monitor multiple servers simultaneously. With this feature, multiple cameras can be monitored alone or mixed into a mosaic in a way that is transparent to the user. Using a set of special tools, it enables live motion detection and automatic image quality control.
The Surveillance Client also allows interoperability between system editions.

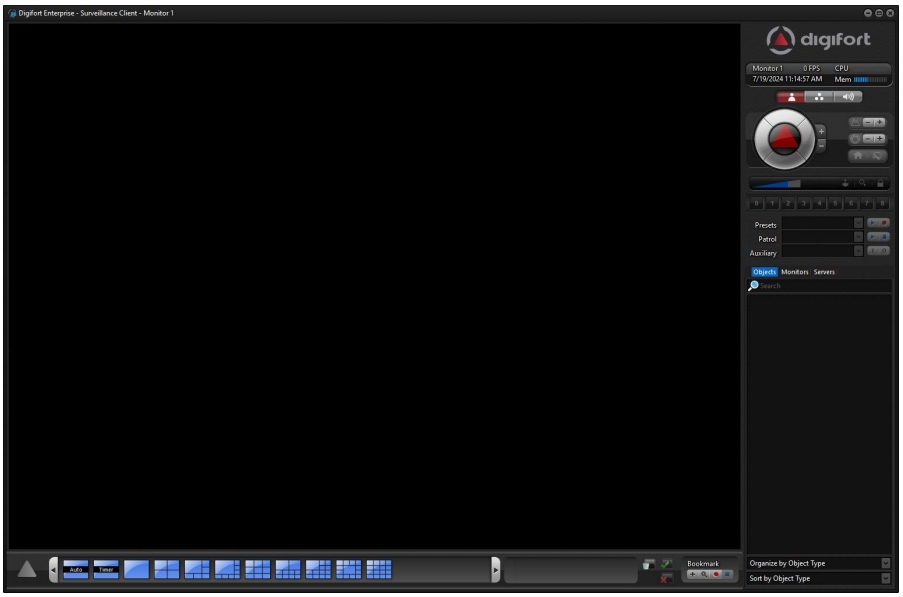
Warning

It is not recommended to run the Surveillance Client on the same computer running the server module, except for small installations, as the processing used by the Surveillance Client to display the cameras on the screen may harm the recordings made by the system. This is due to the fact that the Surveillance Client needs to decode the images for display on the screen, and depending on the number of cameras on screen, this processing can be high.

2.1 How to run the Surveillance Client

To access the Surveillance Client, locate the Surveillance Client icon on your Desktop or programs menu.

When executed, the following screen should appear:



This is the main screen of the Surveillance Client, clicking on the triangle in the bottom left corner gives you the menu with the following tools:

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2.2 Surveillance Client Interface

The Surveillance Client was designed to have a simple and intuitive interface, where operators with a minimum of training can operate the system easily and efficiently. The system interface is made up of several elements and tools. See its main elements below:

1. Options menu
2. Camera and Object View Panel
3. Information Panel
4. Control Panel Selection (PTZ, Privacy, Audio)
5. Control Panel selected (PTZ, Privacy, Audio)
6. Object List
7. Layout List
8. Views Control
9. Bookmark Control

2.2.1 Options Menu

To access the Options Menu, click on the triangle in the bottom corner of the screen.

2.2.1.1 Settings Button

Opens the Surveillance Client settings screen.

To learn how to configure the Surveillance Client, see the Surveillance Client Configuration 24 chapter.

2.2.1.2 Virtual Keyboard

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Opens the virtual keyboard.

The virtual keyboard makes it possible to use the Surveillance client without the need for a physical keyboard.

2.2.1.3 Refresh Button

Restarts the connection to the servers.

2.2.1.4 Full Screen button

Expands the space reserved for viewing the camera so that it fills the entire screen. To return to normal mode, press the ESC key on your keyboard.

2.2.1.5 Minimize Button

Minimizes the system to the same bar where the Windows clock is located (Tray).

2.2.1.6 Power Off Button

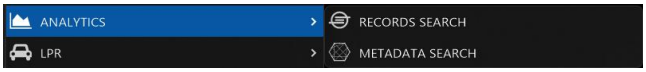
Close the system.

2.2.1.7 Media Player Button

Opens the Media Player, where you can select any camera in the system and view the recorded videos filtered by date and time.

To learn how to play videos, see the chapter on Media Playback 83.

2.2.1.8 Analytics



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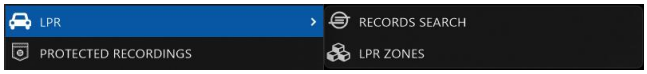
This menu has 2 submenus:

- **Records Search:** Opens the analytics event reporting and search tool. To learn about searching analytics records, see the chapter on Searching Analytics Records 180.
- **Metadata Search:** Opens the analytics metadata search tool (Forensic Search). To learn about forensic analytics metadata search, see the chapter on Analytics Metadata Search 200.

2.2.1.9 LPR



This menu has 2 submenus:

- **Records Search:** Opens the LPR records search and reporting tool. To learn about searching LPR records, see the LPR Records 214 chapter.
- **LPR Zones:** Opens the log and report search tool for the LPR Zones feature. To learn about LPR Zones, see the LPR Zones 235 chapter.

2.2.1.10 Trigger Events button

Opens the global event trigger screen, which could be, for example, the opening of an electronic lock.

To learn how to trigger events, see the How to Trigger Global Events 150 topic.

To learn how to register and manage global events, consult the Administration Client manual.

2.2.1.11 Protected Recordings

Opens the protected recordings management and viewing tool. To learn more about this feature, see the Recording Protection 265 topic.

2.2.1.12 Event log

Opens the Event Logs search screen. To learn about this feature see the Event Logs 244 chapter.

2.2.1.13 List of local alarms

Opens or closes the local alarm list. To learn how to use this feature, check the chapter on Local Alarm List 135.

2.2.1.14 Audit Log

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The audit log screen makes it possible to search the audit of all connected servers simultaneously. To learn how to use this feature, see the topic on Audit Logs 257.

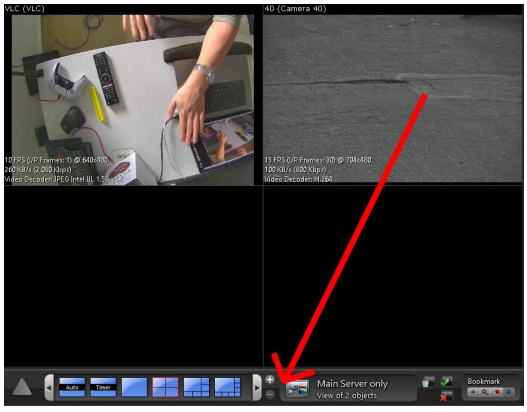
2.2.2 Camera and Object View Panel

The cameras and objects viewing panel is the grid-shaped control, where you can position objects such as cameras and maps for simultaneous viewing. This control can take on several customizable layouts. You can add objects to this grid through the object list, camera shortcut, among other different methods that you will learn in this manual.

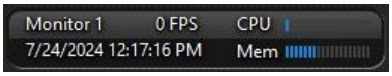
Once an object is on the grid, you can drag it, and swap its position with another object, or drag it to an empty space, using the drag and drop function with the mouse.

To maximize an object in full screen, simply double click on the object, and to return it to its original size (and position), use double click again. Alternatively, you can use the shortcut **Shift + Click** on the object.

To remove an object from the screen, right-click on the object and its Context Menu will be displayed, click on the **Remove Object** option. Alternatively, you can also drag and drop the object onto the Layouts or Views controls:



2.2.3 Information Panel



The Information Panel will provide vital system data:

- **Monitor Name**: Displays the name, or number of the monitor, on multi-monitor systems. This name can be used to identify the monitor when multiple screens are open.

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- **FPS**: Displays the total Frames per Second that the system is displaying (Of all cameras on screen).
- **CPU**: Displays the current CPU usage of the monitoring station.
- **Date and Time**: Displays the current date and time of the monitoring station.
- **Mem**: Displays the current memory consumption of the monitoring station.

2.2.4 Control Panel Selection

This control allows you to switch between different types of control panels.

2.2.5 Control Panels

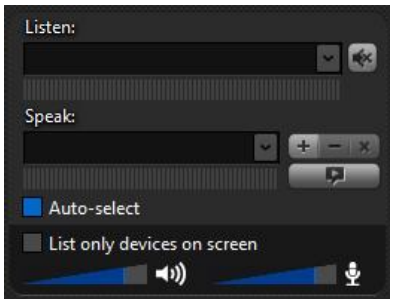
2.2.5.1 PTZ Control

This visual control allows the movement and control of PTZ cameras. To learn more about this control, see the PTZ with On-Screen Controls 70 topic.

2.2.5.2 Privacy Mode

This panel has the features for controlling Privacy Mode. To learn more about this mode, see the Privacy Mode 81 topic.

2.2.5.3 Audio



This panel has the audio controls, which allow you to receive and send audio to live cameras. To learn more about receiving and sending audio to cameras, see the Audio 78 topic.

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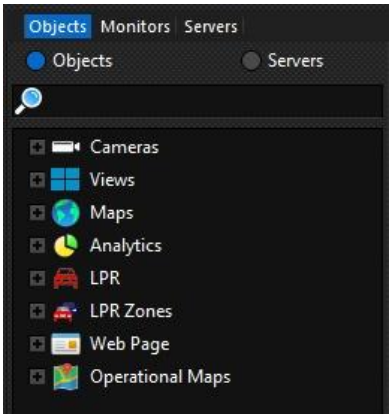
2.2.6 Objects List



The object list is one of the most important controls in the Monitoring Client's main interface. It will display all the objects to which the operator has access and it is through this list that you can add objects to the screen for viewing, reproduction, and various other functionalities. To learn how to use this feature, see the Working with the Object List 56 topic.

2.2.7 Layout List

This control allows you to change the layout of the Camera and Object View Panel. To learn how to use, create and delete layouts, see the Working with Screen Layouts 63 topic.

2.2.8 Views Control

This control provides information about the current view, as well as controls for creating, changing, and deleting views. To learn more about this feature, see the Monitoring Views 66 topic.

2.2.9 Bookmarks

This control provides quick access to creating and searching for bookmarks. To learn more about this feature, see the Bookmarks 138 topic.

2.2.10 Shortcuts

To make the operator's work easier, the Surveillance Client offers some shortcuts for quick access to some of the most used resources.

2.2.10.1 F2 Key

Displays the option to call a camera on the screen using its shortcut (Configured in the camera's General options, in the Administration Client).

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2.2.10.2 F3 Key

Takes a photo from the selected camera and opens a dialog with the photo, and options for saving to disk.

Use **Shift+F3** to save the image directly to the default export directory, without opening the dialog window.

2.2.10.3 F4 Key

Opens the Instant Review 127 function for the selected camera.

2.2.10.4 F5 Key

Reconnects to all configured servers. This shortcut has the same effect as the Refresh button, located in the main menu.

2.2.10.5 F11 Key

Displays cameras in full screen. To exit full screen mode press the ESC key. This shortcut has the same effect as the Full Screen button, located in the main menu.

You can also exit full screen through the context menu, by right-clicking on the screen or on an object, select the **Exit full screen** option.

2.2.10.6 F12 Key

Changes the password of the user logged in to the connected servers. To learn how to use this feature, see the chapter Changing the user password 272.

2.2.10.7 Ctrl + S

Send audio to the selected camera (The system will send audio while the shortcut is being pressed).

2.2.10.8 Ctrl + B

Create a new bookmark.

2.2.10.9 Ctrl + Y

Activate / Deactivate Privacy Mode for selected camera.

2.2.10.10 Ctrl + F

Freezes / Unfreezes the live image from the selected camera.

2.2.10.11 Ctrl + D

Activate / Deactivate Digital Zoom for selected camera.

2.2.10.12 Ctrl + H

Call Home position of the selected PTZ camera.

2.2.10.13 Ctrl + L

Lock / Unlock selected PTZ camera for exclusive use.

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2.2.10.14 Ctrl + P

Pause / Unpause PTZ Patrol of the selected camera.

2.2.10.15 Ctrl + J

Activate / Deactivate Visual Joystick for selected camera.

2.2.10.16 Ctrl + 0..9

Recall preset (0 to 9) of the selected camera.

2.2.10.17 Shift + Click

Expands the viewing area of a control (such as a camera) that is in the control grid, to full screen. To return to normal, repeat the same process.

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Chapter

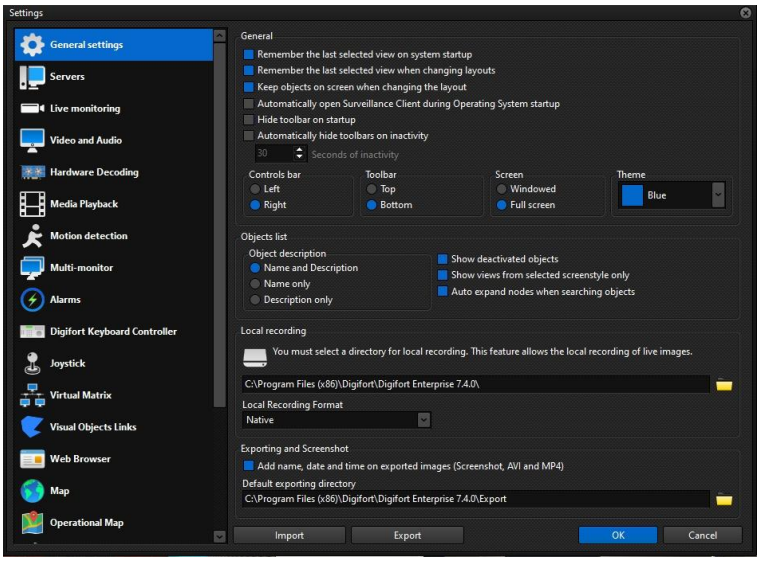
3 Configuring the Surveillance Client

This area of the system allows you to configure and customize the Surveillance Client. In the configurations, the servers that will be monitored and the Surveillance Client environment parameters must be specified.

To access the settings area, click on the settings button, within the Options Menu.

If you add, change or delete any server in the client settings, then you must click the Update button for the Surveillance Client to reconnect to the servers using the desired settings. Any other settings changes will be applied when a new tile or camera is selected on the screen.

3.1 General Settings



This is the general settings screen of the Surveillance Client, it gives you the following options:

3.1.1 Remember the last tile selected when opening the system

When you select a view or camera, the system automatically saves its reference so that later, if the Surveillance Client is reopened, the same camera or view will automatically reappear on the screen. If this option is not checked, no cameras or tiles will be automatically loaded for display when the Surveillance Client is opened.

3.1.2 Remember last selected view when switching layouts

When this option is active, the system will reload the last view that was displayed for the selected layout. If this option is selected, it will take precedence over the option to Keep objects on screen when changing layout 24.

3.1.3 Keep objects on screen when changing layout

By default, when you select a new layoutm the system will clear the screen so that the new layout is displayed empty (unless the "Remember last tile when switching layouts 28" option is selected).

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However, with this option selected, the system will keep the camera, or objects, that are already on screen and populate the next layout, thus allowing the user to "open up more space" for creating views. If the selected layout has fewer spaces than the number of objects on screen, the system will remove the excess objects.

3.1.4 Launch the surveillance client at operating system startup

Starts the Surveillance Client when the operating system starts, automating the camera Surveillance process.

3.1.5 Hide toolbars at startup

Expands the space reserved for the camera view to fill the entire screen when starting the system.

3.1.6 Automatically hide toolbar on inactivity

Expands the space reserved for the camera view to fill the entire screen after a specified period of inactivity. Inactivity time is calculated when the system operator is not moving the mouse or typing on the monitoring station keyboard.

- **Seconds of Inactivity:** Sets the inactivity time for the screen to expand.

3.1.7 Control bar

This option allows you to position the control sidebar on the left or right of the monitor.

3.1.8 Toolbar

This option allows you to place the toolbar at the bottom or top of the Surveillance client.

3.1.9 Screen

This option allows you to configure the type of window that the Surveillance Client will display:

- **Windowed**: The system will behave like a Windows window with minimize, maximize and resize options.
- **Full screen**: The system will occupy the entire screen.

3.1.10 Theme

Allows you to choose the color of the Surveillance Client theme.

3.1.11 Object List

You can choose how object identification will appear in the object list in the Surveillance client Object List.

- **Name and Description**: Displays the name and description of the objects in the list.
- **Name only**: Displays only the object name in the list.
- **Description only**: Displays only the object description in the list.

3.1.12 Show deactivated objects

By default, disabled objects will not be displayed in the object list. Enable this option to display disabled objects in the object list.

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3.1.13 Show views from selected screenstyle only

By default, the system will only display the views of the selected layout in the object list, however, when deactivating this option, all views will be displayed in the object list, regardless of the selected layout.

3.1.14 Auto expand nodes when searching objects

This option will cause the system to display the objects in the list with the nodes automatically expanded when performing a search.

3.1.15 Local recording directory

The system has the functionality to perform local emergency recordings on surveillance stations.

- **Directory**: Select the directory to store locally recorded videos.
- **Recording Format**: Select the recording format
  - o **Native Format**: Local recording in native format (Can only be played back using the Video Player)
  - o **MP4**: Local recording in .mp4, compatible with common video players.

Note

The user used to run the Surveillance Client (Operating System User) must have the right to write to the selected folder. The default folder selected will be the same as the client installation folder, which is generally located within the **Program Files** folder, which normal Operating System users generally do not have write rights to. Make sure to select a folder with write rights.

To learn how to make local recordings, see the chapter Local Recordings 85.

3.1.16 Exporting and Screenshots

Sets a default directory for saving screen shots and exported videos.

- **Add name, date and time to exported images:** When an image or video is exported, the system will render the camera name, date and time of the image. This option may slow down exports as the system will need to transcode the video during export.
- **Default export directory**: Select the default directory that will be suggested during the video export process.

Note

The user used to run the Surveillance Client (Operating System User) must have rights to write to the selected folder. The default folder selected will be the same as the client installation folder, which is generally located within the **Program Files** folder, which normal Operating System users generally do not have write rights to. Make sure to select a folder with write rights.

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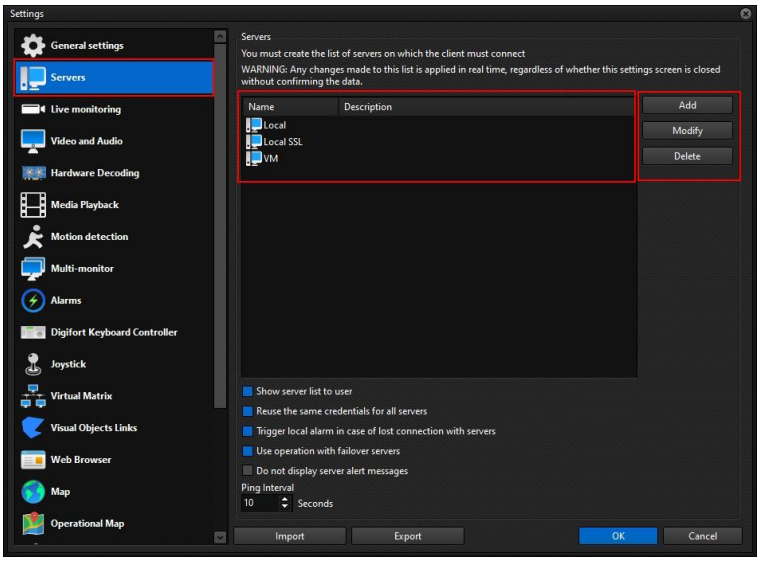
3.2 Configuring the servers to be monitored

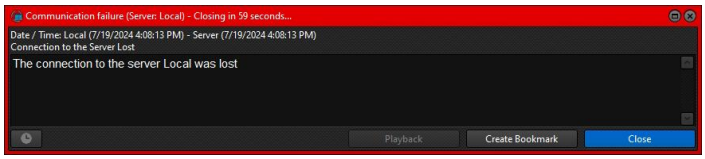


This is the server settings screen. On this screen you can configure which servers the Surveillance Client will monitor.

Remembering that the architecture of the system is client-server, you can add as many servers as you wish, whether they are on your local network or internet, so the Surveillance Client will monitor all of them in a unique way, as if it were a single server.

We have the following options:

- **Show server list to user**: When unchecking this option, the list of servers will not be visible so that the user can connect / disconnect from specific servers.
- **Reuse the same login for all servers**: This option will cause the same login (username/password) to be used when trying to connect to all registered servers.
- **Trigger local alarm in case of loss of connection to the server**: Triggers an alarm popup when the connection to a server is lost.



- **Use operation with failover servers**: This option must be selected so that the user does not have duplicate objects when operating with failover servers. Furthermore, when this option is used, the system will repopulate the objects on screen during failover/failback, making the operation transparent for the operator.
- **Do not display server alert messages**: This option disables alert messages (such as licensing or database) that appear when logging into servers, being particularly useful in applications where the monitoring client is being displayed on a video wall, without an operator controlling it.
- **Ping Interval**: This value is used to check if the server is still available and working, if the server does not respond to the Client's ping message, then the connection will be terminated and restarted. If using Failover servers, use smaller values so that the client can identify more quickly in case the main server becomes unavailable, so the change to the Failover server will take place more quickly.

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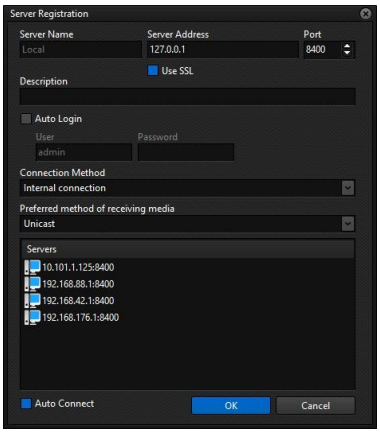
Note

When adding, changing or removing a server, the Surveillance Client must be updated by clicking the Refresh button located on the Options Menu.

3.2.1 Adding, changing and removing a server

To add a server, click on the **Add** button, and to change a server, select the desired server from the list of servers and click on the **Modify** button or, if you prefer, double-click on the server. To remove a server, select the desired server and click **Delete**.

The image below illustrates the screen for inserting or modifying servers.



- **Server name**: Insert an identification name for the server. Once saved, this name cannot be changed, as it will be used to identify the server in the Surveillance Client.
- **Server IP**: Fill in this field with the server's IP address. A DNS address can also be used.
- **Port**: Enter the connection port to the server. The default port is 8600 for non-secure connections and 8400 for secure connections.
- **Use SSL**: Select this option to use a secure, encrypted connection to the server.
- **Description**: Enter a brief description for the server, used only to help the operator identify it in the system.
- **Auto Login**: This option enables the user and password fields to be filled in. By enabling this option, whenever the Surveillance Client is run or updated, it will authenticate to the server using the username and password provided. If this option is unchecked, the user must enter their username and password on the login screen that will appear when the client connects to the server.
- **Connection Method**: Select the type of connection to the server.
  - **Internal Connection**: Select Internal Connection if the server is on your local network. With this option selected, the client will use the Private IP settings for direct access to the cameras (if configured).
  - **External Connection**: Select External Connection if the server is connected via the internet. With this option selected, the client will use the Public IP settings for direct access to the cameras (if configured).
- **Method of receiving media**: Select the media transmission method from server to client:
  - **Unicast**: Each object on the screen will open a new direct and independent connection with the system server. The video will be transferred through this connection.
  - **Multicast**: If the server has multicast enabled, the Client can receive the video via multicast transmission, in order to save network resources, because if multiple clients are receiving a stream from the same camera, it will be sent only once on the network and shared with all the clients "connected" to this stream. Transmission via multicast will generally only work on local networks.

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- **Servers**: Displays all servers found on the network. Select a record from the list and the Server IP and Port fields will automatically populate.
- **Active**: Select this option if you do not want the Surveillance Client to connect to this server. By unchecking this option, no object from this server will be available for viewing.
- **Auto Connect**: Causes the Surveillance Client to automatically connect to the server when started or refreshed.

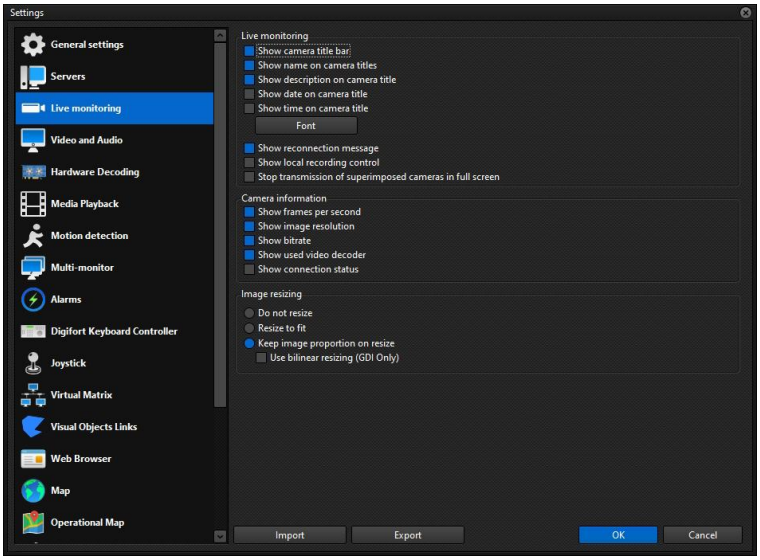
Important

If the user's password entered in the self-login fields is changed by the administrator in the Administration Client or changed by the user himself through the password change module, the values entered here must be updated.

Tip

If the Server module is running on the same computer as the Surveillance Client, the Loopback IP identified by 127.0.0.1 can be used.

3.3 Live monitoring settings



This configuration is divided into three parts: **Live Monitoring**, **Camera Information** and **Image Resizing** configurations.

3.3.1 Live Monitoring

- **Show cameras title bars:** Shows a black bar where the camera information will be positioned at the top of the image.
- **Show name on camera titles:** Displays the camera name at the top of the image.
- **Show description on camera titles:** Displays the camera description at the top of the image.
- **Show date on camera titles:** Displays the current date at the top of the image.
- **Show time on camera titles:** Displays the current time at the top of the image.
- **Fonts:** Option to change the font in which the camera descriptions will be displayed.

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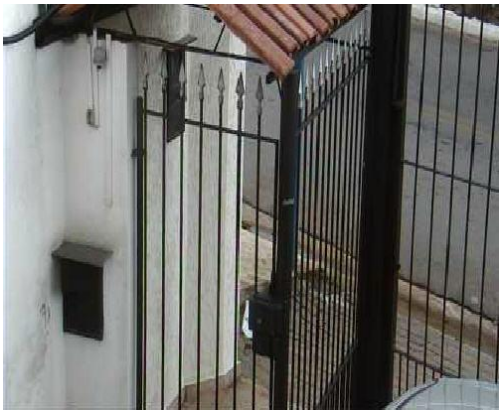
With options active

With no options active



- **Display reconnection message:** When communication with the camera fails for any reason, if this option is enabled, the Surveillance Client will show a reconnection message:

- **View recording controls:** Displays local recording controls, allowing the operator to record images from the desired cameras at the monitoring station itself for later playback. To learn how to perform local recordings, see the chapter Local Recordings 85.

- **Stop transmission of superimposed cameras in full screen:** Cameras can overlap when the user selects a camera in full screen (by double-clicking). In this case, all the cameras that are below (not being displayed) continue to transmit and decode, but by activating this option, the stream of these superimposed cameras will be disabled, saving bandwidth and CPU resources.

3.3.2 Camera Information

- **Show frame rate per second**: Displays the frame rate currently being received on the camera image.
- **Show image resolution**: Displays the resolution of the image being displayed on the camera image.
- **Show bitrate**: Displays the bandwidth used by the camera locally on the camera image.

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- **Show video decoder used**: Displays in the camera image the decoder used to decode and display the image on the screen.
- **Show connection status**: Displays the transmission status on the screen image.

3.3.3 Image Resizing

- **Do not resize images:** The images coming from the cameras will be displayed at their actual size without resizing. If the resolution of the image is smaller than the space reserved for it, the image will become small, and if the image is larger than the space reserved for it, parts of it will be lost. The figure below illustrates how this feature works.

- **Resize to fit:** The images coming from the cameras will always be resized so that they fill the entire space reserved for them. The figure below illustrates how this function works.

- **Resize while maintaining image proportion:** Resizes the image coming from the cameras so that the width and height are resized proportionally to the viewing area.

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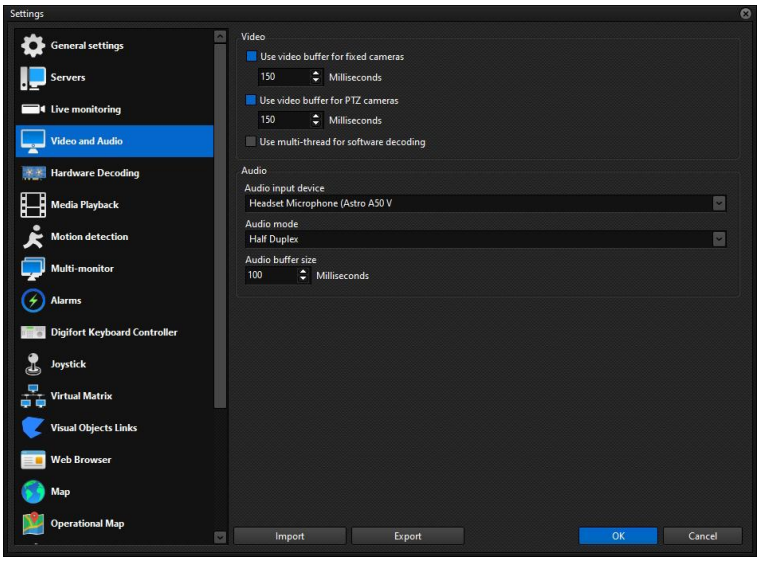
- **Use bilinear resizing:** When the images from the cameras are resized, some distortions artefacts can occur, like jagged edges. By enabling this feature, the images will pass through a filter that minimizes this distortion, keeping the image quality closer to the real image.

Important

Enabling bilinear resizing will require more processing power from the Surveillance station, as image distortion correction is carried out using complex and CPU intensive algorithms.

3.4 Video / Audio settings



3.4.1 Video Settings

- **Video Buffer**: By default, the Surveillance Client will not use the video buffer, which means that video from cameras will be rendered instantly when received. Although this is the option that offers viewing with the least possible latency, the video may not be smooth enough as rendering depends on several external factors such as the quality of transmission via the network, the camera, load on the recording server, among others. When using the video buffer, the system will receive the images and keep a few milliseconds in memory and then reproduce the images constantly, greatly increasing the fluidity of the video, however, this feature will add greater video display latency, which may not be operationally viable for PTZ cameras, so the system allows the activation of the buffer according to the camera type:
  - **Use video buffer for fixed cameras**: Enables video buffering for fixed cameras. Enter the buffer size in milliseconds.

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- **Use video buffer for PTZ cameras**: Enables video buffering for PTZ cameras. Enter the buffer size in milliseconds.
- **Use multi-thread for decoding via software**: The Surveillance Client allows the use of multi-thread for H.264 and H.265 video decoding. This option can be used to speed up video decoding on the client, especially for ultra megapixel images. Using this option will add at least 1 frame of delay to the video, that is, at 30 frames per second the additional delay will be at least 33ms while at 7 frames per second the additional delay will be at least 143ms.

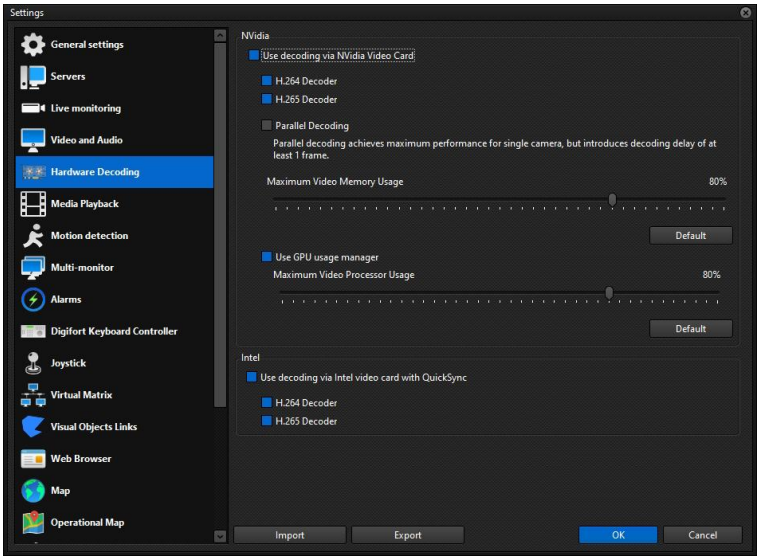
3.4.2 Audio Settings

- **Audio input device**: Choose the audio capture device. The system will detect devices recognized by Windows.
- **Audio Mode:**
  - **Half Duplex**: While sound is being sent to the camera it is not possible to hear any audio coming from the camera.
  - **Full Duplex**: It is possible to listen and speak at the same time.
- **Audio Buffer Size**: Specify the audio buffer size. This buffer is necessary for the correct reproduction of the received audio. Increase this value if the audio received from the cameras is breaking.

3.5 Video Decoding via GPU

For greater system performance, it is possible to use video decoding acceleration through supported video cards.

Video decoding via GPU will drastically reduce CPU usage of the surveillance station, allowing for a greater number of cameras decoding in parallel.



3.5.1 NVidia

For more information about NVidia graphics card compatibility visit this link: https://developer.nvidia.com/video-encode-decode-gpu-support-matrix#Decoder

NVidia GPU decoding is only available in the **64-bit Surveillance Client** (Surveillance64.exe) and requires the installation of official NVidia drivers: https://www.nvidia.com/Download/index.aspx?lang=en-us

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It is possible to use 2 or more video cards for decoding, and the system will balance the decoding load between the available video cards.

The system also implements a video card resource monitor, where it will constantly evaluate GPU usage and GPU memory usage. If the GPU or memory usage is above the configured limit, the system will offload and decoding via CPU (Software) will be used.

Each camera instance being decoded (Regardless of the resolution used) will use around 200~250MB of GPU memory.

- **H.264 Decoder**: Enables H.264 video decoding via NVidia GPU.
- **H.265 Decoder**: Enables H.265 video decoding via NVidia GPU.
- **Parallel Decoding**: The system allows parallelism for H.264 and H.265 video decoding via GPU. This option can be used to speed up video decoding on the client, especially ultra megapixel images. Using this option will add at least 1 frame of delay to the video, that is, at 30 frames per second the additional delay will be at least 33ms while at 7 frames per second the additional delay will be at least 143ms.
- **Maximum Memory Usage**: Select the maximum GPU memory usage value for decoding. If maximum memory usage is reached, new cameras will be decoded via software.
  - **Default**: Restores the default value for this option.
- **Use GPU Usage Manager**: Enable this option for the system to monitor GPU usage and start offloading cameras for software decoding if GPU usage is above the configured limit.
  - **Default**: Restores the default value for this option.

3.5.2 Intel

The system also supports video decoding (H.264 and H.265) via QuickSync through the Intel processor graphics card. QuickSync is an Intel technology that enables video decoding through the graphics processor built into its processors. To use QuickSync, the computer must support the use of the built-in video card (Intel HD Graphics) and it must be active in the operating system. Using QuickSync is recommended for viewing images of 5 megapixels or higher, where the gains from hardware decoding are most noticeable. It is also recommended to use the 64bit Monitoring Client as memory usage is higher.

- **H.264 Decoder**: Enables H.264 video decoding via Intel GPU.
- **H.265 Decoder**: Enables H.265 video decoding via Intel GPU.

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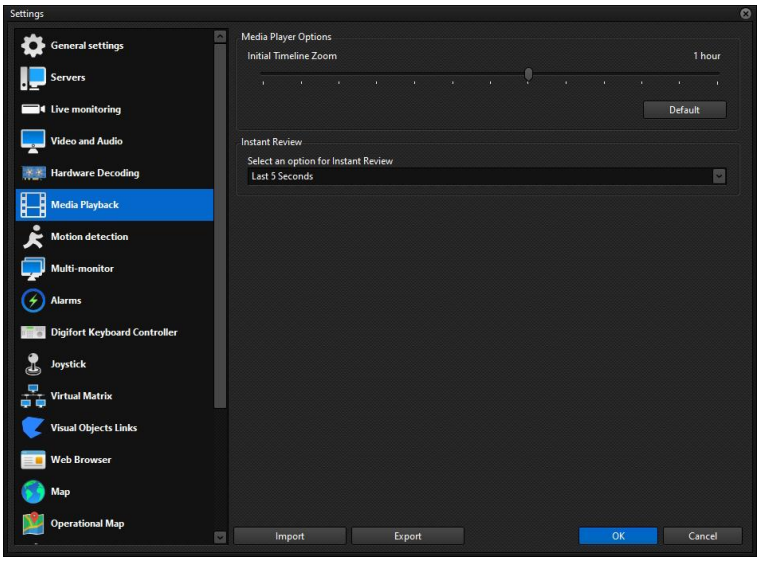
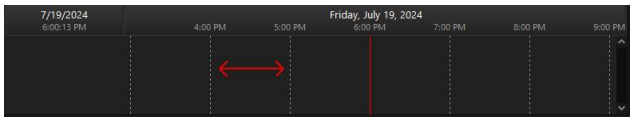
3.6 Media Playback Settings



- **Media Player Options**
  - **Initial Timeline Zoom**: Specify the zoom at which the timeline will be displayed by default
    - **Default**: Restores the default value for this option



- **Instant Review**: Select the Instant Review operating mode:
  - **Last 5 Seconds**: Opens the video player to view the last 5 seconds recorded from the selected camera.
  - **Last 10 Seconds**: Opens the video player to view the last 10 seconds recorded from the selected camera.
  - **Last 15 Seconds**: Opens the video player to view the last 15 seconds recorded from the selected camera.
  - **Last 20 Seconds**: Opens the video player to view the last 20 seconds recorded from the selected camera.
  - **Instant with Backward Playback:** Opens the video player to the current time and starts playing in reverse.

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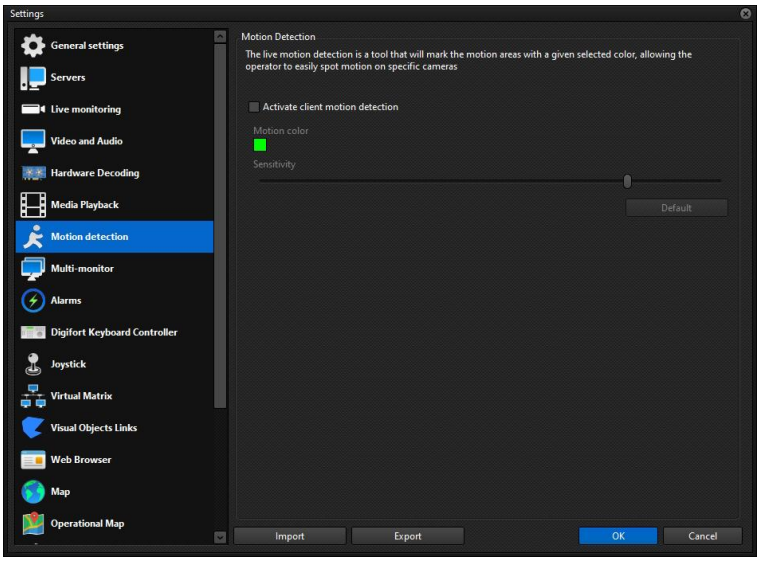
3.7 Motion Detection Settings



Motion detection allows the operator to more easily recognize movement in an image.

Motion detection is a filter applied to the image, highlighting the movements of the image in the desired color.

- **Enable motion detection on client**: Enables the motion detection filter.
- **Motion color**: Select the motion highlight color by clicking the color control.
- **Sensitivity**: Motion recognition sensitivity.
- **Default**: Restores the default value for this option.

3.8 Multi Monitor Settings

The system has the ability to use several monitors interconnected in a single surveillance station, creating an individual monitoring screen on each monitor where it is possible, for example, to display a monitoring view on one of the monitors, and a single camera on the others. In this way, by adding several video outputs, the Surveillance Client will work as an image decoder and multiplexer for as many cameras as necessary.

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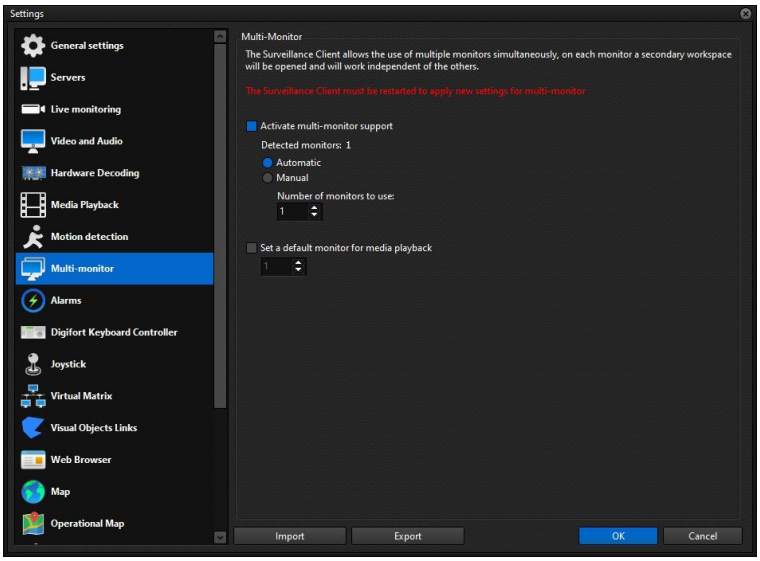
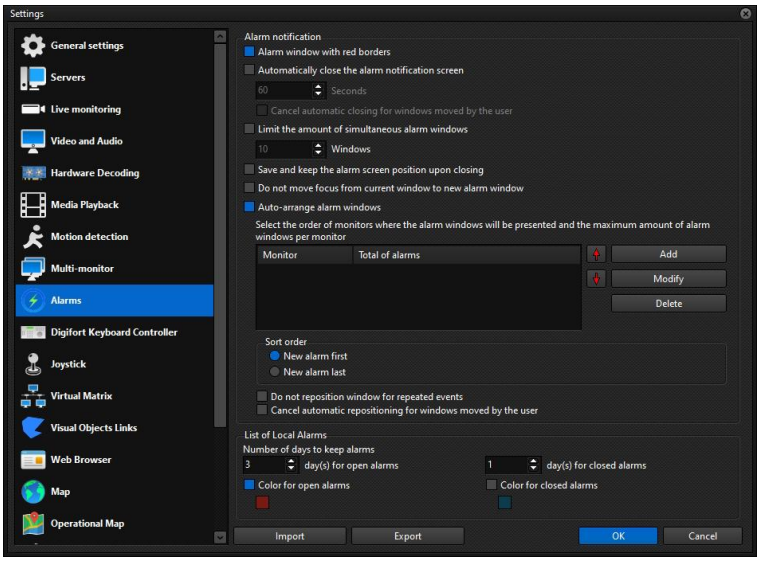


- **Enable multi-monitor support**: Enables multi monitor support.
- **Monitors detected**: Number of monitors detected on your workstation.
- **Operation mode**:
  - o **Automatic**: Automatically opens a monitoring screen on each recognized monitor.
  - o **Manual**: Choose the number of monitoring screens to open. You must manually position the screens on each monitor. The system will save the screen position and position the screens automatically the next time it is opened.
    - ▪ **Total monitors to use**: Select the number of monitors to use in manual mode.
- **Set a default monitor for the Media Player**: Defines which monitor the system media player will appear on when opened.

3.9 Alarms

The alarms screen allows for various settings relating to the alarm pop-ups that are triggered on the surveillance client.



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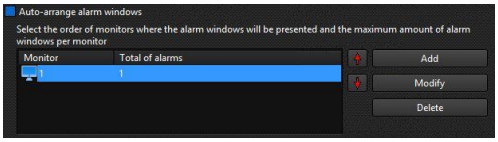
3.9.1 Alarm Notification

- **Alarm window with red border:** This option makes the border of the alarm pop-up red.
- **Automatically close the alarm notification screen:** This option causes the alarm window to close automatically after a set time.
  - o **Time to close:** Configure the time (In seconds) in which the alarm pop-up will close automatically.
  - o **Cancel automatic closing for windows moved by the user:** If automatic closing is enabled, this option will not let the pop-up close automatically if the user drags it.
- **Limit the amount of simultaneous alarm windows:** The alarm system allows you to limit the amount of simultaneously open alarm windows. When the window limit is reached, the oldest pop-up will be closed automatically.
  - o **Simultaneous alarm windows:** Configure the maximum number of simultaneous alarm windows.
- **Save and keep the alarm screen position upon closing:** This option will save the position of the alarm window at the time it was last closed and will use this position for the next alarm window that is opened.
- **Do not move focus from current windows to new alarm window:** With this option active, the system will not move focus from the current window to the new alarm window.

3.9.1.1 Auto-Arrange Alarm Windows

Allows the system, by default, to auto-adjust the position of the alarm windows on the monitors. When a new alarm popup is opened, the system will automatically reposition and adjust the size of the open alarm windows on the monitors. You can define a monitor order (for systems with multiple monitors), where when the limit of windows open on one monitor is reached, the system will continue to open alarms on the next monitor. The window positioning layout can be defined individually for each monitor, as well as the limit on how many alarm windows will be opened on each monitor.

You must configure the order of monitors through the registration list:



In the image above, the following order was configured: the first 4 pop-ups will appear on monitor number 2 and the other 4 will be shown on monitor number 1. In this case, if 9 pop-ups appear, the oldest one will be closed, keeping only the last 8.

Click the **Add** button to add a new monitor configuration. Click **Modify** to change a monitor's settings and **Delete** to delete this monitor's record and remove it from the alarm window rotation.

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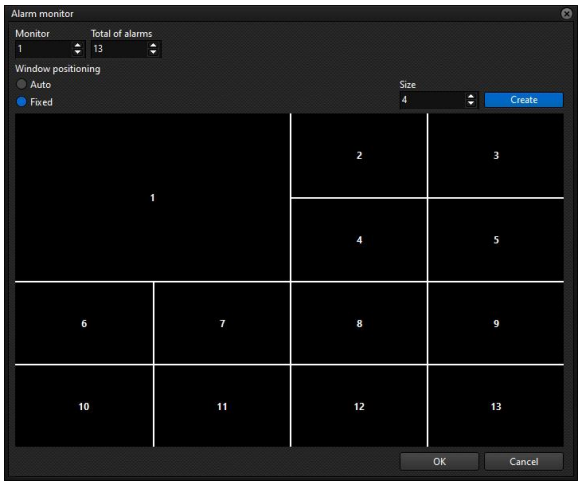

- **Monitor:** Select the number of the monitor that will receive the alarms.
- **Total alarms:** Select the maximum number of alarm windows this monitor can display.
- **Window positioning**
  - o **Auto**: Select automatic so that the system automatically arranges the position of the alarms, according to the configured **Total Alarms**.
  - o **Fixo**: Select Fixed to manually configure the desired layout. Check out the Layout Editor 63 topic to learn how to modify the layout.
- **Sort Order**
  - o **New alarm first**: In the hypothetical case that we have alarm A1 and A2 on the screen, a new alarm would take the place of A1. We would then have A1 (new alarm), A2 and A3.
  - o **New alarm last**: In the hypothetical case where we have alarm A1 and A2 on the screen, a new alarm would be A3. We would then have A1, A2 and A3(new alarm).
- **Do not reposition window for repeated events**: If the same alarm is triggered multiple times, the pop-up that is already open on the screen, referring to this alarm, will not be repositioned, otherwise, the window will be moved to the first or last position in the list of alarms (According to with the ordering configuration, described previously).
- **Cancel automatic repositioning for windows moved by the user**: Windows that are moved by the user will be removed from the alarm window position manager and will no longer be repositioned when alarms are opened or closed.

3.9.2 Local Alarm List

- **Number of days to keep alarms**
  - o **Days for open alarms**: Number of days that the system will keep alarms that are still open in the list.
  - o **Days for closed alarms**: Number of days that the system will keep alarms that are already closed in the list.
- **Color of open alarms**: Color of open alarms, to make the screen easier to read. Click the color control to change the color.
- **Color of closed alarms**: Color of closed alarms, to make the screen easier to read. Click the color control to change the color.

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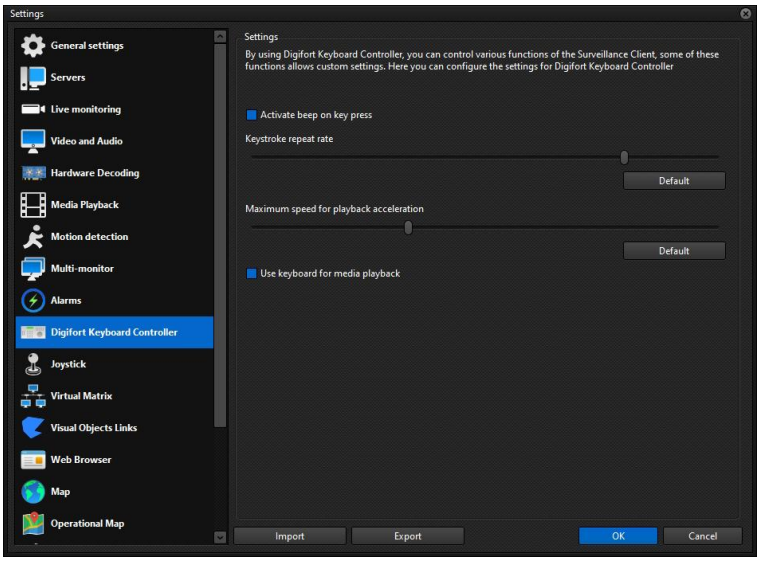
3.10 Digifort Keyboard Controller

This screen allows the configuration of Digifort Keyboard Controller operating options.



- **Activate beep on key press:** Activates and deactivates the audible beep when you press a key of the Keyboard Controller.
- **Keystroke repeat rate:** Adjusts the repeat speed when holding down a key of the Keyboard Controller.
  o **Defaul**: Restores the default value for this option.
- **Maximum speed for playback acceleration:** Defines the maximum speed of video acceleration in media playback when rotating the Controller Table joystick.
  o **Default**: Restores the default value for this option.
- **Use Keyboard for Media Playback**: Allows you to enable or disable the use of the Keyboard Controller for media playback. When the media player is opened, if this option is enabled, you can control playback with the joystick, and if it is disabled, the Keyboard Controller will continue to work for the selected live camera, sending PTZ controls to this camera instead of control the media player.

3.11 Joystick Settings

The system allows the use of common Joysticks to control PTZ cameras. On this screen you can configure the Joystick options.

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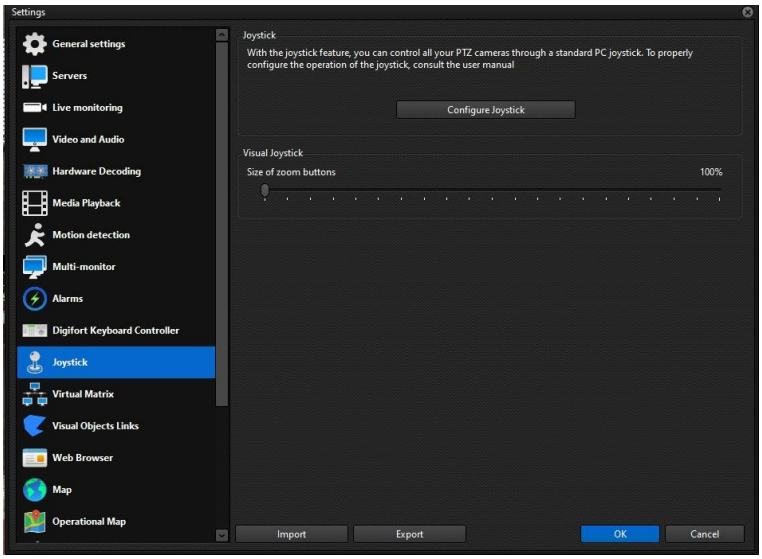
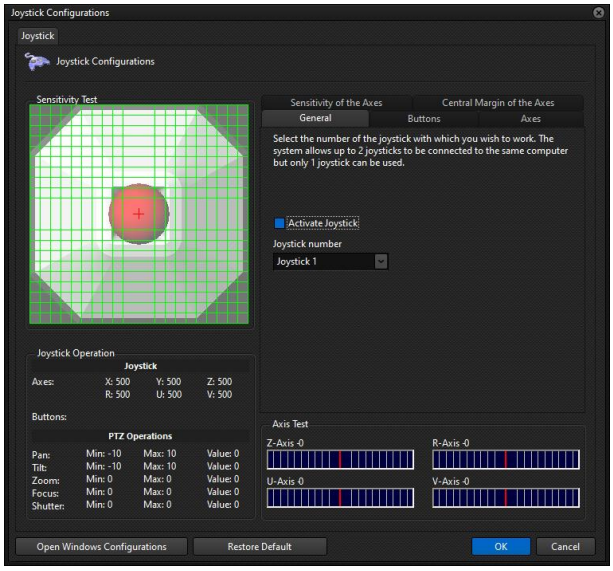


Click **Configure Joystick** to open the Physical Joystick configuration.

- **Visual Joystick**: The system has a Visual Joystick control, which will be superimposed on the camera image, to simulate the use of a Joystick on a camera using the mouse. To learn how to operate the Visual Joystick, see the PTZ Control with Visual Joystick 28 topic.
  - **Size of zoom buttons**: The size of the Visual Joystick zoom button in the Surveillance Client can be increased by up to 300% to optimize use on Windows tablets.

3.11.1 General



- **Activate Joystick**: Activates the use of physical Joystick to control PTZ cameras.
- **Joystick Number**: Select the joystick number (Configured in the Operating System).

- **Open Windows Settings**: Opens the operating system's joystick manager.
- **Restore Default**: Restores default values for all settings.

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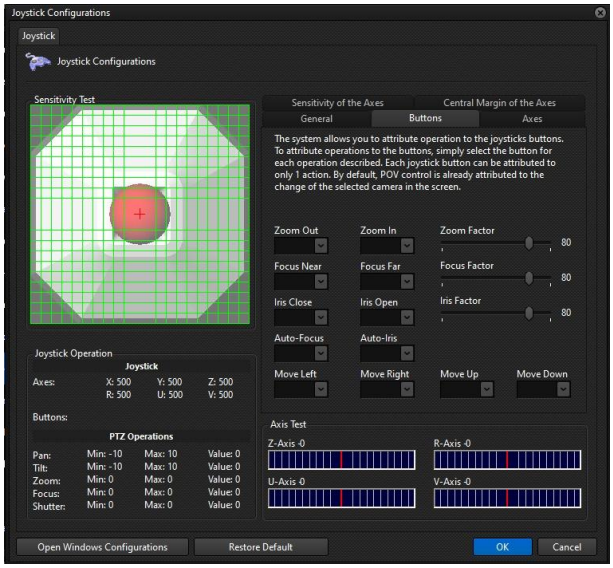
3.11.2 Buttons

The system allows you to associate PTZ functions with the joystick buttons. Here you can define the buttons that will perform zoom, focus, camera switching, among others.



- **Zoom out**: Select the joystick button that will perform the zoom-out function.
- **Zoom in**: Select the joystick button that will perform the zoom in function.
- **Zoom factor**: Select an operation factor, in percentage. This factor applies to zoom speed. In the example above, the camera will zoom at 80% of its maximum speed when the button is pressed.
- **Near focus**: Select the button that will perform the near focus adjustment function.
- **Far focus**: Select the button that will perform the far focus adjustment function.
- **Focus factor**: Select an operating factor, in percentage. This factor applies to the focus adjustment speed. In the example above, the camera will adjust its focus at 80% of its maximum speed when the button is pressed.
- **Close iris**: Select the button that will perform the iris closing function.
- **Open iris**: Select the button that will perform the iris opening function.
- **Iris factor**: Select an operation factor, in percentage. This factor applies to the iris adjustment speed. In the example above, the camera will adjust its iris at 80% of its maximum speed when the button is pressed.
- **Activate auto focus**: Select the button that will perform the auto focus function.
- **Activate auto iris**: Select the button that will perform the auto iris function.
- **Move left**: Select the button that will perform the camera selection switching function. This button selects the closest camera to the left of the selected camera.
- **Move right**: Select the button that will perform the camera selection change function. This button selects the closest camera to the right of the selected camera.
- **Move up**: Select the button that will perform the camera selection change function. This button selects the closest camera over the selected camera.
- **Move down**: Select the button that will perform the camera selection change function. This button selects the closest camera below the selected camera.

3.11.3 Axes

The axes configuration allows you to choose which operation you want to assign to each joystick axis, and the system allows five types of continuous operations: **Pan**, **Tilt**, **Zoom**, **Focus adjustment** and **Iris**

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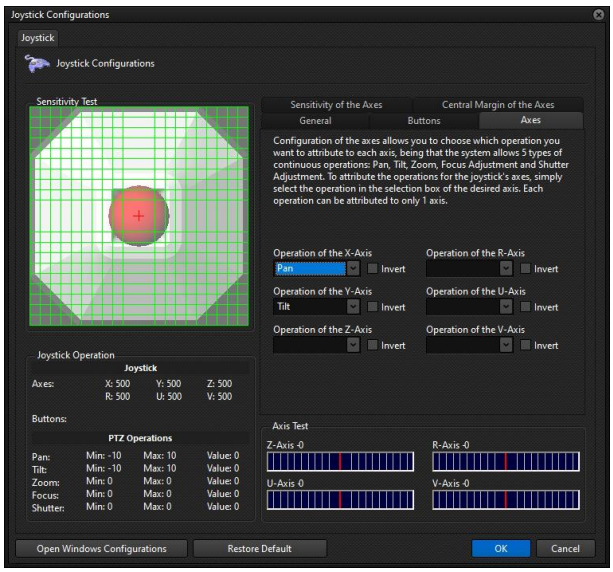
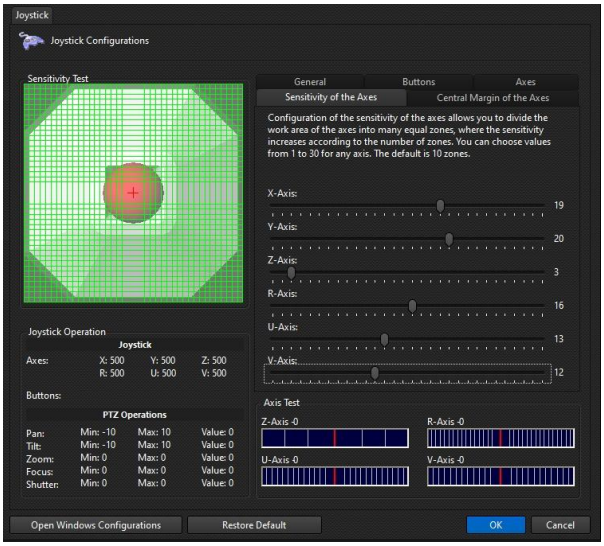
adjustment. To assign operations to joystick axes, simply select the operation in the desired axis selection box. Each operation can only be assigned to just one axis.



- **X-Axis Operation**: Select the PTZ operation that the joystick's X-axis will perform.
- **Y-axis operation**: Select the PTZ operation that the joystick's Y-axis will perform.
- **Z-axis operation**: Select the PTZ operation that the joystick's Z-axis will perform.
- **R-axis operation**: Select the PTZ operation that the joystick's R-axis will perform.
- **U-axis operation**: Select the PTZ operation that the U-axis joystick will perform.
- **V-axis operation**: Select the operation that the V-axis of the joystick will perform.
- **Invert**: All axes can be inverted, that is, right, left, up and down operations will be reversed.

3.11.4 Axes Sensitivity

The axis sensitivity setting allows you to divide the axis working area into several equal parts, with the sensitivity increasing according to the number of divisions. You can choose values between 1 to 30 for any axis. The operating standard is 10 divisions.



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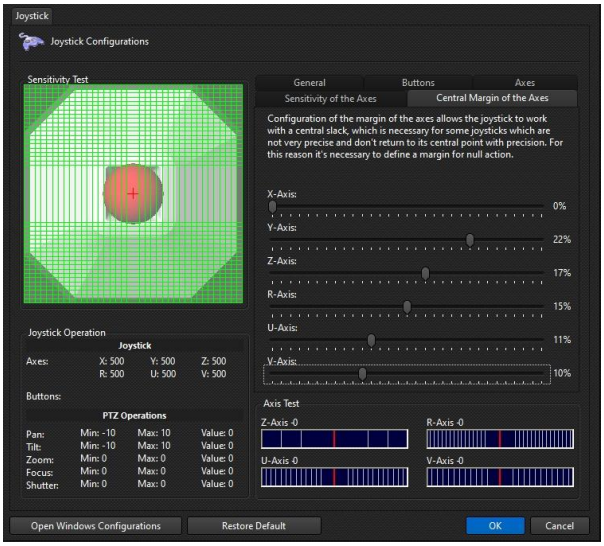
- **X-Axis**: Select X-axis sensitivity.
- **Y-Axis**: Select Y-axis sensitivity.
- **Z-Axis**: Select Z-axis sensitivity.
- **R-Axis**: Select R-axis sensitivity.
- **U-Axis**: Select U-axis sensitivity.
- **V-Axis**: Select V-axis sensitivity.

Tip

When changing the sensitivity values, the visual controls for joystick testing will change to reflect the division chosen for each axis.

3.11.5 Central Margin of the Axes

The axis margin configuration allows the joystick to work with a central gap, this is necessary for some joysticks that are not very precise and return to their central point with a certain gap, so it is necessary to define a margin for no operation.



- **X-Axis**: Select X-axis central margin.
- **Y-Axis**: Select Y-axis central margin.
- **Z-Axis**: Select Z-axis central margin.
- **R-Axis**: Select R-axis central margin.
- **U-Axis**: Select U-axis central margin.
- **V-Axis**: Select V-axis central margin.

Tip

When changing the margin values, the visual controls for joystick testing will change to reflect the center margin chosen for each axis.

3.11.6 Testing Settings

While adjusting the Joystick settings, you can test the changed options with the help of visual controls with real-time feedback.

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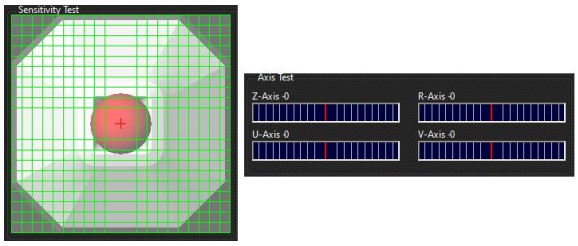
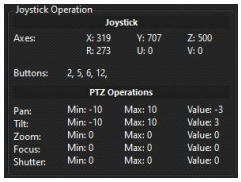


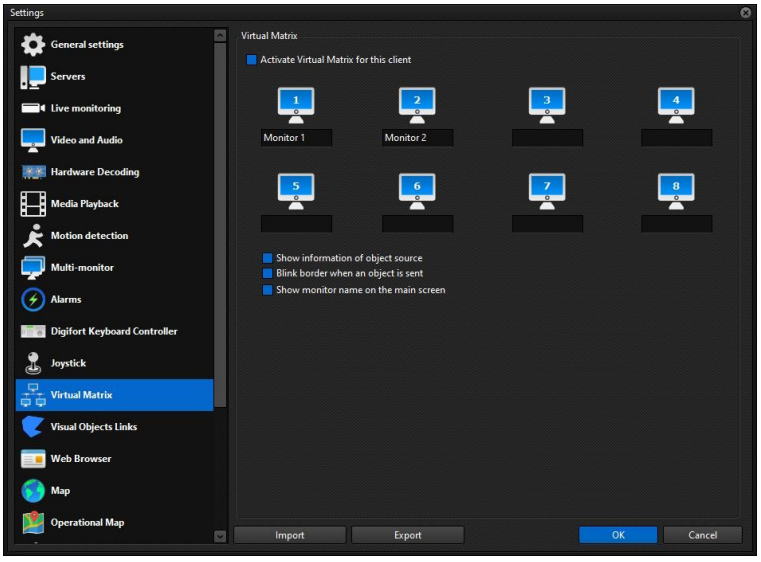
The Sensitivity Test visual controls will display, in real time, the current axis sensitivity division and central operating margin. When moving the Joystick axes, you will see your current position displayed in real time on the visual controls. With this you will be able to fine-tune the settings of each axis, according to your Joystick.



The joystick operation feedback panel will provide real-time data about the joystick

- **Joystick**
  - o **Axes**: The scope of axis values is 0 to 1000, with 500 being the midpoint.
  - o **Buttons**: Currently pressed joystick buttons.
- **PTZ Operations**: Displays the scaled values, according to the sensitivity of each axis. The panel provides information on the minimum and maximum value of each axis, as well as the current scaled value.

3.12 Virtual Matrix



- **Activate Virtual Matrix**: Activates the Virtual Matrix for this client, making the monitors configured here part of the Virtual Matrix monitor network.
- **Monitor List**: Enter the monitor name to be presented to the Virtual Matrix monitor network. You must specify a name that is unique for each monitor. You cannot repeat the same monitor name on different

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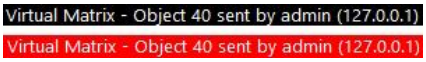
clients, if this occurs, the monitor of the client that connects first to the server will be used as part of the Virtual Matrix. If you do not enter a name for the monitor, it will not be part of the Virtual Matrix. The number of available monitors will be equal to the number of screens (GUIs) open, according to the station's Multi-Monitor Settings 36.

- **Show information of object source**: When an object (such as cameras, views or maps) is sent by a user to another monitor through the virtual matrix, the operator is shown the origin information of that object as shown in the figure below:

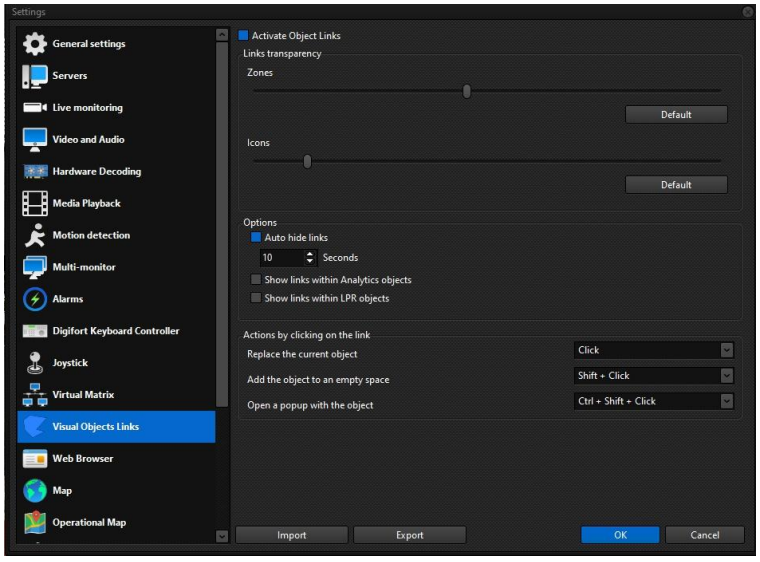
- **Blink border when an object is sent**: When an object (such as cameras, views or maps) is sent by a user to another monitor through the virtual matrix, the object's source information panel will flash between red and black as shown in the figures below (This option is dependent on option to Show information of object source):



- **Show monitor name on main screen**: Displays the name of the Virtual Matrix monitor on the application's main screen, instead of the monitor number.

3.13 Visual Objects Links

This screen allows you to customize the operation of object links. To learn how to operate object links, see the topic on Operating with Object Links 85.



- **Activate object links**: Allows control of whether or not links are activated at this monitoring station.
- **Links transparency**: Allows you to control the opacity of zones and icons, so that you can see the camera image behind the icons and zones or keep them a solid color. You can set independent transparency values for zones or icons.
  o **Default**: Restores the default value for this option.

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- **Auto hide links**: This option causes the links to disappear from the image after the configured time, reappearing when the mouse moves on the image.
  - o **Time**: Time (in seconds) to hide the links.
- **Show links within Analytics objects**: This option makes the links available on the camera object, displayed through the Analytics Configuration object.
- **Show links within LPR objects:** This option makes the links available on the camera object, displayed through the LPR Configuration object.

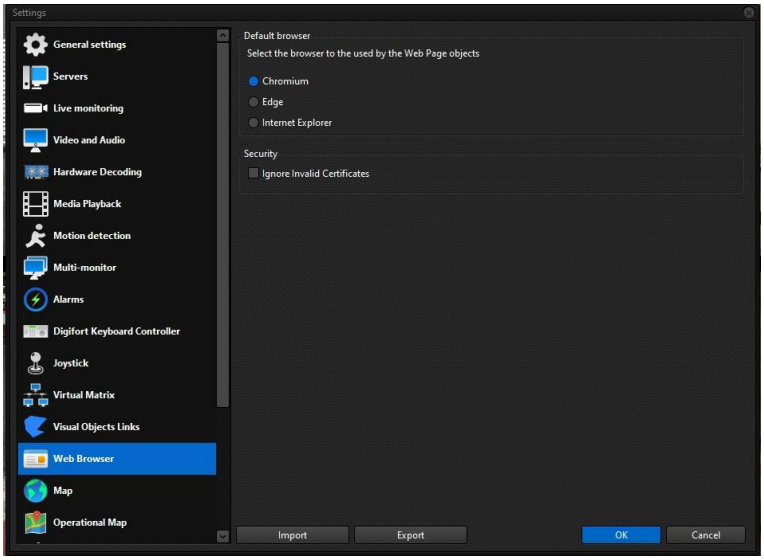
3.13.1 Actions When Clicking on Links

The operation of links is done through shortcuts, that is, when clicking on a link, the system can take an action, such as replacing the current object with the object referenced by the link, or opening this object in a new window, for example. The system allows the use of some modifiers such as **Shift+Click** and **Ctrl+Shift+Click**. Below you can specify which shortcut should be used for a specific action. The system allows operation with 3 different shortcuts, namely **Click**, **Shift+Click** and **Ctrl+Shift+Click**. Configure shortcuts for the desired actions:

- **Replace the current object**: This action will cause the camera to be replaced in its current screen space by the object referenced by the link (if the link leads to an object, if it is an event, the camera will remain on the screen).
- **Add the object to an empty space**: When performing this action, the system will add the object referenced by the link to an empty space in the view, without removing the camera from the screen.
- **Open a popup with the object**: This action will open a popup with the object referenced by the link, keeping the camera on screen.

3.14 Web Browser

This screen provides options for Web Browser control:



- **Default Browser**: Select the type of browser to be used:
  - o Chromium
  - o Microsoft® Edge
  - o Microsoft® Internet Explorer
- **Security**
  - o **Ignore Invalid Certificates**: Do not display an invalid certificate message.

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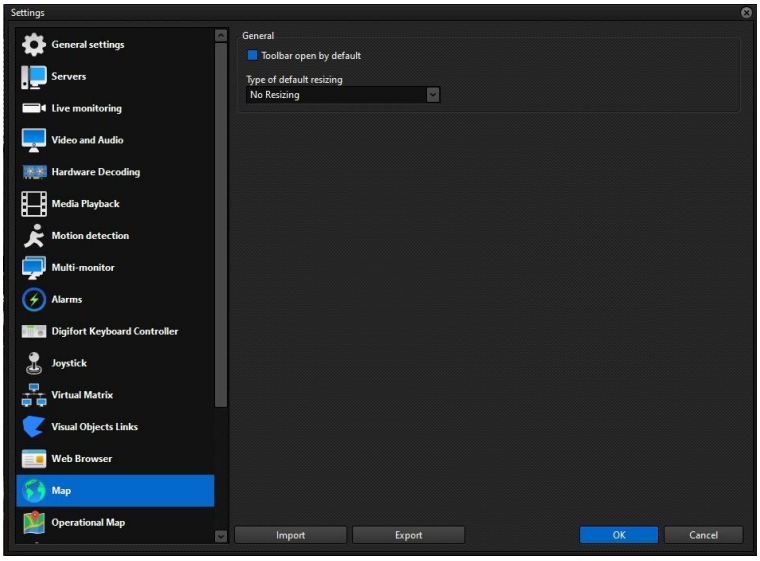
3.15 Maps

This screen allows you to configure options for the Synoptic Map object.



- **Toolbar Open by Default**: Enable this option to always display the map toolbar opened (At the top of the control). If this option is deactivated, the bar will be displayed closed, providing a larger viewing area of the map.
- **Default Resize Type**: Allows selection of the default map display type:
  - o **No Resizing**: Displays the map at its default size, without resizing the icons.
  - o **Stretch**: Displays the map, stretching its content to the entire viewing area where it is being displayed.
  - o **Proportional**: Displays the map, stretching its content to the entire viewing area where it is being displayed, maintaining the original proportions (No distortions).

3.16 Operational Maps

This screen allows you to configure options for the Operational Map object.

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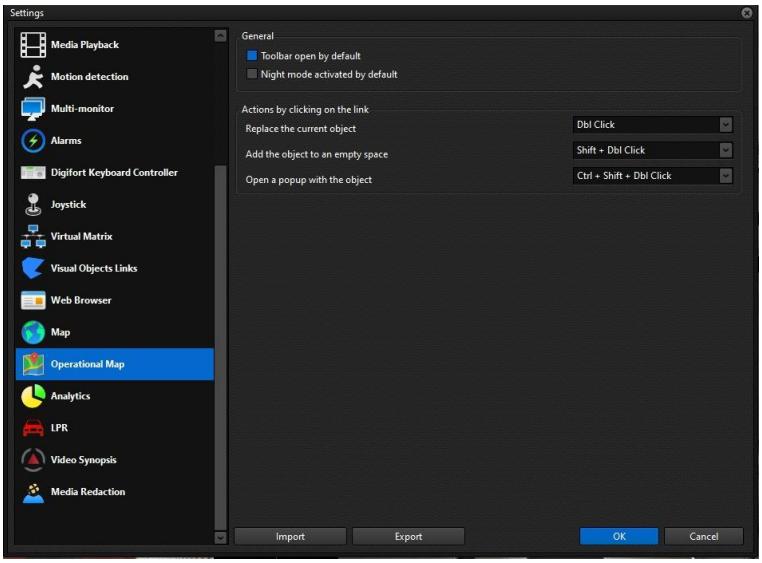

- **Toolbar Open by Default**: Enable this option to always display the map toolbar opened (At the top of the control). If this option is deactivated, the bar will be displayed closed, providing a larger viewing area of the map.
- **Night Mode Enabled by Default**: Activate this option so that the map is displayed with night mode activated.

3.16.1 Actions When Clicking on Objects

The operational map allows you to open the objects displayed on it, such as cameras, analytics configurations, among others. The system provides different actions for displaying the object when clicked, and different shortcuts for activating an action. The supported shortcuts are: **Double Click**, **Shift+Double Click**, **Ctrl+Shift+Double Click**. Assign the desired shortcut for each action:

- **Replace the current object**: This action will cause the map to be replaced in its current screen space by the object referenced by the link (if the link leads to an object, if it is an event, the map will remain on the screen).
- **Add the object in an empty space**: When performing this action, the system will add the object referenced by the link to an empty space in the view, without removing the operational map from the screen.
- **Open a popup with the object**: This action will open a popup with the object referenced by the link, keeping the operational map on screen.

3.17 Analytics

This screen allows you to configure options for the Analytics Configuration object.

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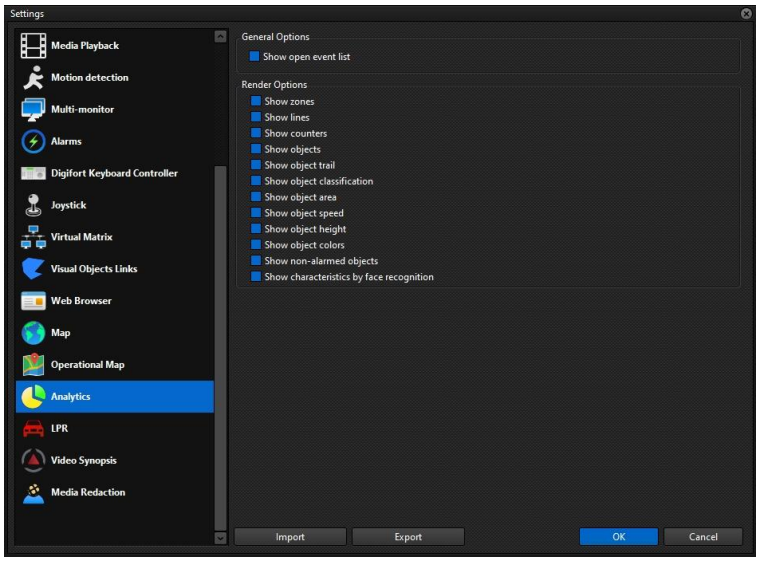
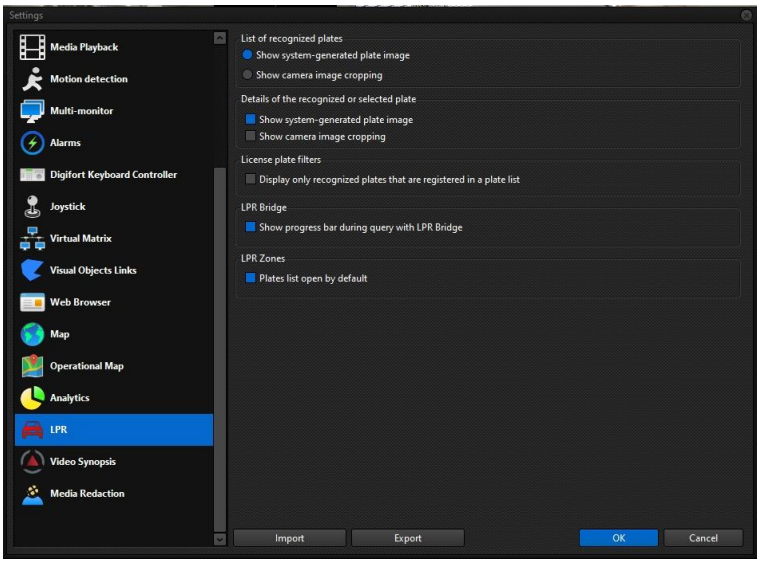


- **Show Open Event List**: Activate this option to always display the event list opened (At the bottom of the control). If this option is disabled, the event list will be displayed closed by default, providing a larger camera viewing area.
- **Rendering Options**: You can configure default analytics metadata rendering options. When an analytics object is added to the screen, the options defined in these settings will be used by default. The user can also change the options of each object manually through the context menu by right-clicking on the Analytics Configuration object. Select the desired options for default rendering.

3.18 LPR

This screen provides options for customizing LPR controls.



3.18.1 List of Recognized Plates

These options allow you to configure the type of plate thumbnail display in the list of recognized plates (On the left side of the LPR control).

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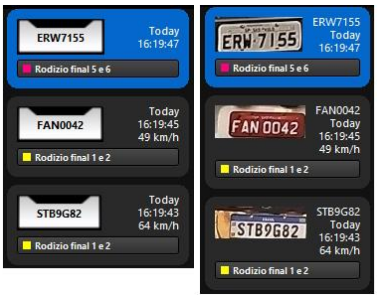

- **Show system generated plate image**: This option will generate a digital representation of the plate, with the recognized characters, presenting different colors for each character, depending on your reading confidence (If supported by the engine or camera).
- **Show camera image crop**: This option will generate a small image with the plate cut from the original image, in thumbnail form.

3.18.2 Details of Selected or Recognized Plate

These options allow you to configure the type of plate thumbnail display in the LPR record search details.

- **Show system generated plate image**: This option will generate a digital representation of the plate, with the recognized characters, presenting different colors for each character, depending on your reading confidence.
- **Show camera image crop**: This option will generate a small image with the plate cut from the original image, in thumbnail form.

3.18.3 Plate Filter

Provides options to filter the plates displayed in the LPR Configuration (Live) control.

- **Display only recognized license plates that are registered in a list**: This option will filter the live records of the LPR Configurations and will only display records for plates that are registered in any system plate list. The effect of this filter is for live viewing only, and does not affect the search for recognized LPR records.

3.18.4 LPR Bridge

Integration options with LPR Bridge.

- **Display progress bar during query with LPR Bridge**: This option will display a small progress bar while the LPR Bridge queries the record.

3.18.5 Zonas de LPR

Options for visual control of LPR Zone.

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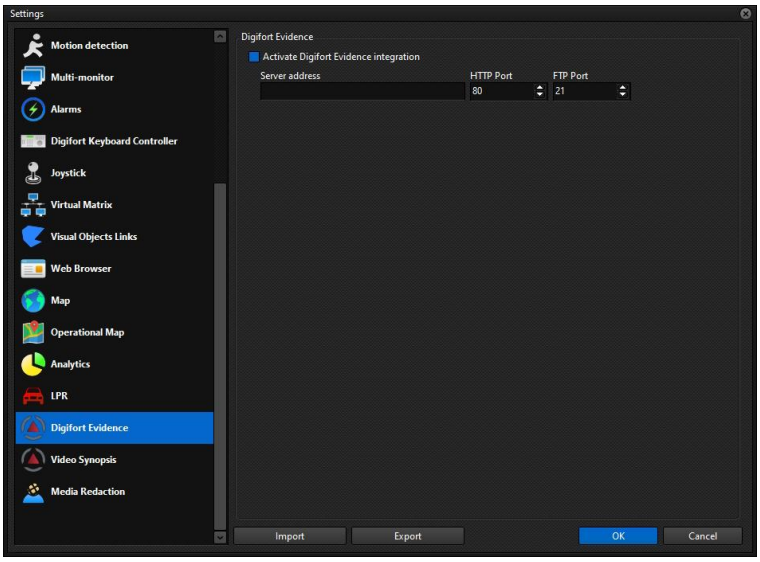
- **Plate List open by default**: Activate this option to always display the list of plates in the zone (On the left part of the control). If this option is disabled, the list of plates will be displayed closed by default, providing a larger viewing area for the zone dashboard.

3.19 Evidence

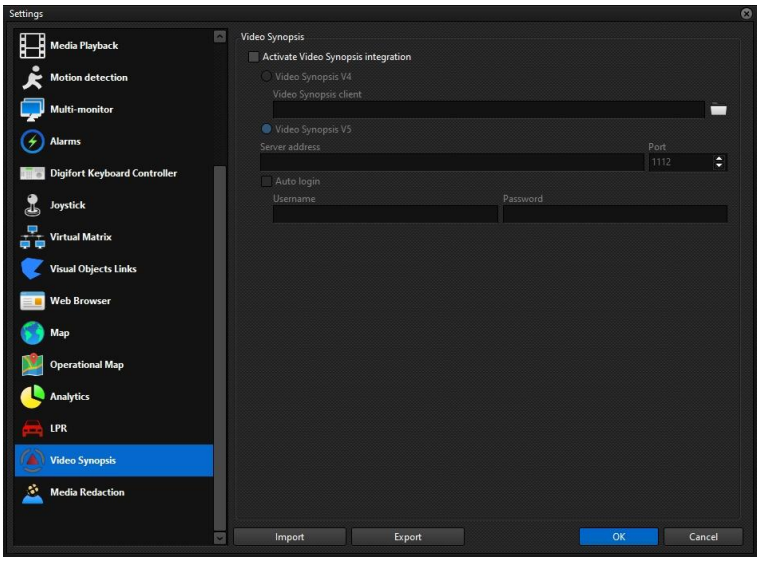
This screen provides the settings for the integration with Evidence.



- **Enable Evidence integration**: Enables integration with Evidence.
- **Server address**: Provide the Evidence server address.
- **HTTP Port**: Provide the Evidence HTTP server port.
- **FTP Port**: Provide the Evidence FTP server port.

3.20 Video Synopsis

The Video Synopsis module is used to investigate recordings through video synopses and video intelligence. This screen allows you to configure integration with the Video Synopsis module.



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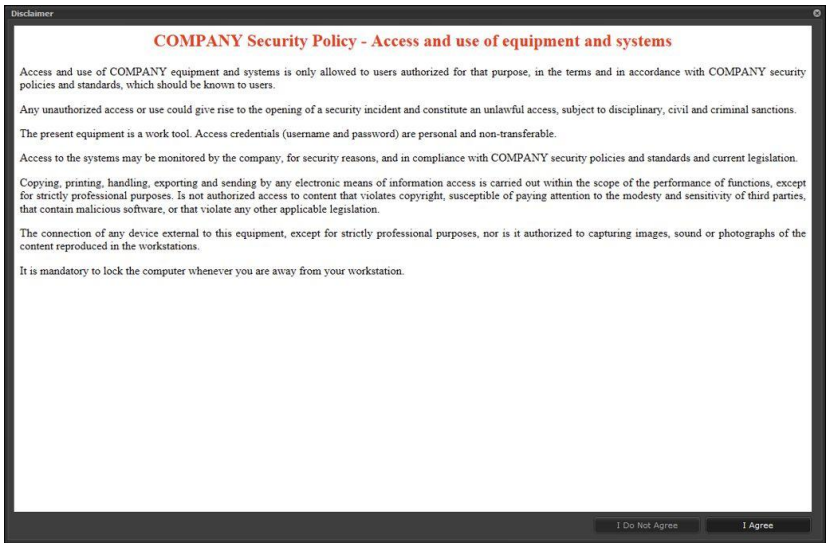
- **Activate Video Synopsis integration**: Enables integration with Video Synopsis.
- **Video Synopsys V4**: Select this option to integrate with version 4 of Video Synopsis.
  - **Video Synopsis Client**: Select the folder where the Video Synopsis Client was installed.
- **Video Synopsis V5**: Select this option to integrate with version 5 of Video Synopsis.
  - **Server address**: Enter the Video Synopsis server address.
  - **Port**: Enter the server port.
  - **Auto Login**: Activate this option for the system to automatically log in to Video Synopsis with a pre-registered username and password.
    - **User**: User for auto login.
    - **Password**: Password for auto login.

3.21 Disclaimer Message

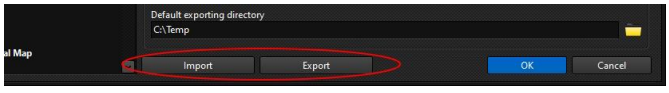
The system allows the display of a personalized Disclaimer message when the Surveillance Client or Administration Client is opened. The user must click "**I Agree**" in order to use the system, otherwise the client will be closed.

To add a personalized disclaimer message, simply add a file called "Disclaimer.htm" to the clients' installation folder.

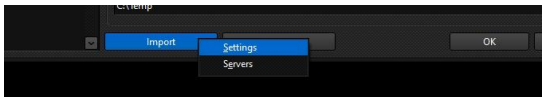


3.22 Importing and Exporting Settings

The system allows you to easily Import and Export Surveillance Client settings. On the **Settings** screen, use the **Import** or **Export** buttons.



When you click a button to Import or Export settings, you can choose between **Settings** and **Servers**:



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- **Settings**: Imports or Exports all settings to an **.ini** file.
- **Servers**: Imports or Exports the server registration to an **.ini** file.

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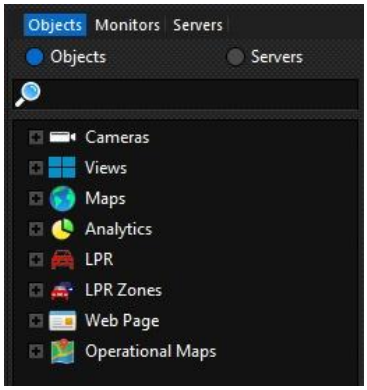
Chapter IV

4 Object List



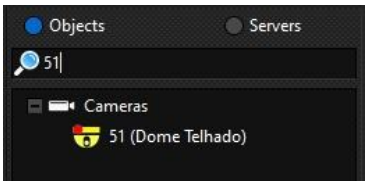
The object list is one of the most important controls in the Surveillance Client's main interface. It will display all the objects to which the operator has access rights, and you will use this list to view, playback and quickly access various other features through the context menu with the right mouse button.

This control is made up of 3 tabs:

- **Objects**: List of system objects.
- **Monitors**: List of Virtual Matrix monitors.
- **Servers**: List of servers.

4.1 Filters

Use the search bar to filter records. The term entered will filter all objects and will only display objects that matches the term in their name or description, as shown in the figure below:



4.2 Objects

The **Objects** tab will provide the complete list of all objects that the operator has access rights from the connected servers. Objects from all servers will be displayed in a single combined list.

4.2.1 Adding Objects to the Screen

To add an object to the **Object View Panel**, double-click on the desired object in the list, and it will be added in an empty space in the **View Panel**. You can also use the drag and drop function:

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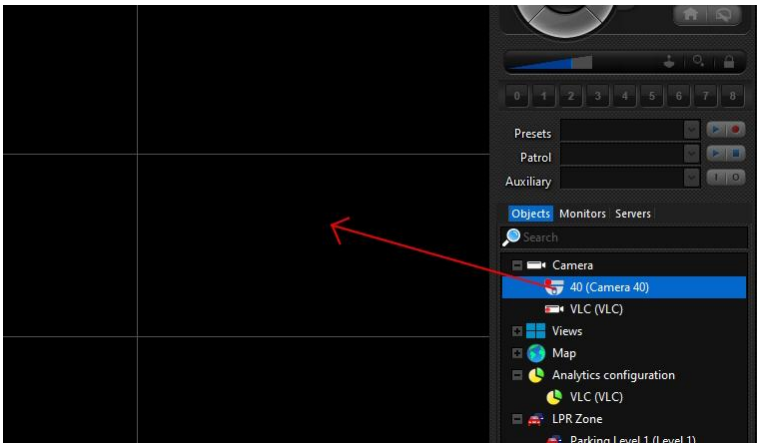
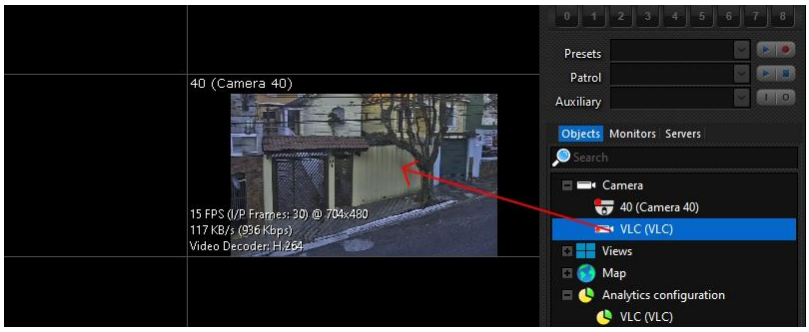
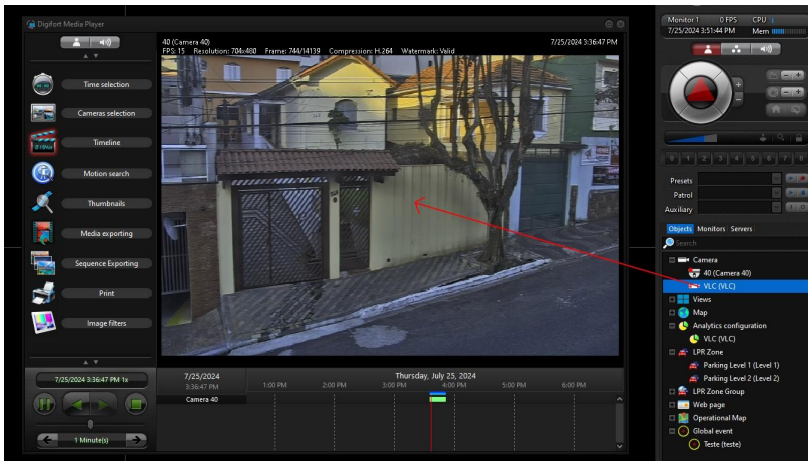


If you drag and drop an object into an empty space, this object will fill that space. You can also drag an object from the object list to a space where another object is already occupying, in which case the object on screen will be replaced by the new object:



The system also allows you to drag and drop objects into the **Media Player**, making it easier to change cameras during a recording investigation:



You can also drag a saved view to the **Live Object View Panel**, or **Media Player**.

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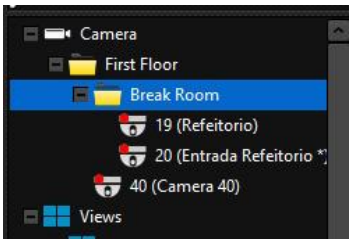
4.2.1.1 Dragging Groups of Objects

The system allows you to drag and drop groups of objects, to the **Object View Panel** or **Media Player**.

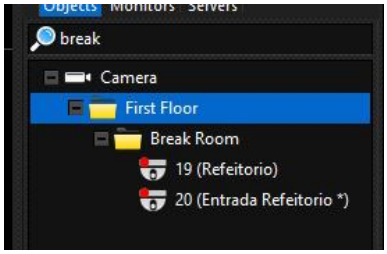
When an object group is dragged, all objects in the group will be added to the canvas:



In the example above, when dragging the **Break Room** group, cameras **19** and **20** will be added to the screen.

By default, when dragging a group, only the direct objects in the group will be added to the screen, therefore, no subgroup objects will be added. In the figure above, if the **First Floor** group is dragged, only camera **40** will be added to the screen. To drag objects from the group and all objects from all subgroups within this group, hold down the **Shift** key while dragging the group. In the example above, when dragging the **First Floor** group, holding the **Shift** key, cameras **19**, **20** and **40** will be added to the screen.

If an object filter is applied, it will also be applied when dragging groups. Example:



In the figure above, the **break** filter applied will filter all objects with this name. Since this is the name of a subgroup, all objects in this subgroup will be displayed. Note that camera **40**, which belongs to the **First Floor** group, is not being displayed. In this example, when dragging the **First Floor** group, with the **Shift** key pressed (To drag subgroup objects), only cameras **19** and **20** will be displayed on screen, and camera **40**, even though it belongs to the **First Floor** group, will not be displayed as it is being excluded by the filter.

4.2.2 Camera Status

The system uses different icons to represent a Fixed camera or a PTZ camera. A Dome camera icon indicates that the camera in question has PTZ capabilities enabled.

These icons represent that the camera is deactivated.

These icons represent that the camera is activated, working, but is not currently writing to disk.

These icons represent that the camera is activated, working, and currently writing to disk.

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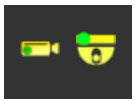
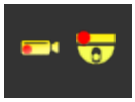


These icons represent that the camera is activated, working, detecting motion, but is not writing to disk. Motion detection will only be signaled if the camera is recording by motion, or has a motion alarm configured.



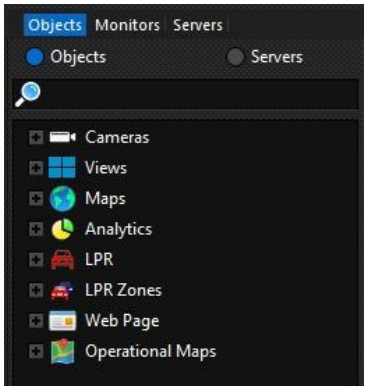
These icons represent that the camera is activated, working, detecting motion, and writing to disk. Motion detection will only be signaled if the camera is recording by motion, or has a motion alarm configured.

These icons represent that the camera is not working.

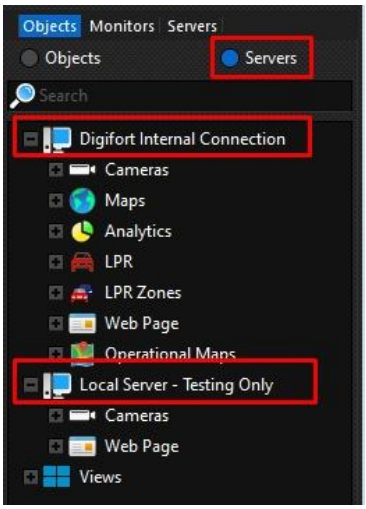
4.2.3 Icons Grouping

The object list icons can be grouped by **Object Types** and **Servers**:

- **Object Types**: This is the default organization of the list, where all objects from all servers will be grouped by their type, providing a general and unified view for the user:



- **Servers**: When organized by servers, objects from each server will be grouped within a specific icon for each server:



In the server organization type, the **Views** will be displayed globally, as they are shared with all servers.

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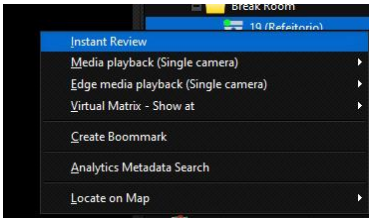
4.2.4 Context Menu

The object list context menu is a very powerful tool for quick access to the most used functions for the selected object type. With easy-to-understand shortcuts and a simple, logical structure, the context menu will optimize system usage time, providing easy access to various system tools and resources.

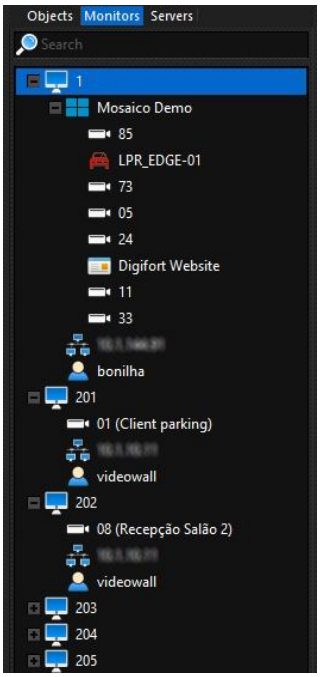
To access the context menu, right-click on an object in the list:



A menu with available options for the selected object type will be displayed. The menu items are shortcuts to various system functions such as **Video Playback**, **Virtual Matrix**, **Bookmarks**, **Searches**, **Maps**, among others.

4.3 Monitores

The **Monitors** tab will display the list of monitors currently connected to the **Virtual Matrix**, providing information about each monitor:



Each monitor item in the list will display the following information:

- **Objects on Screen**: Name of the object currently being displayed on screen. If a view is being displayed, the name of the view will be displayed, as well as a list of all objects in the view.
- **IP**: IP of the station where the monitor is located.
- **User**: User logged in to the station where the monitor is located.

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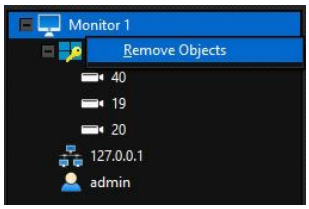
The monitor list also features a context menu, accessible via right-click:

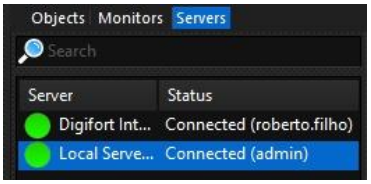


Using this context menu you can remove objects from the selected monitor. This operation will remove all objects on screen.

You can also send objects to this monitor using the drag and drop function. To learn how to use the Virtual Matrix, see the Virtual Matrix 155 topic.

4.4 Servidores

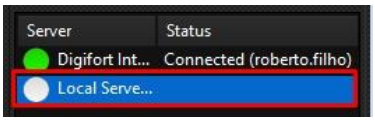
The **Servers** tab will display a list of all servers registered in the Surveillance Client. Here you can check the connection status with servers, connect and disconnect from servers:



The icon on the left side of the server will represent your connection status:

Server disconnected.
Server connected.
Connection in progress.
Error connecting to the server.

To connect or disconnect from a server, double-click on the desired server icon:



If an error occurs while connecting to the server, an error message will be displayed in the Status column:

You can sort the list by clicking on the desired column to sort.

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Chapter V

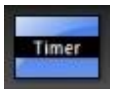
5 Layouts and Views

The Surveillance Client allows the display of multiple objects (Cameras, Maps...) on screen for monitoring. These objects are added in a Camera and Object View Panel 18:

The **Camera and Object View Panel** can take on different layouts (Screen Style) for better organization of the objects on the screen. The system has some standard layouts and also allows the creation of new layouts:

In addition to the common layouts, the system has 2 special layout types:

Automatic: This layout allows the creation of automatic sizing layouts, that is, as many objects as necessary can be inserted into this layout and thus the mosaic automatically resizes the size of the space reserved for each object so that they can all be displayed on the screen simultaneously. This layout will always grow symmetrically (2x2, 3x3, 4x4, etc...).



Timer: This layout allows the creation of a sequence of objects and views that will be displayed on the screen alternately with a waiting time defined by the user. To learn how to use this feature, see the topic on Timer Views 67.

To change the current layout, simply click on the icon for the new desired layout on the control. If the layout list is too long, click the right and left arrow icons to move the layout list.

After selecting the desired layout, you can add objects to the screen, and save this current positioning of objects in a View, so you can reload this view of objects in the future, just by reloading the saved view. To learn more about working with views, see the Views 66 topic.

When changing the layout, the system may automatically display the last view saved for the new layout, if the option to Remember the last view when changing layouts 28 is activated. If this option is disabled, the system will be able to Keep objects on screen when changing layout 24 if this second option is activated, otherwise, the system will clear the screen, removing all objects, when changing layout.

5.1 Creating Layouts

The Surveillance Client has an embedded layout editor. To access it, simply click on the buttons on its toolbar:

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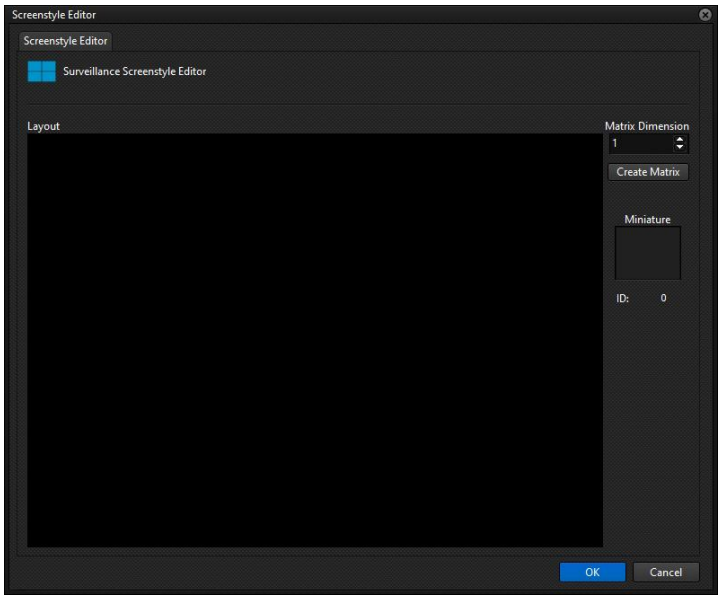
To add a new layout, click the "**+**" button.

To delete a layout, select the layout and click the "**-**" button. The system will ask for confirmation to remove the selected layout. The button will be disabled for the system's native layouts, as these cannot be removed.

When clicking the "**+**" button, the following screen will be displayed:



- **Matrix Dimension:** Choose the dimension of the matrix to be created. The value is NxN.

Select the matrix dimension and click the **Create Matrix** button:

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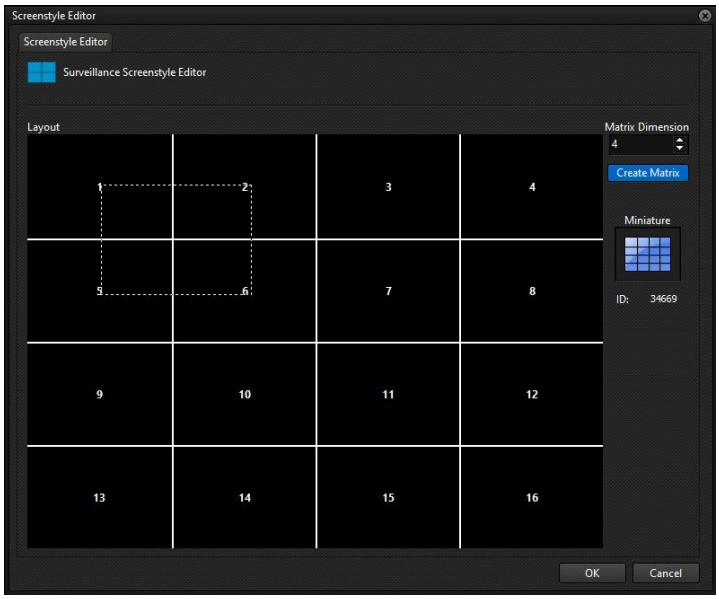
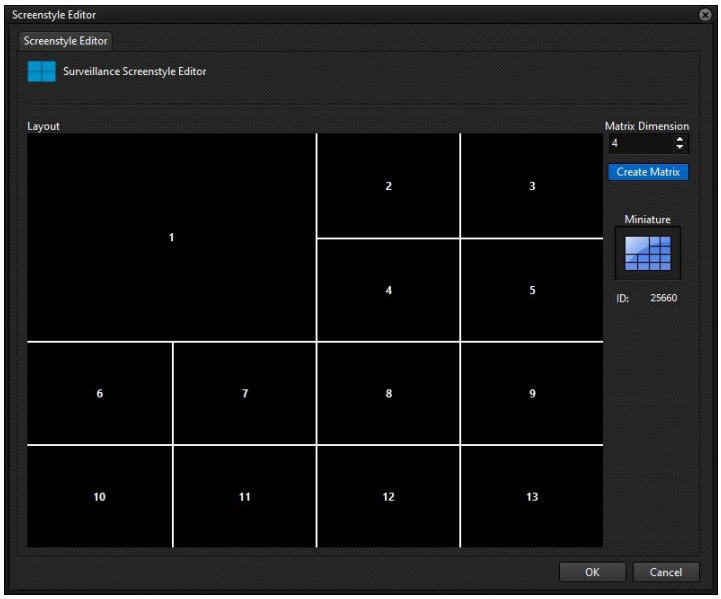


In the figure above we created a 4x4 matrix, making it possible to add 16 cameras to the screen.

After creating the matrix, it is possible to join quadrants by clicking with the left mouse button and dragging it, aiming to obtain a larger viewing area, in the example above we are joining quadrants 1, 2, 5 and 6, forming the layout presented. in the figure below:



With the union of these four quadrants we obtain space for the allocation of 13 objects, one of which will be four times larger.

It is possible to join as many quadrants as necessary as long as the final area is a rectangle.
To undo a join, repeat the same process with the right mouse button.

Click the **OK** button to save the Layout or **Cancel** to cancel the operation.

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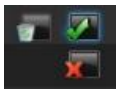
5.2 Creating Views

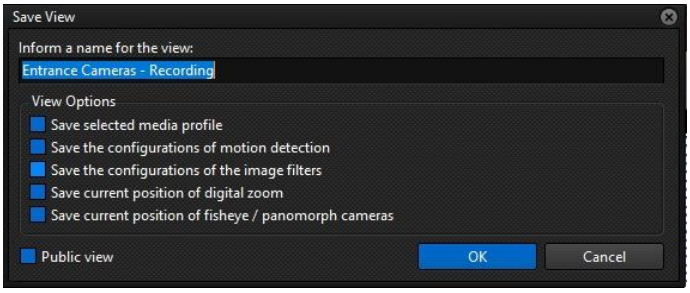
The system allows for saving the current positioning of objects on screen in a View, so you can reload this view of objects in the future, just by reloading the saved View.

- Views are always categorized according to their layout, meaning you can create and save views for different layouts.
- You must choose a unique name for this view within its category (Layout).
- The system allows views with the same name, as long as they have different layouts.
- You cannot create views for 1 object layout.
- By default, the system will only display tiles from the selected layout in the Object List 56, unless the Display views from selected layout only 26 option is unchecked.

To create a view, select the desired layout, place the desired objects on the screen and click the **Save View** button:



The following screen will be displayed, with options for saving the view:



- **Name**: Enter a name for the view. This name must be unique for the selected layout.
- **Options**: The options selected here will be saved along with the view, so when it is loaded again, these saved options will be applied.
  - **Save selected media profile**: Selecting this option will save the current Media Profile 84 for each camera.
  - **Save motion detection settings**: Selecting this option will save the motion detection settings along with the view. To learn how to configure motion detection, see the Motion Detection Settings 36 chapter.
  - **Save image filter settings**: By selecting this option, the image filter settings will be saved along with the view. To learn how to configure image filters, see the chapter Image filters 82.
  - **Save Current Digital Zoom Position**: By selecting this option, the last digital zoom position left on each camera will be saved. To learn about digital zoom, see the chapter Digital PTZ 77.
  - **Save current position of fisheye/panomorph cameras**: Selecting this option will save the filter, mode and current zoom position on the 360 camera dewarp. To learn about Fisheye / Panomorph lenses, see the Fisheye / Panomorph 90 Lenses chapter.
- **Public View**: Select this option to indicate that this is a Public View, or deselect it to indicate that it is a Private View. The Public View will be displayed to all users on the system, while the Private View will be restricted to the user who created it.

The Public View will be displayed in the object list with the following icon:

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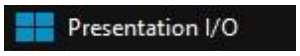
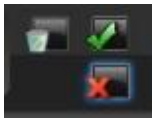


The Private View will be displayed in the object list with the following icon:

Views will dynamically update in real time when created, updated or deleted on all clients, without the need to reconnect to the server.

To delete a mosaic, select the desired mosaic and click the **Delete** button:

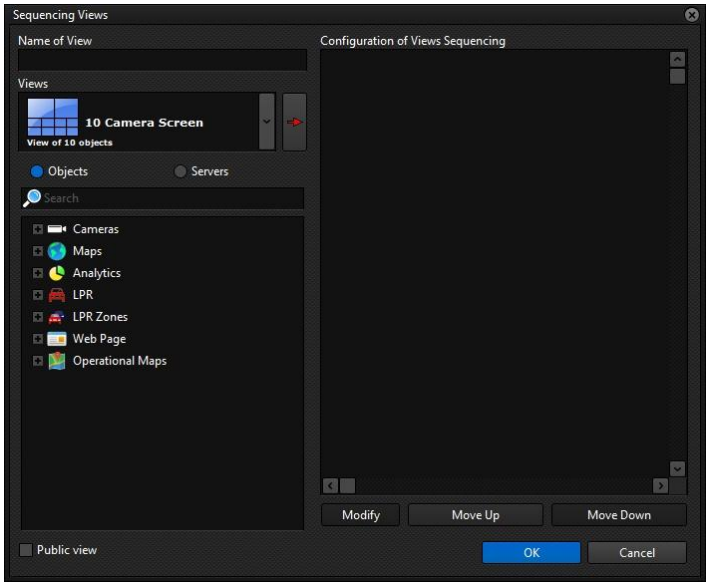


The **Clear** button, represented by a trash can, will remove all objects on screen.

5.2.1 Timer Views

This layout allows the creation of a sequence of objects and views that will be displayed on the screen alternately with an exhibition time defined by the user. To access this feature, select the timer layout in the list of layouts and then click on **New Sequencing View**, as shown in the figure below:

After this process, the timer view inclusion screen will be displayed, as shown in the figure below:



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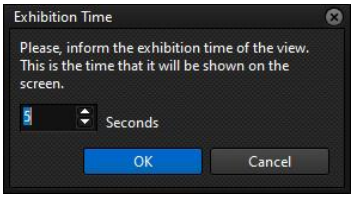
- **View Name**: Enter a reference name for the view.
- **Views**: List of available views to add to the timer view. These views must already be created in advance.
- **Object List**: List of objects available to add to the timer view.
- **Sequencing setup**: Ordered list of timer view items that will be sequenced on the Surveillance Client screen.
- **Modify**: Modifies the display time of the selected item.
- **Up and down buttons**: Changes the display order of the selected object.
- **Public View**: Select this option to indicate that this is a Public View, or deselect it to indicate that it is a Private View. The Public View will be displayed to all users on the system, while the Private View will be restricted to the user who created it.

To add views to the sequencing, select it and click the **Add** button, represented by the red arrow pointing to the right, or to add objects, select the object and drag it to the list. When adding an object or view to the sequencing list, the screen requesting the time that this object or view will be displayed on the screen will be shown, as illustrated in the figure below:



- **Seconds**: Display time of the selected object or view

Enter the desired time and click OK.

After adding all the desired views and/or objects to the timer view, click OK to save and it will be displayed on the screen, and it will start executing, sequencing the items in the order that was created in the sequencing list.

The system provides some controls for manipulating this view, located on the main screen of the Surveillance Client, with functions such as pausing the sequencing, moving forward and backward between objects or views and restarting, as illustrated in the figure below:

This control will be presented below the list of objects on the Surveillance Client main screen, only when the TIMER layout is selected.

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Chapter VI

6 Cameras

Camera control is the most important component of the system, it is with this control that you can view a live camera:

You can customize and configure this control through the Surveillance Client's Live Monitoring Settings 29.

Camera control has several keyboard shortcuts. See the Surveillance Client Shortcuts 20 chapter to learn more.

With the right mouse button, you can access a powerful context menu, with several shortcuts to optimize system operation. See the Context Menu for Optimized Operation 28 chapter to learn about object shortcuts.

In this session you will learn how to use all the features that camera control offers.

6.1 PTZ

Through the Surveillance Client it is possible to control moveable cameras using the PTZ feature.

The system provides several ways to control a camera's movement:
- Visual Screen Controls
- Physical Joystick or Keyboard Controller
- Visual Joystick
- Click and Center
- Area Zoom
- Digital Zoom

How the four ways of moving a camera work will be explained in the following topics.

6.1.1 Moving using on-screen controls

The system provides all the necessary tools to move the camera through the screen controls. To access this feature, locate the PTZ controls on the Surveillance Client's main screen, as illustrated below. These controls are only available if a camera with PTZ support is selected.

To move a camera, you first need to select it, to do this click on the image of the desired camera. A colored border will appear around the camera to indicate that it is selected.

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6.1.1.1 Directional Arrows

Moves the selected camera to the desired direction. If the selected camera driver supports Joystick PTZ, you can click and hold the directional button and the camera will move while the button is pressed. If the selected camera driver does not support Joystick PTZ, when you click the directional buttons, the camera will move a few steps and stop, regardless of whether you keep the button pressed.

6.1.1.2 Zoom Buttons

Performs Zoom In or Zoom Out function. If the selected camera driver supports Joystick PTZ, you can click and hold the zoom buttons and the camera will perform the zoom function while the button is pressed. If the selected camera driver does not support Joystick PTZ, when you click the zoom buttons, the camera will zoom a few steps and stop, regardless of whether you keep the button pressed.

6.1.1.3 Sensitivity Bar

This bar defines the speed at which the camera will move when performing a PTZ function. The system will always save the last position used by the user.

6.1.1.4 Focus Button

If your camera supports focus control, use these controls to control your focus.

- **Button +**: Adjusts focus for objects close to the camera.
- **Button -**: Adjusts focus for objects far from the camera.
- **Auto Focus Button**: Enables or disables Auto Focus. When pressing this button, the context menu below will be displayed, with options to Enable or Disable Auto Focus:

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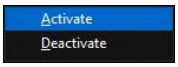
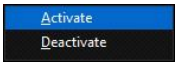


6.1.1.5 Iris Button

If the camera supports iris control, use these controls to control the opening and closing of the lens.

- **Button +**: Opens the lens iris to receive more light.
- **Button -**: Closes the lens iris to receive less light.
- **Auto Iris Button**: Activates or deactivates Auto Iris. When pressing this button, the context menu below will be displayed, with options to Enable or Disable Auto Iris:



6.1.1.6 Digital PTZ Button

Enables or disables Virtual PTZ. To learn what it is and how to use this feature, see the topic Using Digital PTZ 77.

6.1.1.7 Joystick Button

Enables or disables the visual joystick. To learn what it is and how to use this feature, see Moving using the Visual Joystick 76.

6.1.1.8 PTZ Lock Button

Locks the camera's PTZ controls for exclusive use by the operator, following the hierarchy of priorities pre-defined by the administrator. When activating this lock, only the operator who activated the lock will be able to control the PTZ of the camera, all other operators will lose control of this camera. Only an operator with higher priority will be able to take over control.

PTZ locking can also be done using the shortcut **Ctrl + L**.

When a PTZ camera is locked for exclusive use, an icon indicating the lock will be displayed on the PTZ control:

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When keeping the mouse over this icon, the system will display the user name and IP of the station that has the block.

6.1.1.9 Home Position Button

The camera will move to the Home position when you press this button.

The home position can also be called using the shortcut **Ctrl + H**.

6.1.1.10 Windshield wiper

Activates the windshield wiper, if the camera supports this feature.

6.1.1.11 Presets

Preset control allows you to recall camera presets (Predefined positions) or create new presets (If the operator has the right).

6.1.1.11.1 Calling Presets

To recall a preset, simply select it from the list and click the play button as shown in the figure below:

The system also provides quick access to the first 9 presets, via the numbered buttons:

When keeping the mouse over a numbered button, the system will display the name of the preset.

You can also call presets using the shortcuts **Ctrl + 0..9**.

6.1.1.11.2 Creating Presets

To save a preset, move the camera to the desired position, and click on the create save preset icon, represented by a Rec button:

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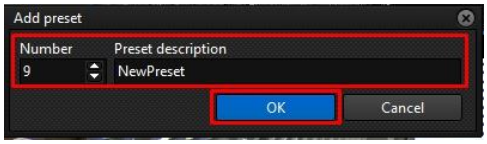
The preset registration window will be displayed:



- **Number**: Select the preset number. The system will automatically increase this value, suggesting a preset number, based on the value of the last registered preset.
- **Description**: Provide a description for this preset.

When finished, click the **OK** button to save or **Cancel** to abort the operation.

6.1.1.12 PTZ Patrol

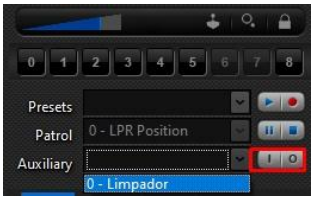
This control allows you to start or pause PTZ Patrols. This is a feature that allows the camera to follow a tour pre-defined by the administrator.

To start a Patrol, select the desired tour and click the **Play** button.

To pause a Patrol, press the **Stop** button.

You can also start or pause a Patrol using the shortcut **Ctrl + P**.

6.1.1.13 Auxiliary



Activates or deactivates an auxiliary camera function if supported.

To activate or deactivate an auxiliary function, first select the function in the menu and press the **I** button to activate or **O** to deactivate.

6.1.1.14 PTZ Usage Status

When a user is using PTZ on the selected camera, an icon indicating its use will be displayed on the PTZ control:

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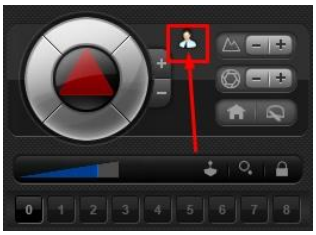

By placing the mouse over the icon it is possible to see which user is interacting with the PTZ of the selected camera:

6.1.2 Moving by Click and Center

This feature, if supported by the camera driver, allows the user to click on any point in the camera image where they want to center the image.

When clicking on a point in the image, the camera will move and position itself to center the clicked point.

To use this feature, select the desired camera, and then click on the center button on the PTZ control screen. The central control button will be activated:

With this button pressed (Enabled), click on the desired point in the camera image.

While this button is pressed, the system will not allow the selection of another camera. Disable the button so you can select another camera.

6.1.3 Moving with Area Zoom

The system allows the movement of a PTZ camera by selecting an area of the image, if the camera driver supports this function. When selecting an area in the camera image, the system will position the camera to zoom in to the desired area, moving the camera's Pan, Tilt and Zoom simultaneously in order to center and zoom in to the selected area:

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To perform the Area Zoom function, right-click on the initial position, and, keeping the right button pressed, drag the mouse to create a selection area. When releasing the right mouse button, the system will perform the Area Zoom.

6.1.4 Moving with Visual Joystick

The visual joystick is a tool that simulates the operation of a desktop joystick using the mouse.

To activate the visual joystick, select a camera and then click on the Joystick button:

You can also activate and deactivate the Visual Joystick using the **Ctrl + J** shortcut.

The Joystick controls should appear as shown in the figure below:

To use the visual joystick, click on the image with the left mouse button, keep the button pressed, and move the mouse to any position on the image. The further away from the center of the image the mouse is, the faster the camera will move, and vice versa.

To perform zoom operations, use the mouse wheel, turning it forward, the image will be zoomed in, and backward, the image will be zoomed out. You can also use the **+** and **–** visual buttons, displayed near the center of the image. The zoom speed can also be controlled and viewed by the control on the left side of the image. The further away from the center the red marking is, the faster the zoom will be, and vice versa.

6.1.5 Moving with Physical Joystick

If you have a standard USB desktop joystick or a Keyboard Controller, you can perform PTZ operations on a camera through it.

To learn how to configure a USB Joystick, see the Joystick Configuration 40 topic.

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To learn how to configure a Keyboard Controller, see the topic on Keyboard Controller Configuration 40.

Select the desired camera and use the Joystick to control it's PTZ.

6.1.6 Moving with Digital Zoom

The system allows you to perform the Digital Zoom function on images from fixed or PTZ cameras.

Fixed cameras always have Digital Zoom activated by default. To use this function on PTZ cameras, select the desired camera and click on the Digital Zoom button:

You can also activate and deactivate Digital Zoom using the shortcut **Ctrl + D**.

The icon representing a magnifying glass will be displayed on the PTZ control, indicating that Digital Zoom is activated:

With the Digital Zoom function activated, right-click on the starting position, and, keeping the right button pressed, drag the mouse to create a selection area. When releasing the right mouse button, the system will digitally zoom to the selected area. Digital Zoom can also be done using the mouse wheel or the PTZ control zoom buttons.

When zooming, a mini camera image will be displayed, with the current Digital Zoom viewing area marked in red:

With the zoom started, all Pan and Tilt options will be enabled, and you will be able to use all PTZ operating modes to move the Zoom position (For example via Physical Joystick, Visual Control, Visual Joystick, etc...).

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You can also use the mini image, and perform Digital Zoom by selecting an area within the mini image, and the new zoom will be made to the selected area.

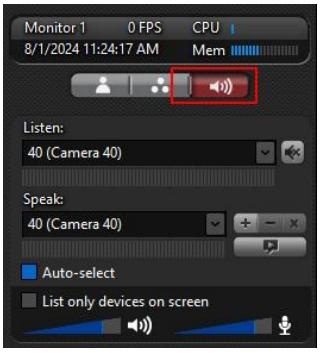
Using the mini image, you can drag the current zoom selection to another area, to do this, click with the left mouse button on a point in the mini image, the current zoom selection will be centered in that area, keeping the left mouse button pressed you can move this selection to another point in the image.

To remove the digital zoom, double-click with the left mouse button inside the mini image. You can also perform the Zoom Out operation until the zoom is completely removed.

6.2 Audio

The system allows two-way communication with the cameras, that is, it allows you to listen to the audio from the cameras in real time and also send audio using a microphone connected to the monitoring station.

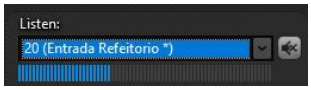
To access the Audio controls, click the corresponding button in the Controls Selection Panel:



The audio control will be displayed, as shown in the figure above.

6.2.1 Listen

To listen to audio from a camera, simply select the desired camera from the selection box:



If the **Auto-Select** option is activated, when clicking on a live camera in the Camera and Object View Panel 18, the camera will be automatically selected in the camera selection control to receive audio.

- **Mute Button**: Mutes camera audio.
- **Volume bar**: Shows the volume of the audio received, in real time.

6.2.2 Speak

Some cameras allow audio to be sent to their speakers, meaning the operator can speak through the camera.

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To speak, simply select the camera in the selection box and click the button below:

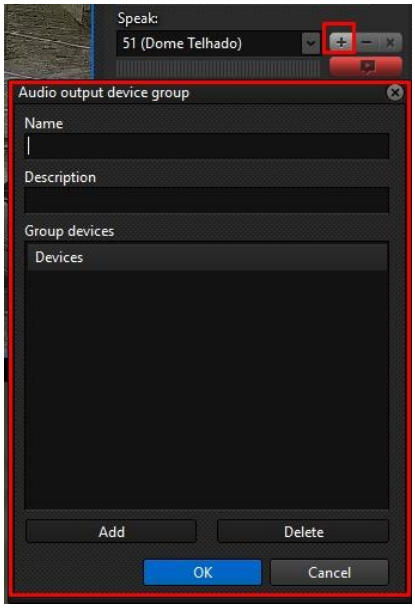
To speak, you must keep the button above pressed. You can also double-click this button and keep it pressed indefinitely, even being able to switch between cameras, or audio groups, while the audio is being sent.

If the **Auto-Select** option is activated, when clicking on a live camera in the Camera and Object View Panel 18, the camera will be automatically selected in the camera selection control to receive audio.

6.2.2.1 Audio Output Device Groups

It is possible to send audio to multiple cameras at the same time, that is, sectorize the audio areas; for this, the system allows the creation of **Audio Output Devices Groups**.

To create a group of devices to send audio, simply click on the button with the **+** sign and the window below will open:



- **Name**: Name of the audio output device group.
- **Description**: Description of the created group
- **Devices**: Click **Add** to add devices to the group, or **Delete** to remove selected groups from the list.

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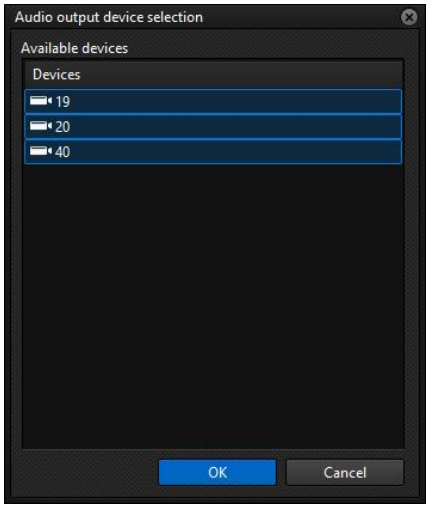
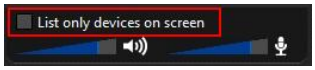
When you click the **Add** button, the device selection screen (Supporting audio output) will be displayed, and you can select the devices you want to be part of the group:



To modify a created group, select it and click on the button: **-**
To delete a created group, select it and click the button: **x**

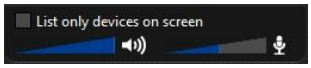
6.2.3 List only devices on screen



Select this option so that the checkboxes contain only the cameras that are currently on screen, otherwise all cameras will be listed.

6.2.4 Volume

Adjust the volume of your speaker and microphone by dragging the blue bars shown in the image below:



6.3 Automatic Media Profile Switching

The system has a function that allows you to change the media profile live when selecting a camera in the Camera and Object View Panel 18. This feature is especially useful to save processing and bandwidth used by the Monitoring Station. When multiple cameras are being viewed on the same monitor, it will rarely be necessary to use the maximum resolution for these multiplexed cameras on screen, as the monitor resolution is generally lower than the resolution of all cameras combined, therefore, it is recommended to use a lower resolution for live viewing by default, and when greater detail is needed, have the ability to switch to a higher resolution media profile easily.

To keep system operation simple and efficient, switching the media profile can be done by simply selecting the live camera:

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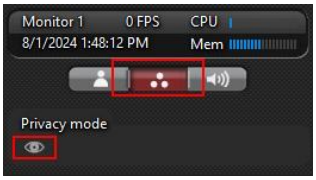
Note that in the example above, the unselected camera is displaying a 704x480 resolution image, which is suitable for being displayed in small quadrants, together with other cameras. As it is a low-resolution image, it will consume less bandwidth and CPU or GPU resources to decode the video, thus allowing a greater number of simultaneous cameras on screen. When the camera is selected (Image on the right), the system will switch to a larger profile (In the example above, 1920x1080), allowing the visualization of greater details, as well as a better Digital Zoom 77.

This feature must be configured by the System Administrator through the Administration Client.

6.4 Privacy Mode

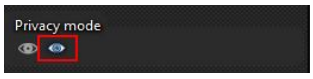
Privacy Mode allows you to determine a list of users who will lose access to a camera's image when it is activated in the Surveillance Client. This feature can be very useful when an installation's cameras are available externally, meaning the operator can temporarily block external access to the camera when desired.

To access the Privacy Mode control, select the corresponding button in the Control Panel Selection:



To activate a camera's Privacy Mode, select the camera you want to control and click on the mode activation button, shown in the image above.

Once activated, an icon indicating that Privacy Mode is active for the selected camera will be displayed in the Privacy Mode Control, as well as the image will be frozen for configured users, with a message as shown in the image below:



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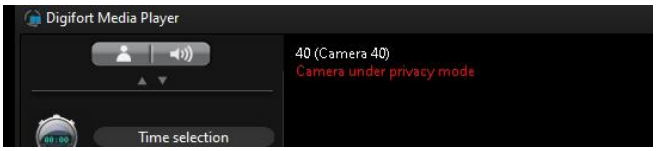
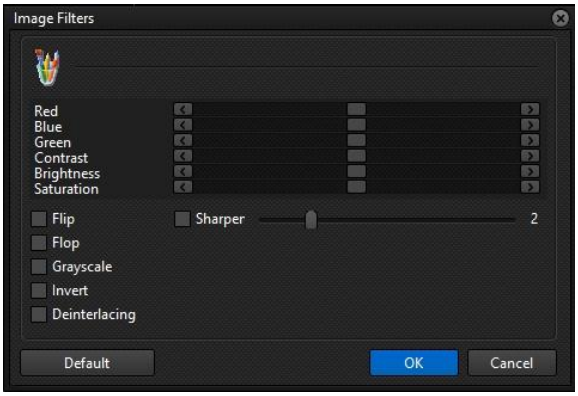
Users who are not configured to maintain camera access will not be able to view their live images, nor will they be able to play videos while Privacy Mode is enabled:



6.5 Image filters

Image Filters are settings applied to a camera image with the aim of enhancing colors and details of a scene to aid analysis.

To access this feature, right-click on the image of a camera, thus displaying its Context Menu, and select the **Image Filters** option, as illustrated in the figure below:



- **Red**: Adjusts the red color level of the image.
- **Blue**: Adjusts the blue color level of the image.
- **Green**: Adjusts the green color level of the image.
- **Contrast**: Adjusts the image contrast level.
- **Brightness**: Adjusts the image brightness level.
- **Saturation**: Adjusts the color level of the image.
- **Flip**: Flips the image horizontally. Recommended when the camera is installed upside down.
- **Flop**: Flips the image vertically. Recommended when the camera is installed upside down.
- **Greyscale**: Leaves the image in grayscale.
- **Invert**: Inverts the color channels of the image.
- **Sharpen**: Applies the edge enhancement effect to the image.

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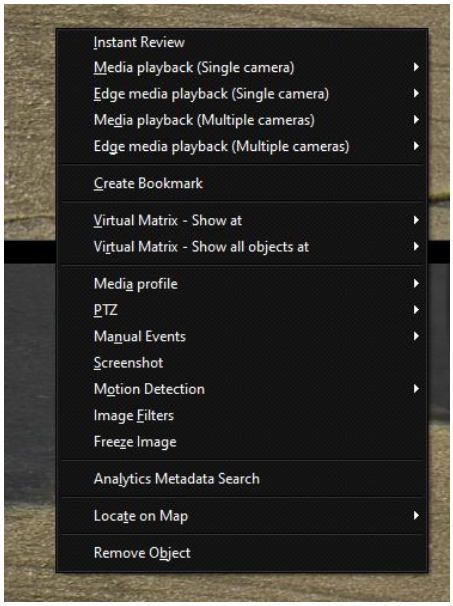
- **Deinterlacing**: The Deinterlacing filter softens images that are of lower quality due to movement. This effect usually occurs on older analog cameras, at 4CIF resolution. The figure below shows an example of deinterlacing.

- **Default Button**: Returns all values to the default position.

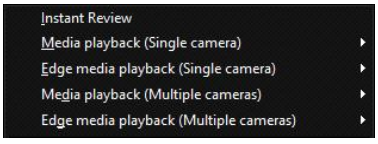
6.6 Context Menu

With the right mouse button, you can access a powerful camera context menu with various shortcuts to optimize system operation.



6.6.1 Media Playback

The menu provides several options for fast media playback, such as Instant Review and Quick Playback for single and multiple cameras.



To learn about quick media playback see the chapter: Quick Playback 127

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6.6.2 Create Bookmark

Opens the Bookmark creation screen with the chosen camera.

This option will also be displayed in the Context Menu of camera objects or camera groups in the Object List 20. If this option is executed from a camera group, all the cameras in the group will be added to the Bookmark.

To learn more about bookmarking, see the Bookmark 138 chapter.

6.6.3 Virtual Matrix

Sends the object to another monitor via the Virtual Matrix. To learn more about the Virtual Matrix, see the Virtual Matrix 155 chapter

6.6.4 Media Profile

Selecting this item will display a sub-menu with all the media profiles for the selected camera. To change the media profile to be used for monitoring the camera, simply select the desired option. To learn how to create media profiles, see the **Administration Client Manual**.

6.6.5 PTZ

Provides quick access to some PTZ options for the camera. To learn about PTZ features, see the PTZ 70 chapter.

6.6.6 Eventos Manuais

If there are manual events registered for this camera, you can activate them by clicking on the desired event. To learn more about Manual Events, see the Manual Events 152 chapter.

6.6.7 Screenshot

By selecting this item, a screen will be displayed with the current image of the selected camera, allowing you to save this image to a file.

6.6.8 Motion Detection

By selecting this item, a sub-menu will be displayed with the motion detection settings for the selected camera:

- **Activate / Deactivate**: Activates or Deactivates motion detection for the selected camera.
- **Settings**: Opens the motion detection configuration screen for the selected camera. To learn how to configure motion detection, see the chapter Motion Detection Settings 36.

6.6.9 Image Filters

Opens the image filter configuration screen for the selected camera. To learn how to configure image filters, see the chapter How to configure image filters 82.

6.6.10 Freeze Image

When you click on this option, the system will freeze the camera image so that it is paused. To return to normal, simply click on the same option again.

6.6.11 Analytics Metadata Search

Opens the analytics metadata search screen with the camera filter already applied to display the results for this camera only.

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6.6.12 Locate on Map

This option allows you to locate the selected camera on all the maps of the selected type that the user has access to. If the camera is part of a map, the system will open a screen with the maps in question and the camera denoted by a red circle.

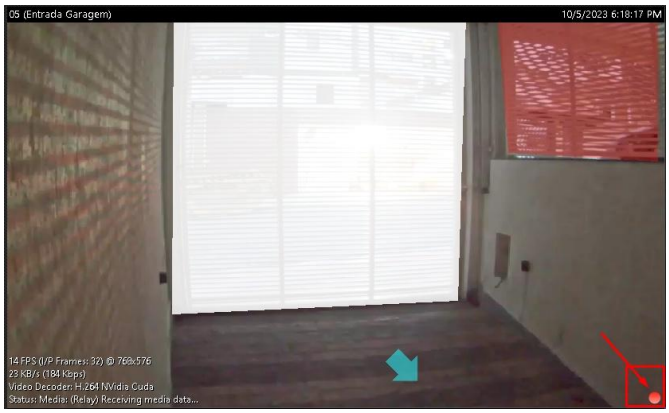
- **Operational Map**: Locates the camera on operational maps.
- **Map**: Locates the camera on synoptic maps.

6.7 Performing Local Recordings

The system allows the operator to make recordings at his monitoring station, that is, in addition to the images being recorded on the server, they will also be recorded on the operator's computer.

To access this feature, enable recording controls in the Surveillance Client Settings 29.

After activating this feature, the recording controls will be displayed over the cameras image, as illustrated in the figure below:



- To start camera recording at the operator's workstation, click on the recording control. Once this is done, the control will remain in a flashing state.
- To stop recording, click the recording control again.

Local recordings from this camera will be held in the Local Recording Directory. To change this directory, as well as the recording format, see the Surveillance Client Settings 26.

To learn how to play local videos, see the chapter on Local Video Playback 130.

6.8 Operation with Object Links

The Object Links function provides a revolutionary new way to navigate between the system's cameras, making system operation easier and faster.

Object links allow you to create virtual links between different cameras or objects, and also create event triggers overlaid on camera images.

The following image displays an example of using object links. Each camera on display has a link to other cameras in the image. When clicking on the link (Represented here by semi-transparent arrows), the associated camera will be loaded, allowing quick navigation between cameras, for example, when following a person who is moving between cameras.

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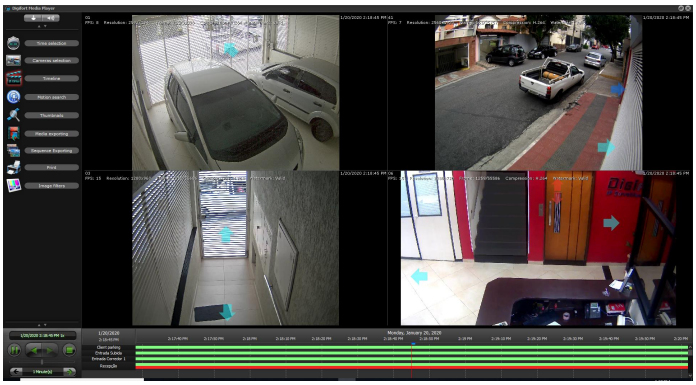
It is also possible to associate events (And several other types of objects) in the images, such as Global Events that can be used to trigger I/O outputs to open doors and gates. In the image below, cameras 01 and 03 have buttons to physically open the gates.

Object links can also be used during video playback, making them an indispensable tool for analyzing recorded incidents.



Object links can be represented by icons, as shown in the images above, or also by a zone, which is represented by a semi-transparent polygon in the image, which can be added, for example, to the outline of a door or gate, providing a visual representation that if the operator clicks on this gate, he will be able to see the image from the camera on the other side, or he will also be able to open it.

The image below shows a white zone, which is associated with a door, when clicking on the door, the camera from inside the room will be displayed.

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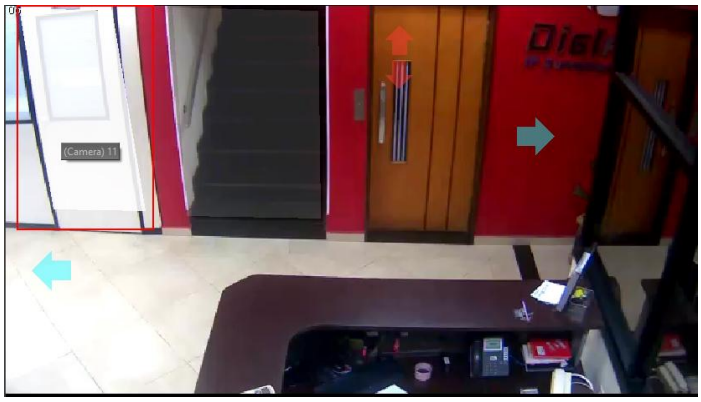
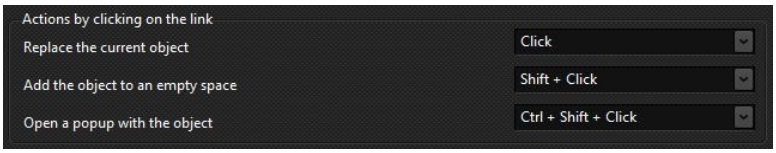


6.8.1 Operating Modes

The Object Links function is very flexible, and allows different ways to access and execute the links. The system allows you to configure a shortcut for each type of operation through the Object Link Settings 46 .



The system allows different types of actions when executing a link, and provides different shortcuts to perform the available types of actions. Below are the different ways to operate object links.

6.8.1.1 Replace the current object

This action will cause the camera to be replaced in its current screen space by the object referenced by the link (if the link leads to an object, if it is an event, the camera will remain on the screen):

In the example above, when executing the top right camera link, through its configured shortcut (Default **Click**), the linked camera will be displayed, replacing the original camera in its space.

If the link is to a Public View, all objects on screen will be removed, and the referenced view will be loaded.

6.8.1.2 Add the object in an empty space

When performing this action, the system will add the object referenced by the link, in an empty space in the Camera and Object View Panel, without removing the camera from the screen. If there are no more empty spaces on the screen, the system will open a Popup with the referenced object.

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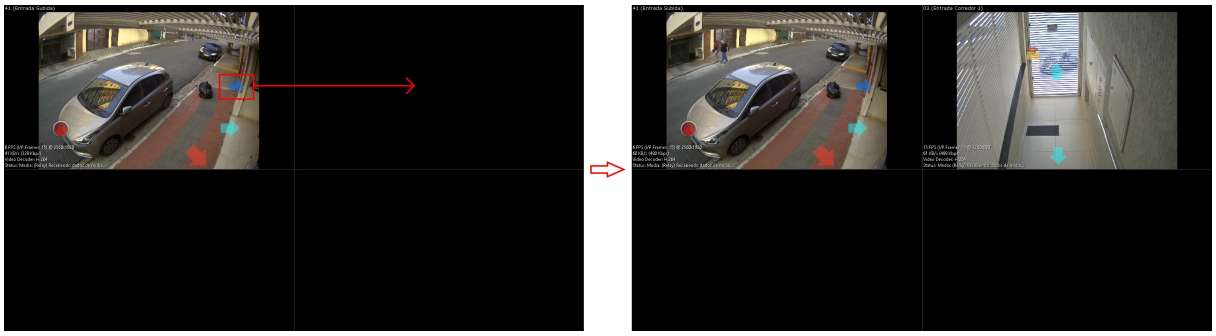


In the example above, when executing the top left camera link, through its configured shortcut (Default **Shift + Click**), the linked camera will be added in the next empty space in the panel.

If the link is to a Public View, all objects on screen will be removed, and the referenced view will be loaded.

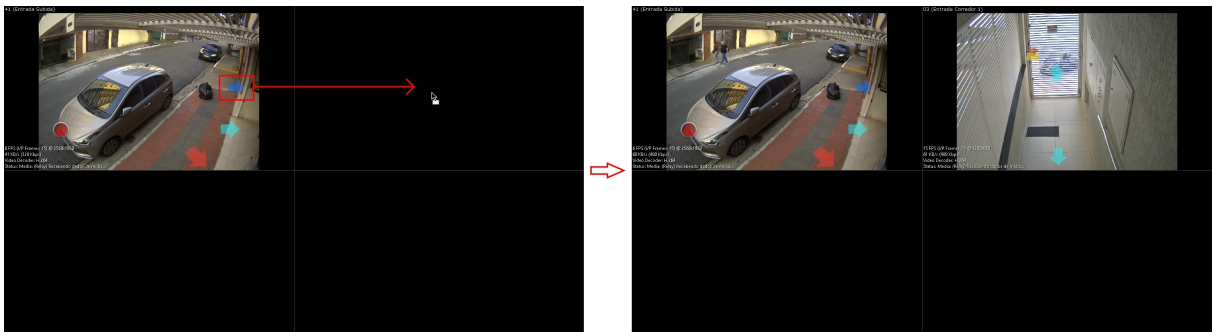
6.8.1.3 Open a popup with the object

When performing this action, the system will open a popup with the object referenced by the link.

In the example above, when executing the top left camera link, through its configured shortcut (Default **Ctrl + Shift + Click**), a popup with the referenced camera will open.

6.8.1.4 Drag and drop a link to a screen space

Allows you to drag a link from within a camera, to the Cameras and Objects View Panel, and open the object corresponding to the link, in the chosen quadrant.



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The example above shows a link from the top left camera, being dragged to an empty space, and the associated camera being opened in this space.

You can also drag a link over another object, replacing this target object with the link object.

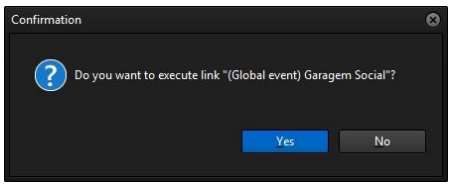
6.8.2 Triggering Events or Actions

Object Links can also reference events such as **Global Events** and **Manual Camera Events** and actions such as **Call a Preset**. These events are generally associated with physical actions, such as opening a gate, triggering an alarm or triggering some automation procedure and the link provides quick and intuitive access to trigger this event.

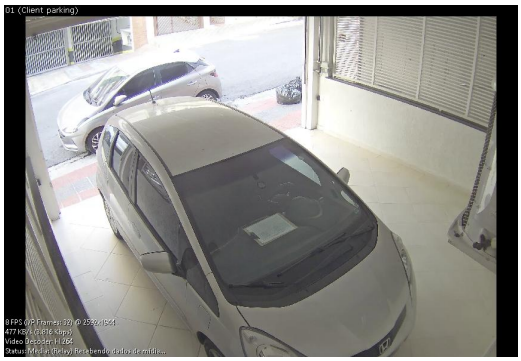
Links to Events are always accessed via the Left Mouse Button **Click** shortcut.

In the following image, we have a link on a gate, referencing its opening. The purpose of this link is to open the gate.

When clicking on the link, the system will display a confirmation message for the execution of the associated event. You can suppress this message, and execute the event directly using the **Shift + Click** shortcut. The confirmation message will only be displayed for Event type objects. Actions such as **Calling a Preset** will be performed directly.



The figure below represents the execution of the event, effectively opening the gate.



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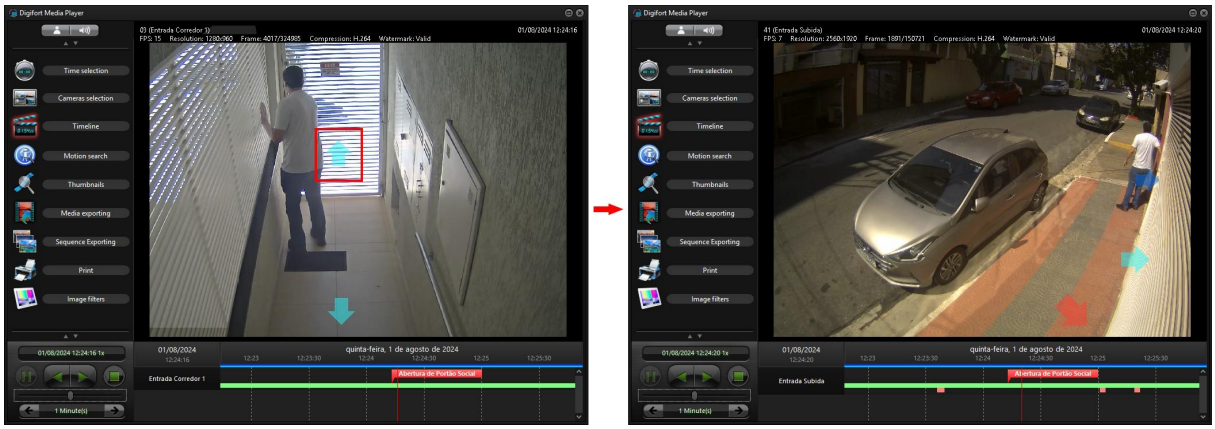
6.8.3 Media Playback

Object Links are particularly useful and powerful during an investigation with Media Playback. With them you will also have all the power to switch between cameras and views, allowing operations such as following a suspicious person, who travels through several cameras:



In the example above, we see a person leaving a building, through a corridor camera and, when clicking on the link to the external camera, it will be loaded, allowing advanced investigation of the incident.

Only links to cameras and views will be displayed during Media Playback. Links to Events, Actions, or different types of objects like Maps will not be displayed.

In the Media Player, you will be able to work in the same way as live. Different types of actions for executing links are supported, such as Replace the current object on the screen 87, Add the object to an empty space 87 and Drag and drop a link to a space on the screen 88. The open popup action will not be available in the Media Player.

You can even use object links during a Sequence Export 119, which makes this process even easier and more intuitive.

6.9 Working with Fisheye and Panamorph Lenses

If the camera has a 360 Fisheye or Panomorph lens, the system can display the dewarped image, allowing you to navigate this camera as if it were a PTZ camera.

For Fisheye lenses, the system integrates a Plugin for several manufacturers, however not all manufacturers are supported, and the dewarping functions vary from manufacturer to manufacturer. The Fisheye Plugin must also be installed on the monitoring station.

For Panomorphic lenses, the system has a built-in library to navigate the images of these cameras, with a single interface, without the need to install additional plugins.

The system allows dewarping of 360 cameras live and during media playback.

When placing a camera with a panamorph lens on the screen, the following buttons will be available:

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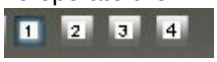
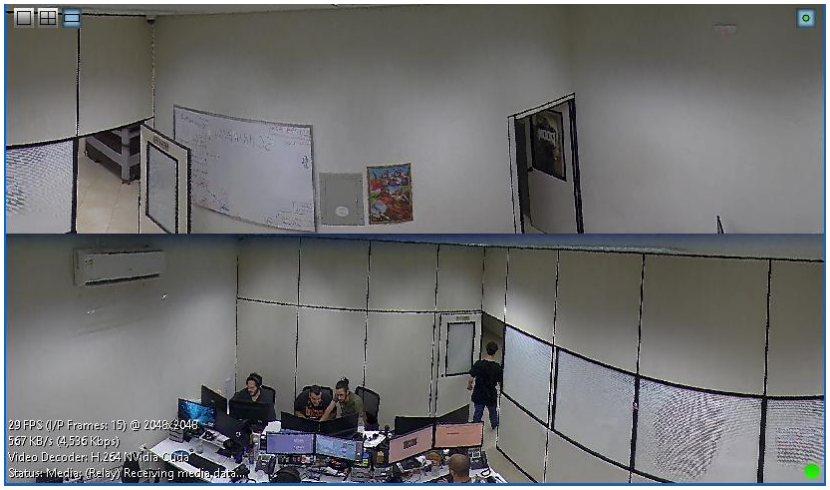
Allows you to navigate the camera with a dewarped image. The image will be displayed like a normal camera. This is the main option for working with a Fisheye or Panomorphic lens.

Divides the image into 4 cameras without distortion as illustrated below:

To operate the PTZ in one of the divisions, simply click on the desired number represented by the icons:


Generates a panoramic image as illustrated below:



When deselecting the previous Dewarping options, the original camera image will be displayed:

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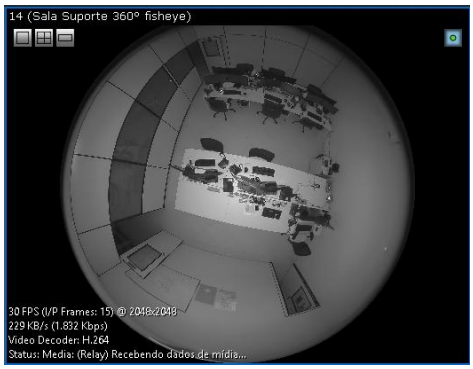


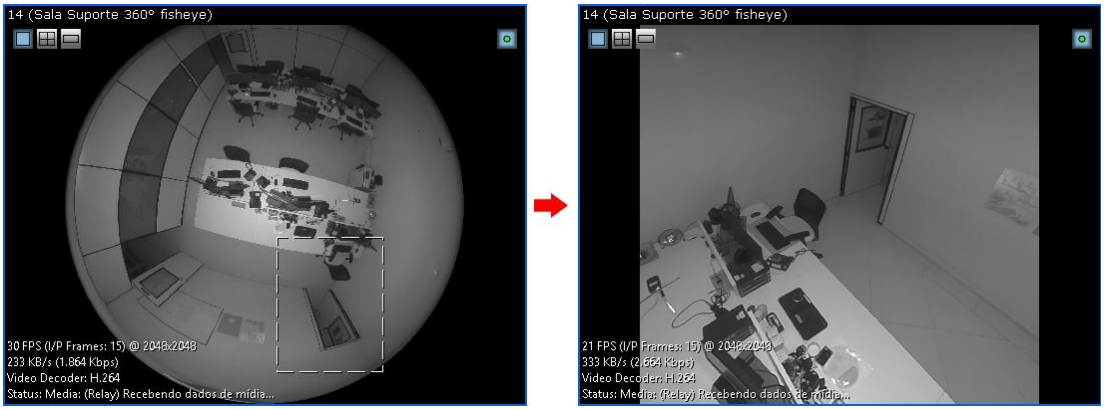
This button will hide or display the dewarping control buttons.

6.9.1 PTZ Operations

The system allows the use of all PTZ controls, such as Visual Controls, Visual Joystick, Physical Joystick and Area Zoom in images with 360 dewarping, offering a powerful solution for navigating these images.

Example of using a Visual Joystick to control 360 Cameras:

Example of Area Zoom to control 360 Cameras:



To learn about the different types of PTZ Controls, see the PTZ 70 topic.

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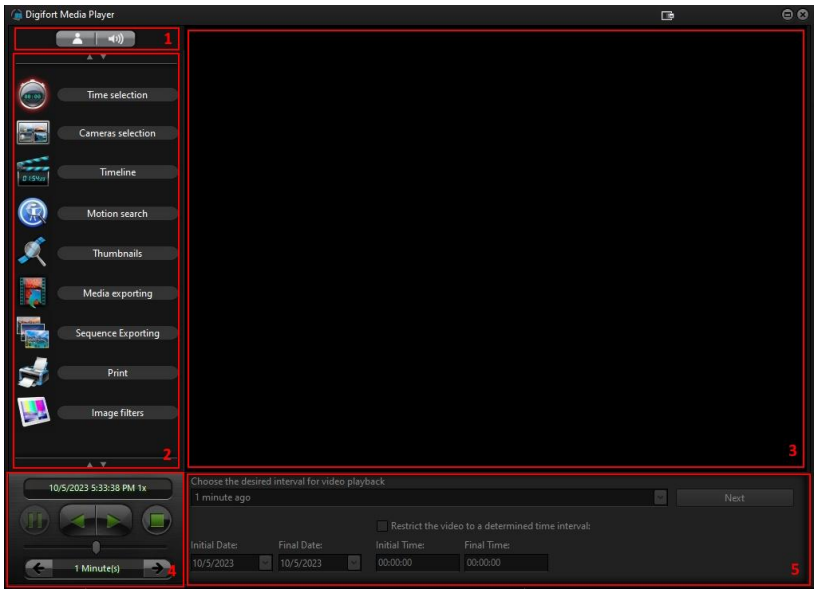
Chapter VII

7 Media Playback

The system has a powerful media player with many features to help you investigate recorded videos. In this chapter you will learn all about how to use all the features of the Media Player.

7.1 Media Player Interface

The Media Player has been designed to have a simple and intuitive interface, where operators with minimal training can operate the system easily and efficiently. The player's interface is made up of various elements and tools. Below are its main elements:



1. **Control Panel Selection for PTZ and Audio**: This panel allows you to open the controls for moving 360 cameras and controlling audio.
2. **Tool Selection Panel**: Allows you to select various tools for video playback.
   a. **Time Selection**: Opens the panel with controls for selecting the media playback time.
   b. **Camera Selection**: Opens the panel with controls for selecting cameras and screen layouts.
   c. **Timeline**: Opens the panel with timeline controls.
   d. **Motion Search**: Opens the panel with controls for performing motion search.
   e. **Thumbnails**: Opens the panel with controls for displaying thumbnails of the video being played.
   f. **Media Export**: Opens the panel with controls for exporting video.
   g. **Sequence Export**: Opens the panel with controls for performing a sequence export.
   h. **Print**: Opens the panel with controls for printing.
   i. **Image Filter**: Opens the panel with controls for applying an image filter to the cameras.
3. **Camera Display Panel**: This is the panel where the cameras will be displayed, and this is the same control used in the live video interface. For more details on this control, see the topic Camera and Object View Panel 18.
4. **Playback Control Panel**: This panel provides tools for controlling video playback, such as Play, Pause, Forward, Rewind, among others.
5. **Selected Tool Controls Panel**: This section of the interface is dedicated to tool panels. A tool panel will open for each option selected in the Tool Selection Panel, described in Item 2.

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The Media Player Tool Selection Panel is structured in such a way as to follow a logical order for video playback, starting with time selection, moving on to camera selection and finally opening the timeline. This is the basic sequence for starting video playback.

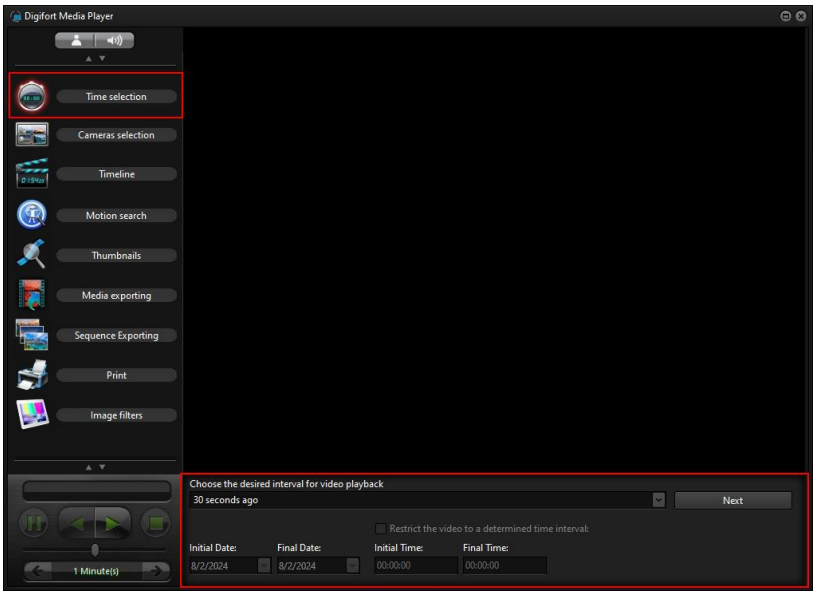
7.2 Playing Videos

To start video playback, first open the Media Player from the system's Main Menu 16:

The system also allows quick access to the video player from object Context Menus and in the Surveillance Client object list. See the topic on Quick Playback 127 to learn more about this tool. When the Media Player is opened using the Quick Playback method, the time and camera selections are already filled in and the video is already in Playback mode.

If you opened the video player directly from the Main Menu, follow the steps in the following topics, Time Selection 95 and Camera Selection 96, to start playback, if the video player was opened via Quick Playback, it will already be in Playback status and with the Timeline bar open.

7.2.1 Time Selection



The first step in starting video playback is selecting the time. This toolbar, accessible via the **Time Selection** button in the left sidebar, will provide you with the tools you need to select the time to start the **Media Session**.

- **Video Playback Interval**: The system provides some pre-registered options to make it easier to open the video playback session. You can select from the predefined time options, such as 30 seconds ago, 1 hour ago, 1 day ago, among other options, or you can also choose the **Custom** option, where you must specify the start and end date and time for opening the media session.
- **Custom Date and Time**: When the **Custom** option is selected in the Video Playback Interval, the controls for selecting the start and end date and time will open.
  - **Start Date**: Select the start date of the session.
  - **End Date**: Select the end date of the session.

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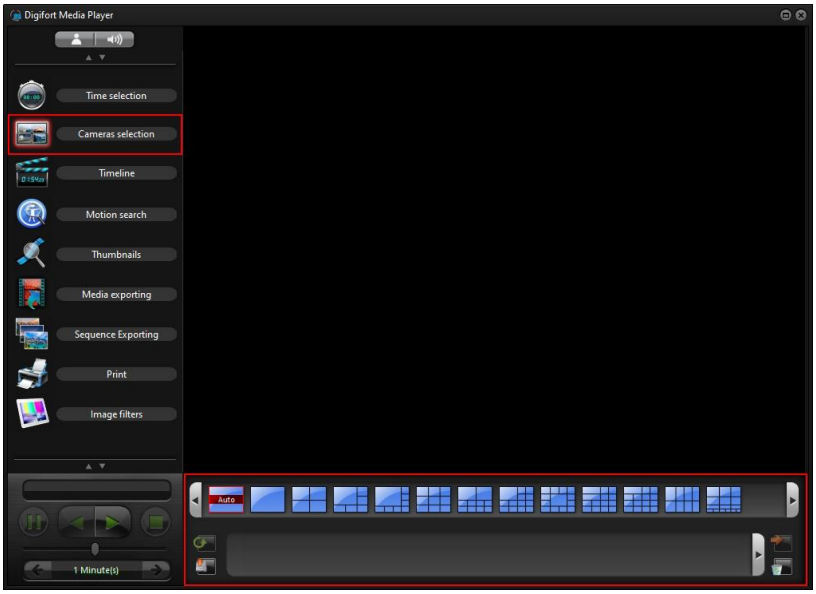
- **Restrict video to time interval**: Select this option if you want to specify the start and end time. If this option is not selected, the system will open the video displaying the full content of the selected day range.
  - **Start Time**: Enter the start time. This is the time value for the Start Date.
  - **End Time**: Enter the end time. This is the time value for the End Date.
- **Next**: When you have finished selecting the date and time, click this button for the next step, where the camera selection tool will be displayed.

7.2.2 Camera Selection



When you select the **Camera Selection** option, the system will display the camera and View selection toolbar, as shown above.

The toolbar has similar controls to the views and layouts controls for live cameras:

1. Layout type selection control.
2. Button to reload the cameras on screen (Only available when a view is selected).
3. Button for adding local recordings. For more information on playing back local recordings, see the topic on Local Video Playback 130.
4. Camera and View selection control.
5. Button to add the selected camera (in the camera and view selection control) to the screen. This button will only work for cameras, and will not be available when a view is selected.
6. Button to remove all cameras from the screen

First select the desired screen layout via the layout selection control, according to the number of cameras you want to play back. If you want to play back cameras from an already existing view, you can skip this step.

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Once you have selected the layout, you will need to add the cameras to the screen. In order to provide greater flexibility and speed in the operation of the system, there are several ways to add cameras to the screen in the video player. See the supported methods in the following sub-topics.

When all the desired cameras are on screen, click the **Play** button to start Media Playback:

Attention

A camera can only be added once on screen, i.e. you cannot add the same camera repeatedly on screen, as is possible in live mode.

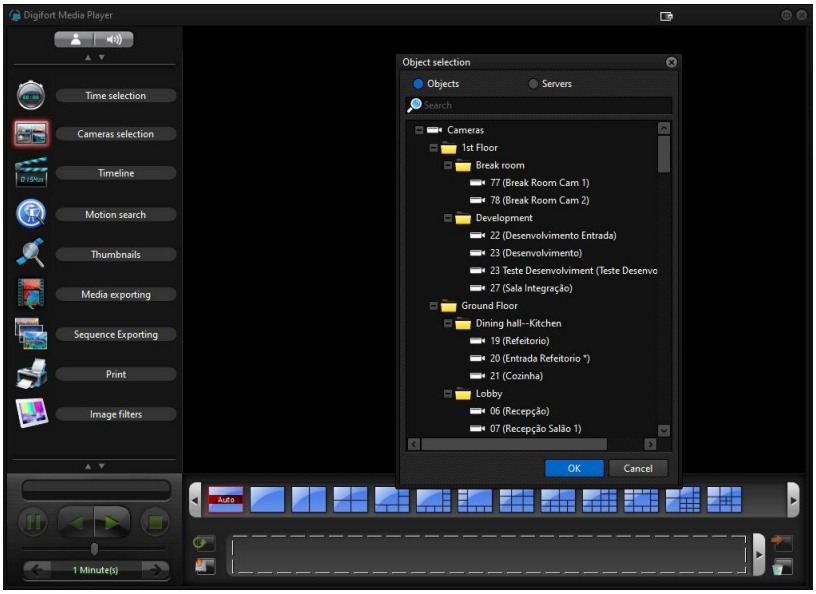
Tip

You can add, remove or replace cameras on screen at any time during media playback, without having to pause or stop the video.

7.2.2.1 From the player's camera list

The most basic way of selecting cameras for playback is from the list of cameras available within the Media Player.

Click on the camera and view selection control, and an object selection screen will appear:



Locate the cameras or view you want to add and:

- Double-click on the camera or view icon.
  - **Camera**: By double-clicking on a camera, it will be added to the next empty space on the screen.
  - **View**: By double-clicking on a view, it will be fully loaded onto the screen.
- Click once on the icon of the desired object, select it and click OK.
  - **Camera**: When you select a camera object from the list, it will be displayed in the camera selection control. You will also need to press the **Add to Screen** button to add this camera to the screen.

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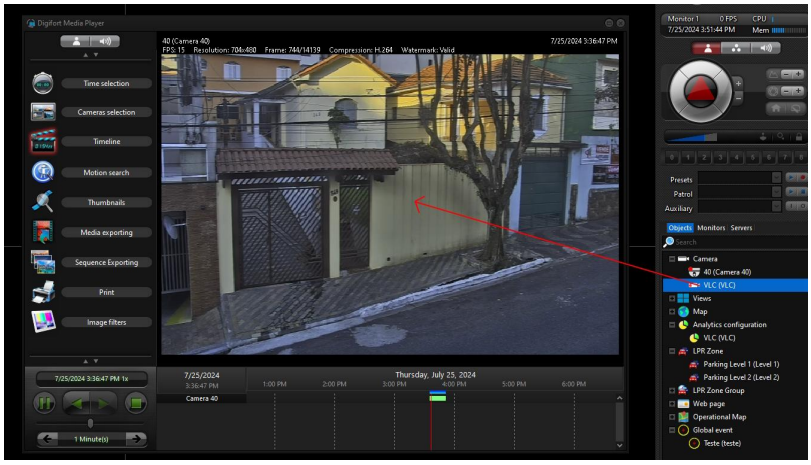
- **View**: When you select a view from the list and click OK, the screen will close and the view will be loaded automatically.

7.2.2.2 From the main list of objects

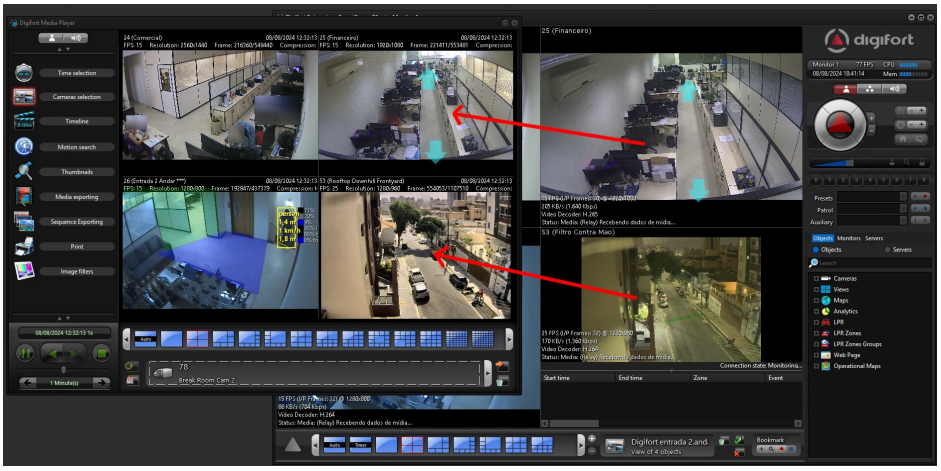
You can also add cameras to the screen from the main list of system objects by simply dragging and dropping the icon of the desired object into the video player. To learn more about the object list, see the topic Adding Objects to the Screen 56 from the Object List 56.



You can drag and drop not only cameras and views from the main list of system objects, but also other types of objects that have a camera as an anchor, such as **Analytics Configuration** and **LPR Configuration**, in which case the camera associated with the object will be displayed on screen.

7.2.2.3 From live objects

You can drag objects that are being displayed in Live mode directly into the Media Player. To do this, simply drag the desired object from the main monitoring screen to the desired location in the Media Player.



You can drag objects such as **Cameras** or objects that have a camera as an anchor, for example **Analytics Configuration** and **LPR Configuration**, in which case the camera associated with the object will be displayed on screen.

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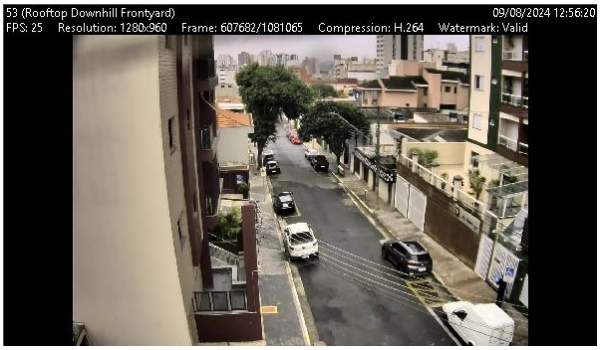
7.2.3 Cameras

When you add a camera to the screen, the camera control will be displayed:



This view control is similar to the live camera view control, but with limited video playback capabilities.

The following information will be provided in the camera header:

- **Name and/or Description of the camera.**
- **Playback time.**
- **Frames per second recorded (referring to the second currently being displayed).**
- **Image resolution.**
- **Current video frame number / Total number of video frames.**
- **Type of video compression.**
- **Image authenticity watermark**: When the image coming from the camera is recorded on the disk, a security code is generated based on this image. If the image is altered for any reason, the authenticity code is broken, displaying the value **Invalid** on the screen. The video player will not allow the export of a video frame that has an invalid watermark.

This object has a simple context menu, accessible by right-clicking on the image:

- **Save Image**: Saves the current image to disk. When you select this option, a dialog window will appear in which you must select the name of the destination file and its format. The system allows you to save the image in the following formats: JPG, BMP, PNG, WMF, GIF, TIF.

It is possible to perform Digital Zoom on images from cameras in playback. The Digital Zoom control is identical to the live mode. To learn how to operate Digital Zoom on cameras in playback, see the topic on Moving via Digital Zoom 77.

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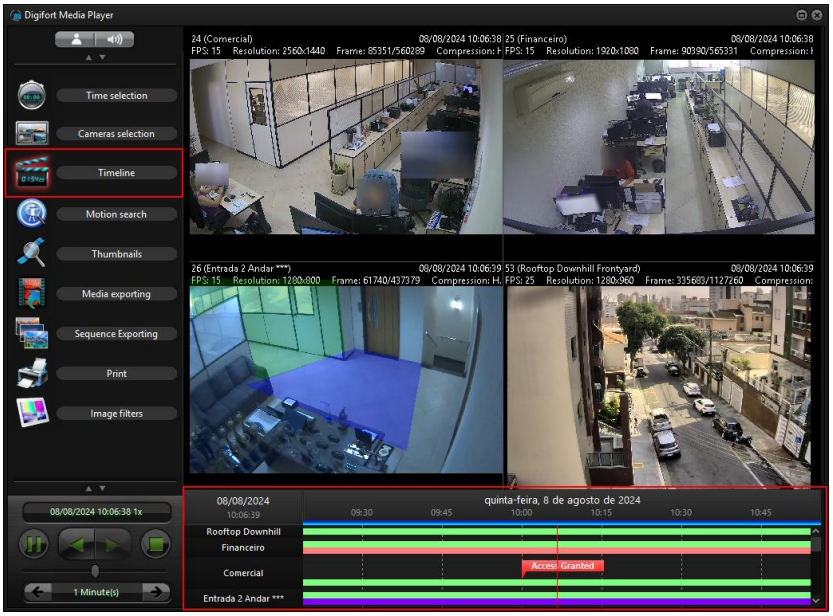
7.2.4 Timeline



When you start media playback, the **Timeline** control will be displayed automatically. You can also access the **Timeline** from its corresponding button on the **Tool Selection Bar** on the left-hand side of the interface.

This is one of the Media Player's main controls, and provides a visualization of the recording timeline, displaying the recording time for each type of track (Video, Audio, Metadata), as well as lines with motion information and bookmarks. You can use this control to navigate through the entire recording period.

See the following sub-topics for the functionalities of this control.

7.2.4.1 Interface

The timeline control interface is divided into 4 panels:

1. **Current date and time of media playback**.
2. **Timeline time division panel**: This panel displays the date and time corresponding to the timelines. The time division can be changed with the timeline zoom function.
3. **Camera panel**: This panel displays a line for each camera in the Media Player. Here you can select cameras (camera selection is used for features such as export and motion search) and the timeline search and motion search progress bars are also displayed.
   a. **Blue progress bar**: Represents progress towards finishing the timeline search.
   b. **Red progress bar**: Represents the progress of the Motion Search 106.
4. **Timeline panel**: This panel displays the timeline information for each recording track:
   a. **Green line**: Video recording.
   b. **Orange line**: Audio recording.

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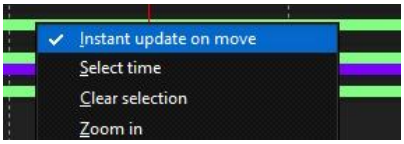
c. **Purple line**: Metadata recording.
d. **Yellow line**: Event recording. Motion / event metadata recording must be activated on the camera.
e. **Motion line**: This line is defined by the intensity of the motion detected and will vary in shades of red. Darker red indicates greater movement and lighter red indicates less movement. Motion / event metadata recording must be activated on the camera.
f. **Motion search line**: This line will contain a motion intensity graph, produced by the Motion Search 106 feature.
g. **Bookmarks**: Bookmarks will be displayed in a line indicating the time of the bookmark and the title of the bookmark.

7.2.4.2 Move

To move the timeline, simply left-click and drag. When you release the timeline, it will move inertially.

While the timeline is moving, all the images from the cameras will be updated periodically, but this effect can slow down video playback on slow connections. You can deactivate this feature via the context menu, accessed with the right mouse button, by deselecting the **Update instantly when moving** option:



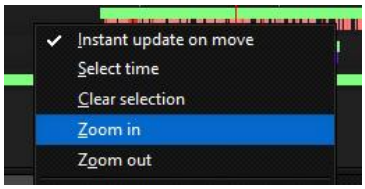
By deactivating this option, the camera images will only be updated to the timeline time when you release the mouse button, and the timeline will also no longer continue to move with inertia.

7.2.4.3 Zoom

The timeline allows you to zoom in and out to increase or decrease the time resolution displayed.

- To increase the time resolution (zoom in), press the **+** key **.**
- To decrease the time resolution (zoom out), press the **-** key.

You can also zoom in or out using the context menu with the right mouse button:



The image below represents an example of zooming in on the timeline:

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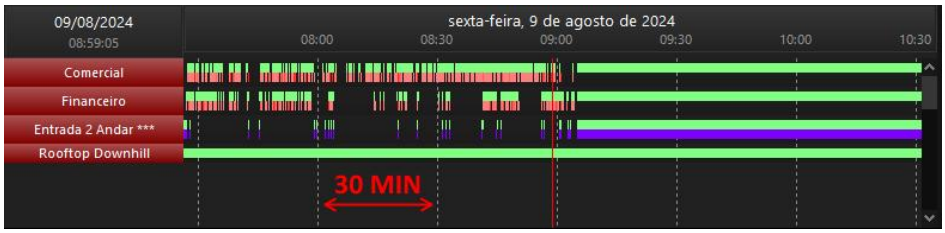
The image below represents an example of zooming out on the timeline:



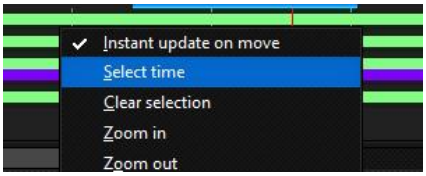
7.2.4.4 Time Selection

The timeline allows you to make a time selection, which can be used to export videos or carry out a motion search.

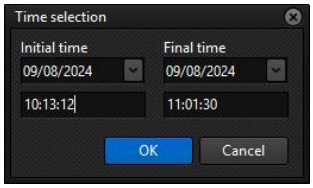
By default, once the system has finished consulting the timeline, its full period will be selected automatically.

To select a time period, right-click on the timeline and drag the mouse while holding down the right button. A blue time selection bar will appear at the top of the timeline:

You can also select or deselect the time via the context menu, accessible by right-clicking on the timeline:



- **Select Time**: Opens a dialog box for manual selection of the time, where you can choose precisely the time you want:



- **Clear Selection:** Clears the current time selection.

7.2.4.5 Bookmarks

The timeline will display the bookmarks available for the cameras in playback.

A bookmark is identified in the timeline with a bar above the media track lines, displaying the title and color of the bookmark:

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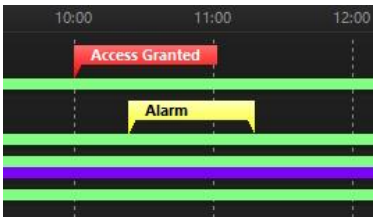
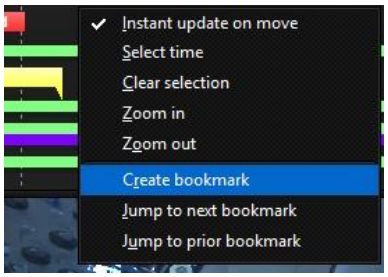


Bookmarks whose start and end date and time are the same will be displayed only with the start time stamp, and their size on screen will be determined by the size of their title text:

Bookmarks whose start and end date and time are different, will be displayed with the start and end time stamp according to their time, and their size on screen will be determined by their time:

The context menu, accessible by right-clicking on the timeline, offers some options for working with Bookmarks:



- **Create Bookmark**: Opens the screen for creating bookmarks for the cameras on screen. To learn how to create bookmarks, see the topic on Bookmarks 138.
- **Advance to next bookmark**: Clicking this option advances the timeline to the next bookmark.
- **Back to previous bookmark**: Clicking on this option takes the timeline back to the previous bookmark.

7.2.5 Playback Controls

This panel allows you to control the media playback session.

Displays date, time and current speed of video playback.

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Pauses video playback.

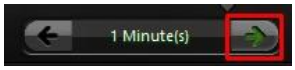
Starts video playback backwards.

Starts video playback forward.

Stops video playback and closes the media session. When you start playback again (with the **Play Forward** button), the media session and timeline will be reloaded.

Controls the video playback speed.

7.2.5.1 Forward and Reverse Control



This control allows you to advance and rewind the images according to the selected method. The default method is by time, and the time of **1 minute** will be displayed by default. In the example above, by clicking on the forward or backward arrow buttons, the system will move the video 1 minute forward or 1 minute backward.

Right-click on the center of the control to change the forward or reverse method:

- **Time**: Select the time option (Default) to allow clicking on the forward or backward directional arrows to move the system forward or backward by the selected time. The value of 1 minute will be displayed by default. To change this value, left-click on the text and drag forward to increase the minutes or backward to decrease them. You can choose the precision of seconds. To do this, the value of 1 minute must be displayed, at which point you must click and drag backwards, activating the precision by seconds option (Below 1 minute). If the control is in seconds, you can move up to 1 minute, at which point you should release the mouse button and click again if you want to move up to more minutes.
- **Frame by frame**: When you select this method, the system will advance or rewind the video by 1 frame when you click the corresponding directional buttons. Ideally, the video should be paused for this method to be effective. In the case of multi-camera playback, when moving forward or backward, the system will move 1 frame of the camera whose frame is closest to the current playback time.
- **Bookmark**: By selecting this method, the system will advance or rewind the video, jumping to the nearest or previous bookmark, depending on the directional button clicked.

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7.2.6 PTZ for 360 Cameras

You can use PTZ controls to navigate the images recorded from cameras with panomorphic or fisheye 360 lenses. To open the control, simply click on the joystick option as shown in the figure below:

- **Camera with standard lens**: PTZ will be used in Digital Zoom mode.
- **Camera with 360 lens**: The options presented in the chapter Working with Fisheye and Panamorphic Lenses 90 will be available on the screen and can be applied to video playback, just as they can in live video mode.

7.2.7 Audio Control

Audio is recorded together with the camera's video, if enabled. To choose the camera you want to listen to, simply select it on the screen, or click on the audio option as shown in the figure below:

In this control you can select the camera, activate the mute option and view the volume of the recorded audio.

If the **Auto-Select** option is activated, when you select a camera in the video player, the camera will be automatically selected in the camera selection control to receive audio.

- **Mute button:** Mutes the camera's audio.
- **Volume bar**: Shows the volume of the incoming audio in real time.
- **Volume control**: Allows you to increase or decrease the audio playback volume.

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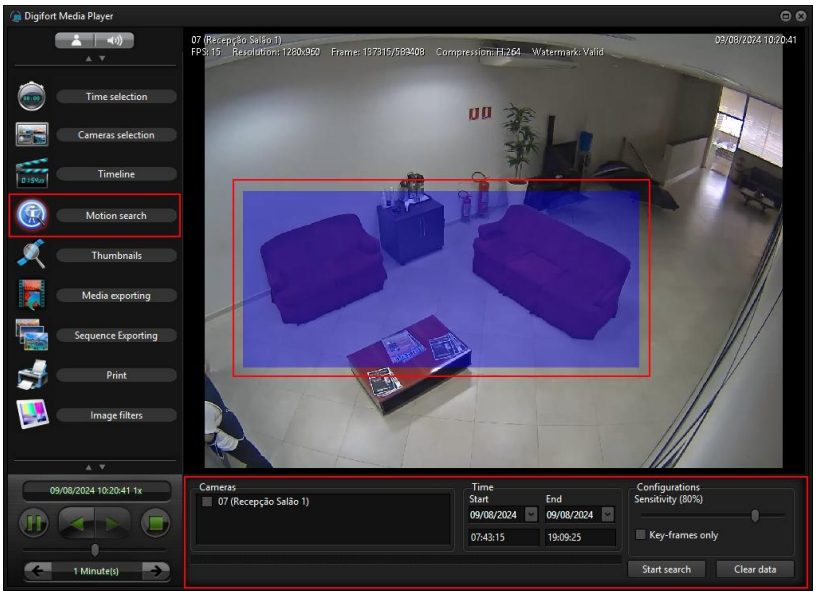
7.3 Motion Search

The system allows you to search for motion in selectable areas on the cameras, filtering the video playback scope to display only the frames that contain motion. This feature helps a lot when searching for an event, as it reduces the time spent analyzing the recorded images.

To access Motion Search, during a media playback session, click on the **Motion Search** icon in the Tool Selection Panel:



When you open this tool, the system will display the Motion Search panel, and you will now be able to select areas for motion detection on the desired cameras. The system allows you to search for motion on multiple cameras simultaneously.

- **Cameras**: Box for selecting cameras. Select the cameras to search for motion.
- **Start Time**: Start date for the motion search. The search needs a start and end time to be set. This time can be filled in according to the selection in the timeline (blue bar).
- **End Time**: End date for the Motion search. The search needs a start and end time to be set. This time can be filled in according to the selection in the timeline (blue bar).
- **Sensitivity**: Motion recognition sensitivity. 80% is the ideal value for recognizing significant motions in the image. If you wish to change this value, motion the bar to obtain the desired value.
- **Key-frames only**: Motion search in key frames only (H.263, MPEG-4, H.264 and H.265 only). The search speed can be greatly increased by using this option, but the search may be less accurate as the motion will only be recognized in the key frames. It is recommended that the distance between the recorded key frames does not exceed 2 seconds (ideal 1 second).
- **Start Search button**: Starts the motion search. You can follow the progress of the search in the Timeline tab.
- **Clear Data button**: Clears the data collected during the search. This data is information on where there was motion in the video, until it is cleared, the timeline will only display recordings where the motion graph (Red Graph) is marked.

To start a search, follow the steps below:

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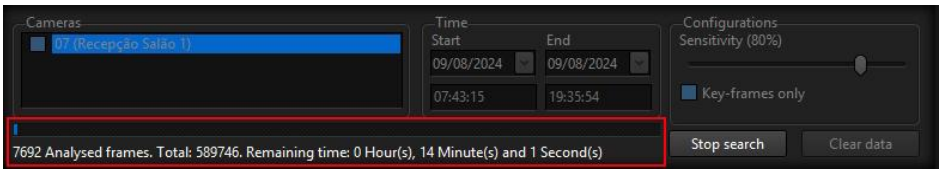
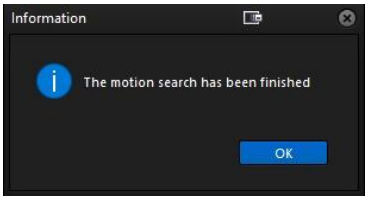
1. Select the desired cameras from the camera list. You must select the camera even if there is only 1 camera on screen. If you are playing back multiple cameras, you must choose the cameras you want to search.
2. Select motion-sensitive areas on the cameras. To do this, click the left mouse button and, while holding down the mouse button, drag the mouse to create the desired area. To remove an area, do the same process, but hold down the right mouse button and draw a larger area that encompasses the areas you want to remove. You can create multiple motion search areas on the camera.
3. Select the start and end dates and times for the search. You can enter these values manually in the visual date and time controls, or you can also select the date and time via the Timeline Time Selection 102.
4. Set the motion detection sensitivity (Default 80% is recommended).
5. Click **Start Search**.

You can follow the search via the bar in the Motion search tab as shown in the figure below:

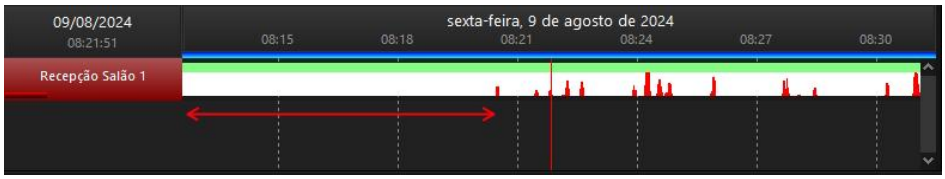


Or in the Timeline as shown in the figure below:

Once the search is complete, a message will be displayed as shown below:



With the motion search finished, the video player will now only display the video of the moments where motion was recognized:



In the example above, all the areas that are completely blank indicate that no motion was found, the player will skip these areas automatically, allowing you to quickly analyze only the images that had motion. A negative effect of this feature can occur during video playback with motion search from several

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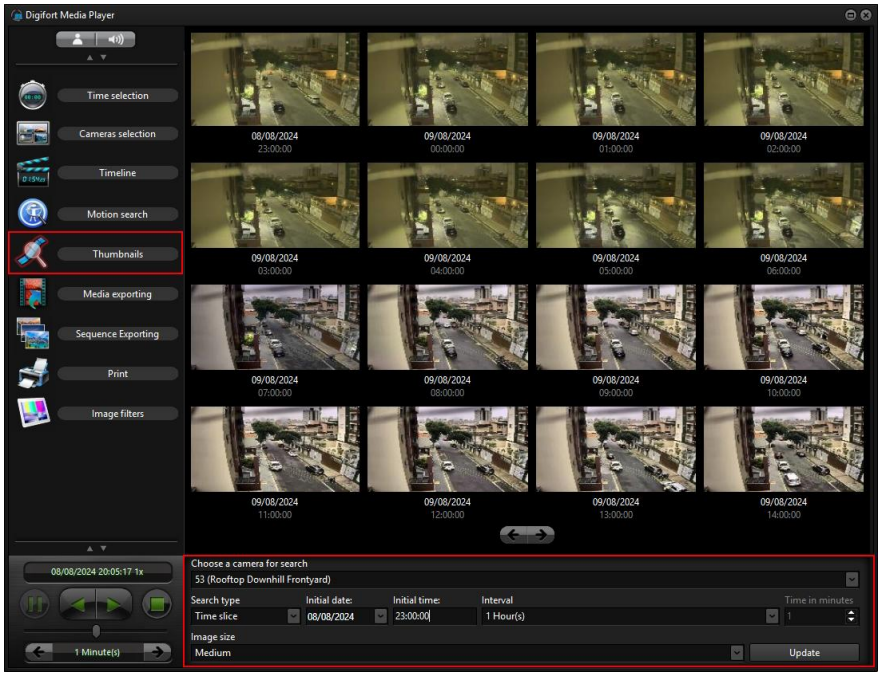
cameras simultaneously, where there is motion on one camera and no motion on another camera for the same time. In this case, the standard message "There are no recordings for this time" will be displayed on the camera where motion was not detected. If there is a common moment where there is no motion on all cameras, the system will automatically skip playback to the next block with motion, regardless of which camera this motion was recognized on.

When the motion search bar is displayed on the timeline, it will act as a filter, allowing video playback only of the sections where motion has been detected. If you wish to remove this filter, select the desired cameras and click the **Clear Data** button.

7.4 Thumbnails

The Media Player allows you to search by thumbnail. This excellent feature will display a thumbnail of different times in the recording, allowing you to quickly locate a desired scene.

To access this tool, during a media playback session, click on the **Thumbnails** icon in the Tool Selection Panel:



You can generate thumbnails based on time slice where the system will display thumbnails at a fixed time interval, or by bookmark, where the system will display a thumbnail for each camera bookmark. The system also allows you to customize the time interval and the size/quantity of thumbnails on screen.

- **Choose the camera for the search**: Choose the camera you want to view the thumbnails for. The camera must already be open in playback within the timeframe previously determined.
- **Search type**:
  - o **Time**: Divides the thumbnails by defined time intervals. In the example above we have thumbnails every 1 hour.
  - o **Bookmark**: Displays the thumbnails of the camera's bookmarks.
- **Start Date**: Select the start date that the thumbnails should be displayed. (Only available in the Time search type)

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- **Start Time**: Select the start time that the thumbnails should be displayed. (Only available in the Time search type)
- **Interval**: Select the desired interval between each thumbnail. (Only available in the Time search type)
  - **Time in minutes**: If the **Custom** option is selected in the interval option, you can select the desired interval in minutes in this option. (Only available in the Time search type)
- **Image size**: Select the display size of the thumbnails: **Large**, **Medium** or **Small**.
- **Refresh**: Refreshes the screen with new recordings.

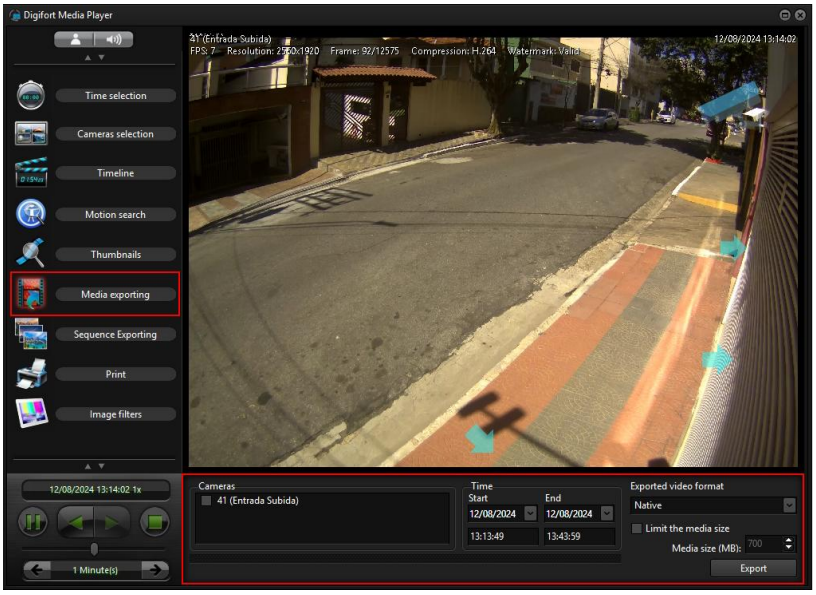
Use the left or right arrow keys to change the thumbnail page.

When you click on a thumbnail, the video will be synchronized with the time of the thumbnail for quick viewing of the event.

7.5 Media Export

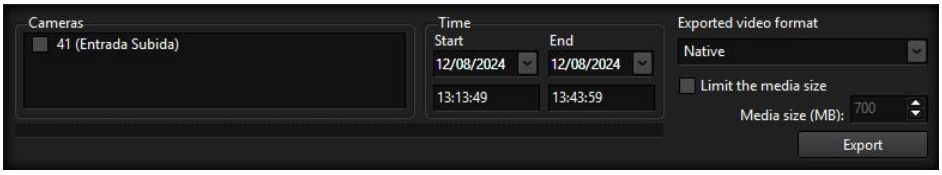
Exporting is one of the most important features of the media player, through which you can save a snippet of video from the selected cameras, in various formats compatible with standard video players, to be shared and viewed on various computers or devices.

To access this tool during a media playback session, click on the **Media Export** icon in the Tool Selection Panel:



7.5.1 Exporting Videos

The export options are shown in the figure below:



- **Cameras**: Select the cameras you want to export. If you select more than one camera, the videos will be exported simultaneously and synchronously.

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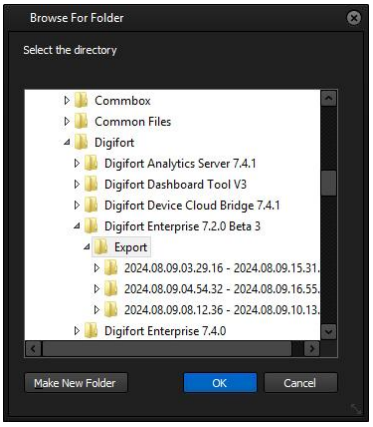
- **Start Time**: Start date for the export. The export needs a start and end time to be set. This time can be filled in according to the selection in the timeline (blue bar).
- **End Time**: End date for the export. The export needs a start and end time to be set. This time can be filled in according to the selection in the timeline (blue bar).
- **Export format**: The system has several formats for the exported video. Choose the format that best suits your operation:
  - **Native**: This is the recommended video format, as an exact copy of the system database is exported. With this type of export, the system automatically creates media with a video player identical to the system's native player and with all its features, including the video authenticity watermark. This format supports encryption and the system will also export the bookmarks along with the video. The limitation of this format is that you will need a computer with a Windows operating system to play the video.
  - **MP4**: Exports the video in MP4 format, compatible with most video players and operating systems.
  - **AVI**: Exports the video in AVI format, which can be played in any video player that supports the Codec used in the export. This export format is not the most recommended, as the images will be compressed and the exporting process will be slow.
  - **JPEG**: Exports the video (Video only) in independent JPEG images. You can use this format to make a Time-Lapse video.
  - **WAV**: Exports the audio (Audio only) in WAV format.
- **Limit Media Size**: By selecting this option, the system will automatically split the exported video into the size specified in this field. During export, several folders will be created whose files will have the maximum size specified. This option is useful if you want to save the video on removable media that is limited in size.

7.5.1.1 Native Format

When you start exporting in **Native** format, the system will display a dialog box for choosing the export folder:



The default folder selected will be the folder configured in the Surveillance Client's General Settings 26. On this screen you can choose the folder you want or create a new one.

Once you have selected the folder, click **OK**. The system will automatically create a subfolder with the start and end dates of the export, and all the material will be saved in this subfolder.

The system will then display the export settings screen in **Native** format:

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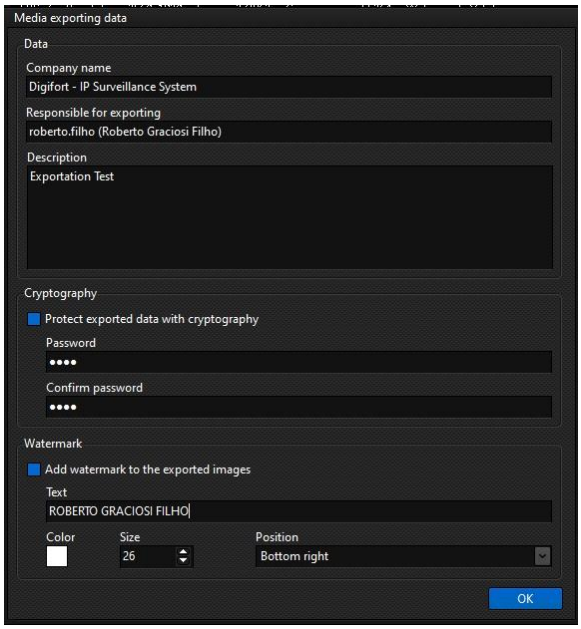

- **Company name**: Provide the company name, which will be displayed on the opening screen of the exported video player. A default name can be assigned in the Server Settings using the Administration Client.
- **Responsible for Exporting**: Enter the name of the operator responsible for exporting this video. This name will be displayed on the opening screen of the exported video player. The name of the authenticated user will be displayed by default.
- **Description**: Provide a description for the video, which will be displayed on the opening screen of the exported video player.
- **Encryption**: Select this option to encrypt the exported video. The system will use AES 256 encryption for the export.
  - **Password**: Provide the encryption password (This password will need to be provided when opening the exported video player).
  - **Confirm Password**: Confirm the password entered in the previous field.
- **Watermark**: Adds a watermark to the exported images. The watermark will be a text that will be superimposed over the image, using the properties defined below.
  - **Text**: Provide the text for the watermark.
  - **Color**: Provide the font color for the text.
  - **Size**: Select the font size.
  - **Position**: Select the position on the image where the watermark text will be displayed.

Click **OK** to start the export.

7.5.1.2 MP4

When you select export in **MP4** format, the system will open a screen with options for exporting in this format:

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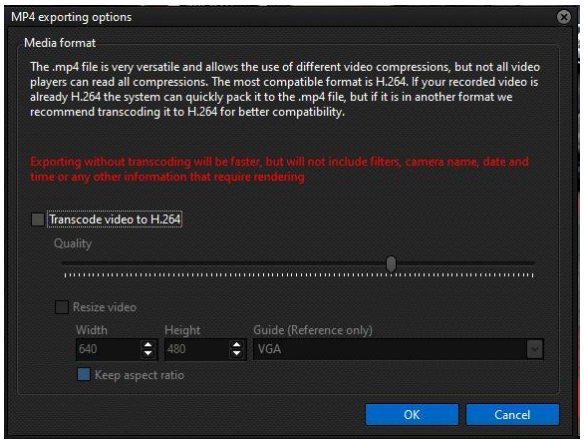
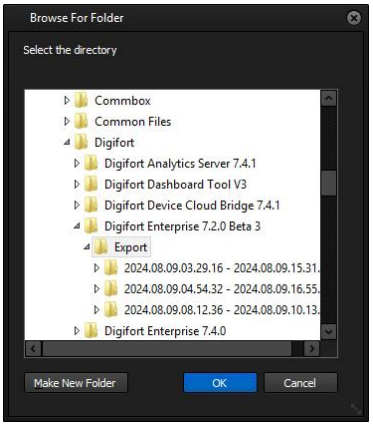


- **Transcode video to H.264**: The system allows you to transcode video to H.264 for better compatibility with external video players. Exporting video in MP4 supports the H.264 and H.265 formats, but the H.265 format may not be compatible with most video players, in which case we recommend enabling this feature. If this option is not activated and the original exported video is already in H.264 or H.265 format, and there is no watermark to be applied, or any video transformation to be applied, the system will export using the original video. If the original video is recorded in another format such as JPEG, MPEG-4 or MxPEG, or if it is necessary to add a watermark to the export, or any video transformation to be applied, then the system will automatically transcode to H.264, using the default transcoding settings.
  - **Quality**: Select the quality of the compression. The higher the quality, the higher the bitrate used.
  - **Resize video**: Select this option if you want to resize the video, to decrease its resolution.
    - **Width**: Enter the new width of the video.
    - **Height**: Enter the new height of the video.
    - **Guide**: Instead of providing a resolution manually, you can choose from some pre-registered options.
    - **Keep aspect ratio**: Select this option to keep the aspect ratio of the original video when applying the new resolution.

Click **OK**. The system will then display the export folder selection window:



The default folder selected will be the folder configured in the Surveillance Client's General Settings 26. On this screen you can choose the folder you want or create a new one.

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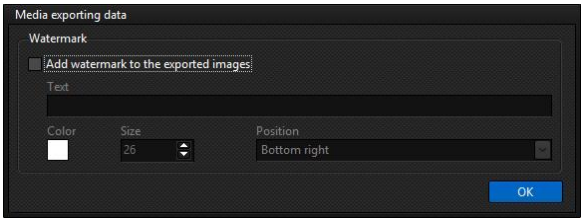
Once you have selected the folder, click **OK**. The system will automatically create a subfolder with the start and end dates of the export, and all the material will be saved in this subfolder.

Once the export folder has been selected, the system will display a new screen with options for adding a watermark to the exported video:

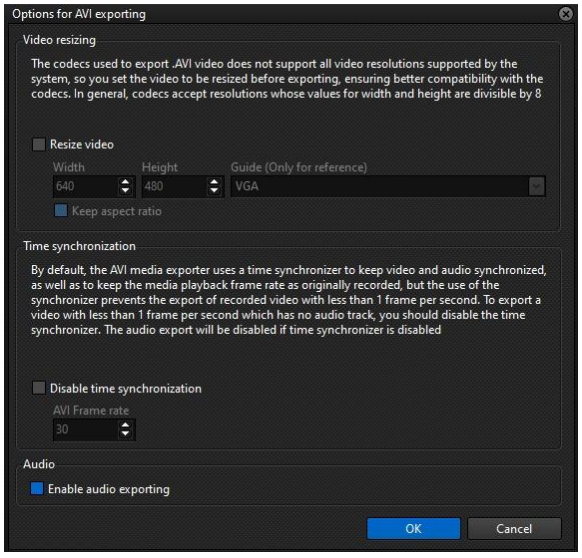


- **Watermark**: Adds a watermark to the exported images. The watermark will be a text that will be superimposed over the image, using the properties defined below. Activating this option will force the system to transcode the video to H.264.
  - **Text**: Provide the text for the watermark.
  - **Color**: Provide the font color for the text.
  - **Size**: Select the font size.
  - **Position**: Select the position on the image where the watermark text will be displayed.

Click **OK** and the export will begin.

7.5.1.3 AVI

When you select export in **AVI** format, the system will open a screen with options for exporting in this format:



- **Resize video**: Select this option if you want to resize the video, to decrease its resolution. Some codecs used to export in AVI will not support all the video resolutions that the system supports, so you can activate this option to select a new video resolution to ensure greater compatibility with the codecs. In general, codecs accept resolutions whose width and height values are divisible by 8.
  - **Width**: Enter the new width of the video.
  - **Height**: Enter the new height of the video.

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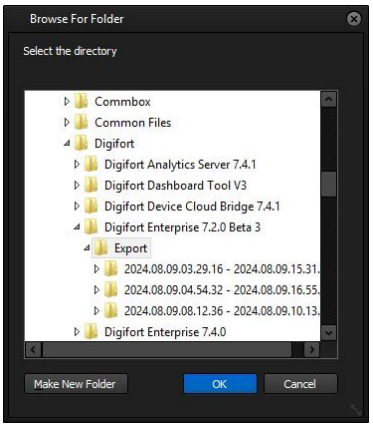
  - **Guide**: Instead of providing a resolution manually, you can choose from some pre-registered options.
  - **Keep aspect ratio**: Select this option to keep the aspect ratio of the original video when applying the new resolution.
- **Time synchronization**: By default, the AVI media exporter uses a time synchronizer to keep the video and audio synchronized, as well as keeping media playback at the originally recorded frame rate, but using the synchronizer makes it impossible to export video recorded at less than 1 frame per second. To export a video with less than 1 frame per second that does not have an audio track, you must disable the time synchronizer. Audio export will be deactivated if the time synchronizer is disabled.
  - **Frame Rate**: When you deactivate the time synchronizer, you must specify a frame rate that will be used when playing this AVI.
- **Activate audio export**: Select this option to allow the audio to be exported along with the video.

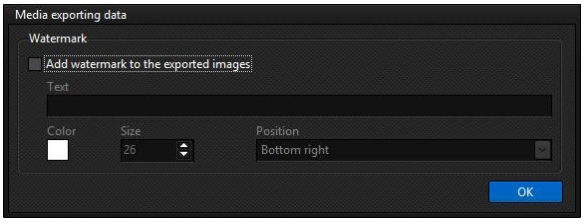
Click **OK**. The system will then display the export folder selection window:



The default folder selected will be the folder configured in the Surveillance Client's General options 26. On this screen you can choose the folder you want or create a new one.

Once you have selected the folder, click **OK**. The system will automatically create a subfolder with the start and end dates of the export, and all the material will be saved in this subfolder.

After selecting the export folder, the system will display a new screen with options for adding a watermark to the exported video:



- **Watermark**: Adds a watermark to the exported images. The watermark will be a text that will be superimposed over the image, using the properties defined below.
  - **Text**: Provide the text for the watermark.
  - **Color**: Provide the font color for the text.
  - **Size**: Select the font size.
  - **Position**: Select the position on the image where the watermark text will be displayed.

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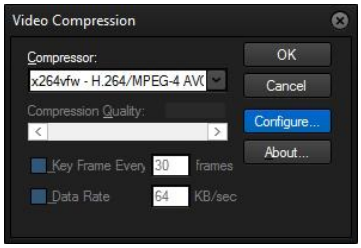
Click **OK** and the system will now display the standard operating system window for selecting the AVI codec:

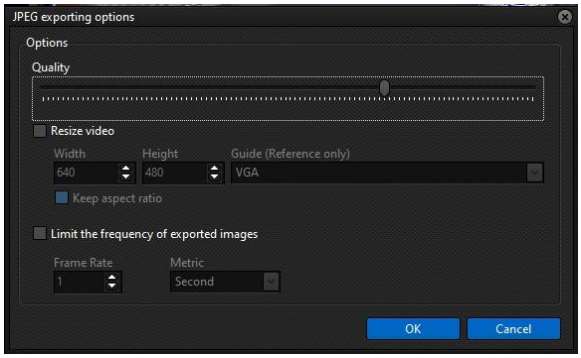


On this screen you will have to select the desired codec (Recommended **x264vfw**) and its settings. The codec settings will not be covered in this manual as they are specific to each type of codec installed on the PC.

Click **OK** and the export will begin.

7.5.1.4 JPEG

When you select export in **JPEG** format, the system will open a screen with options for exporting in this format:



In this export format, the video frames will be exported independently, each in a .JPG file.

- **Quality**: Select the JPEG compression quality.
- **Resize video**: Select this option if you want to resize the images, to decrease their resolution.
  - o **Width**: Enter the new width of the images.
  - o **Height**: Enter the new height of the images.
  - o **Guide**: Instead of providing a resolution manually, you can choose from some pre-registered options.
  - o **Keep aspect ratio**: Select this option to keep the aspect ratio of the original video when applying the new resolution.
- **Limit the frequency of exported images**: The option to limit the frequency of exported images is widely used to create "timelapse" type videos where you have one frame per hour, or even one frame per day for very long construction videos, where the same location is recorded for months and then you need to view the video with only a few frames per week, etc.
  - o **Frame Rate**: Select the frame rate.
  - o **Metric**: Select the frame rate metric.

Click **OK**. The system will then display the export folder selection window:

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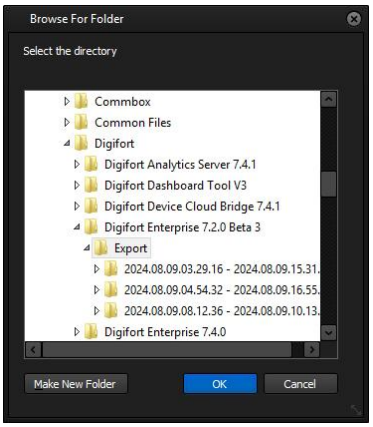
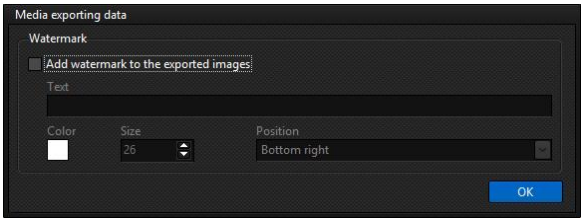


The default folder selected will be the folder configured in the Surveillance Client's General Settings 26. On this screen you can choose the folder you want or create a new one.

Once you have selected the folder, click **OK**. The system will automatically create a subfolder with the start and end dates of the export, and all the material will be saved in this subfolder.

Once the export folder has been selected, the system will display a new screen with options for adding a watermark to the exported images:



- **Watermark**: Adds a watermark to the exported images. The watermark will be a text that will be superimposed over the image, using the properties defined below.
  - **Text**: Provide the text for the watermark.
  - **Color**: Provide the font color for the text.
  - **Size**: Select the font size.
  - **Position**: Select the position on the image where the watermark text will be displayed.

Click **OK** and the export will begin.

7.5.1.5 WAV

When you start exporting in **WAV** format, the system will display a dialog box for choosing the export folder:

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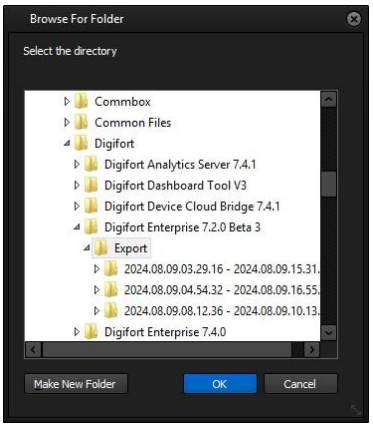
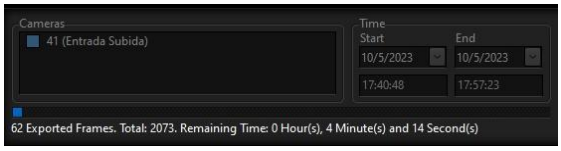


Click **OK** and the export will start. In this export format, only the audio (if available) will be exported, in .WAV files.

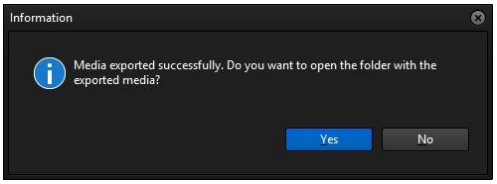
7.5.1.6 Progresso

During the export, the system will display its progress:



You will be able to track the number of frames exported, as well as the estimated time remaining to finish the export. You can stop the export at any time by clicking on the **Stop Export** button. If the export is stopped during its progress, the data already exported will not be deleted.

If the export is successful, the following dialog box will be displayed:



This dialog box will provide the option to open the folder with the exported videos.

7.5.2 Playing exported videos in Native format

When you export the video in **Native** format, the system will copy the Video Player into the exported folder, as well as all the library files needed to run the player. Run the Player.exe or Player64.exe file to start the player:

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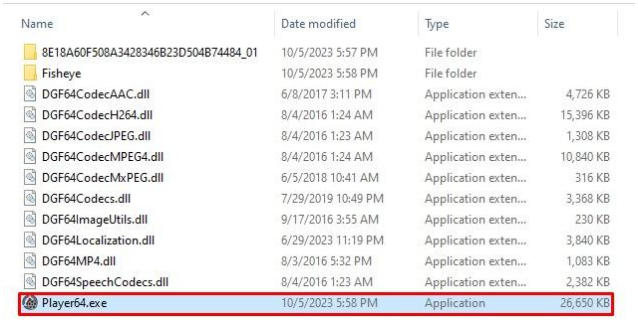
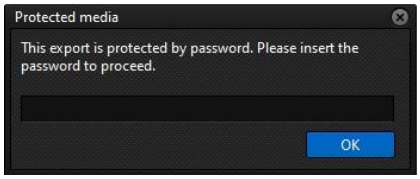
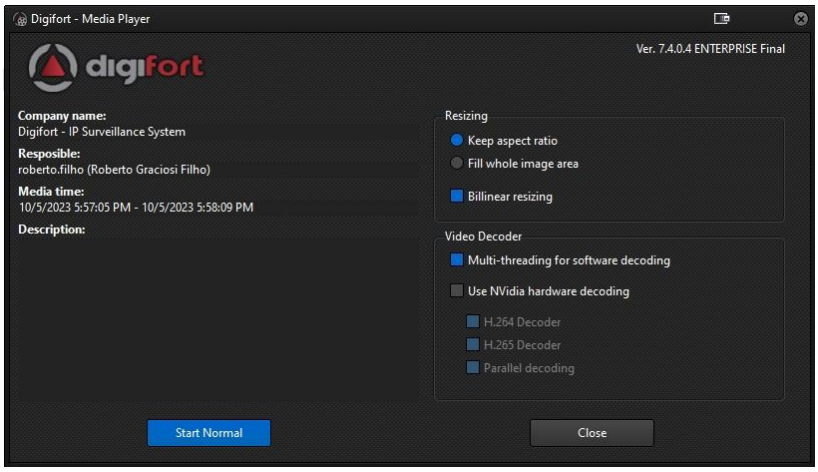


When you run the player, if the video has been exported with encryption, the window below will appear. In it you will have to provide the encryption password used in the export settings in native format 110. The player will not let you continue if the password is wrong.



The main screen of the exported Video Player will be displayed:



The main screen of the player will contain information about the video, which was provided during the export settings in native format 110.

The player also offers some options that can be applied:

- **Resize Options**: Allows you to configure the type of image resizing for better viewing.
  - o **Keep aspect ratio**: Select this option to use resizing proportional to the original resolution of the recorded image. This option prevents image distortion.
  - o **Fill entire image area**: Select this option to stretch the camera image across the entire viewing area. This option may create distortions in the images.
  - o **Bilinear resize**: When camera images are resized, some distortions can occur, such as serrated edges. By enabling this feature, the images will pass through a filter that minimizes this distortion, keeping the image quality closer to the real image.
- **Video Decoder:** Allows you to choose options for the video decoder

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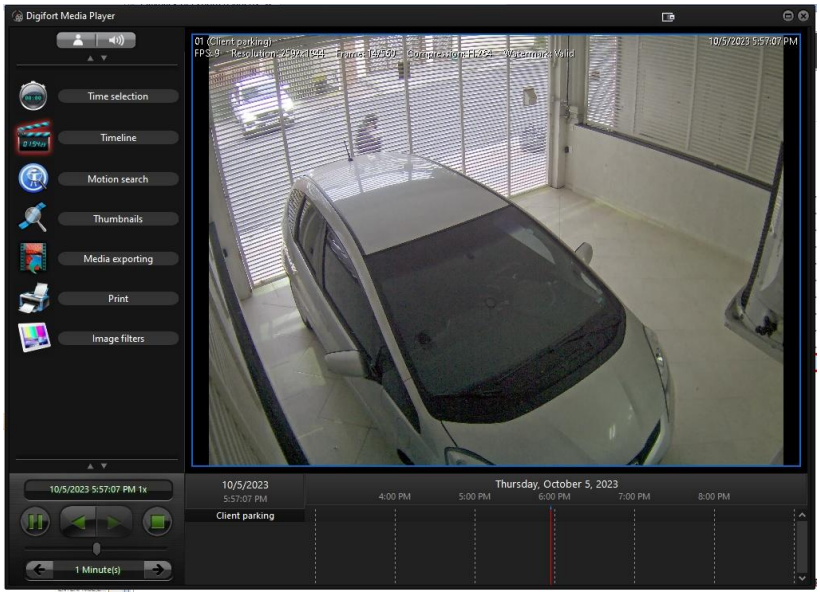
- **Use multi-thread for software decoding**: The player allows the use of multi-threading for H.264 and H.265 video decoding. This option can be used to speed up video decoding on the client, especially of ultra megapixel images. Using this option will add at least 1 frame of delay to the video, i.e. at 30 frames per second the additional delay will be at least 33ms while at 7 frames per second the additional delay will be at least 143ms.
- **Use NVidia hardware decoding**: Enables the use of NVidia GPU to decode videos:
  - **H.264 Decoder**: Activates H.264 video decoding via the NVidia GPU.
  - **H.265 Decoder**: Activates H.265 video decoding via the NVidia GPU.
  - **Parallel Decoding**: The system enables parallelism for H.264 and H.265 video decoding via the GPU. This option can be used to speed up video decoding on the client, especially of ultra megapixel images. Using this option will add at least 1 frame of delay to the video, i.e. at 30 frames per second the additional delay will be at least 33ms while at 7 frames per second the additional delay will be at least 143ms.

Just click on **Start Normal** and the video player will run with all the features presented in the chapter Playing videos 95, as illustrated in the figure below:



7.6 Sequence Export

Sequence Export is a very useful tool for exporting an event that occurs progressively through multiple cameras.

During video playback, you can switch cameras with object links, or manually by dragging and dropping objects from the object list into the video player, to, for example, follow a suspect who is moving between multiple cameras. The sequence export allows the video to be exported together with camera switching actions, i.e. it is possible to create an export where the exported video player will automatically switch cameras, following the actions created by the operator during the export.

During the sequence export, all the operator's operations, such as adding cameras to the screen, removing cameras from the screen, changing the screen layout or loading another view, will be recorded along with the time of the video playback moment when these actions took place. During video playback of this sequence export, the player will replicate the same actions, effectively changing the cameras on screen automatically.

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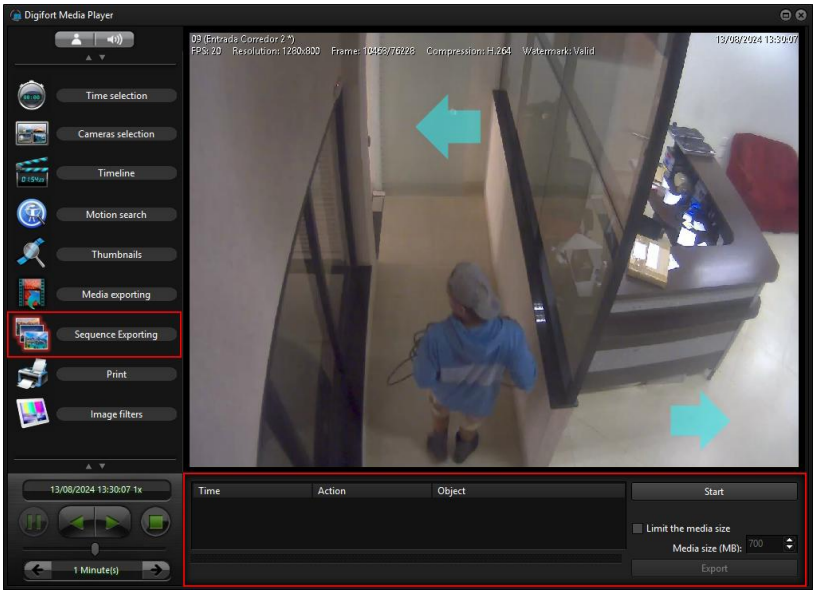
To access this tool, during a media playback session, click on the **Sequence Export** icon in the Tool Selection Panel:



- **Action History**: This panel displays the user's action histories, such as adding cameras to screen, removing cameras and changing views.
- **Start**: Starts recording user actions for sequence export. For this button to be activated, the video session cannot be in **Stop** mode, it must be in **Play** or **Pause**.
- **Limit Media Size**: By selecting this option, the system will automatically split the exported video into the size specified in this field. During export, several folders will be created whose files will have the maximum size specified. This option is useful if you want to save the video on removable media that is limited in size.

To create a sequence export, simply position the video at the beginning of the period you want to export and click on the **Start** button. From this point on, all the actions (changing cameras and views) will be recorded, so now you can click **Play** and change cameras as necessary. At the end of the session just click **Stop** and the **Export** button will be enabled, and the export of the sequence can be completed.

With this, you can create an exported sequence, where the Video Player will automatically switch between the cameras, following the exact moment when the operator switched between the cameras during the export session. Here's an example of how to export a sequence.

In this example we will create an export to follow a suspicious person leaving a building, passing through multiple cameras. First, we position the video at the start of the export and click **Start**. From then on, all the user's actions will be recorded. Initial actions will be added automatically, containing the View layout and the initial cameras on screen:

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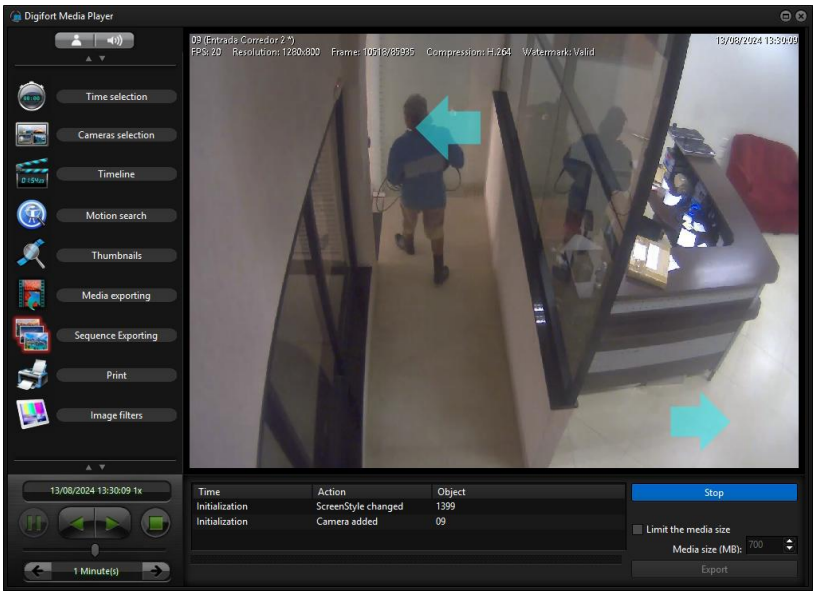
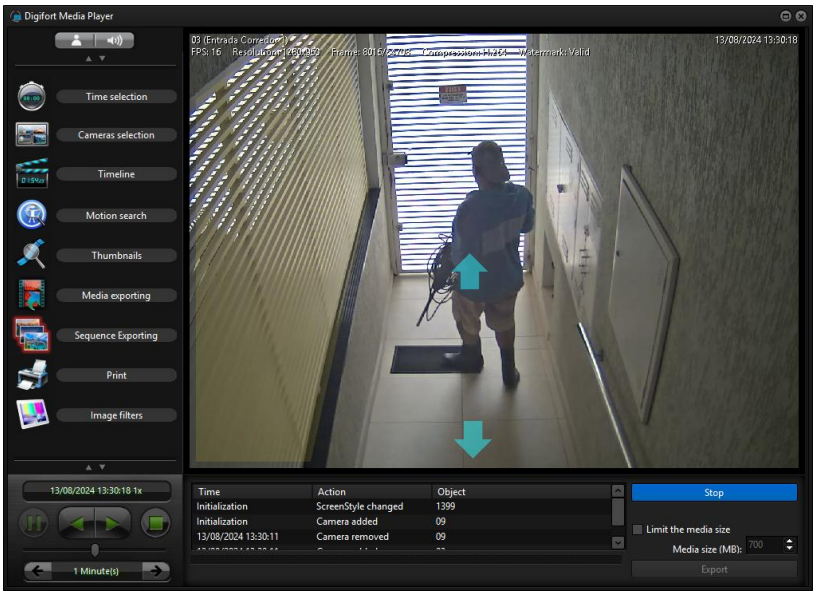


Now we click **Play** and to follow the suspect between the cameras, we use links to pre-registered objects, in this case of the image above, we will click on the arrow pointing to the left, which is linked with a camera positioned in the exit corridor:



By clicking on the left arrow, the linked camera will be loaded, and we can see the suspect crossing the corridor to exit the building. Then we continue with the video playback and now click on the up arrow, which represents a connected camera that is outside the building:

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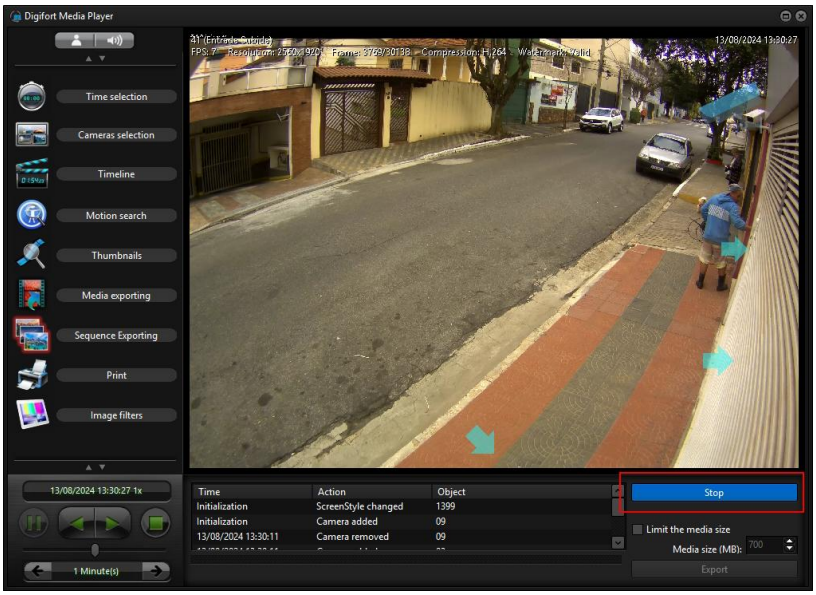
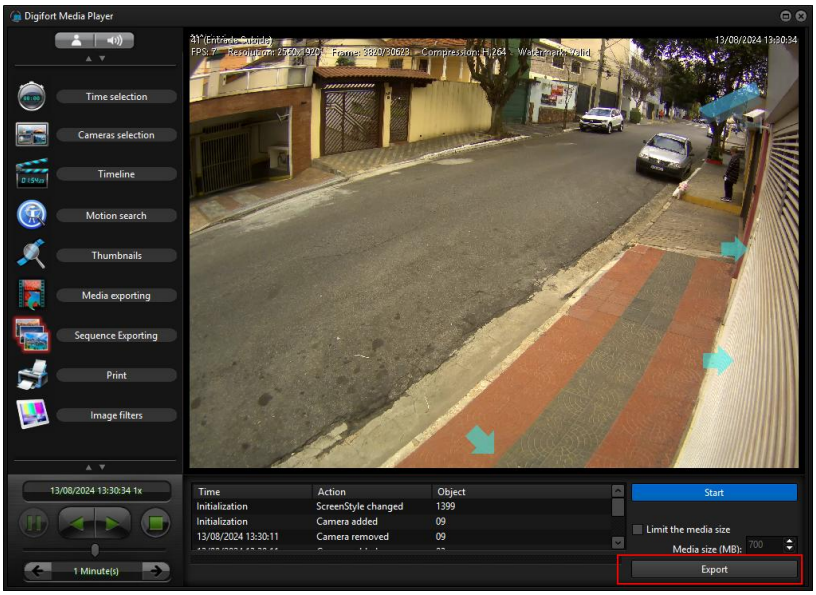
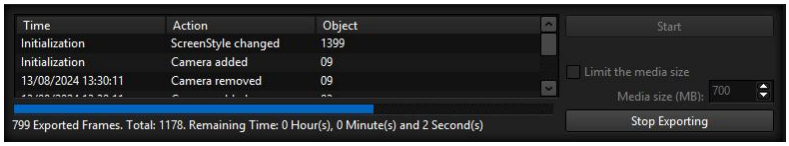


The corresponding camera will load and all these actions have been saved in the export script. At the end of the investigation, we will click on the **Stop** button, as shown in the previous figure, and then the **Export** button will be activated and we can start the export:



When you click the **Export** button, the system will use Native Format 110 Export, already explained in the Native Format Export 110 topic.

After configuring the export in native format, the system will start the export:



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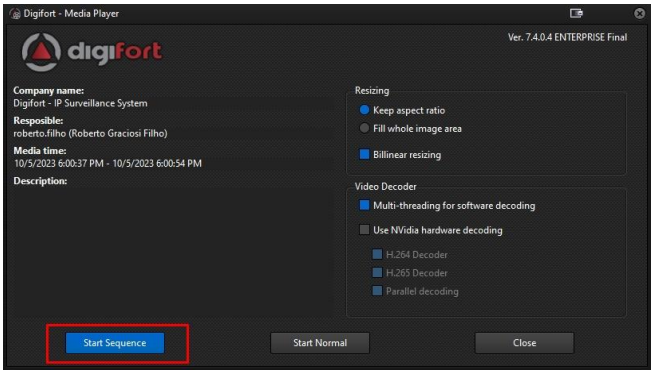
Once the export is complete, you can play the exported sequence using the steps described in the topic Playing exported videos in Native format 117, the only difference being, when you open the main window of the exported Media Player, you will select the **Start Sequence** button instead of **Start Normal**:



- **Start Sequence**: Starts video playback using the sequence script to switch between cameras automatically, following the script created by the operator during export.
- **Start Normal**: Starts playback with all the cameras used for playback in an Automatic view.

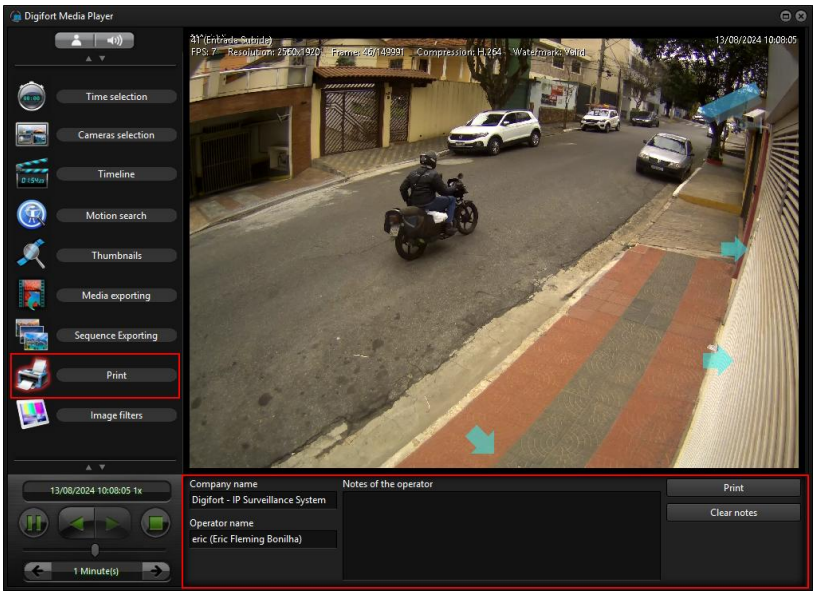
Note

This feature will export all the images from all the cameras that are part of the sequence for the entire duration of the sequence.

7.7 Print

The system allows you to print one or more images in the form of a report.

To access this tool, during a media playback session, click on the **Print** icon in the Tool Selection Panel:



- **Company Name**: Provide the name of the company, which will be displayed in the report. A default name can be assigned in the Server Settings using the Administration Client.

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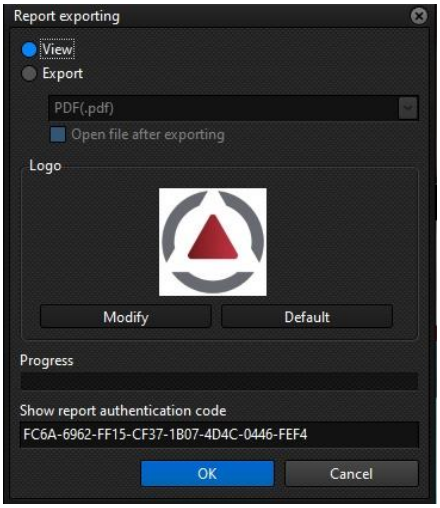
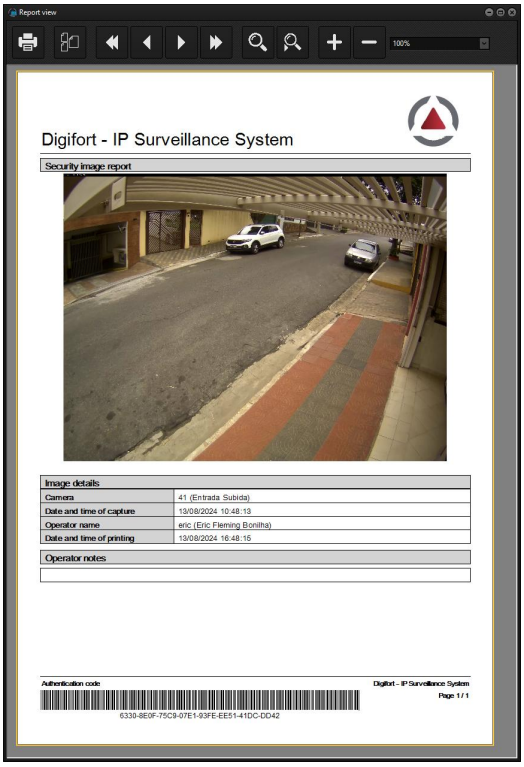
- **Operator Name**: Enter the name of the operator responsible for printing, which will be displayed in the report. The name of the authenticated user will be displayed by default.
- **Operator Notes**: Enter general notes about this incident, which will be displayed in the report.
- **Print**: Prints the report
- **Clear Notes**: Clears the general notes field.

Fill in the fields and click **Print**.

The screen below allows you to view, export and modify the logo that will appear with the report.



Click OK and a print screen with the data will open.



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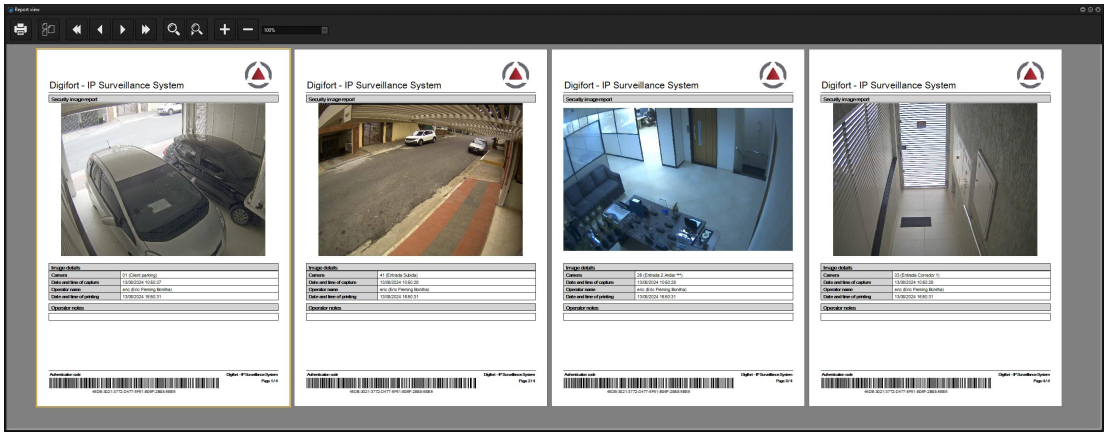
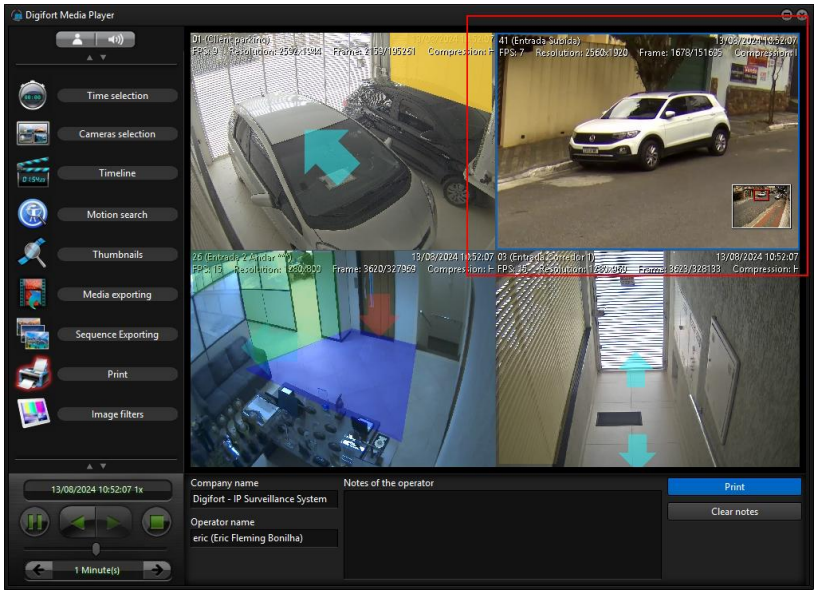
In the case of multi-camera playback, if you select a camera, the report will only contain the image from the selected camera; if there is no camera selected, then the system will generate a report with the image from all the cameras:



If Digital Zoom is applied to an image, the report will only be generated with the Digital Zoom image:



Report:

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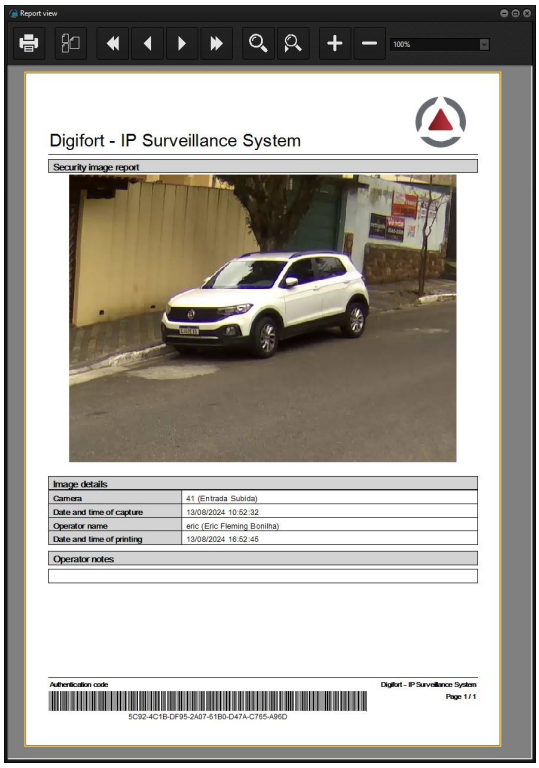

7.7.1 Report Viewer

The report viewer allows you to preview a report before printing it.

The viewer consists of a toolbar at the top and the report preview area in the body of the control:

1. Prints the report.
2. Show / Hide page thumbnails in the left-hand corner.
3. First page.
4. Previous page.
5. Next page.
6. Last page.
7. Find text.
8. Find next text.
9. Zoom in.
10. Zoom out.
11. Change form display size.

7.8 Image Filters

This feature allows the operator to change the characteristics of individual camera images. To open the image filters, go to the left menu and click on the **Image filters** icon. The following screen will open:

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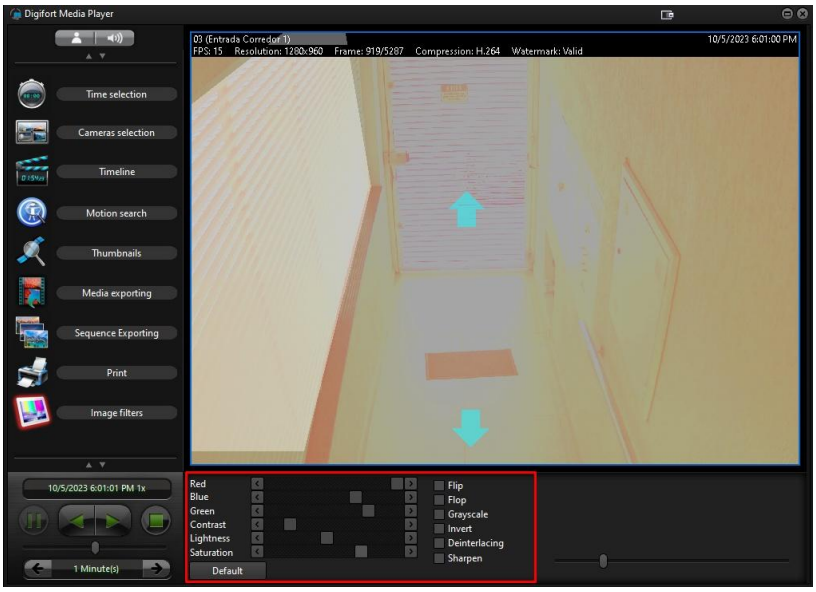


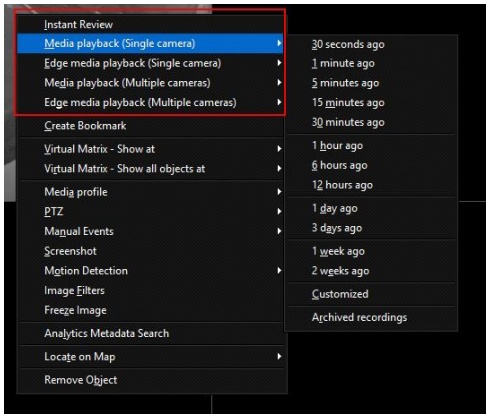
To apply the filters, select the desired camera and set the desired filters.

To learn about image filters, see the chapter How to configure image filters 82.

7.9 Fast Video Playback

The system allows quick playback of videos using the context menu (Accessible by right-clicking) of objects on screen or from the Surveillance Client's main object list.

When you access the context menu of objects on screen, or from the object list, you will be presented with the following options:



- **Instant Review**: This option provides a quick way to play back a video with a pre-configured time period. This option is very useful in environments where you need to see events quickly, for example in casinos where you need to instantly review a fact. The playback period can be set in the Surveillance Client's Video Playback Settings 35.
- **Media Playback (Single Camera)**: This option allows video playback from the selected camera. Only 1 camera will be opened in the video player. When you select this menu, a sub-menu will appear. Choose a preset time from the list displayed, or specify a time manually using the **Custom** option.

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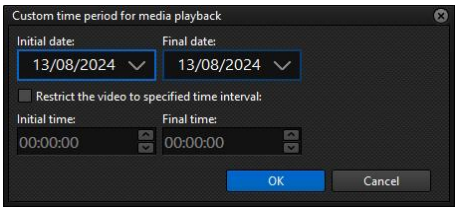
This option is only available when the context menu is opened from a live object or an icon from the object list that represents a single object (e.g. a camera).

- **Edge Media Playback (Single Camera)**: This option enables edge playback of video from the selected camera. Only 1 camera will be opened in the video player. When you select this menu, a sub-menu will appear. Choose a predefined time from the list shown, or specify a time manually using the **Custom** option. This option is only available when the context menu is opened from a live object or an icon from the object list that represents a single object (e.g. a camera) and the camera supports the **Edge Recording** feature.
- **Media Playback (Multiple Cameras)**: This option allows video playback from multiple cameras simultaneously. When you select this menu, a sub-menu will appear. Choose a preset time from the list displayed, or specify a time manually using the **Custom** option. This option is only available when the context menu is opened from a live object or an icon from the object list that represents a group of objects or a View. If the context menu is opened from a live object, the system will play the video from all the cameras that are occupying the same screen as the selected object.
- **Edge Media Playback (Multiple Cameras)**: This option allows edge video playback from multiple cameras simultaneously. When you select this menu, a sub-menu will appear. Choose a predefined time from the list shown, or specify a time manually using the **Custom** option. This option is only available when the context menu is opened from a live object or an icon from the object list that represents a group of objects or a view and all cameras support **Edge Recording**. If the context menu is opened from a live object, the system will play the video from all the cameras that are occupying the same screen as the selected object.

The Quick Playback context menu will also be displayed when right-clicking on objects that are derived from cameras, such as LPR Configurations and Analytics Configurations.

By selecting the **Custom** option in a quick search sub-menu, the following screen will be displayed:



- **Start Date**: Select the start date of the session.
- **End Date**: Select the end date of the session.
- **Restrict video to time range**: Select this option if you want to specify the start and end time. If this option is not selected, the system will open the video displaying the full content of the selected day range.
  - **Start Time**: Enter the start time. This is the time value for the Start Date.
  - **End Time**: Enter the end time. This is the time value for the End Date.

7.10 Archived Video Playback

Archived videos are considered **cold storage** and are part of the archiving system, which can be configured to copy all the day's recordings to an archive folder.

To learn how to activate the image archiving feature, see the **Administration Client Manual**.

Due to the storage format of archived recordings, it is only possible to play back 1 archived day per playback session.

To play back archived recordings, simply right-click on a camera image or item in the object list, access

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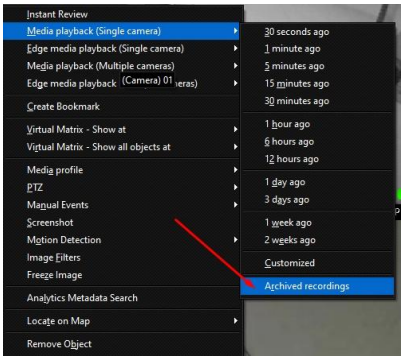
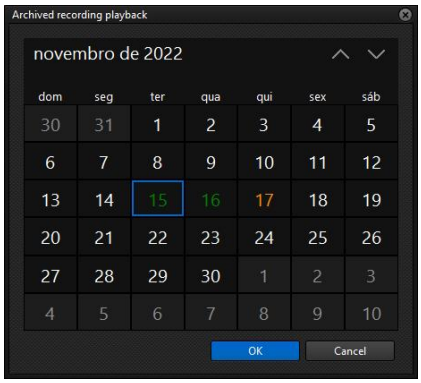
its context menu, select the **Media Playback** option, and in the sub-menu, select the **Archived Recordings** option. The system also allows multiple archived cameras to be played back. To play back multiple cameras, select the **Media Playback (Multiple Cameras)** option from the context menu of the objects on screen. You can also play back multiple cameras using the context menu of the object list, in camera groups or views, if the objects in this group or view support edge video playback.



When you select the **Archived Recordings** item, the system will open the screen for selecting the day for playback:



The system will display different colors for the days in the calendar:

- **White**: There are no archived recordings for this day on any selected camera.
- **Green**: There are recordings archived for this day on all selected cameras.
- **Orange**: There is an archived recording for this day for one or more of the selected cameras, but there is no recording for all of the selected cameras.

Select the desired day and click OK to open the video player.

See the topic Playing Videos 95 to learn how to use the Media Player.

7.11 Edge Video Playback

The **Edge Video Playback** function allows video to be played back by downloading directly from the device's edge recordings.

This feature expands the **Edge Recording** system (which allows the system to download recordings stored on the cameras), so you can play back recordings from any device that has Edge Recording integrated into the system.

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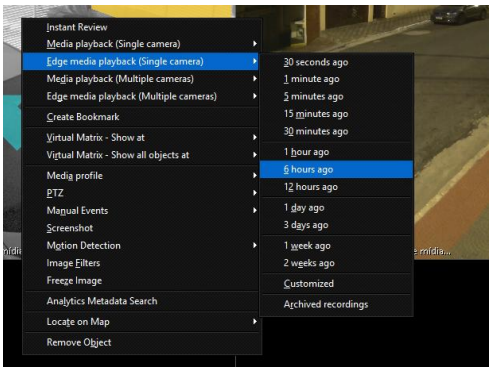
It is also possible to play back video recorded on supported DVRs/NVRs, thus enabling the use of distributed recording, since it is possible to view the recordings directly from the equipment.

To play back edge recordings, simply right-click on the image of a camera or item in the object list, accessing its context menu, and if the devices support Edge Recording, select the **Edge media playback** option, and the playback options sub-menu will be displayed. The system also allows multiple cameras to be played back at the edge, making it possible to play back several cameras from a DVR/NVR simultaneously. To play back multiple cameras, select the option **Edge media playback (Multiple cameras)** from the context menu of the objects on screen. You can also play multiple cameras using the context menu of the object list, in camera groups or views, if the objects in this group or view support edge video playback.



Edge video playback will be transparent to the user, but will have some limitations:

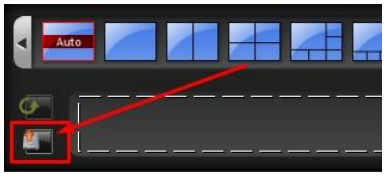
- The system will linearly download recordings from the device during the video playback session, and the timeline will be progressively updated as new recordings are temporarily downloaded.
- The user will only be able to browse and view videos that have already been downloaded, and will not be able to move on to a part of the video that has not yet been downloaded.
- The **Sequence Export** feature will not be available for edge playback.

See the topic Playing Videos 95 to learn how to use the Media Player.

7.12 Local Video Playback

The Media Player is capable of playing recorded videos in their native format, directly from the recording folder. These videos can come from archives, video exports or even local emergency recordings 85 made in the Surveillance Client.

To play a local video, follow the steps described in the topic Playing Videos 95, the only difference being that when selecting cameras, instead of selecting a camera via the camera selection control or by dragging icons from the list of objects, you will add a directory containing the recordings you want to play, click on the add local recording button, as shown below:



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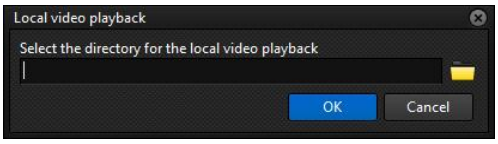
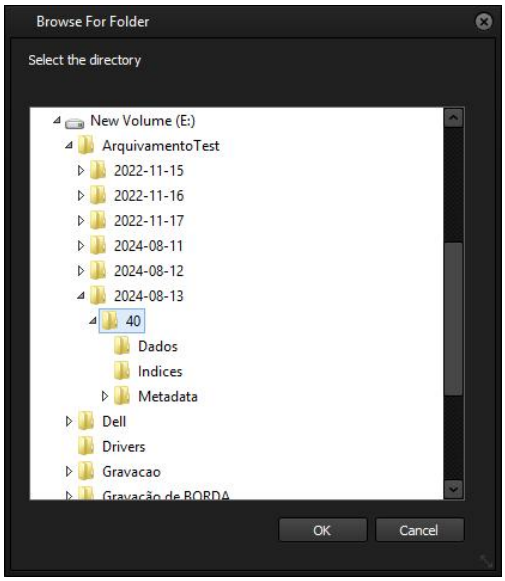
The directory selection screen will be displayed:

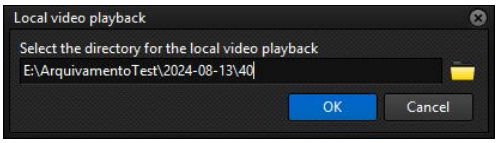


Click on the directory selection button, represented by a yellow folder icon, and the following screen will be displayed:



On this directory selection screen, you must select the root directory, which has the subdirectories **Data** and **Indexes**.

Click OK and the directory will be filled in on the previous screen:



A camera will be added to the screen, and its recording will be played back from the selected directory:

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You can add multiple local directories for synchronized playback.

From this point on, you can use all the features explained in previous topics for video playback.

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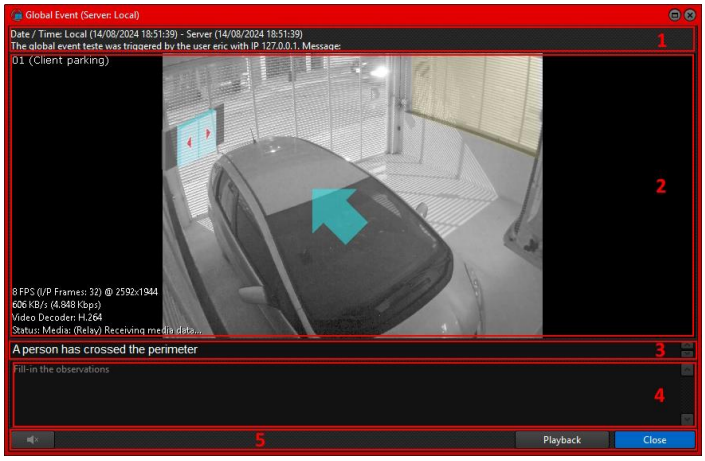
Chapter VIII

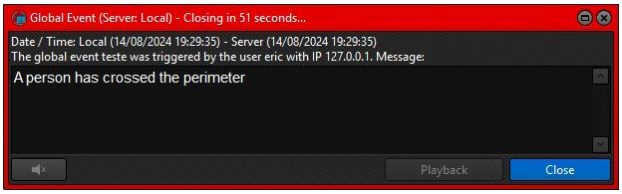
8 Alarms

The Surveillance Client has a powerful alarm notification system that uses Popups to notify the operator:



1. The header bar will bring up information about the event. It will contain
   a. Local date and time of the event (Time of the monitoring station).
   b. Server date and time (Server time).
   c. Descriptive message, indicating the type of event that occurred
   d. Customized message (only provided via API for Global Events).
2. Object panel 18. This control will display the cameras or objects associated with the event.
3. Custom message, created from the Administration Client. It usually contains instructions for the operator. This panel will auto-resize according to the size of the text.
4. Panel where the operator can write a response to the event, which will be stored in the event database.
5. Controls panel.
   a. Mute: Silences the alarm sound.
   b. Play: Plays the event video
   c. Close: Closes the alarm screen.

The system has great flexibility in configuring actions (in the Administration Client), and depending on the actions selected for the event, some panels will not be displayed in the alarm popup. For example, an alarm may only contain a descriptive message, with no cameras or operator response panel:



Alarm windows, by default, will not open again if the same event occurs again while the window is already open, however, when the event is configured to request written confirmation from the operator, a new alarm window will open, thus forcing the operator to confirm all events in writing.

If the alarm has a sound action, the system will play the alarm sound and will also display an icon in the left-hand corner of the Control Panel to mute the alarm sound in progress. This icon is only available while an alarm sound is playing.

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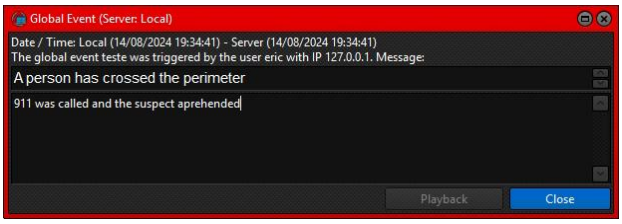
The system allows extensive configuration of the behavior of the alarm windows, as well as automatic arrangement of the windows on the monitor, automatic closing of windows, custom positioning, window border color, among others. To learn about all the options for customizing the alarm experience, see the Surveillance Client Alarms Configuration 37 topic.

8.1 Observations

When the operator remarks panel is available, you can type a response to the event, giving details, for example, of the actions taken to validate the event. The administrator can configure this field to be mandatory, in which case the window cannot be closed until a text is added.

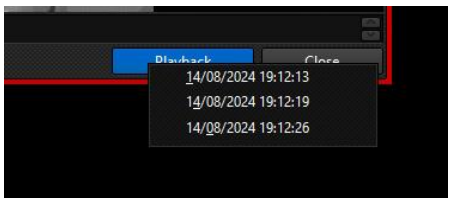
The text provided here will be stored in the event log 244, and the system even provides a specific report containing all operator responses to events. See the event log 244 topic for more information.



8.2 Playback

The alarm window has a button for playing back the event called **Play**. By clicking this button, the system will open the Video Player 94, positioning the timeline at the moment the event occurred, and the media session will open for review up to 1 hour before and after the time the event was triggered.

If the same alarm is triggered, and its popup is reused for the new trigger, the window will store the time of all repeated alarms that occurred while it was open, allowing you to choose a specific time when you click the **Play** button, as shown in the following image:



8.3 Local Alarm List

The list of local alarms is a record of which alerts have already been dealt with by the operator at that monitoring station, making it easier to manage environments with many alerts. This is only a list of locally triggered alarms and does not include all the events that have occurred on the server. An event is considered an alarm when it has actions that open a popup on the monitoring station.

To display the list of local alarms, click on the corresponding icon in the system's main options menu:

When you open the list, it will appear above the toolbar, as shown in the image below:

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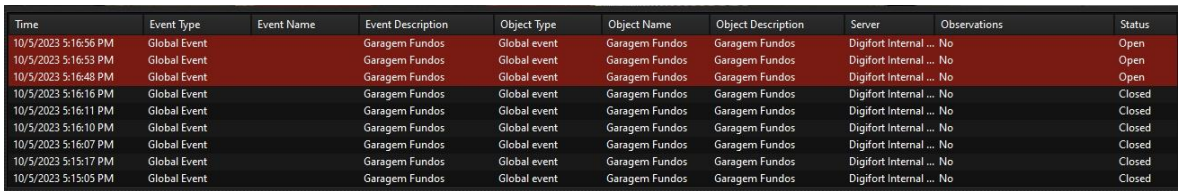

Time	Event Type	Event Name	Event Description	Object Type	Object Name	Object Description	Server	Observations	Status
10/5/2023 5:16:56 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos	Garagem Fundos	Digifort Internal ...	No	Open
10/5/2023 5:16:53 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos	Garagem Fundos	Digifort Internal ...	No	Open
10/5/2023 5:16:48 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos	Garagem Fundos	Digifort Internal ...	No	Open
10/5/2023 5:16:16 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos	Garagem Fundos	Digifort Internal ...	No	Closed
10/5/2023 5:16:11 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos	Garagem Fundos	Digifort Internal ...	No	Closed
10/5/2023 5:16:10 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos	Garagem Fundos	Digifort Internal ...	No	Closed
10/5/2023 5:16:07 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos	Garagem Fundos	Digifort Internal ...	No	Closed
10/5/2023 5:15:17 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos	Garagem Fundos	Digifort Internal ...	No	Closed
10/5/2023 5:15:05 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos	Garagem Fundos	Digifort Internal ...	No	Closed

The list contains the following information:

- **Time**: Date the event was received.
- **Event type**: Which type of event was received (Analytics, LPR, Global Event, Motion Detection, etc).
- **Event name**: Name of the event received. This name is only available for events registered within objects, such as Manual Events or Timer Events.
- **Event description**: Description of the event received.
- **Object type**: Type of object that triggered the event.
- **Object name**: Name of the object that triggered the event.
- **Object description**: Description of the object that triggered the event.
- **Server**: Server from which the event originated.
- **Observation:** Operator's comments on the event, if the action to request confirmation has been sent.
- **Status:** Current status of the event.
  - o **Open**: The alarm is considered open when the popup has not yet been closed, or if it has already been closed but the operator still needs to provide the handling remarks.
  - o **Closed**: The alarm has already been closed and dealt with by the operator.

When it receives a new event, the system will mark the event in the list as still open and waiting to be dealt with:

Time	Event Type	Event Name	Event Description	Object Type	Object Name
10/5/2023 5:16:56 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos
10/5/2023 5:16:53 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos
10/5/2023 5:16:48 PM	Global Event		Garagem Fundos	Global event	Garagem Fundos

The marking will remain as open until the operator closes the notification. The colors for open and closed events can be configured on the alarm configuration 37 screen .

You can open the popup of an alarm that has already been closed by double-clicking the left mouse button.

To hide or show columns, right-click on a column heading and select the **Select Columns** option .

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Chapter IX

9 Bookmark

The Bookmark feature allows markings to be made on the video recording. These bookmarks are made with keywords and colors that can be searched easily to locate and identify an event in the recording with ease.

The image below shows a red Bookmark indicating an event in the recording:

9.1 Creating Bookmarks

To create a Bookmark during the live view, use the bookmarks control on the toolbar:

The first button with the "+" character allows you to create a Bookmark from a date specified by the operator. When clicked, the following screen is available:

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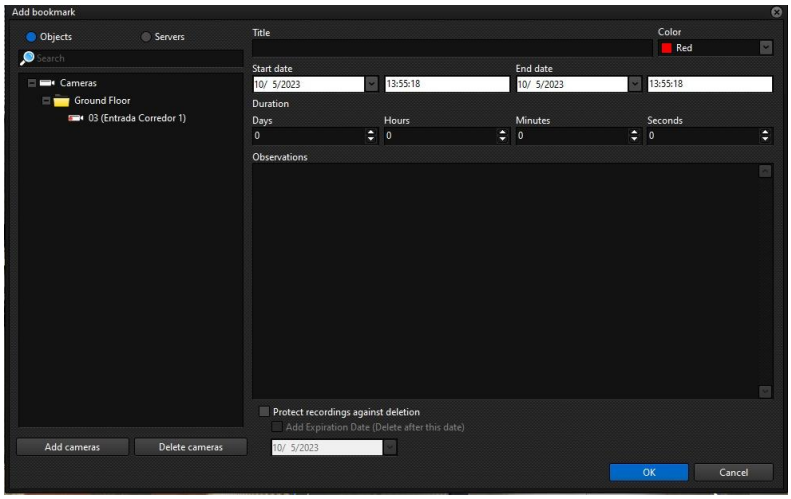


In the left part of the screen we can choose the cameras we want to create the Bookmark for. By default, the system will list the cameras that are in the view.

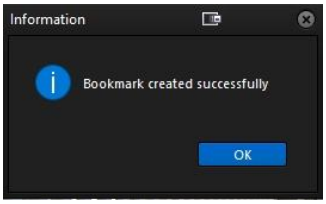
To add another camera, simply click on **Add cameras** and choose the camera you want.
To delete a camera, simply select one or more and click **Delete Cameras**.

On the right-hand side of the screen we'll put the information about the Bookmark:

- **Title**: Enter the Title**of** the bookmark
- **Color**: Select the color of the Bookmark
- **Start Date**: Start date and time of the event. The Bookmark will initially be bookmarked at this time
- **End Date**: The Bookmark can have a start and an end date. Enter the date and time of the event in this field. Note that when you change the end date, the Duration of the event below will automatically change. **NOTE**: If the end date is the same as the start date, only a ponctual Bookmark will be created, i.e. only with the start date.
- **Duration**: Setting the duration of the Bookmark. This setting will automatically change the event's end date.
- **Remarks**: Enter remarks related to the event to be bookmarked for later search.

- **Protect recordings from deletion**: Select this option to protect recordings from the period of this bookmark. To learn more about this feature, see the topic on Protecting Recordings 265.
  - **Add expiration date**: Select this option so that the protection of these recordings expires on a set day.
    - **Date**: Select the date on which the protection will expire.

After filling in the information, click **OK** to create the Bookmark. The image below shows an example of a bookmark being created and displayed during video playback:



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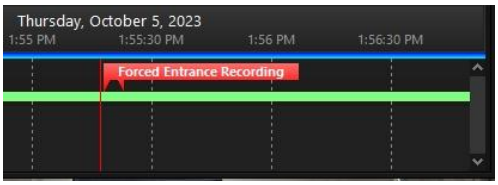
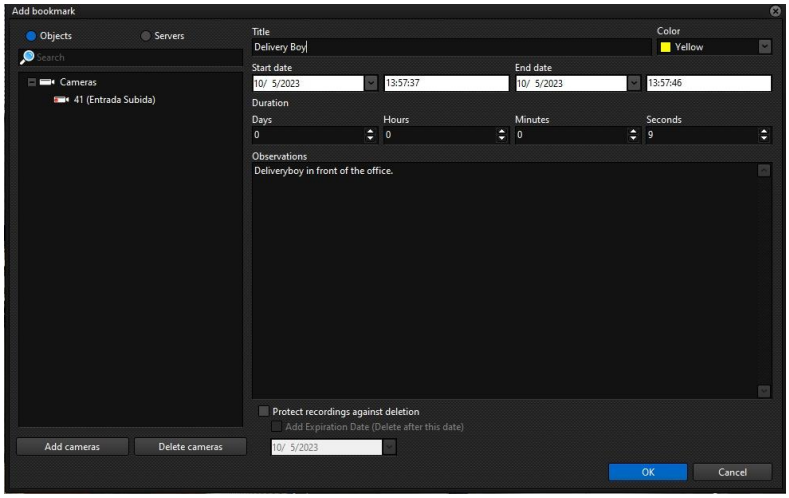


Notice that this bookmark has two marking points that are signaling a bookmark with an interval. Ponctual bookmarks, where the end date is the same as the start date, will only be displayed with the start mark:

Another way to create Bookmark is to click on the Start Bookmark button, represented by the red circle. By clicking the button, the system will start counting the duration of the Bookmark until the End Bookmark button, represented by the blue square, is pressed:

When it is finished, the Bookmark configuration screen will open with the start and end date filled in according to the start and end time of this process:



9.2 Bookmark Search

To search for the Bookmarks you have created, simply click on the button represented by the magnifying glass:

Click on the magnifying glass to open the Bookmarks search screen:

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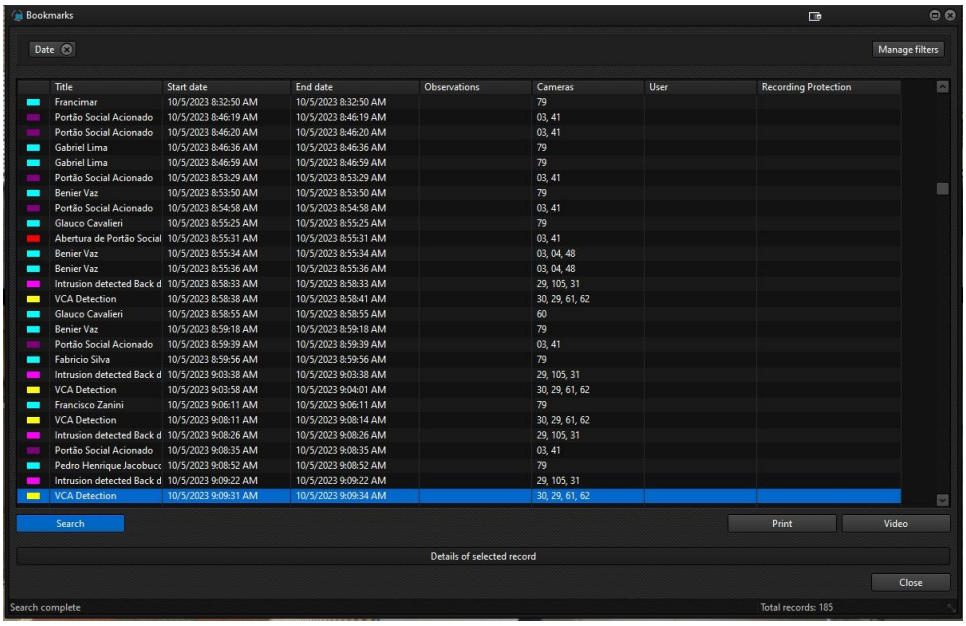
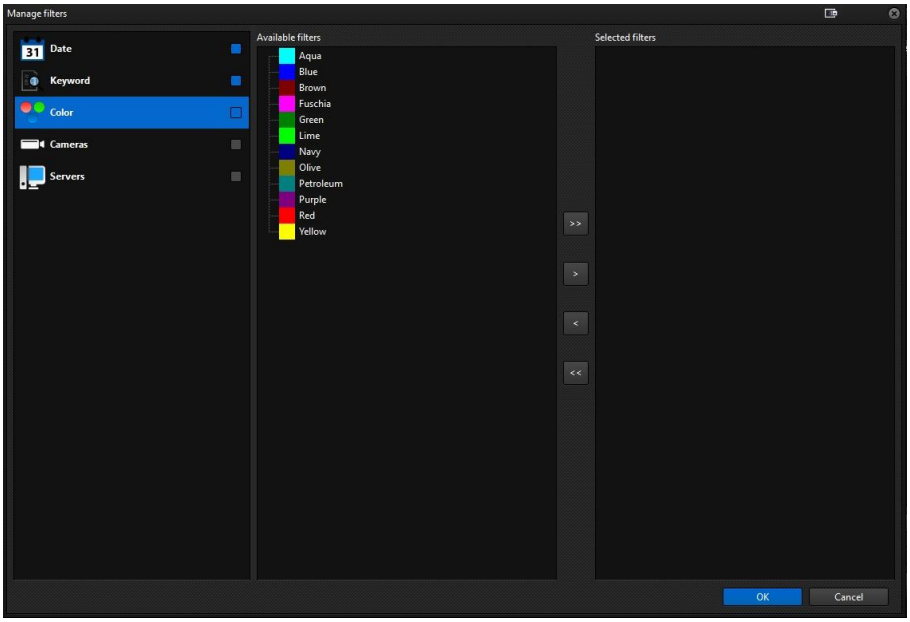


On this screen we can search for all the Bookmarks created using the filters provided by the system.

When you select a bookmark, you can bring up video playback of the bookmark time by clicking on the **Video** button.

To add filters, click on **Manage Filters** as shown in the image below:



9.2.1 Date Filter

The date filter allows you to search for Bookmarks by the selected date.

To add the filter, click on **Manage Filters**, then click on the **Date** tab.
To activate the filter, click on the checkbox to the right of the filter.

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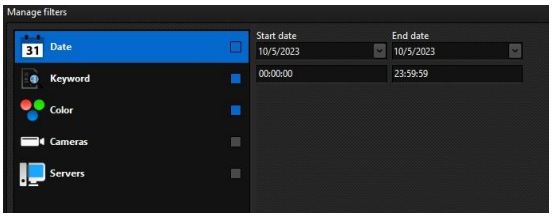
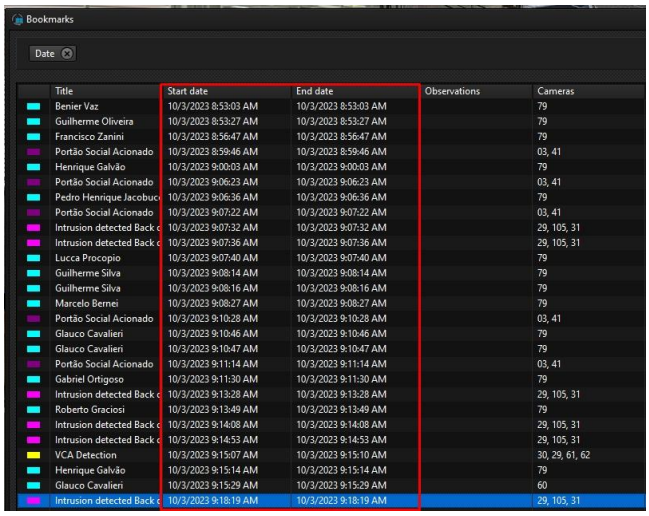


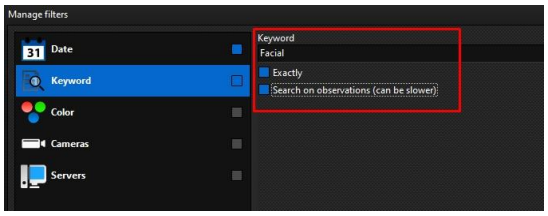
Choose the time interval for searching the Bookmarks created. Click **OK** and then on the main search screen click **Search**:



9.2.2 Keyword Filter

The Keyword filter allows you to search Bookmarks for words in their title or in the comments field.

To add the filter, click on **Manage Filters**, then click on the **Keyword** tab.
To activate the filter, click on the checkbox to the right of the filter.



- **Search field**: Type in the keyword to be searched for in the Bookmark titles.
- **Exactly**: Forces the system to search for exactly what has been entered. If not checked, there may be other words together with the search word.
- **Search in comments (may be slower)**: The system will also search in the remarks field of the Bookmark, however this search may demand more from the server as the remarks field is not indexed in the database.

Fill in the desired keyword and click **OK.** On the main search screen, click on **Search**:

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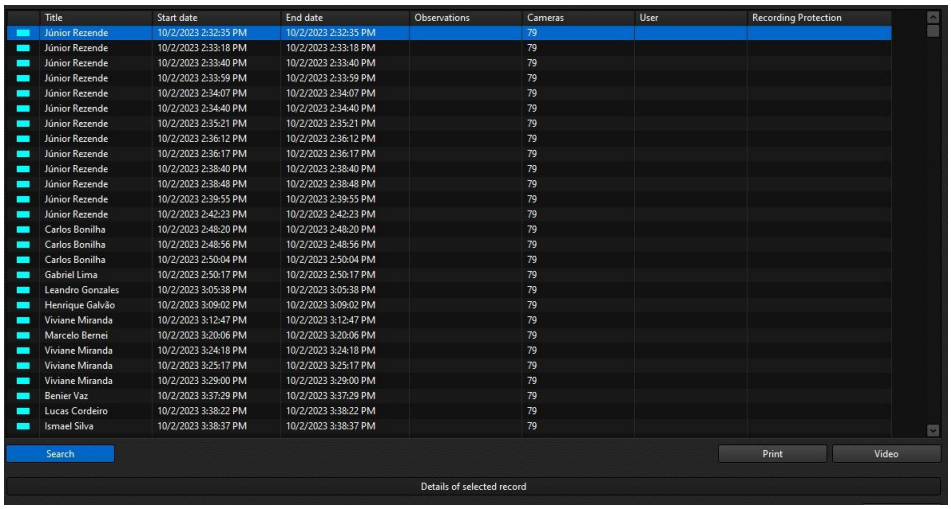
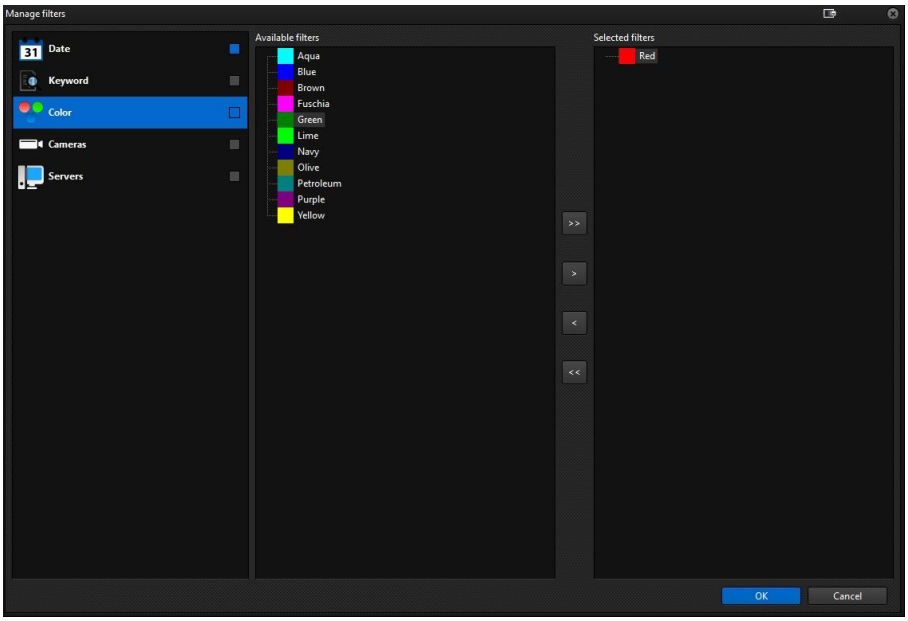


9.2.3 Color Filter

The color filter allows you to search for Bookmarks by the colors in which they were registered.

To add the filter, click on **Manage Filters**, then click on the **Color** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the colors you want by dragging from the left list to the right list, and click **OK.** On the main search screen, click **Search**:

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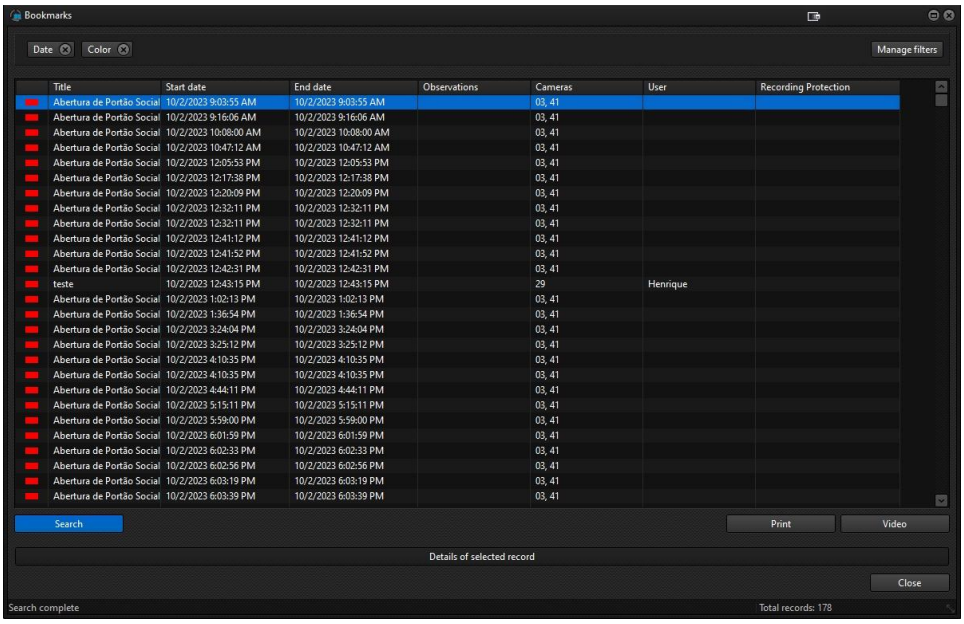
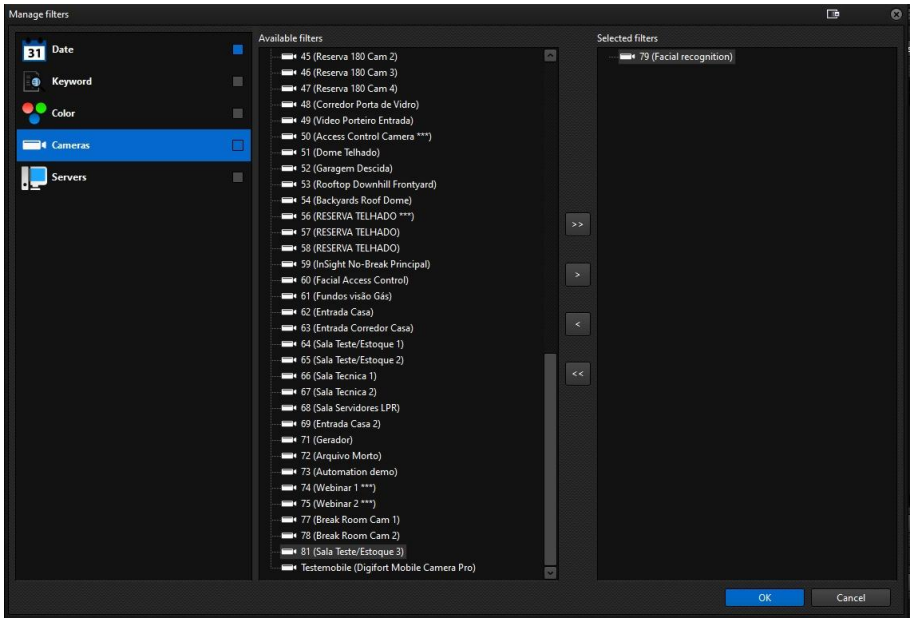


9.2.4 Camera Filter

The camera filter allows you to search for the Bookmarks of certain cameras on which they were recorded.

To add the filter, click on **Manage Filters**, then click on the **Cameras** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the cameras you want by dragging from the left list to the right list, and click **OK.** On the main search screen, click **Search**:

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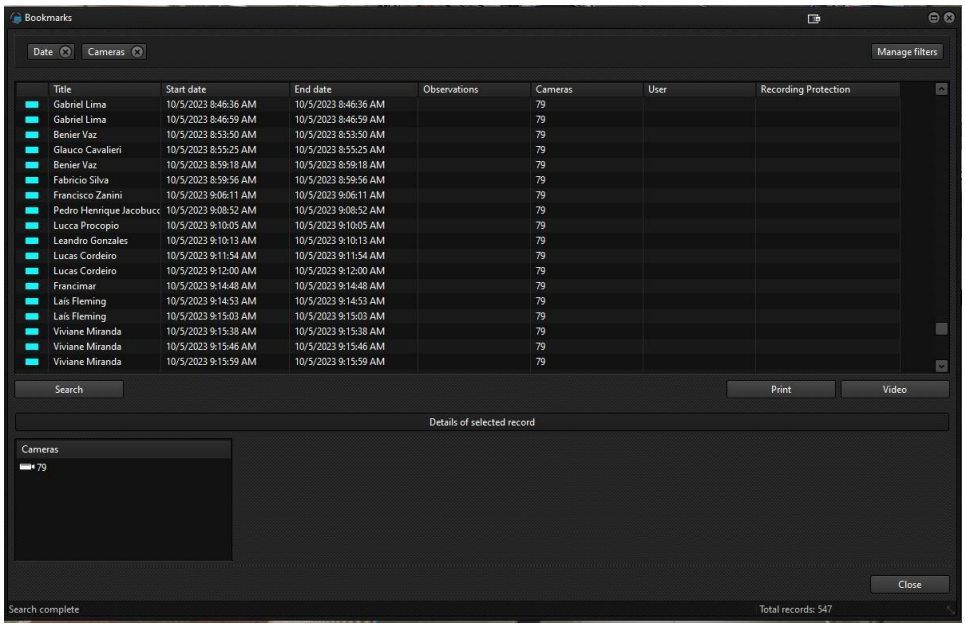
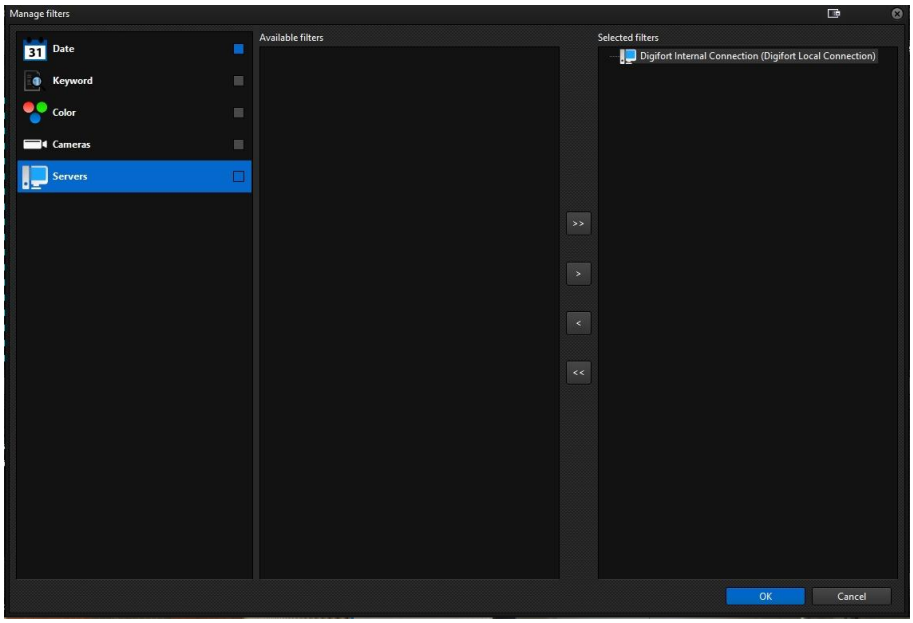


9.2.5 Server Filter

The server filter allows you to filter Bookmarks saved on certain servers where they were saved.

To add the filter, click on **Manage Filters**, then click on the **Servers** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the desired servers by dragging from the left list to the right list, and click **OK.** On the main search screen, click **Search**:

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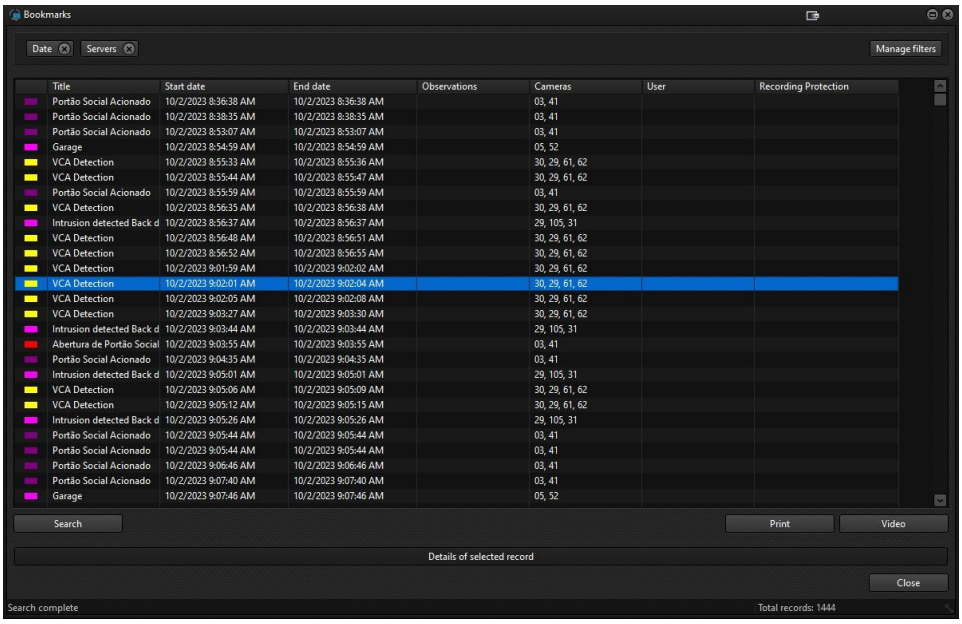
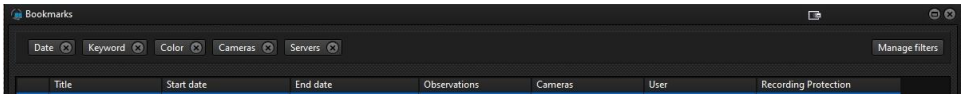


9.2.6 Combining Filters

You can activate multiple filters simultaneously by simply activating the desired filters on the filter management screen. Each filter will limit the scope of the search.

The activated filters are shown in the top bar where you can add or delete them as required:



The filters that are selected intersect, i.e. only the information that is common to them will be filtered.

9.2.7 Generating Bookmark Reports

By clicking on the **Print** button, you can generate a printable report with all the bookmarks:

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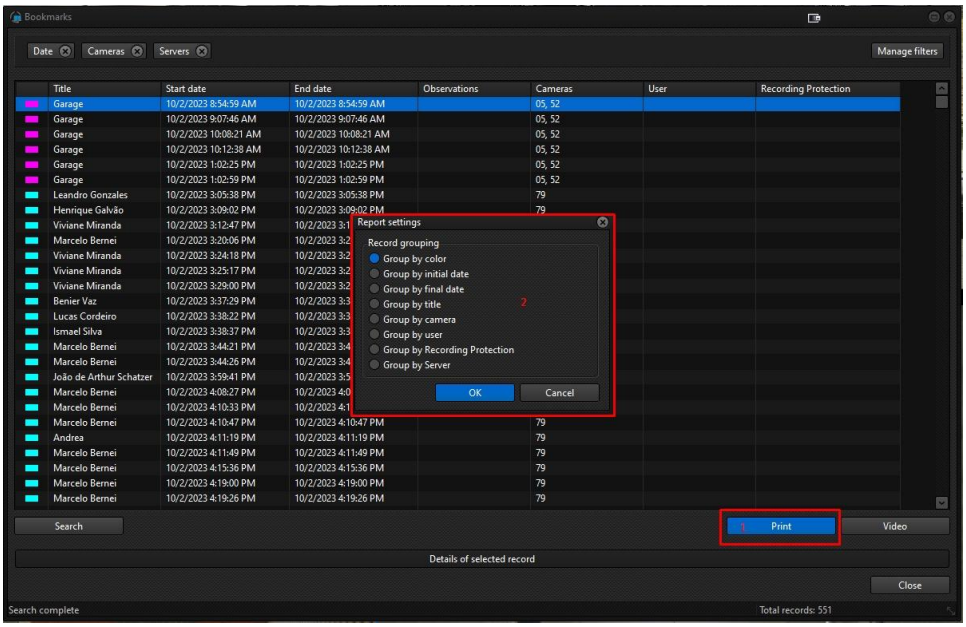
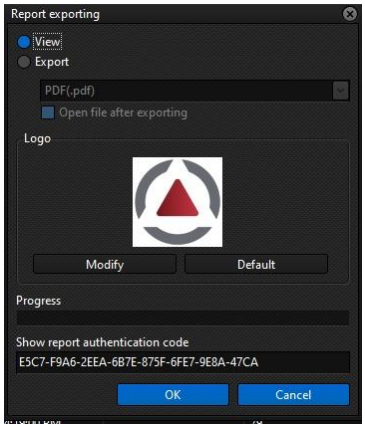


Select the type of record grouping. You can group the records using different options. Select the most appropriate one for your report and click **OK.**

Now select the format and whether you want to view only, print or export (*.pdf, or *.html) and click **OK** and the standard report viewer will be displayed:



The generated report will look like the image below:

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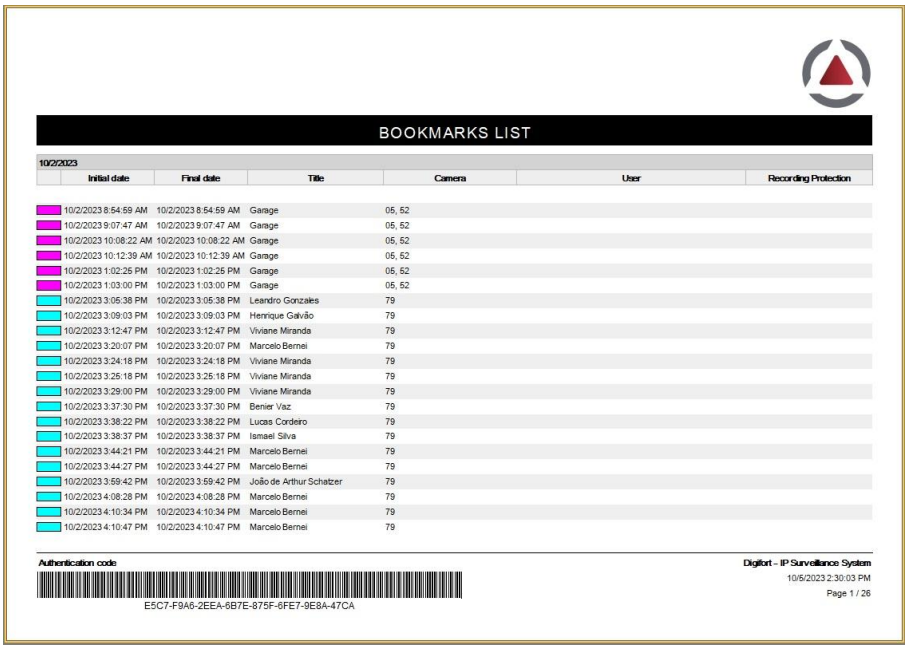


BOOKMARKS LIST

10/2/2023

	Initial date	Final date	Title	Camera	User	Recording Protection
	10/2/2023 8:54:59 AM	10/2/2023 8:54:59 AM	Garage	05, 52		
	10/2/2023 9:07:47 AM	10/2/2023 9:07:47 AM	Garage	05, 52		
	10/2/2023 10:08:22 AM	10/2/2023 10:08:22 AM	Garage	05, 52		
	10/2/2023 10:12:39 AM	10/2/2023 10:12:39 AM	Garage	05, 52		
	10/2/2023 1:02:25 PM	10/2/2023 1:02:25 PM	Garage	05, 52		
	10/2/2023 1:03:00 PM	10/2/2023 1:03:00 PM	Garage	05, 52		
	10/2/2023 3:05:38 PM	10/2/2023 3:05:38 PM	Leandro Gonzales	79		
	10/2/2023 3:09:03 PM	10/2/2023 3:09:03 PM	Henrique Galvão	79		
	10/2/2023 3:12:47 PM	10/2/2023 3:12:47 PM	Viviane Miranda	79		
	10/2/2023 3:20:07 PM	10/2/2023 3:20:07 PM	Marcelo Bernei	79		
	10/2/2023 3:24:18 PM	10/2/2023 3:24:18 PM	Viviane Miranda	79		
	10/2/2023 3:25:18 PM	10/2/2023 3:25:18 PM	Viviane Miranda	79		
	10/2/2023 3:29:00 PM	10/2/2023 3:29:00 PM	Viviane Miranda	79		
	10/2/2023 3:37:30 PM	10/2/2023 3:37:30 PM	Benier Vaz	79		
	10/2/2023 3:38:22 PM	10/2/2023 3:38:22 PM	Lucas Cordeiro	79		
	10/2/2023 3:38:37 PM	10/2/2023 3:38:37 PM	Ismael Silva	79		
	10/2/2023 3:44:21 PM	10/2/2023 3:44:21 PM	Marcelo Bernei	79		
	10/2/2023 3:44:27 PM	10/2/2023 3:44:27 PM	Marcelo Bernei	79		
	10/2/2023 3:59:42 PM	10/2/2023 3:59:42 PM	João de Arthur Schatzer	79		
	10/2/2023 4:08:28 PM	10/2/2023 4:08:28 PM	Marcelo Bernei	79		
	10/2/2023 4:10:34 PM	10/2/2023 4:10:34 PM	Marcelo Bernei	79		
	10/2/2023 4:10:47 PM	10/2/2023 4:10:47 PM	Marcelo Bernei	79		

Authentication code

E5C7-F9A6-2EEA-6B7E-875F-6FE7-9E8A-47CA

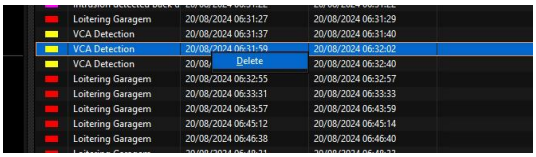
Digifort – IP Surveillance System

10/5/2023 2:30:03 PM

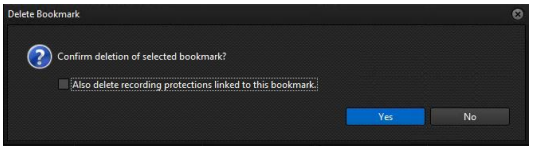
Page 1 / 26

9.2.8 Deleting Bookmarks

To delete a bookmark, select the desired bookmark and right-click on it, selecting the **Delete** option:



A confirmation message will be displayed:



The confirmation screen will also provide an option to delete the write protection associated with this bookmark, if one exists.

Click **Yes** to delete the bookmark.

The operator must have delete bookmark rights in order to perform this function.

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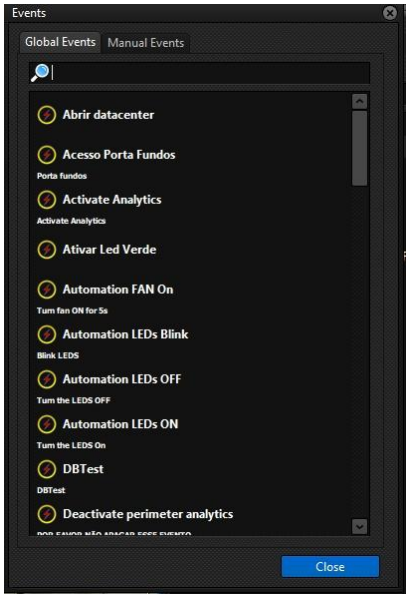
Chapter

10 Global Events

The system makes it possible to create Global Events that can be triggered by the user via the Surveillance Client. Global Events are events that are not associated with an object, such as Manual Events 152 that are associated with a camera. Global Events are independent events that, when triggered, generate actions, such as triggering sirens, opening electronic doors or turning on lamps. To learn how to configure Global Events, see the **Administration Client Manual**.

To trigger global events, click on the **Trigger Events** button on the main screen of the Surveillance Client, as shown in the figure below:

The event selection screen will be displayed:



On this screen, you can filter the events using the filter control at the top of the screen. The filter will be applied to the name or description of the events.

To trigger a global event, simply double-click on the desired item.

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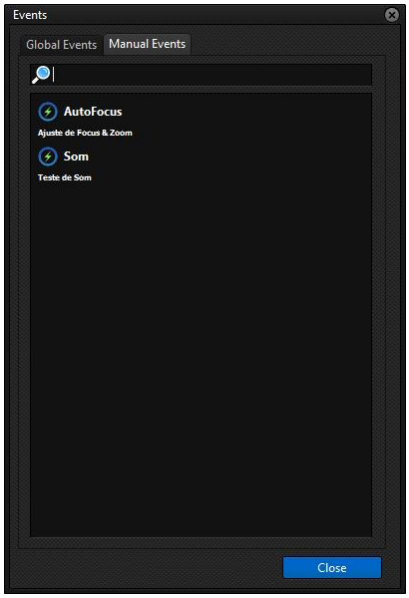
Chapter XI

11 Manual Events

The system makes it possible to create Manual Events that can be triggered by the user via the Surveillance Client. Unlike Global Events 150, Manual Events are associated with a camera and can be triggered via the main event trigger menu or via the camera's context menu, thus providing greater system organization. Like Global Events, Manual Events can also be used to generate actions, such as triggering sirens, opening electronic doors or turning on lamps. To learn how to configure Manual Events, see the **Administration Client Manual**.

To trigger manual events, select the desired camera on the screen and click on the **Trigger Events** button on the main screen of the Surveillance Client, as shown in the figure below:

The event selection screen will be displayed:



On this screen, you can filter the events using the filter control at the top of the screen. The filter will be applied to the name or description of the events.

To trigger a manual event, simply double-click on the desired item.

Another (quicker and more practical) way to trigger Manual Events is via the camera's context menu. To do this, right-click on the camera on the screen, locate the **Manual Events** menu (Only displayed if the camera has at least 1 Manual Event registered), inside this menu you will find the manual events registered on this camera. To trigger them, simply click on the desired item:

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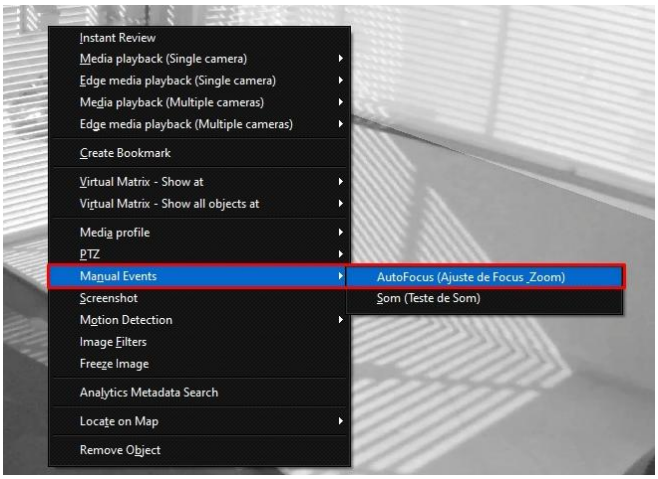

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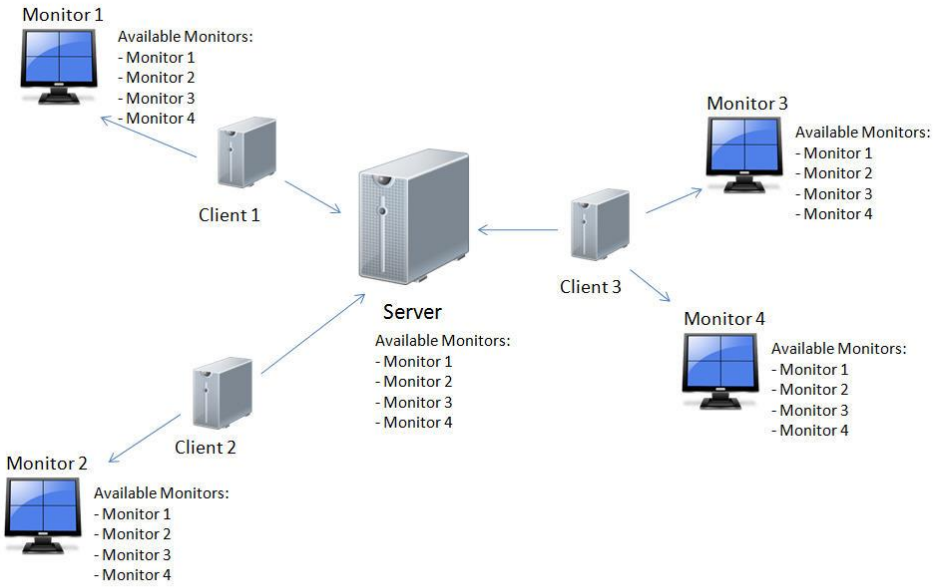
Chapter XII

12 Virtual Matrix

The virtual matrix allows the operator to send or drag and drop any system object such as cameras, maps, views, web pages, analytics, LPR, to any monitor on which the Surveillance Client is open on any computer on the network or to Video Walls. You can use the virtual matrix to create Video Walls, and you can also use it to send objects between system operators.

Here's a diagram of the Virtual Matrix architecture



In this image we have 3 clients connected to the server, which has a list of all the monitors available for the virtual matrix, which in turn sends them to all the clients. In this way, all the clients connected to this server will have an up-to-date list of all the available monitors, and all the clients will be able to interact with all the monitors.

Configuring the Virtual Matrix on the Client is simple, just activate the feature and provide a unique name for the monitors on the workstation, to be shared with the other clients. See the topic on Configuring the Virtual Matrix 45 for more details.

After configuring the client's monitors to be available on the Virtual Matrix, make sure that the user logged on to the Surveillance Client has the right to join the Virtual Matrix (to find out how to grant user rights, see the **Administration Client Manual**).

12.1 Using the Virtual Matrix

There are several ways to send objects to other Virtual Matrix monitors. The user logged into the Surveillance Client must have rights to operate the Virtual Matrix in order to send objects. See below for the different methods of operation.

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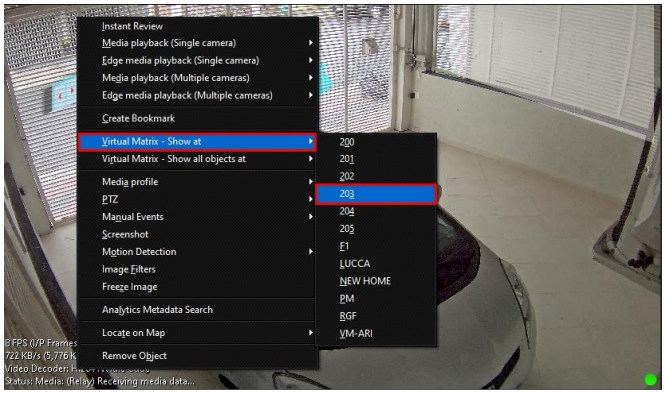
12.1.1 Sending Single Objects via the Context Menu

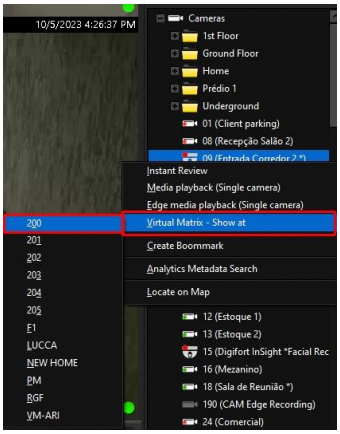
The easiest way to send objects to the Virtual Matrix is via the object's Context Menu or the list of objects. You can send any type of visual object to be displayed in the matrix, as well as complete 158 views.

Right-click on a visual object on screen, such as a camera or a map, and use the **Virtual Matrix - Show at** menu option:



By selecting this option, a submenu with all the available monitors will be displayed, click on the desired monitor to send the object.

You can carry out the same procedure described above in the list of objects, as shown in the figure below:



If you are sending a single object, and the target monitor has a multi-position layout loaded, the system will open a screen to allow you to select which position you want to send the object to:

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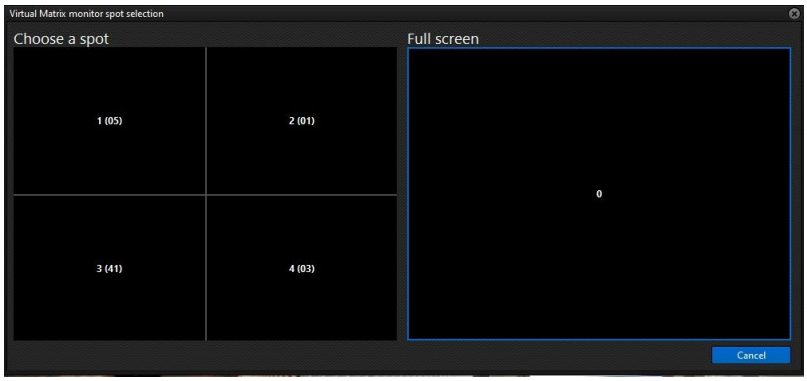
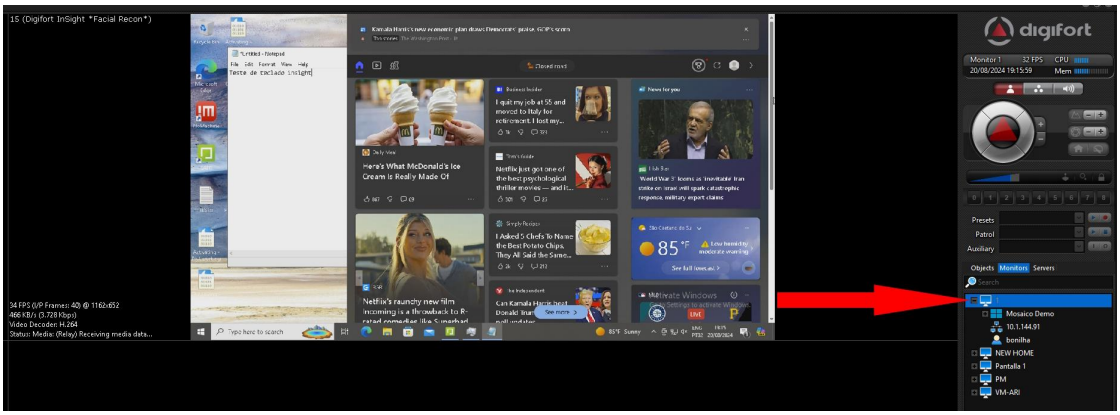


On this screen, in the left quadrant, the system will load the layout that is currently displayed on the target monitor, and you can select a position from the layout to display the object, or you can choose the **Full Screen** option, and the monitor layout will be replaced by the 1-object layout and this object will be displayed in full screen.

If the 1-object layout is already loaded on the target monitor, and you are sending a single object, then this screen will not be displayed and the object will be sent instantly.

12.1.2 Sending Single Objects Using Drag-and-Drop

You can send objects that are being displayed live on the screen using the drag-and-drop function. To do this, first select the **Monitor List** in the controls sidebar, then left-click on the object you want to send, and while holding the button down, drag the object and drop it onto the desired monitor in the monitor list:



If you are sending a single object, and the destination monitor has a multi-position layout loaded, the system will open a screen to allow you to select which position you want to send the object to:

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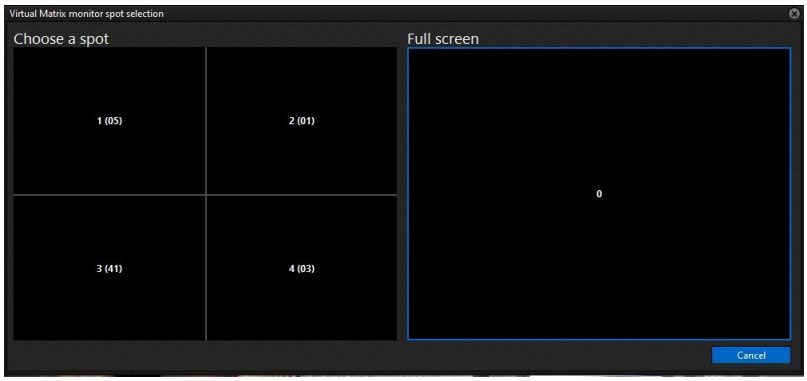
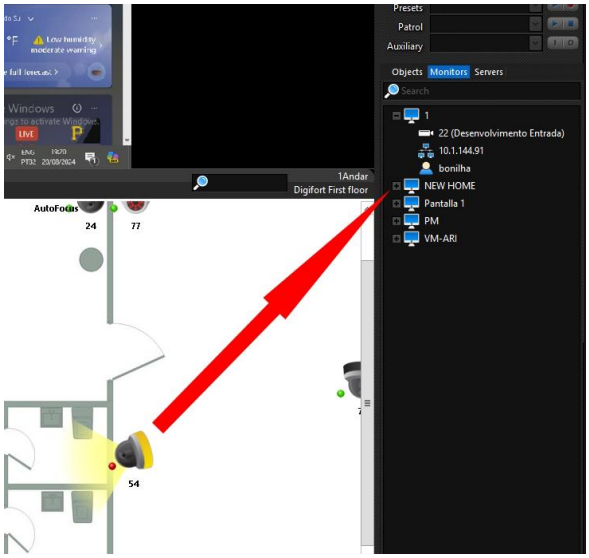


On this screen, in the left quadrant, the system will load the layout that is currently displayed on the destination monitor, and you can select a position from the layout to display the object, or you can choose the **Full Screen** option, and the monitor layout will be replaced by the 1-object layout and this object will be displayed in full screen.

If the 1-object layout is already loaded on the target monitor, and you are sending a single object, then this screen will not be displayed and the object will be sent instantly.

12.1.2.1 Sending Objects from Maps

If you are viewing a Synoptic Map 162, you can drag objects from within the map directly onto the list of displays, and the selected object from within the map will be sent to the virtual matrix instead of the map itself. If you drag the map itself, then the map object will be displayed in the Virtual Matrix.



12.1.3 Sending Multiple Objects

The system allows you to send multiple objects on screen, groups of objects or ready-made views directly to the Virtual Matrix.

12.1.3.1 Sending Views

To send saved views, you can right-click on the desired **view** item directly in the object list and select the option **Virtual Matrix - Show at**:

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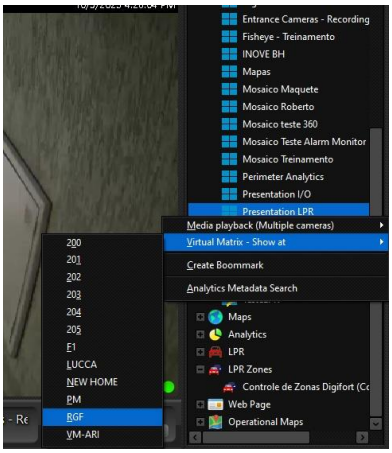
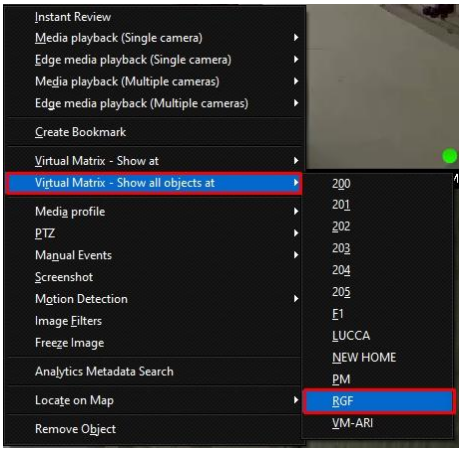


When you select this option, a submenu with all the available monitors will be displayed, click on the desired monitor to send the view.

12.1.3.2 Sending Objects on Screen

The Virtual Matrix allows you to send all the objects that are present on screen, along with their settings (media profile, zoom position, 360 lens position, image filter and motion detection, etc).

By clicking directly on an object (or on the empty matrix), the **Virtual Matrix - Show all objects at** option will be provided with a list of available monitors.



By selecting this option, a submenu with all the available monitors will be displayed, click on the desired monitor to send all the objects on screen.

NOTE: The view does not need to be saved for this option to be used.

12.1.3.3 Sending Groups of Objects

To send groups of objects, you can right-click on the desired group item directly in the object list. The system will give you two options:

- **Virtual Matrix - Show at**: Select this option to display all the group's direct objects to the Virtual Matrix.

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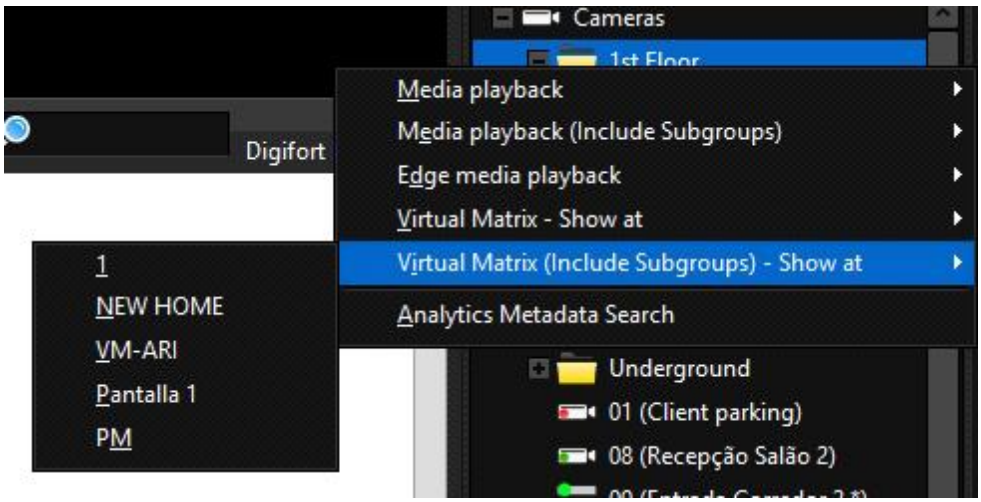
- **Virtual Matrix (Include subgroups) - Show at**: Select this option to display all direct objects and all objects of all subgroups of the selected group to the Virtual Matrix.



When you select this option, a submenu with all the available monitors will be displayed, click on the desired monitor to send the objects from the selected group.

12.2 Monitor List

Use the monitor list to send objects to the virtual matrix via drag-and-drop and to check which objects are currently being displayed on all monitors. See the subtopic on the Monitor List 60 in the Surveillance Client Interface topic for details on this list.

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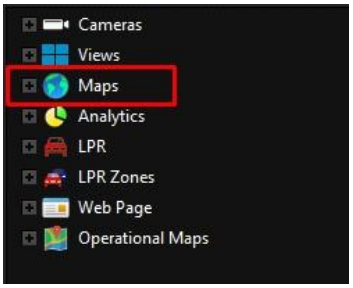
Chapter XIII

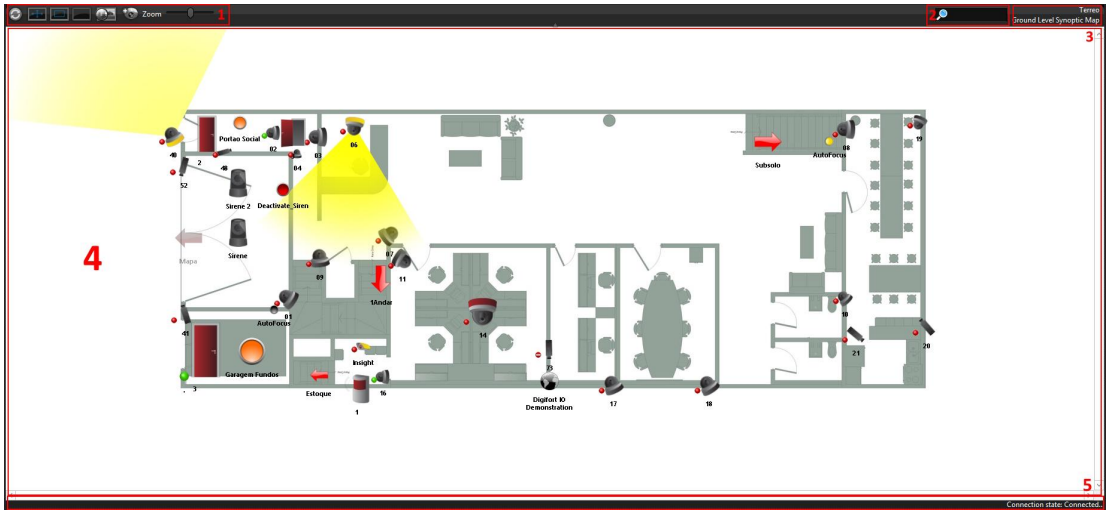
13 Synoptic Maps

The Synoptic Map is a tool that allows you to view a map of the environment, containing images of floor plans, for example, where you can position objects such as cameras, sensors, alarms, triggers, among others, and get an overview of the environment. The Synoptic Map can also be used as a control panel for actions and the status of events and sensors. The system allows for great flexibility when creating maps. To learn how to create synoptic maps, see the **Administration Client Manual**.

Once you have registered your map, it will be available in the list of system objects, as shown in the figure below:



Interface of the Synoptic Map visual object:



1. Toolbar, containing options for controlling and adjusting the map for better viewing.
2. Object filter: By typing in the name of some object, the map will filter and display only the objects that satisfy the filter.
3. Title Bar, containing the name and description of this map object.
4. Map viewing area
5. Map connection status bar.

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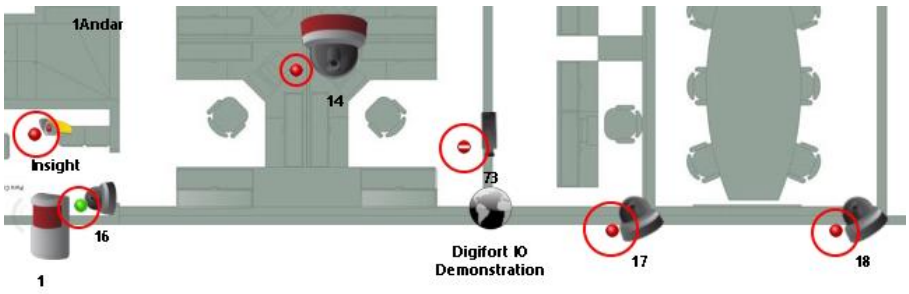
13.1 Toolbar

1. Reloads the map
2. Stretches the map display area to occupy the entire control area, without maintaining the map's original aspect ratio.
3. Stretches the map display area to the entire control area, maintaining the map's original aspect ratio.
4. Displays the map, without resizing.
5. Resize Filter: Allows you to choose the map resize filter.
   a. Nearest: Fast resizing filter, uses little CPU, but produces results with resizing artifacts, such as serrated edges.
   b. Draft: This resizing filter produces a better result than Nearest, but uses a little more CPU.
   c. Linear: This resizing filter produces the best resizing results, but uses more CPU.
6. Open all the cameras on the map in a popup window.
7. Zoom control for viewing the map, only available when option 4 is selected.

To increase the map viewing area, you can close the toolbar using the arrow icon at the bottom center of the toolbar:

13.2 Object Status

Some objects, such as cameras, display their working status with an icon next to the object icon:



If the object supports running status, the following icons will be used:

Object running. Cameras with this icon are running, but are not currently writing to disk.
Object in operation. Cameras with this icon are working and currently recording to disk.
Object not working

13.3 Camera Status and Preview Window

Positioning the mouse over a camera icon will display a brief report about the camera, as shown below.

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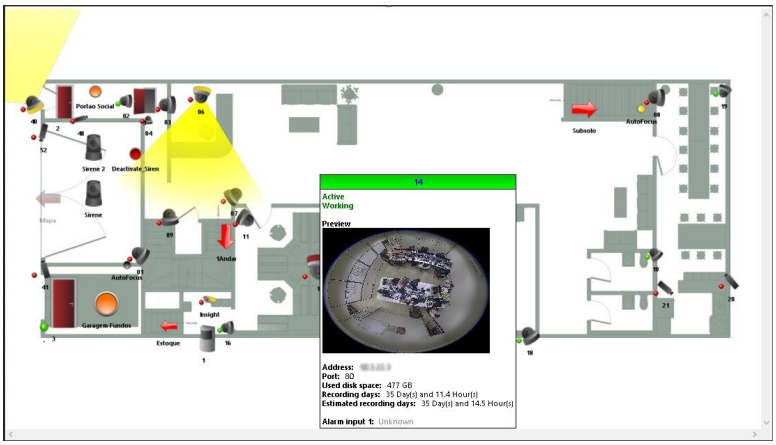

The dialog box will display:

- **Title with name and status**: The name of the camera will be displayed in the title, which will be colored **green** if the camera is in operation or **red** if it is out of operation.
- **Activation status**: Indicates whether the camera is activated or deactivated.
- **Working status**: Text status indicating whether the camera is working.
- **Preview**: Provides an image of the camera updated every second. **NOTE**: The image buffer for the camera must be activated in the camera's settings. See the **Administration Client Manual** to learn how to configure this buffer.
- **Restricted fields**: The following fields will only be available if the user has camera status viewing rights.
  - **Address**: IP address of the camera.
  - **Port**: Communication port.
  - **Disk Used**: Disk space used for recordings.
  - **Recording Days**: Total number of days recorded.
  - **Estimated Recording Days**: Estimated recording days for the current disk limit applied to the camera.
  - **Alarm Input**: Status of the camera's IO Input ports.

13.4 IO Device Status Window

Positioning the mouse over the icon of an IO device will display a brief report about the device, as shown in the figure below.

The dialog box will display:

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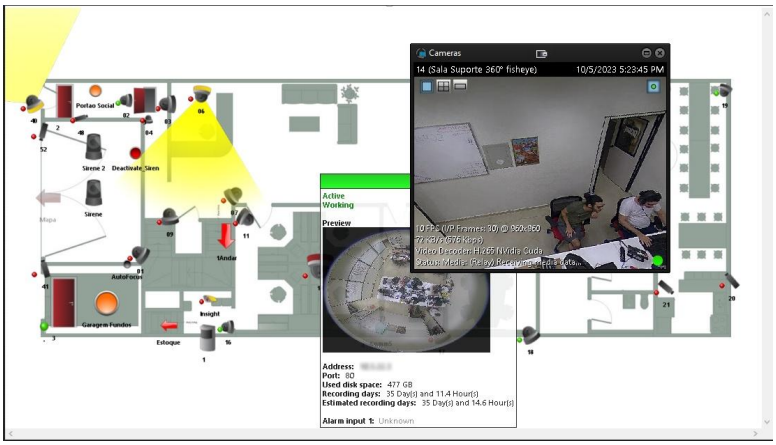
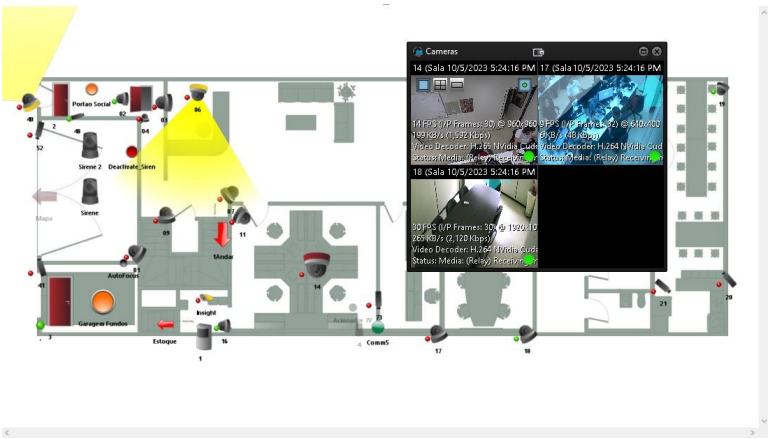
- **Title with name and status**: The name of the device will be displayed in the title, which will be colored **green** if the device is working or **red** if it is not working.
- **Activation status**: Indicates whether the device is activated or deactivated.
- **Working status**: Text status indicating whether the device is working.
- **Restricted fields**: The following fields are only available if the user has IO device status viewing rights.
  - o **Address**: IP address of the device.
  - o **Port**: Communication port.
  - o **Alarm Input**: Status of the device's IO Input ports.

13.5 Open Cameras

You can open cameras that are represented on the Synoptic Map using icons. To do this, double-click on a camera icon and a pop-up with the camera control will appear:



By double-clicking on another camera, it will be displayed in the same window:



You can open the camera in a new window by holding down the **shift** key and double-clicking on the camera icon. With multiple windows open, double-clicking on another camera icon will display it in the window with the focus, unless the **shift** key is held down (To create a new window).

You can also drag a camera icon directly into a space on the monitoring screen, as shown in the image below:

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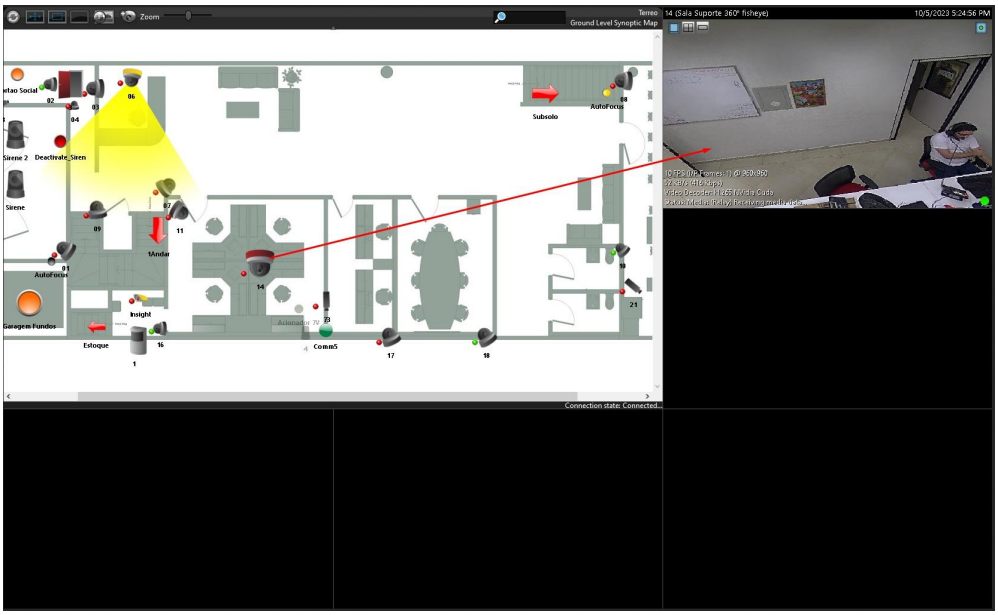
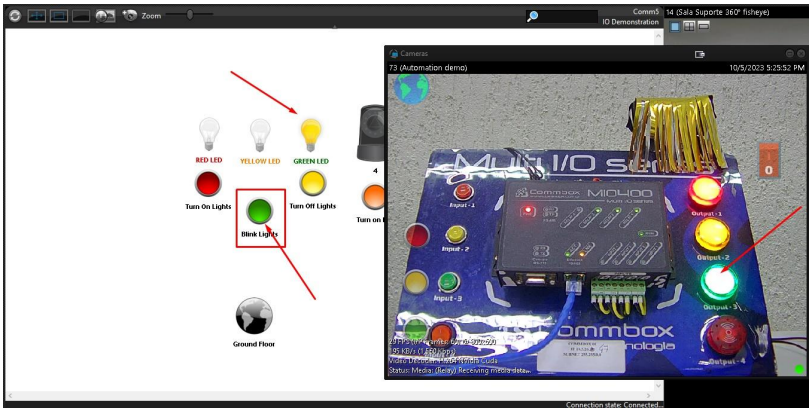


You can also open all the cameras on the map in a popup by clicking on the button on the control's top toolbar.

13.6 Triggers

Synoptic maps allow you to add icons which, when triggered, can trigger an event or a physical action, such as activating relays and alarms.

To activate an event or action, simply double-click on the corresponding button, as in the following example:



Maps also allow you to add event statuses, as well as alarm entry door statuses, allowing you to create maps that can be used as a kind of control panel:

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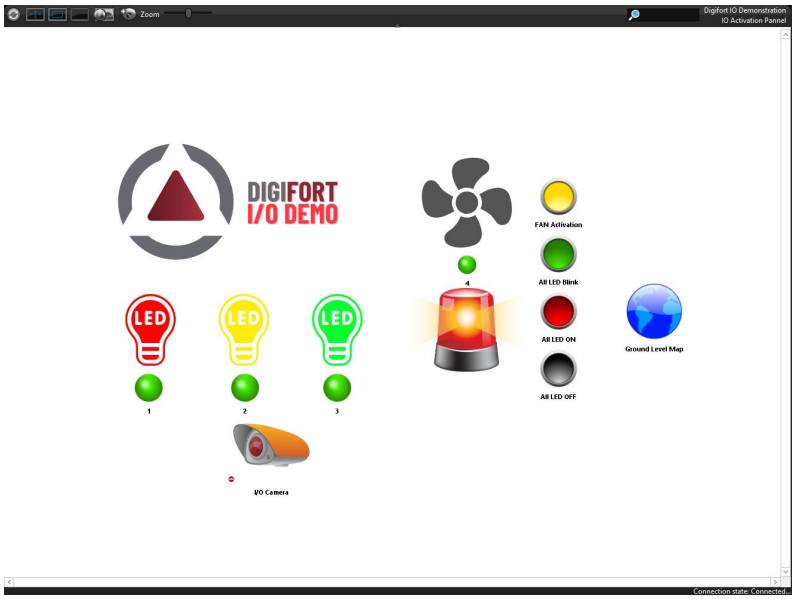
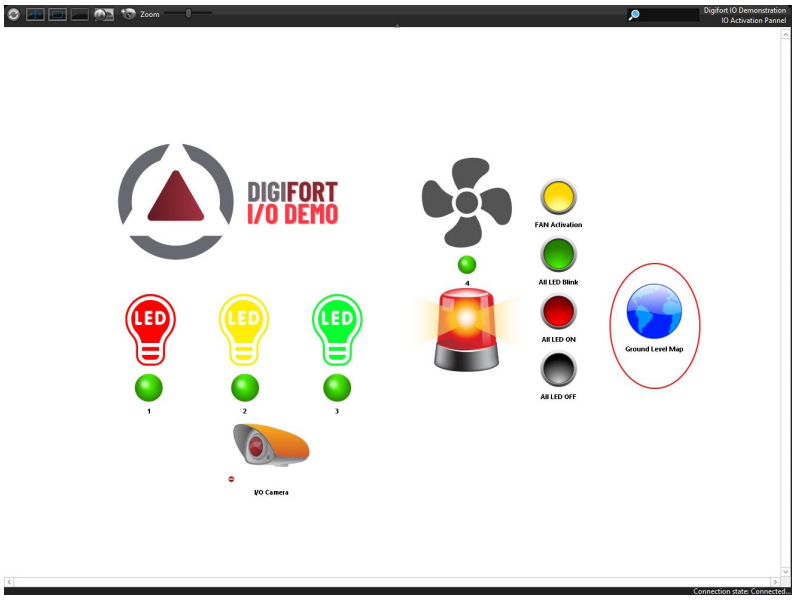


Other objects such as Presets for PTZ cameras can also be added to the map, and can be triggered by double-clicking.

See the **Administration Client Manual** for more information on how to configure events, statuses, actions, presets and triggers on maps.

13.7 Links to Maps

The map system allows you to add links to other maps, thus creating the possibility of multi-level maps. In the example below we have a globe-shaped icon, which when double-clicked will open the associated map:



As with cameras, you can drag the map link to a space in the monitoring view, allowing the linked map to open:

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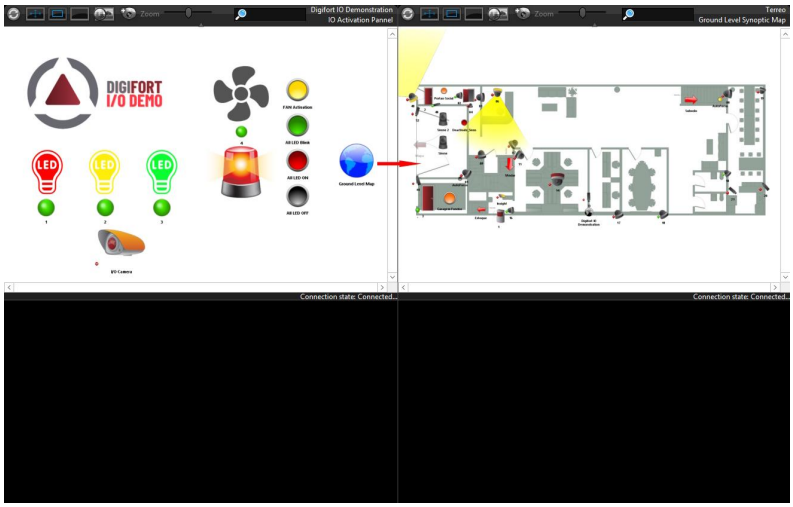

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Chapter XIV

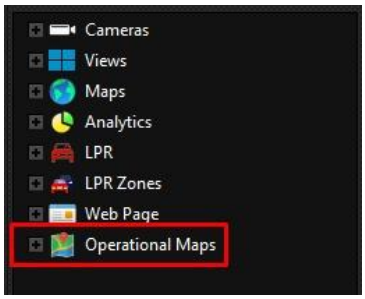
14 Operational Maps

Operational maps have advanced applications within servers with several cameras, monitoring various points in a city, for example.
This is a feature that, through integration with Google Maps, allows the creation of navigation maps and event maps.

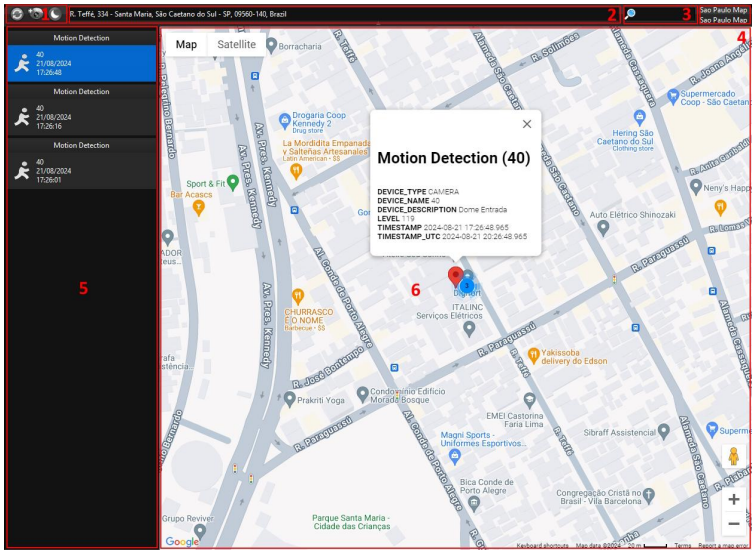
The **navigation maps** provide an overview with the geo-positioning of all the cameras in the system (which have geo-positioning activated) and will allow access to these cameras via icons referenced on the map. If the Surveillance Client is connected to multiple servers, the operational map will automatically concentrate and display objects from all servers.

Event maps provide, in real time, the position of the event (if it is geo-referenced) on the map when it occurs, creating a powerful visualization and navigation interface that offers a detailed view of the locations where events are occurring and allows the operator to access the cameras near an event, thus speeding up the response to the event.

Operational Maps can be found in your object list:



Operational Map visual object interface:



1. Toolbar, containing options for controlling and adjusting the map for better viewing.
2. Address bar. Displays the address of the selected event and allows navigation to a specified address.

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3. Object Filter: By typing in the name of some object, the map will filter and display only the objects that satisfy the filter.
4. Title bar, containing the name and description of this map object.
5. List of Events.
6. Map display area

The operational map, when displayed, will connect to all the servers connected to the Surveillance Client, receiving camera and event information from all of them, allowing the operator to have control and overview of the system.

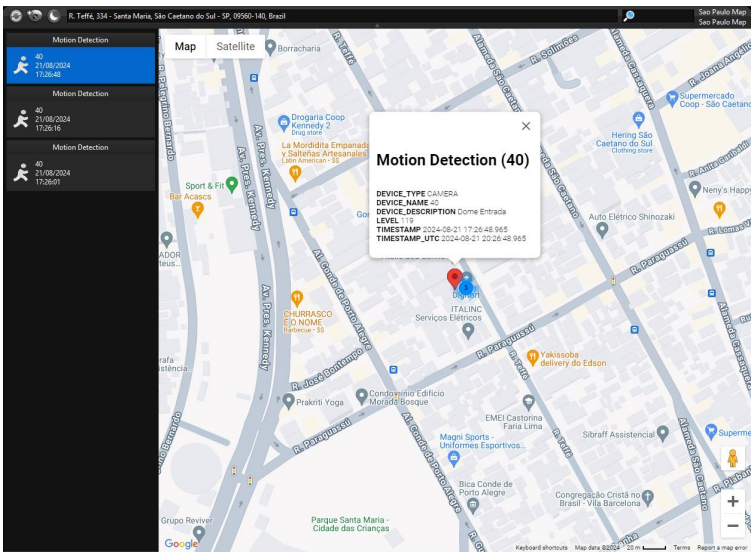
14.1 Toolbar

1. Reloads the map
2. Open all the cameras on the map in a popup window.
3. Switch between Day and Night Mode

To increase the map's viewing area, you can close the toolbar using the arrow icon at the bottom center of the toolbar:

14.2 Events

One of the greatest uses of the Operational Map is its ability to display geo-referenced events, providing the position of the event on the map, as well as additional information about the event:



In this example, motion detection events are being received on this map and are displayed in the records column on the left, clicking on one of the records will center the map on the location where the event occurred.

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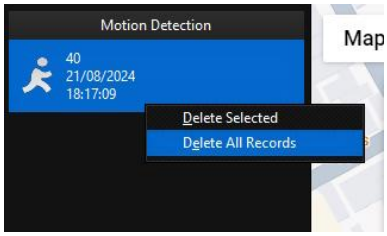
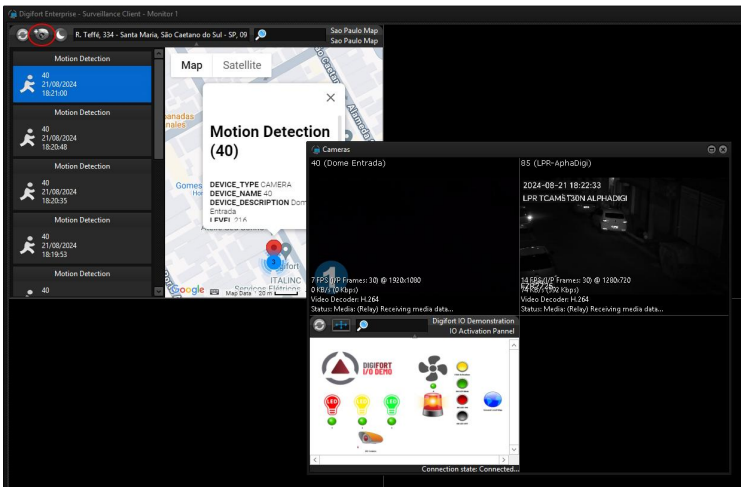
Only events with latitude and longitude will be displayed on the screen.

The list of events allows you to delete a specific event or delete all events by right-clicking on the list of events, displaying the Context Menu and selecting the desired option:



- **Delete selected**: Deletes the selected event.
- **Delete all records**: Clears the list of events.

After receiving an event, the operator can simultaneously view all the objects (Cameras and Synoptic Maps) that are being displayed on the current perimeter of the map by simply clicking on the **View Objects** button on the toolbar, making the operator's handling much more agile and with unprecedented scope:



The event displayed on the map will also have all the event variables listed on screen. These variables contain extra information about the event:

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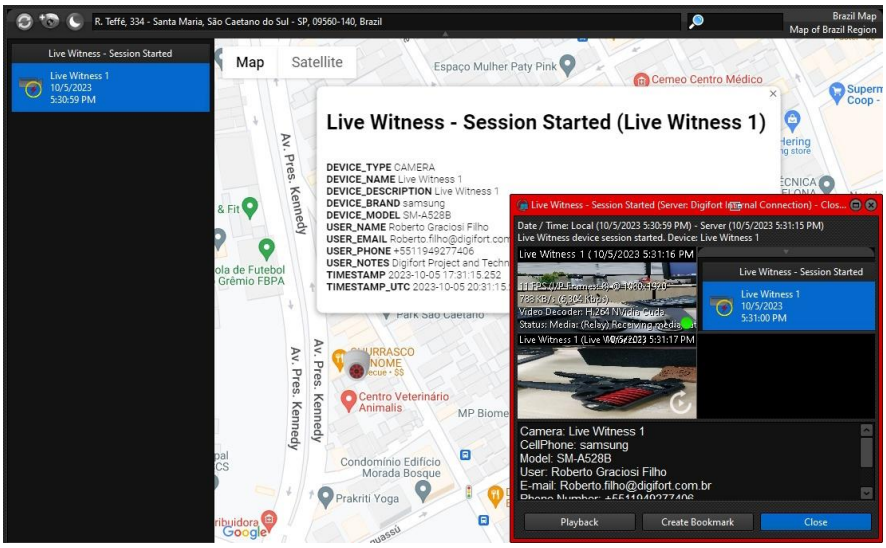


Note

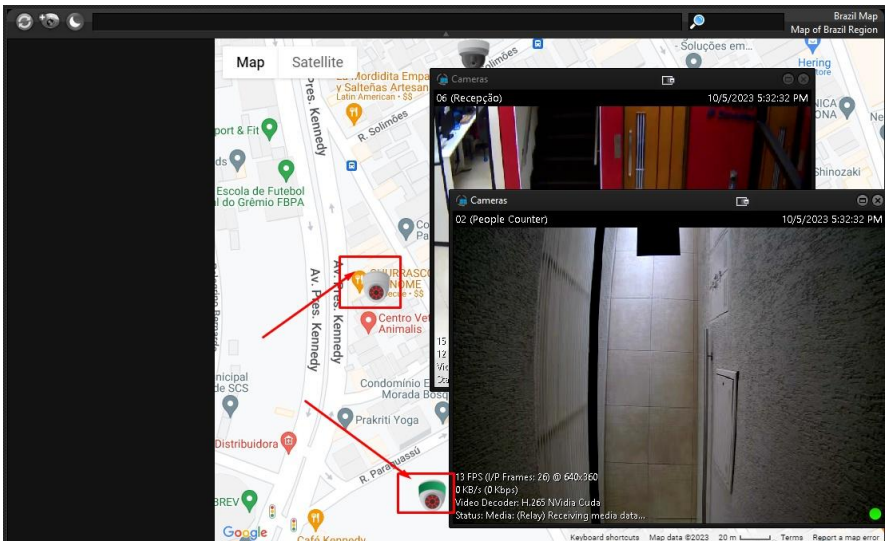
The event list will keep the last 50 events.

14.3 Open Cameras and Maps

It is possible to open cameras and synoptic maps that are represented on the Operational Map using icons. The system has some options for displaying the object, which can be configured in the Operational Map Settings 49.

With the default setting:

- Double-click on a camera icon, or operational map, the linked object will replace the operational map object on screen.
- Double-click on an object while holding down the shift key, the linked object will be added to a quadrant of the view that is free, if no quadrant is free, a popup will be displayed with the object.
- Double-clicking on an object while holding down the ctrl + shift keys will display the linked object in a popup window.



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You can also open all the objects on display in the current map perimeter in a popup by clicking on the button on the control's top toolbar.

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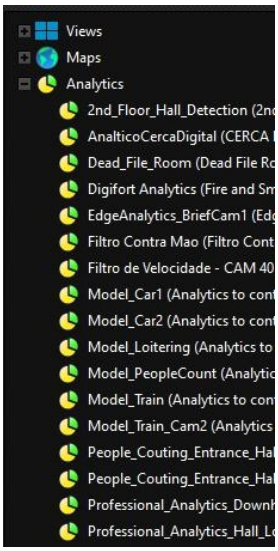
Chapter XV

15 Analytics

Analytics is a set of tools that intelligently processes camera images. This processing includes object counting, flow control, objects left and taken, face detection and others, which we'll look at in detail below. This system is able to detect when there is a breach of pre-defined rules and trigger alarms to attract the operator's attention.

Analytics can complement monitoring in various ways, such as triggering alarms, archiving events and generating reports.

Analytics can be found in the object list:



The analytics object interface consists of a camera and a list of events.

15.1 Event Bar

The event list is used to display the events triggered by this Analytics Configuration in real time. The list will always be clear when the object is added to the screen, and will keep the last 100 events that occurred while the object was on the screen.

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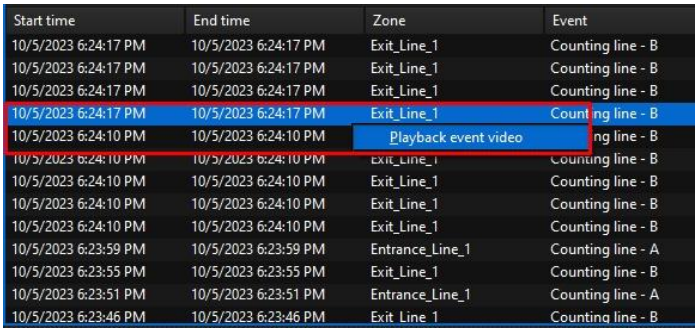
- **Start Date**: Start date of the event.
- **End Date**: End date of the event.
- **Zone**: Zone, if available, in which the event was triggered.
- **Event**: Type of event.
- **Class**: Class of object, if available, which triggered the event.
- **Rule**: Rule, if available, that triggered the event.

The event bar organizes the events in descending order, i.e. the last one to be triggered at the top.

You can view the video of an event by clicking on it with the direct button and then clicking on **Play event video**.



15.2 Context Menu

The analytics Context Menu offers several options for customizing the display of analytics metadata, as well as controls such as counter reset, video playback, bookmarks and virtual matrix.

Right-click on the camera of the analytics object to access the Context Menu:

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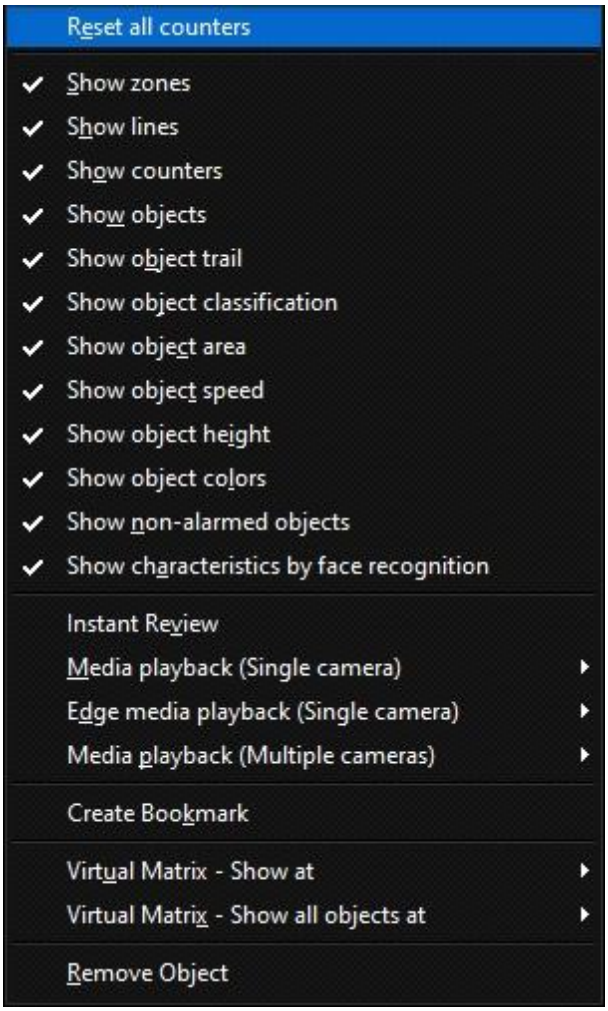

The following functionalities are available in the menu where the mouse pointer is located:

- **Reset Counters**: If there are counters on screen, the **Reset all counters** option will be available, select this option to reset the value of all the counters on screen, or right-click on a specific counter to get the option to reset the value of that counter only.
- **Show Zones**: Enables or disables the display of configured zones on the screen.
- **Show Lines**: Enables or disables the display of configured lines on the screen.
- **Show Counters**: Enables or disables the display of counters on the screen.
- **Show Objects**: Enables or disables the display of the rectangle surrounding the object on the screen.
- **Show Object Trail**: Enables or disables the display of the object trace on the screen.
- **Show Object Classification**: Enables or disables the display of the object's classification (car, person, No classification, etc).
- **Show Object Area**: Enables or disables the display of the object area calculation.
- **Show Object Speed**: Enables or disables the display of the object's speed calculation.
- **Show Object Height**: Enables or disables the visualization of the object height calculation.
- **Show Object Colors**: Enables or disables the display of object colors.
- **Show Non-Alarmed Objects**: Show objects that are not triggering any analytics rules. When an object triggers an analytics event, its outline changes from yellow to red.
- **Show Face Recognition Features**: Shows face recognition features such as gender, mood, age, etc.
- **Video Playback**: See the topic on Video Quick Playback 127.

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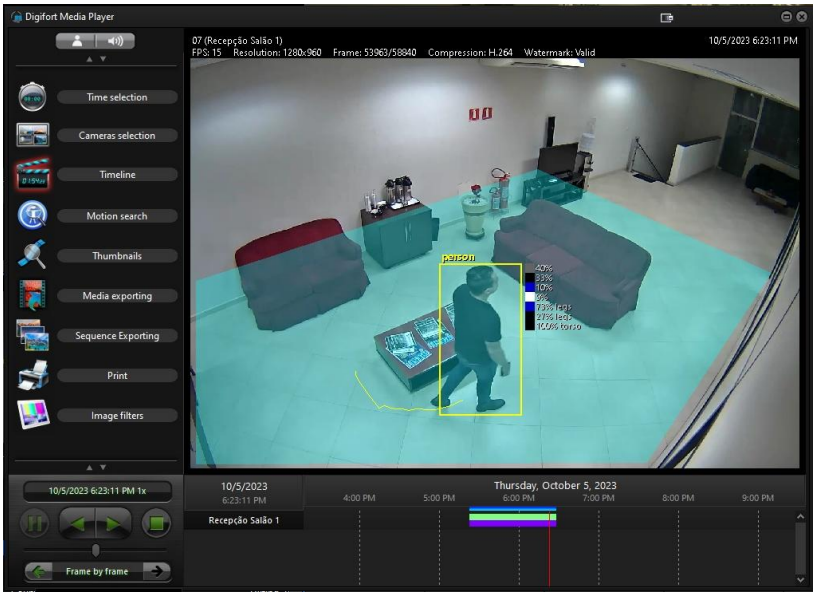
- **Bookmark**: Opens the screen for creating a bookmark 138 with this selected camera.
- **Virtual Matrix**: See the topic on Sending Objects to the Virtual Matrix 156.

15.3 Recording and Metadata

You can activate the recording of the data generated by the analytics together with the camera images. To learn how to activate this feature, see the **Administration Client Manual**.

When a camera is used by analytics and has the metadata recording function activated, in its recording you can view the data generated by the video analysis:



During video playback, a purple bar will be displayed on the timeline showing the metadata recording track.

The system also allows you to select which analytics metadata will be displayed by right-clicking on the image as shown below:

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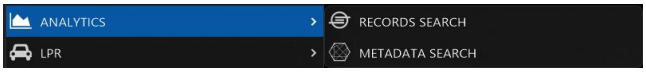
NOTE: The metadata will also be included in a video export in native format.

15.4 Analytics Records

O sistema possui uma poderosa ferramenta para pesquisa e relatórios de registros de analítico. Neste tópico você aprenderá a pesquisar, gerar relatórios e gráficos de analíticos.

15.4.1 Searching Records

To search for records, click on the **Records Search** option as shown in the image below:



The following screen will be displayed:

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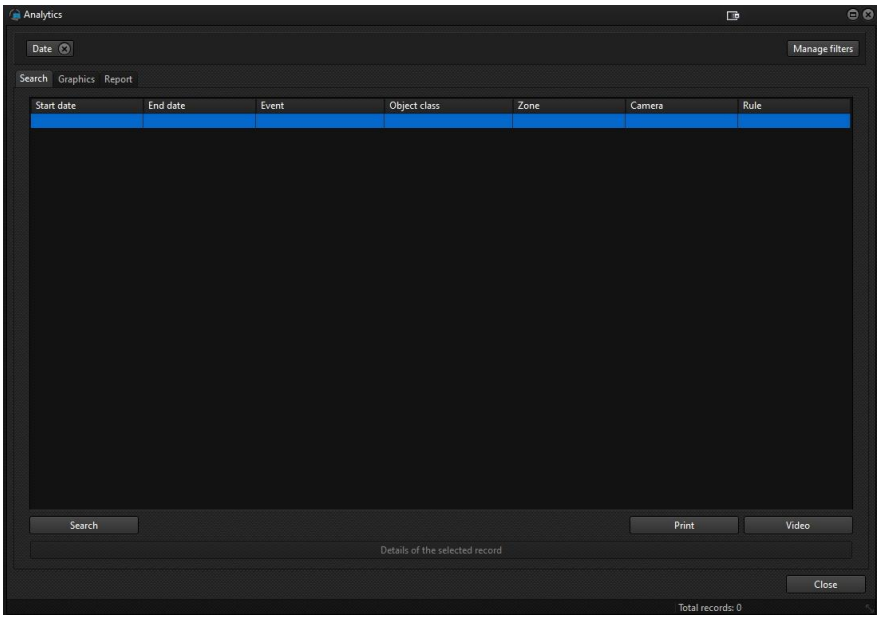
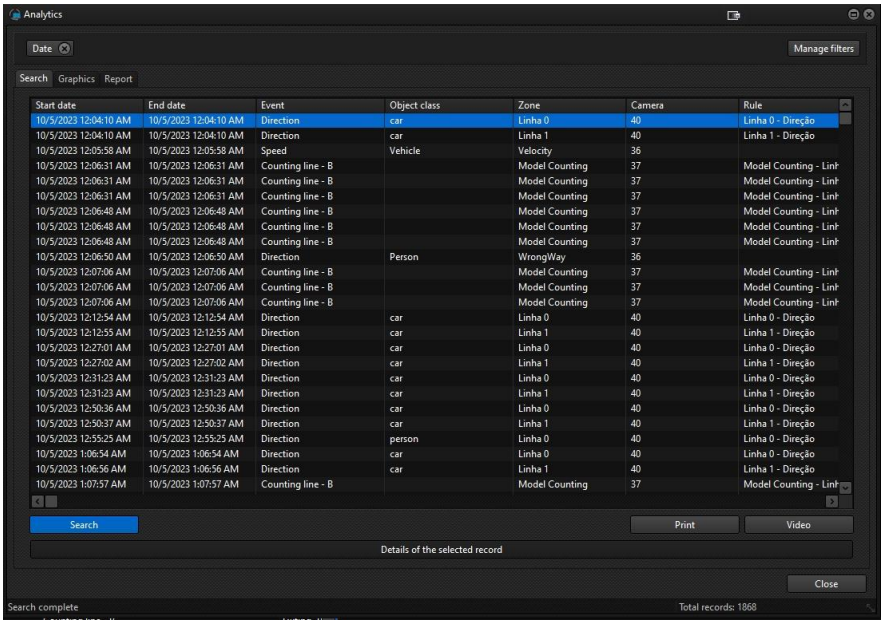


On this screen it is possible to search for records by various methods. We'll look at each of them in the following chapters

When the **Search** key is pressed, the system will query the records according to the filters selected in the filter bar:



Every analytics event starts and ends at a certain date and time, so you can see the recording of the exact moment by clicking on the desired record and then clicking on the **Video** button as in the figure below:

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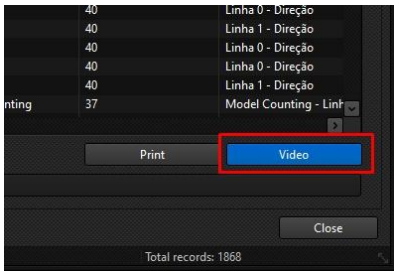
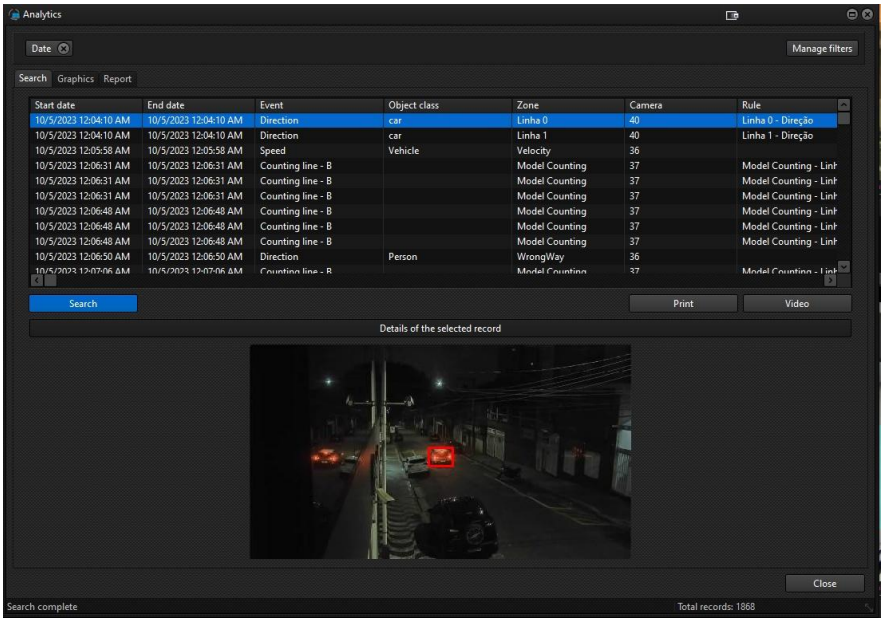


After clicking on video, the Media Player 94 will be displayed, bringing up the video of the event.

15.4.1.1 Record Details

Some analytics records have attachments such as a photo of the time of the event.

To see the details of a record, simply select it and click on **Details of the selected record**, as shown in the image below:



15.4.1.2 Searching With Filters

The search allows you to select various filters to help you find records. Click on the **Manage Filters** button to add new filters:

15.4.1.2.1 Date Filter

Searching by date allows you to filter the records by the selected date.

To add the filter, click on **Manage Filters**, then click on the **Date** tab.
To activate the filter, click on the checkbox to the right of the filter.

You will see two options: **Complete Date** and **Fractional Date**.

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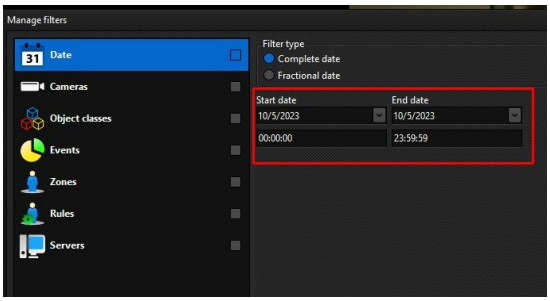
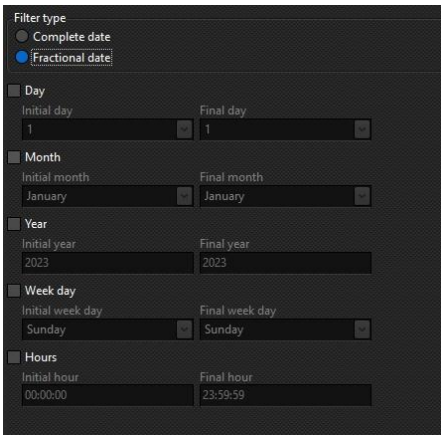
The Complete Date search will filter the records found between the Start Date/Time and End Date/Time:



The Fractional Date search, on the other hand, allows for a greater variety of combinations, providing a powerful tool for creating customized reports. Select the Split Date field as shown in the image below:



This screen has the following functionalities:

- **Day**: Configuration of the start day and end day to filter the events contained between these days.
- **Month**: Setting the start month and end month to filter the events contained between these months.
- **Year**: Setting the start year and end year to filter the events contained between these years.
- **Week**: Setting the start week and end week to filter the events contained between these days.
- **Hours**: Setting the start time and end time to filter the events contained between these hours.

This search allows you to merge fields and get results like the example below:
I want to search for events between the 1st and 20th, between the months of July and December, between the years 2023 and 2024, that fit between Monday and Friday and in the times from 06:00:00 to 22:00:00.

Choose the time interval to search the records. Click **OK** and then on the main search screen click **Search**:

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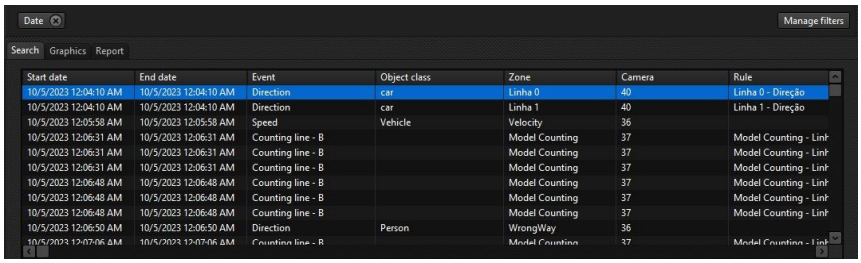
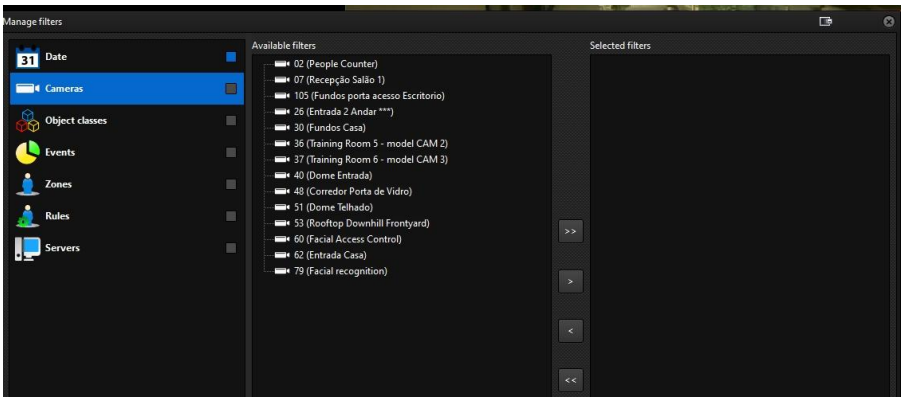


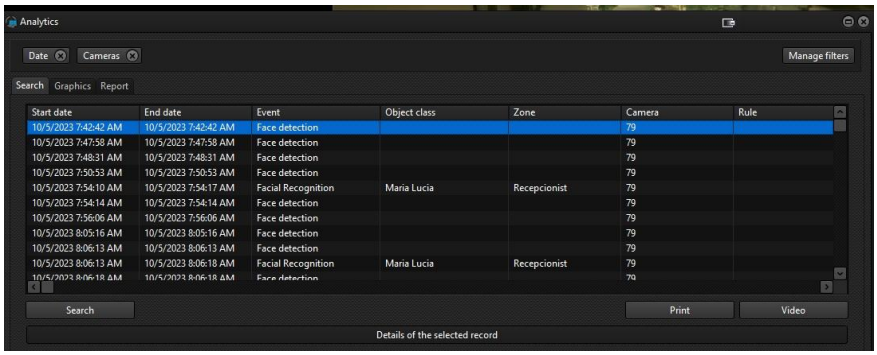
15.4.1.2.2 Camera Filter

The camera filter allows you to search for recordings from specific cameras.

To add the filter, click on **Manage Filters**, then click on the **Cameras** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the cameras you want by dragging from the left list to the right list, and click **OK.** On the main search screen, click **Search**:



15.4.1.2.3 Object Class Filter

The object class filter allows you to search for event records that have been triggered by a certain class, such as a car or a person.

To add the filter, click on **Manage Filters**, then click on the **Object Classes** tab.
To activate the filter, click on the checkbox to the right of the filter.

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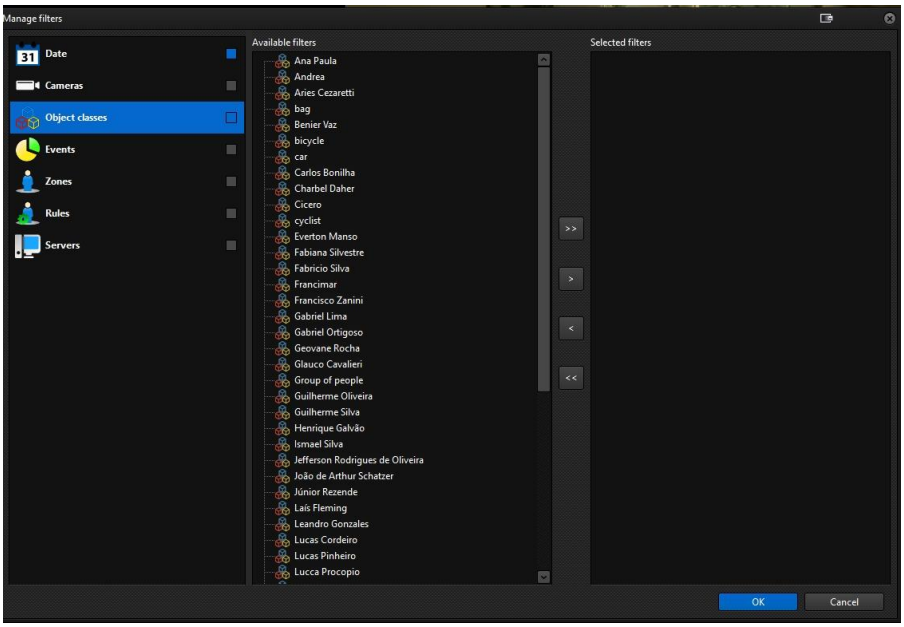
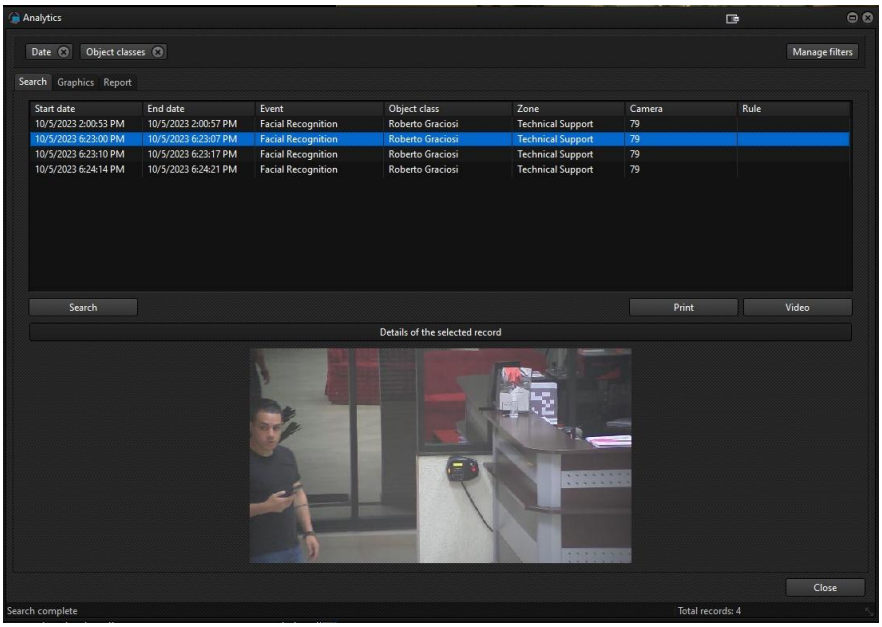


Select the classes you want by dragging from the left list to the right list, and click **OK.** On the main search screen, click **Search**:



15.4.1.2.4 Event Type Filter

The event type filter allows you to search for event records of a certain type, such as Presence, Loitering, etc.

To add the filter, click on **Manage Filters**, then click on the **Events** tab.
To activate the filter, click on the checkbox to the right of the filter.

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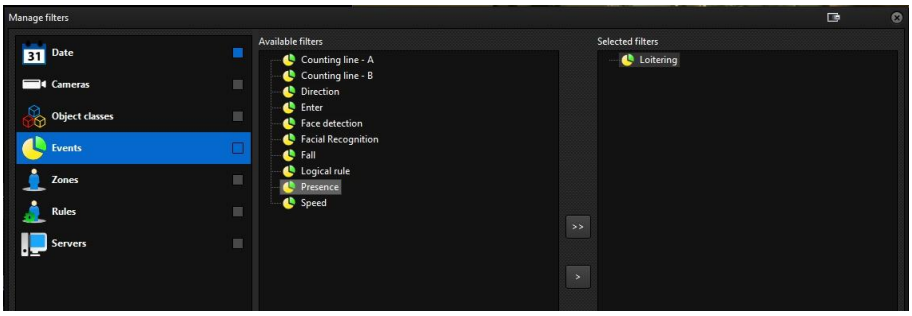
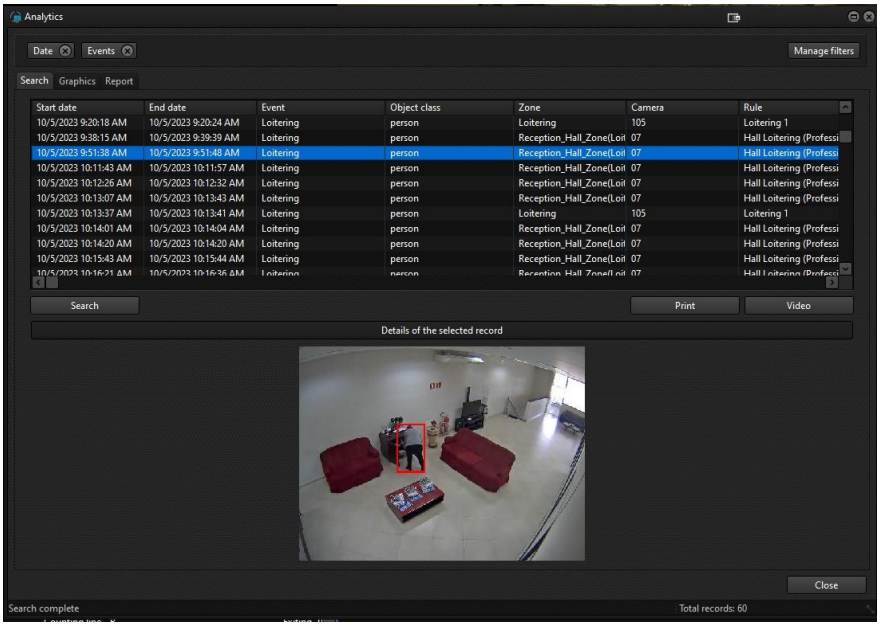


Select the desired event types by dragging from the left list to the right list, and click **OK.** On the main search screen, click **Search**:



15.4.1.2.5 Zone Filter

The zone filter allows you to search for event records that occurred in certain configured zones.

To add the filter, click on **Manage Filters**, then click on the **Zones** tab.
To activate the filter, click on the checkbox to the right of the filter.

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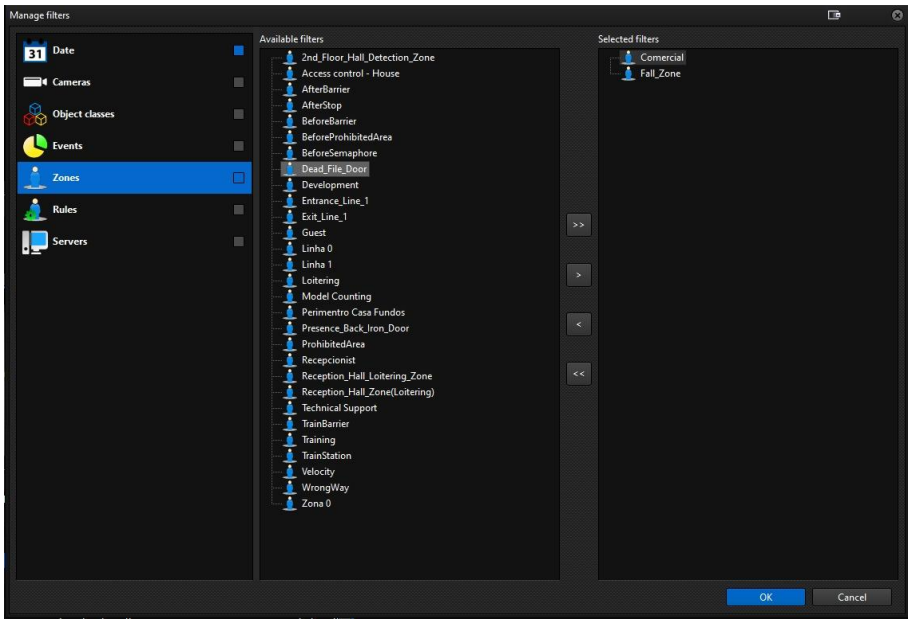
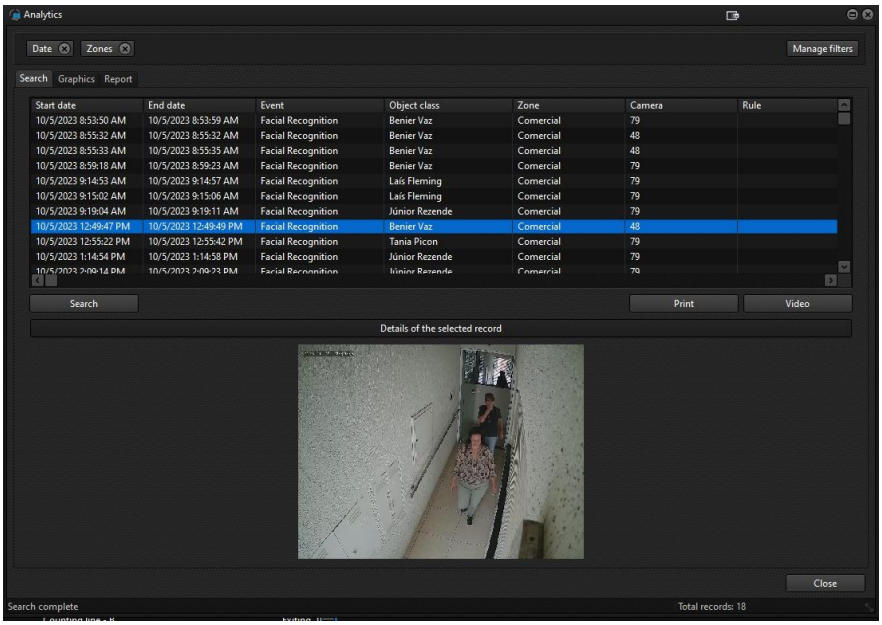


Select the zones you want by dragging from the left list to the right list, and click **OK.** On the main search screen, click **Search**:



15.4.1.2.6 Rules Filter

The rules filter allows you to search for event records that have been triggered by certain configured rules.

To add the filter, click on **Manage Filters**, then click on the **Rules** tab.
To activate the filter, click on the checkbox to the right of the filter.

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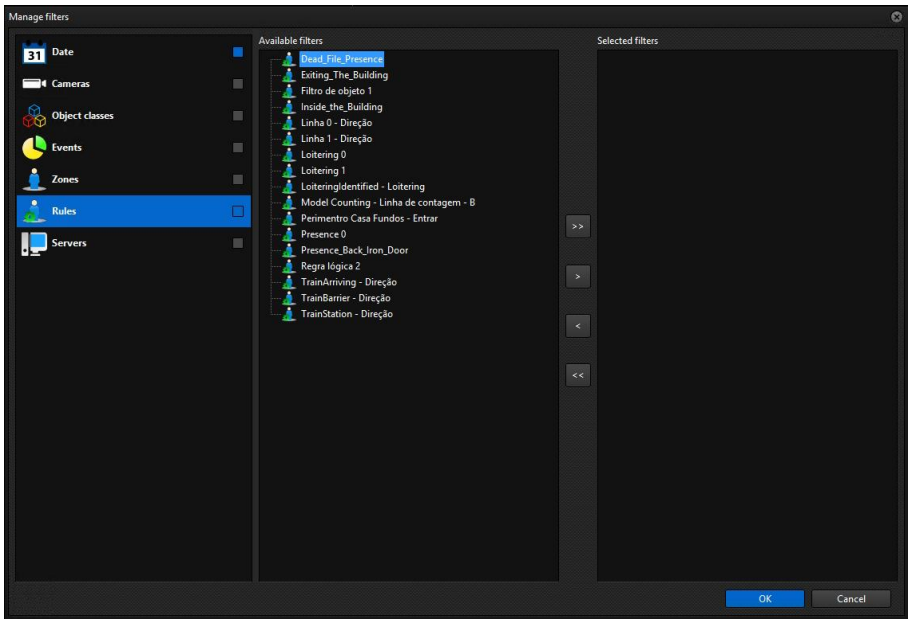
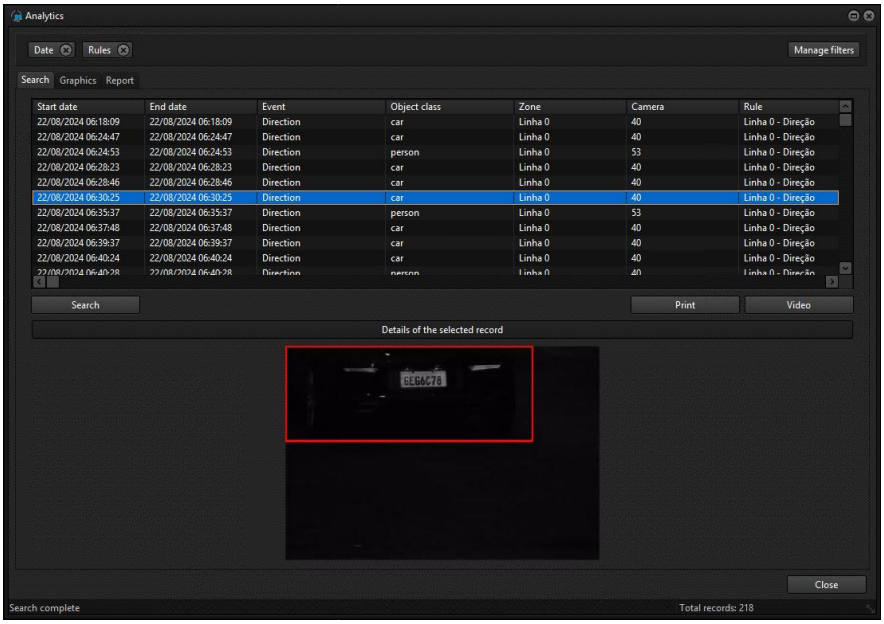


Select the rules you want by dragging from the left list to the right list, and click **OK.** On the main search screen, click **Search**:



15.4.1.2.7 Server Filter

The server filter allows you to search for event logs that have been triggered by servers connected to the Surveillance Client.

To add the filter, click on **Manage Filters**, then click on the **Servers** tab.
To activate the filter, click on the checkbox to the right of the filter.

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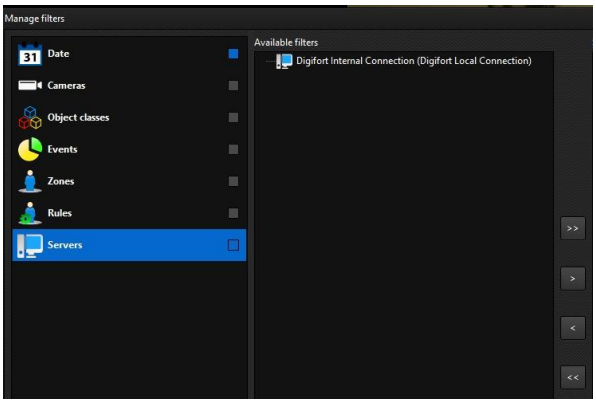
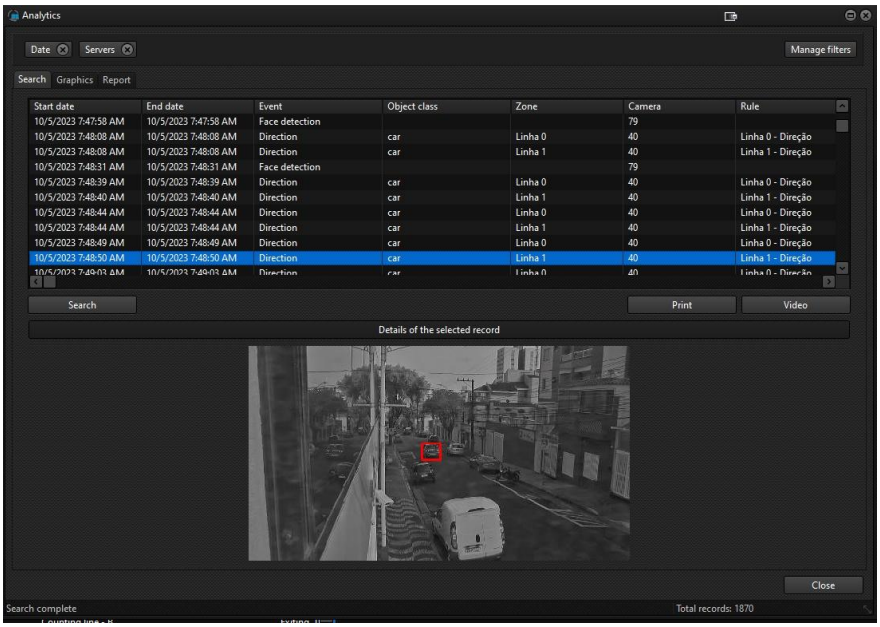


Select the desired servers by dragging from the left list to the right list, and click **OK.** On the main search screen, click **Search**:



15.4.1.2.8 Combining Filters

You can activate multiple filters simultaneously by simply activating the desired filters on the filter management screen. Each filter will limit the scope of the search.

The activated filters are shown in the top bar where you can add or delete them as required:

The filters that are selected intersect, i.e. only the information that is common to them will be filtered.

15.4.1.3 Records Printing

By clicking on the **Print** button, you can generate a printable report with all the filtered records:

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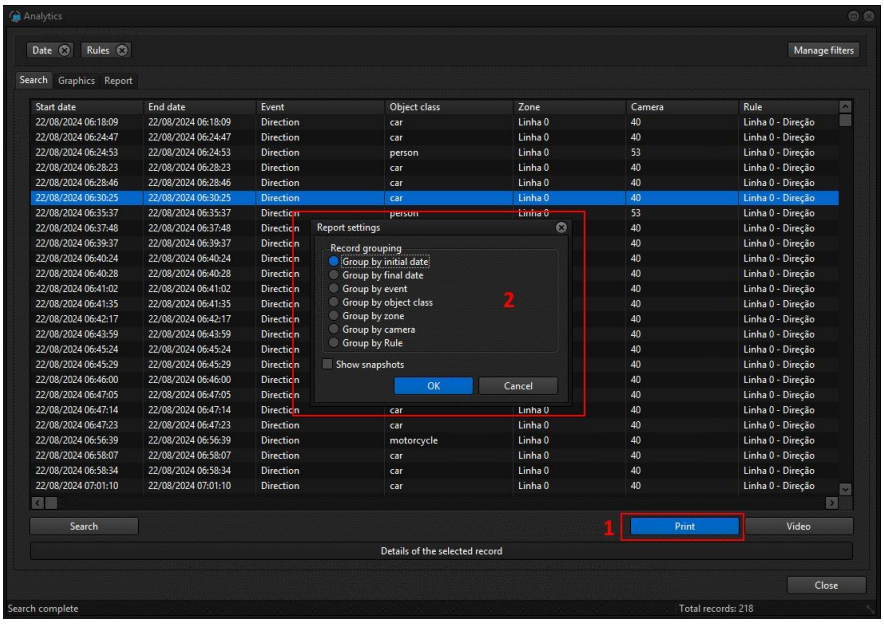
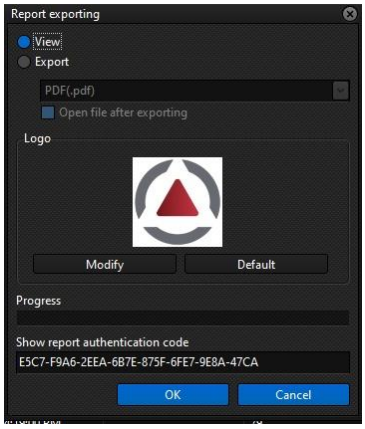


Select the type of record grouping. Records can be grouped by different options. If you want to include a small snapshot of the event (if the event exists) in the report, select the **Display Snapshots** option. Select the most appropriate options for your report and click **OK.**

Now select the format and whether you want to view only, print or export (*.pdf, or *..html) and click **OK** and the standard report viewer will be displayed:



The generated report will look like the image below:

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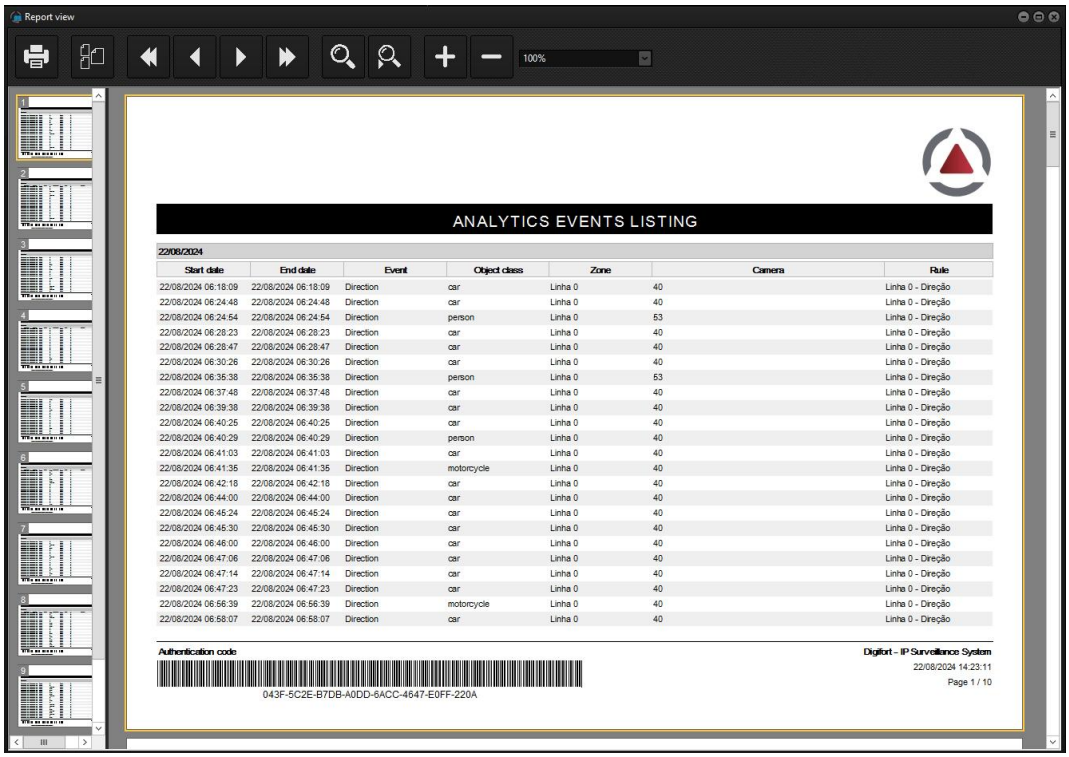
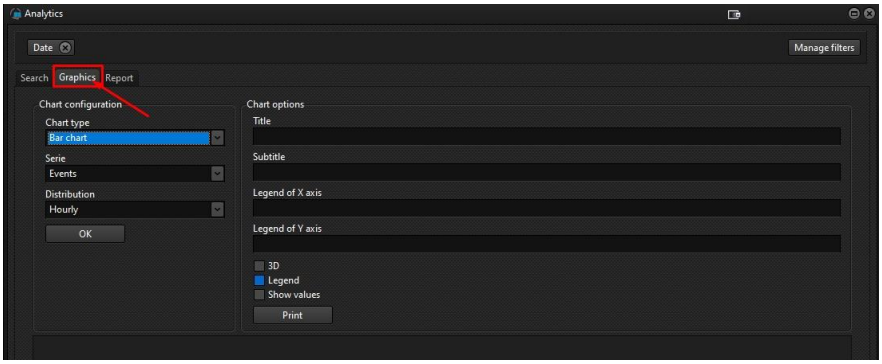


15.4.2 Generating Charts

The Analytics Charts is a powerful tool that instantly provides statistical graphs of all system events. In the following chapters we will explore this tool in detail.

To start, on the analytics records screen click on the **Charts** tab and the following screen will be displayed:



This chapter will make use of the filter concepts explained in the chapter Searching with filters 182. Select the desired filters to generate the chart.

15.4.2.1 Chart Settings

The charts tool gives you great flexibility when generating reports.

The chart settings have the following configurations:

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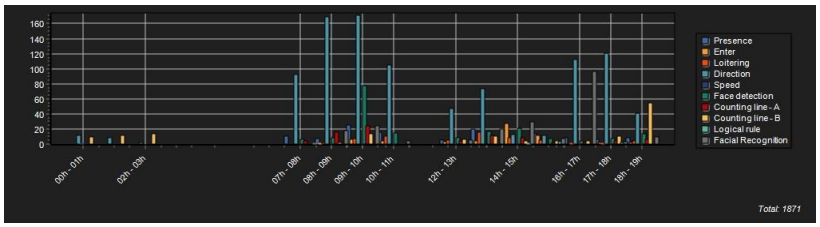
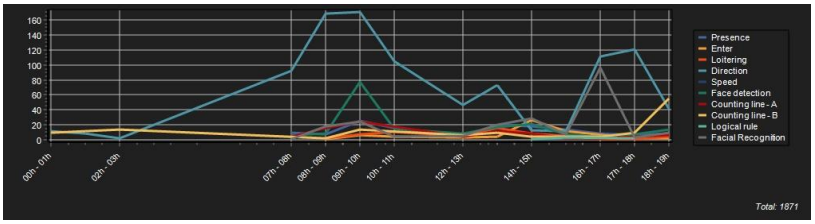
15.4.2.1.1 Types of Charts

This option defines the type of chart that will be displayed. The options include:

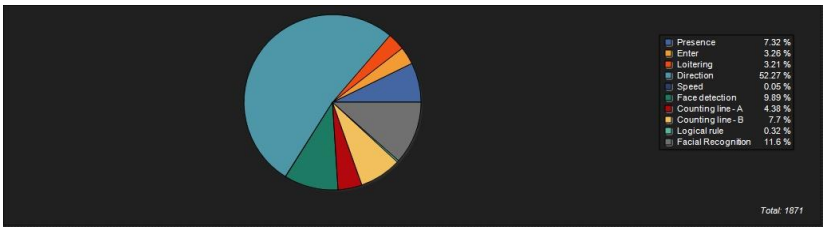
- **Bars**:



- **Lines**:



- **Pie**:



15.4.2.1.2 Series and Distribution

By combining the **Series** and **Distribution** functions, it is possible to obtain powerful results in the reports.

In the figure below, we have set the chart type to **Bars** and in the **Series** field we have set the **Event Types** option and selected the **Presence** and **Facial Recognition** events in the filter. This way, the chart will show the sum of all the events in the system on the Y axis.

The **Distribution** option will show the data in a certain time sample. In the figure below, this distribution is **Daily**, i.e. we have a sample of all the days of the month (1, 2 ,3 ...31):

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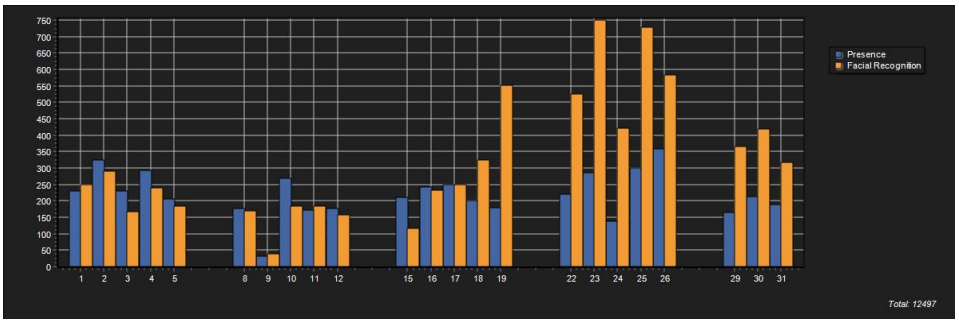


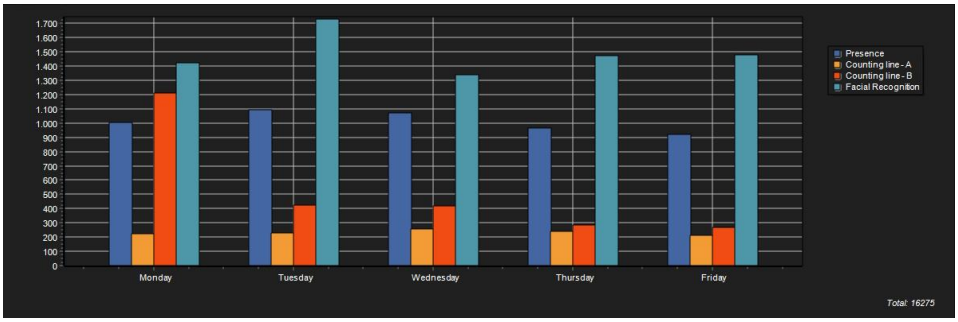
To understand how filters work, see the chapter Searching with filters 182.

The **Distribution** option is related to the X axis of the chart, more precisely to the sampling time, and has the following functions:

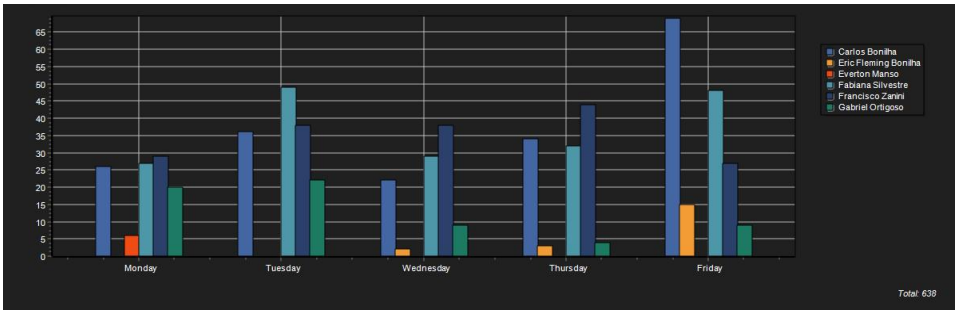
- **Hourly**: Divides the sampling of records into hours (from 00hrs to 23hrs).
- **Daily**: Divides sampling into days (from day 1 to day 31).
- **Weekly**: Divides sampling into days of the week (Sunday to Saturday).
- **Monthly**: Divides sampling into months (from January to December).
- **Annual**: Divides the samples into years (years containing records).

The **Series** option is related to the Y-axis of the graph, more precisely to sampling, and has the following features:

- **Events**: The event series option will display on the Y axis, the count of the types of events found in the records.



- **Object classes**: The Object Classes series option will display on the Y axis, the count of objects according to their class.



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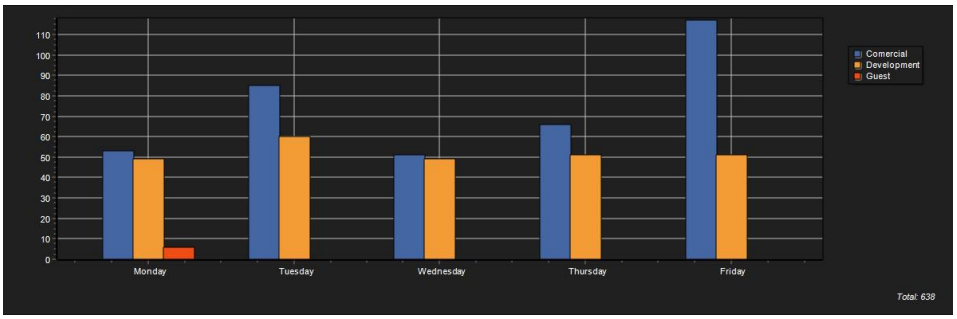
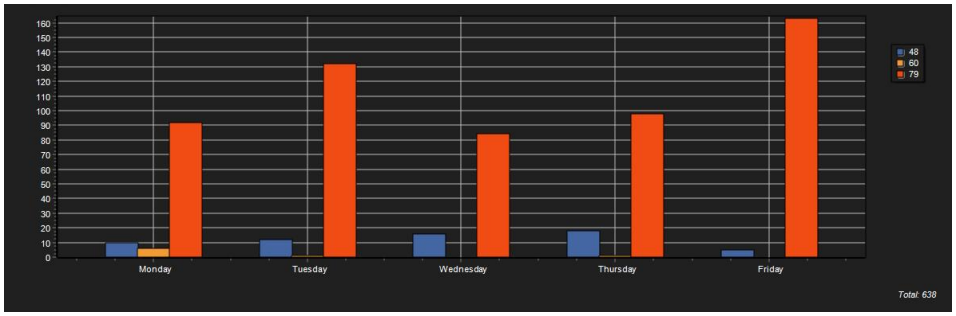
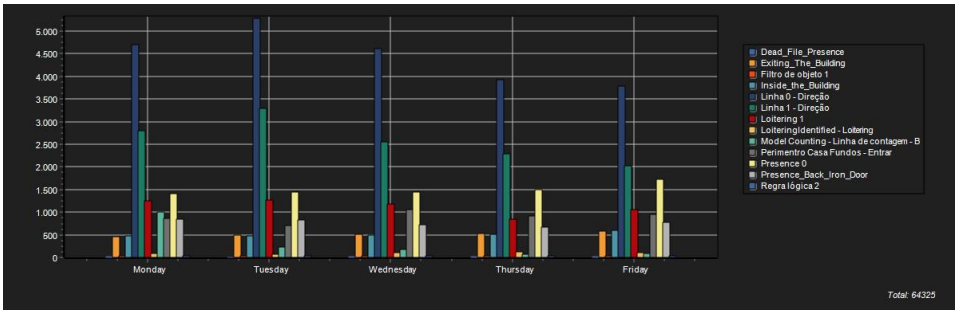
- **Zones**: The Zones series option will display the count of records per analytics zone on the Y axis.



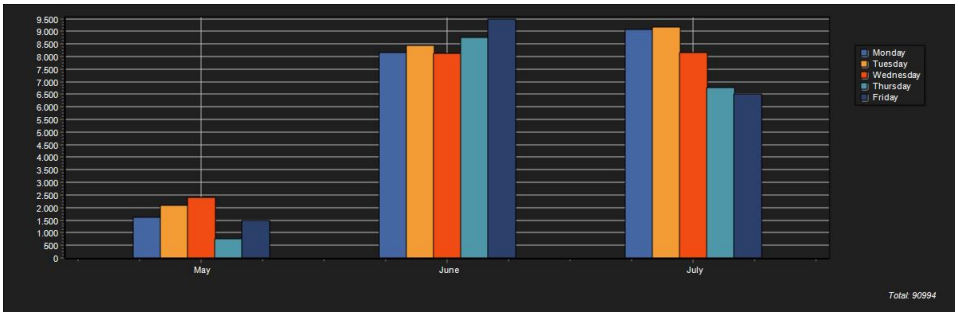
- **Cameras**: The Zones series option will display the count of records per camera on the Y axis.



- **Rules**: The Rules series option will display on the Y axis, the count of records by rules.



- **Days of the week**: The Days of the week series option will display the count of all events by days of the week on the Y axis. We recommend using this option in conjunction with **Monthly or Annual Distribution**.



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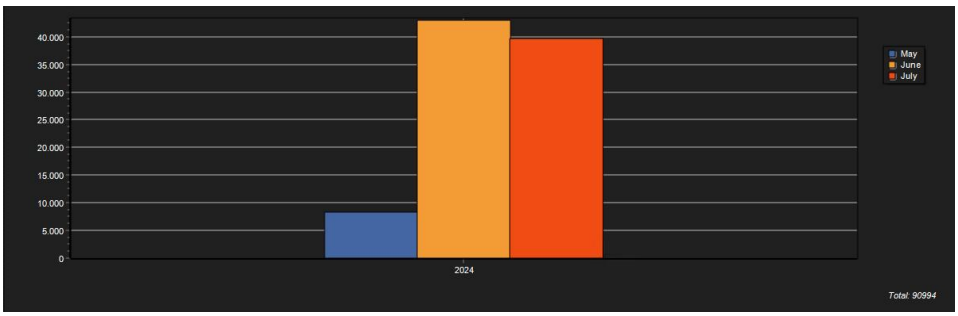
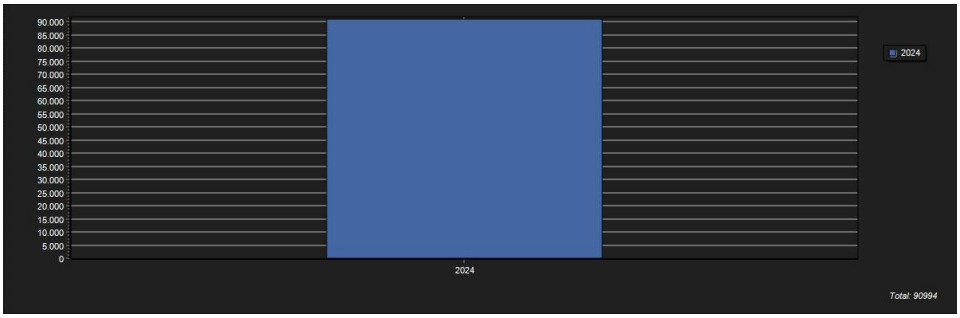
- **Months**: The Months series option will display on the Y axis, the count of all events by month of the year. We recommend using this option together with the **Monthly or Annual Distribution**.



- **Years**: The Years series option will display on the Y axis, the count of all events by years. We recommend using this option in conjunction with the **Annual Distribution**.



15.4.2.2 Chart Options

There are some options that allow you to change how the chart is displayed for printing or better visualization.

The figure above shows the following functions:

- **Title**: Adds a title for the chart:

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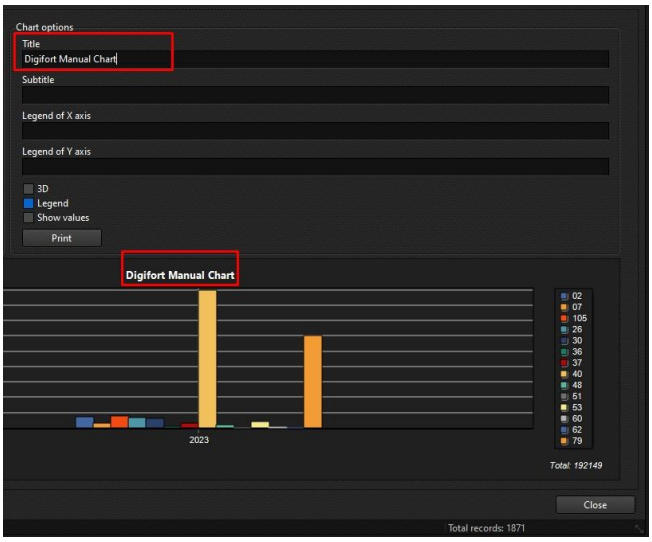
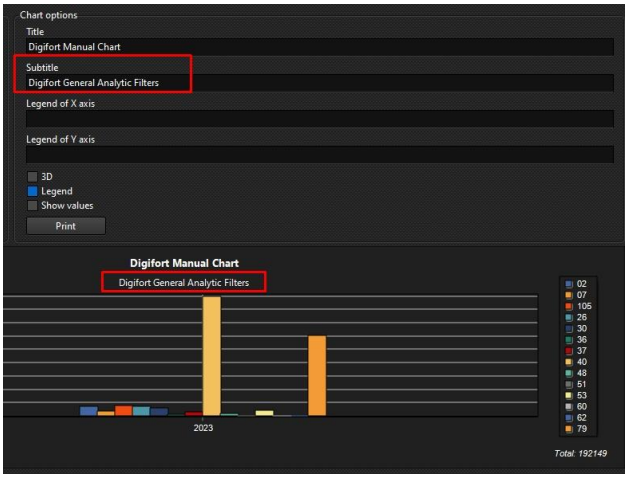
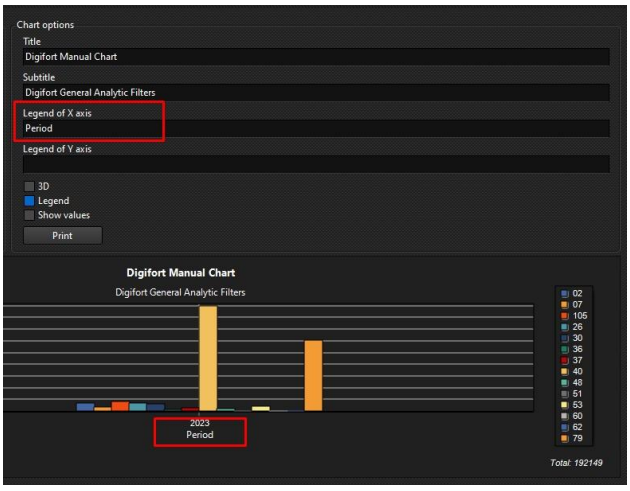


- **Sub-Title**: Adds a sub-title to the chart:



- **X-axis legend**: Adds a legend for the X-axis:



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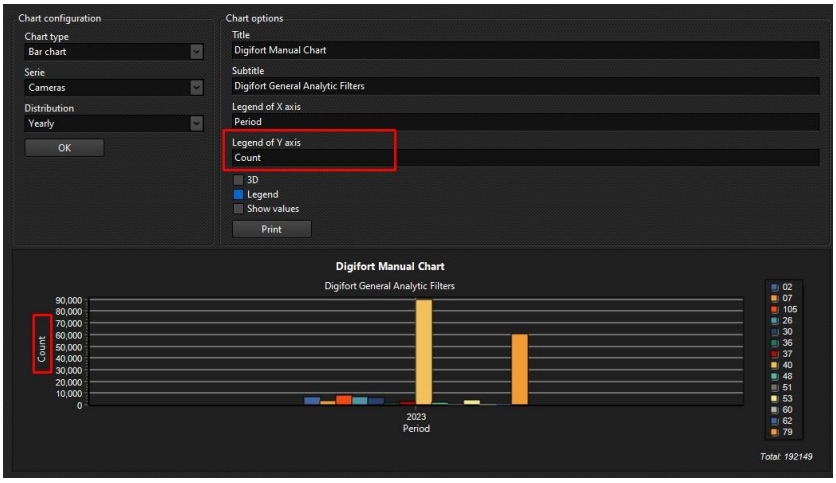
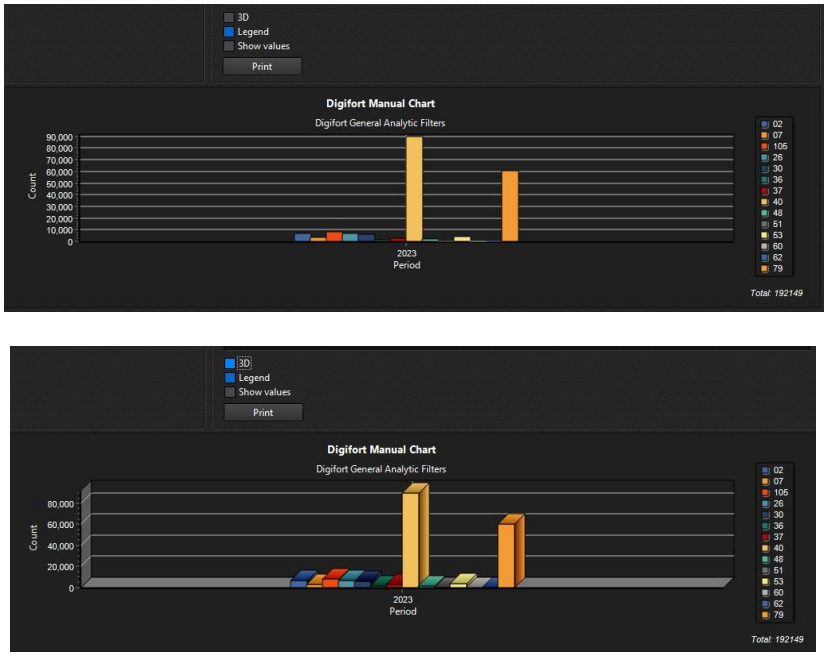
- **Y Axis Legend**: Adds a legend for the Yaxis:



- **3D**: Option to make the chart look 3D. The image below shows the chart with the option enabled and disabled respectively:



- **Legend**: Enables or Disables the legend box in the graph. The image below shows the chart with the option enabled and disabled respectively:

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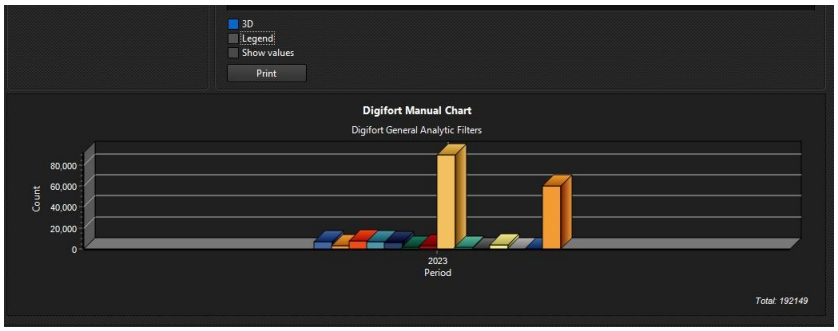
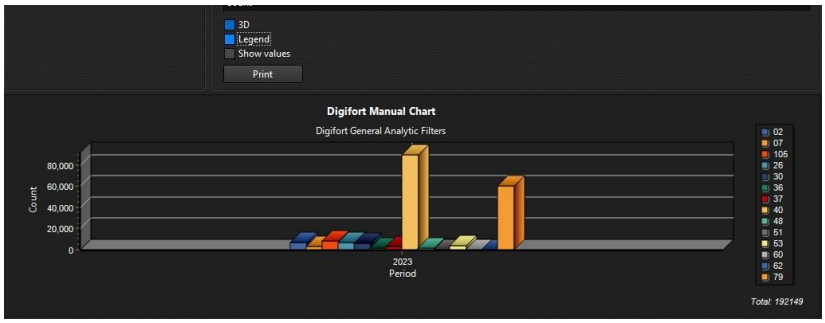
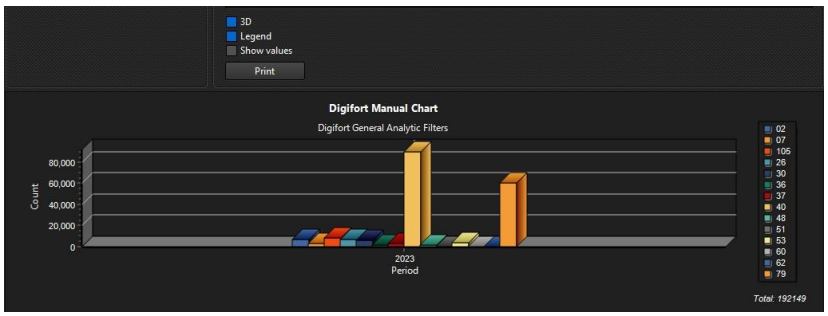
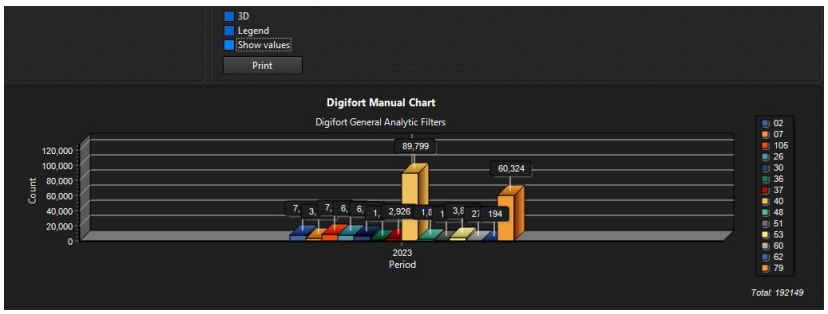




- **Show Values**: Enables or Disables the values in the chart. The image below shows the chart with the option enabled and disabled respectively:





- **Print**: The Print button opens a screen with the report for printing or which can be saved to disk as shown in the figure below:

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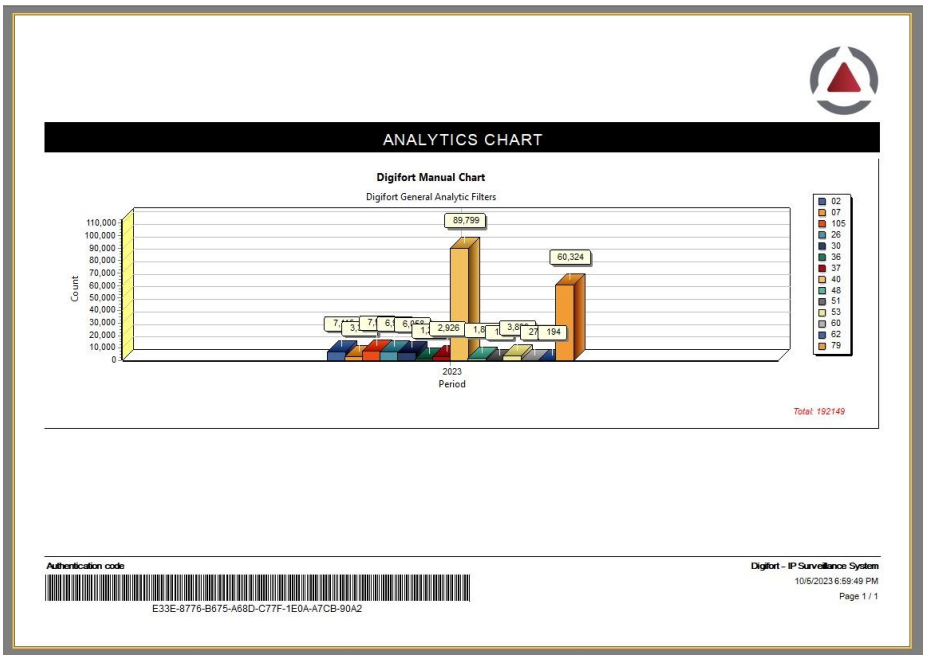
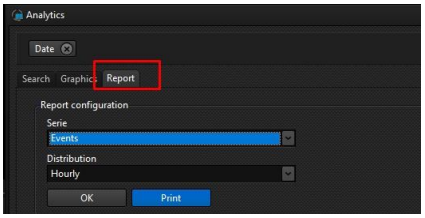


15.4.3 Generating Reports

Analytics reports allow the user to generate a customized report with the analytics records.

You can view the report on screen, print it or export it to PDF and CSV.

The report screen is accessed via the **Report** button at the top of the screen, as shown in the image below:



The operation follows the same logic as the graphics screen presented in the previous chapter Generating Charts 191. You can filter the information using the options in the left-hand sidebar and select the type of series and Distribution you want. Below is an image of a report where the Distribution is Hourly and the Series are Event Types:

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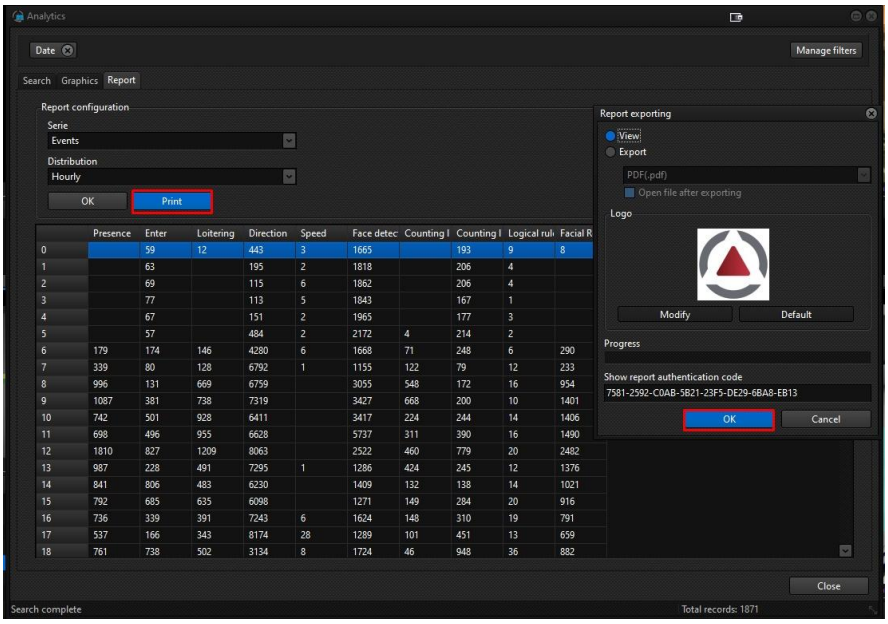
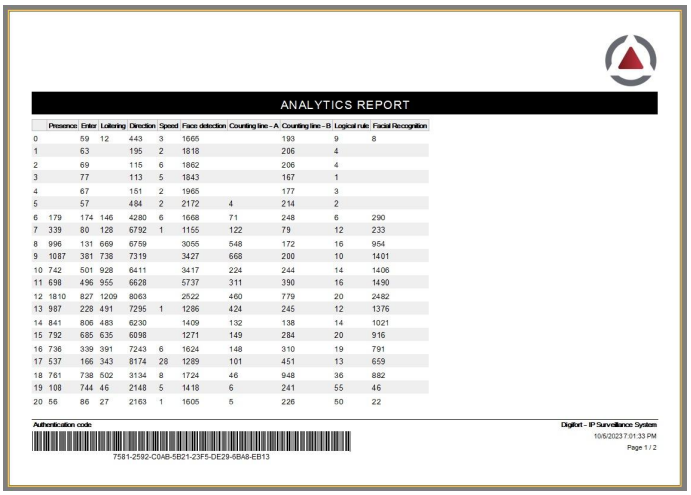


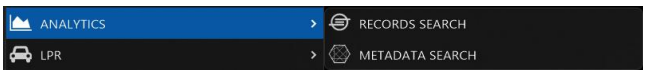
Printed report:



15.5 Metadata Search

Metadata Search, also known as Forensic Search, allows you to perform a detailed search directly on the metadata recorded by the analytics system. Metadata usually contains object characteristics, such as type, height, speed, color, among others.

To search for records, click on the **Metadata Search** option as shown in the image below:



The following screen will be displayed:

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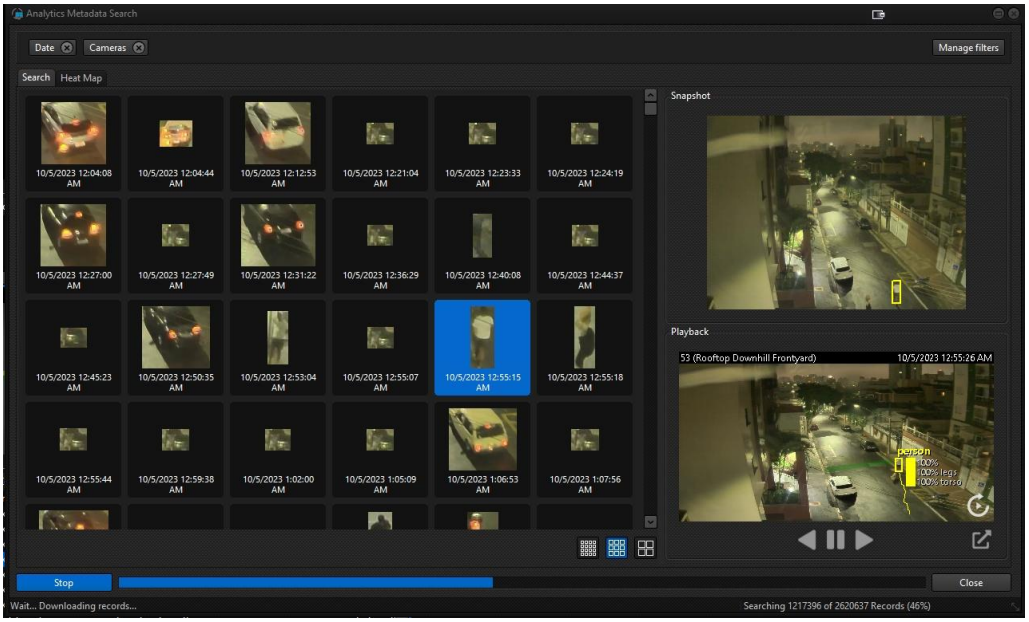
To start the search, first select the desired filters by clicking **Manage Filters** in the top right-hand corner. See the Filters 202 topic to learn how to configure the filters.

After selecting the desired filters, click on **Search** to start:



The system will bring up a list of recognized objects, according to the filters selected. This will be a list of snapshots, with the image of the object cut out. You can select the size of the quadrants using the buttons .

When you select a record, you can see the snapshot of your scene with the object in the top right panel:

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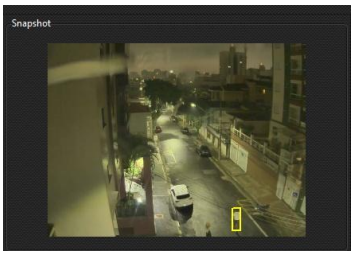
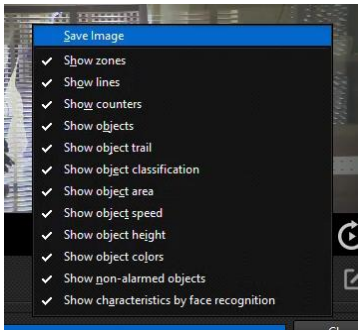


Immediately below is a mini-player for quick review of the event:

The player has rewind, pause, forward and repeat functions. You also have the option of opening the media player by 95 clicking on .

Right-clicking on the Player will bring up its Context Menu with options for **Saving the image** and **Options for Rendering Metadata**:



See the topic about the Context Menu of Analytics 177 to learn more about the rendering functions available in this Context Menu.

15.5.1 Filters

The search allows you to select various filters to help you find records. Click on the **Manage Filters** button to add new filters:

15.5.1.1 Date Filter

The date filter allows you to search the analytics metadata by the selected date.

To add the filter, click on **Manage Filters**, then click on the **Date** tab.

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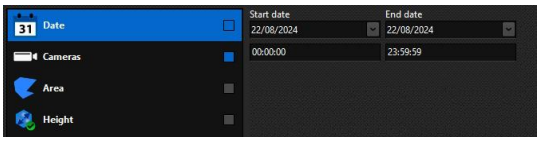
To activate the filter, click on the checkbox to the right of the filter.

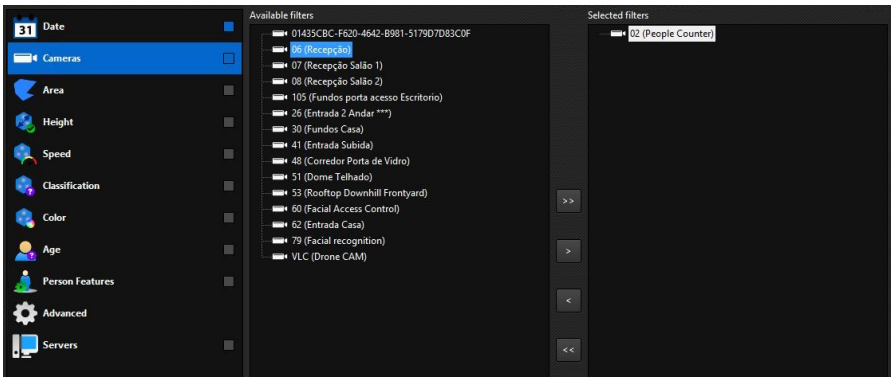


Select the Start Date and Time and End Date and Time for the search.

15.5.1.2 Camera Filter

The camera filter allows you to search the analytics metadata for the selected cameras. **This filter is mandatory**.

To add the filter, click on **Manage Filters**, then click on the **Cameras** tab.
To activate the filter, click on the checkbox to the right of the filter.

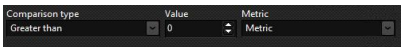


Select the cameras you want by dragging from the left list to the right list.

15.5.1.3 Area Filter

The area filter allows you to search the analytics metadata, filtering out objects whose area meets the conditions of this filter.

To add the filter, click on **Manage Filters**, then click on the **Area** tab.
To activate the filter, click on the checkbox to the right of the filter.



- **Comparison Type**: Select the method for comparing values
  - o **Equal to**: The object's area must be equal to the value provided.
  - o **Different from**: Area of the object must be different from the value provided.
  - o **Less than**: Area of the object must be less than the value provided.
  - o **Less than or equal to**: Area of the object must be less than or equal to the value provided.
  - o **Greater than**: Area of the object must be greater than the value provided.
  - o **Greater than or equal to**: Area of the object must be greater than or equal to the value provided.
- **Value**: Provide the reference value for the comparison.
- **Metric**: Select the type of metric
  - o **Metric**: Uses the metric system, where the area is calculated in **Square Meters**.
  - o **Imperial**: Uses the imperial system, where the area is calculated in **Square Feet**.

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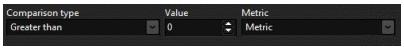
15.5.1.4 Height Filter

The height filter allows you to search the analytics metadata, filtering out objects whose height meets the conditions of this filter.

To add the filter, click on **Manage Filters**, then click on the **Height** tab.
To activate the filter, click on the checkbox to the right of the filter.

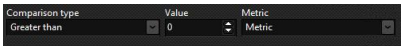


- **Comparison Type**: Select the method of comparing values
  - **Equal to**: The object's height must be equal to the value provided.
  - **Different from**: Height of the object must be different from the value provided.
  - **Less than**: Height of the object must be less than the value provided.
  - **Less than or equal to**: Height of the object must be less than or equal to the value provided.
  - **Greater than**: Height of the object must be greater than the value provided.
  - **Greater than or equal to**: Height of the object must be greater than or equal to the value provided.
- **Value**: Provide the reference value for the comparison.
- **Metric**: Select the type of metric
  - **Metric**: Uses the metric system, where the height is calculated in **Meters**.
  - **Imperial**: Uses the imperial system, where height is calculated in **Feet**.

15.5.1.5 Speed Filter

The speed filter allows you to search the analytics metadata, filtering out objects whose speed meets the conditions of this filter.

To add the filter, click on **Manage Filters**, then click on the **Speed** tab.
To activate the filter, click on the checkbox to the right of the filter.



- **Comparison Type**: Select the method for comparing values
  - **Equal to**: The object's speed must be equal to the value provided.
  - **Different from**: Speed of the object must be different from the value provided.
  - **Less than**: Speed of the object must be less than the value provided.
  - **Less than or equal to**: Speed of the object must be less than or equal to the value provided.
  - **Greater than**: Speed of the object must be greater than the value provided.
  - **Greater than or equal to**: Speed of the object must be greater than or equal to the value provided.
- **Value**: Provide the reference value for the comparison.
- **Metric**: Select the type of metric
  - **Metric**: Uses the metric system, where speed is calculated in **KM/H**.
  - **Imperial**: Uses the imperial system, where speed is calculated in **MPH**.

15.5.1.6 Classification Filter

The classification filter allows you to search the analytics metadata, filtering out objects whose class meets the conditions of this filter.

To add the filter, click on **Manage Filters**, then click on the **Classification** tab.
To activate the filter, click on the checkbox to the right of the filter.

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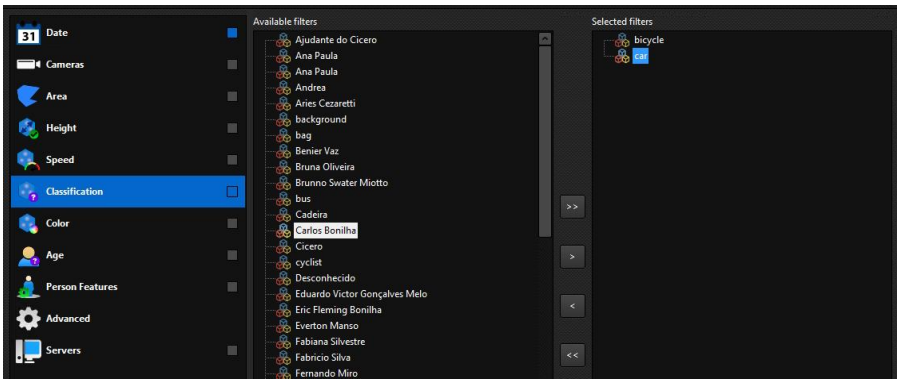
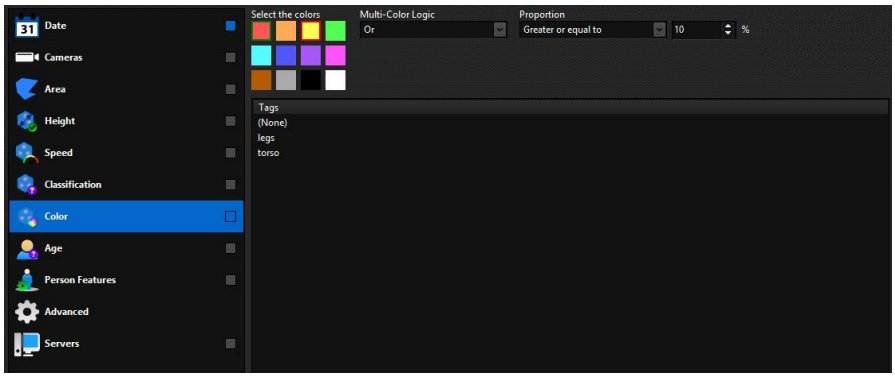


Select the object classes you want by dragging from the left list to the right list.

15.5.1.7 Color Filter

The classification filter allows you to search the analytics metadata, filtering out objects whose colors meet the conditions of this filter.

To add the filter, click on **Manage Filters**, then click on the **Color** tab.
To activate the filter, click on the checkbox to the right of the filter.



- **Colors**: Select the colors you want to filter.
- **Multi-Color Logic**: If you select more than one color, choose which logic will be used to compare the colors.
  - o **AND**: The object must have all the colors selected.
  - o **OR**: The object must have any of the selected colors.
- **Proportion**: Select the color proportion the object should have.
  - o **Equal to**: The object's color proportion must be equal to the value provided.
  - o **Different from**: Color proportion of the object must be different from the value provided.
  - o **Less than**: Color proportion of the object must be less than the value provided.
  - o **Less than or equal to**: Color ratio of the object must be less than or equal to the value provided.
  - o **Greater than**: Color ratio of the object must be greater than the value provided.
  - o **Greater than or equal to**: Color ratio of the object must be greater than or equal to the value provided.
  - o **Value**: Desired proportion value.
- **Labels**: Some analytics provide the specific colors of parts of the object, for example the color of the Torso, or the color of the Legs, select the desired labels, if available, for example to search for all people who have red pants.

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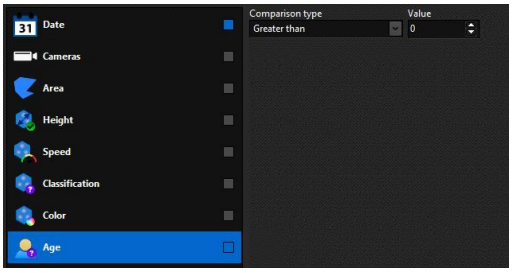
15.5.1.8 Age Filter

The age filter allows you to search the analytics metadata, filtering out objects whose age (usually detected by Face Recognition systems) meets the conditions of this filter.

To add the filter, click on **Manage Filters**, then click on the **Age** tab.
To activate the filter, click on the checkbox to the right of the filter.

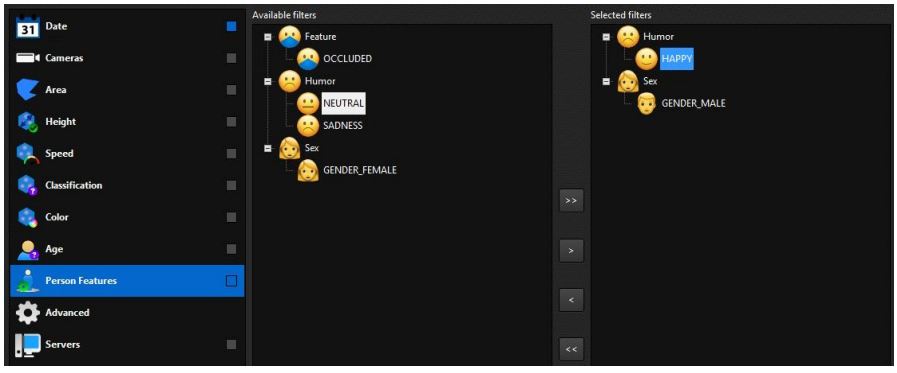


- **Comparison Type**: Select the value comparison method
  - o **Equal to**: The person's age must be equal to the value provided.
  - o **Different from**: Person's age must be different from the value provided.
  - o **Less than**: Person's age must be less than the value provided.
  - o **Less than or equal to**: Person's age must be less than or equal to the value provided.
  - o **Greater than**: Person's age must be greater than the value provided.
  - o **Greater than or equal to**: Person's age must be greater than or equal to the value provided.
- **Value**: Provide the reference value for the comparison.

15.5.1.9 Person Features Filter

The person features filter allows you to search the analytics metadata, filtering results for people whose characteristics meet the conditions of this filter. These characteristics are usually generated by Face Recognition systems.

To add the filter, click on **Manage Filters**, then click on the **Person Features** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the desired features by dragging from the left list to the right list.

15.5.1.10 Server Filter

The camera filter allows you to search the analytics metadata only for the cameras of the selected servers.

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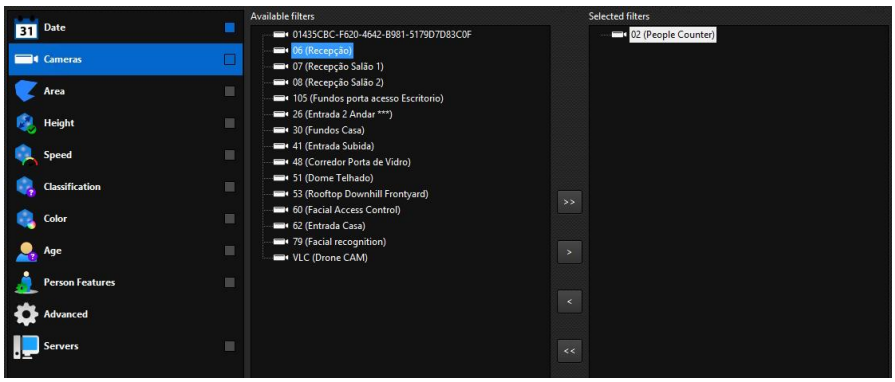
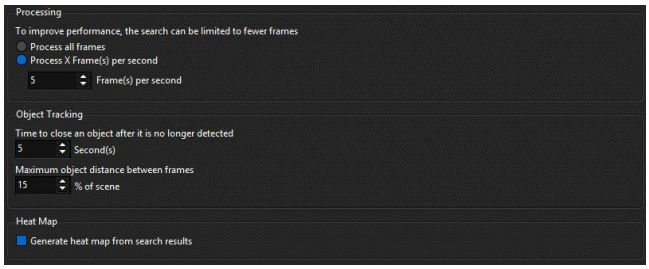
To add the filter, click on **Manage Filters**, then click on the **Cameras** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the cameras you want by dragging from the left list to the right list.

15.5.2 Advanced

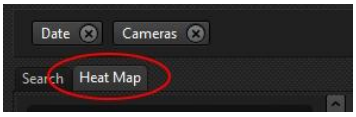
The system allows advanced adjustments to optimize the search:



- **Processing**: This option allows you to adjust between performance and assertiveness, making the search faster by analyzing a smaller number of frames.
  - **Process all frames**: During the search, all recorded metadata frames will be analyzed. This option will make the search more assertive, but will take longer to complete.
  - **Process X frames per second**: Allows you to analyze only a certain number of frames per second that have been recorded, thus increasing the search speed. The default value of 5 frames per second is recommended to maintain acceptable assertiveness.
- **Time to close object after not being detected**: How long the system should allow for an object to be considered part of the background if it is no longer being detected.
- **Maximum object distance between frames**: How far away (in % of the scene) should the system consider a new object to be.
- **Heat map**: If this option is selected, the system will generate an independent heat map for each camera searched.

15.5.3 Heat Map

When searching for metadata, the system can also generate a heat map (if the option is selected in the advanced filter options). This map can be accessed once the search is complete by clicking on the Heat Map tab in the top left-hand corner:



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By selecting the tab, the system will then give you the option to select the camera (from among those selected in the filters) and will then display a heat map, according to the filters applied. This heat map will be created from the movement of the filtered objects:

The heat map legend will indicate the number of objects that have been recognized, with the reddest (hottest) areas having the most movement:

The map can be saved as an image by clicking the save button in the bottom right-hand corner:

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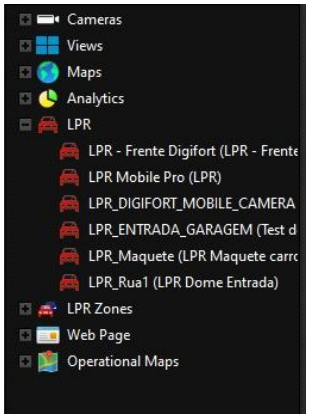
Chapter XVI

16 LPR

LPR is a set of services that processes images from cameras to automatically read license plates. The system has various tools for working with the results, such as searches, reports, alarms, automation and more.

The LPR Configurations can be found in your object list:



Interface:

1. List of recognized license plates and quick action buttons.
2. Capture image.
3. Live camera panel. This panel contains the main camera (First) and all the peripheral cameras.
4. Information panel about the recognized card.
5. Server connection status panel.

16.1 List and Information of Recognized Plates

During LPR operation, the recognized license plates will be added to the license plate list on the left-hand side of the control. The list will always be clear when the object is added to the screen, and will keep records of the last 100 recognitions that have occurred while the object is on the screen.

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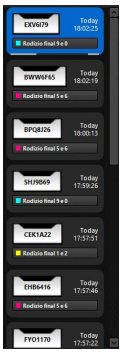

By selecting a record, you will be able to see the image of the moment it was captured, as well as information about the license plate:

If the LPR engine used has the character read reliability feature, the license plate will be represented with character colors according to its reliability:

- **Black**: High reliability index for the character.
- **Blue**: Medium reliability for the character.
- **Red**: Low reliability index for the character.

By default, the first recognized license plate record will always be selected, in which case whenever a new license plate is recognized, it will be displayed automatically. If you select any other record, the system will keep the new record selected, and new license plates will only be added to the list, but the record selection will not be changed, so always remember to return the selection to the first record if you have selected any other record for analysis.

Recognized license plates that are part of an LPR list will display a tag with the name of the list and the color of the list for easy identification. The license plate can be recognized in multiple lists, in which case a tag will be displayed for each list:

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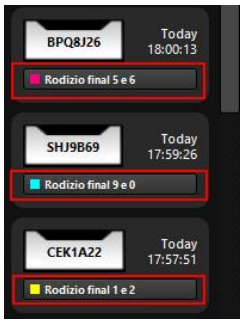
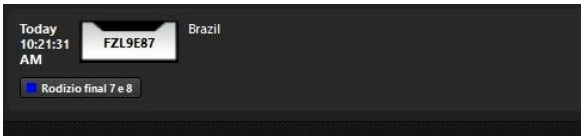


Lists can be used for various applications, such as a blacklist of stolen vehicles, or a list of residents that can be used to open a gate automatically. See the **Administration Client Manual** to learn how to create and associate license plates in lists.

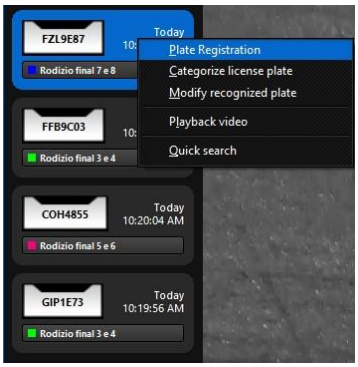
The lower control will display more complete information about the recognized license plate:



This control will display the day and time of reading, the license plate image, license plate list tags, information about the license plate owner, information received via the LPR Bridge and additional engine information (if available), such as recognized country, vehicle type, vehicle color, license plate color, vehicle speed, among others.

16.2 Registering Plates

Recognized license plates can be added to the system's license plate register. The license plate register is particularly useful because you can provide additional information about a license plate, as well as associate it with lists of license plates for organizing and generating events. To register a recognized license plate, right-click on the desired plate and select **Plate Registration**:



You can also register a license plate in the license plate list via the **Plate Registration** button below the license plate list.

A window will open for registering license plates:

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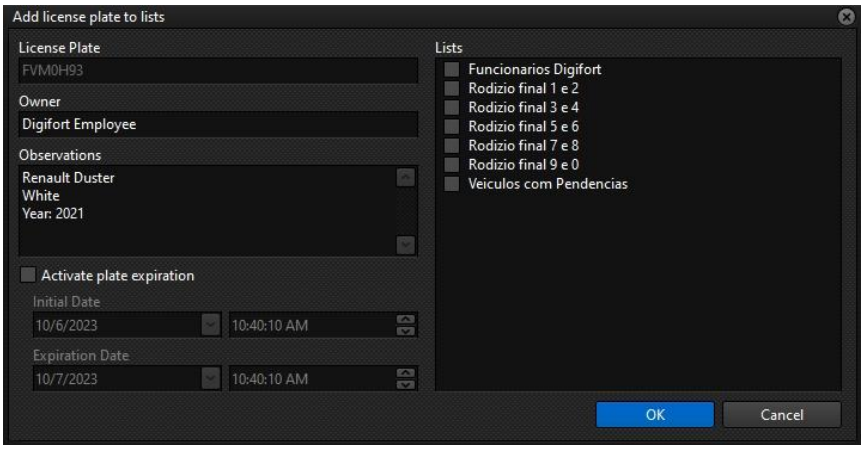
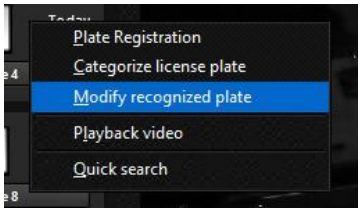


If you accessed the screen via the right mouse button on a recognized license plate, then the **License Plate** field will already be filled in, if you accessed it via the **Plate Registration** button, you can register any license plate you wish.

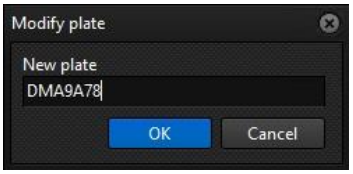
- **License Plate**: Enter the license plate to be registered.
- **Owner**: Owner of the vehicle
- **Observations**: General remarks about this license plate (Free field).
- **Lists**: If you want to add this license plate to any list of license plates (previously registered in the Administration Client), simply select the desired lists.
- **Activate license plate expiration**: Select this option so that the validity of this license plate in the registry expires automatically.
  - o **Start Date**: Start date and time (The license plate will be valid from this date).
  - o **Expiry Date**: Enter the expiry date.

16.3 Changing Recognized Plates

The system allows the operator to change the characters on a recognized license plate (if he identifies an error in the character recognition), if he has the right to do so. To change a record, right-click on the license plate and select **Modify Recognized Plate**:



The system will display a small screen, where you can enter the new license plate:



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16.4 Playing Video

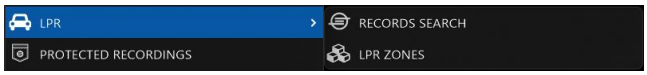
To play the video of a live recognition record, select the desired license plate and right-click on the record and select the **Play Video** option:

16.5 LPR Records

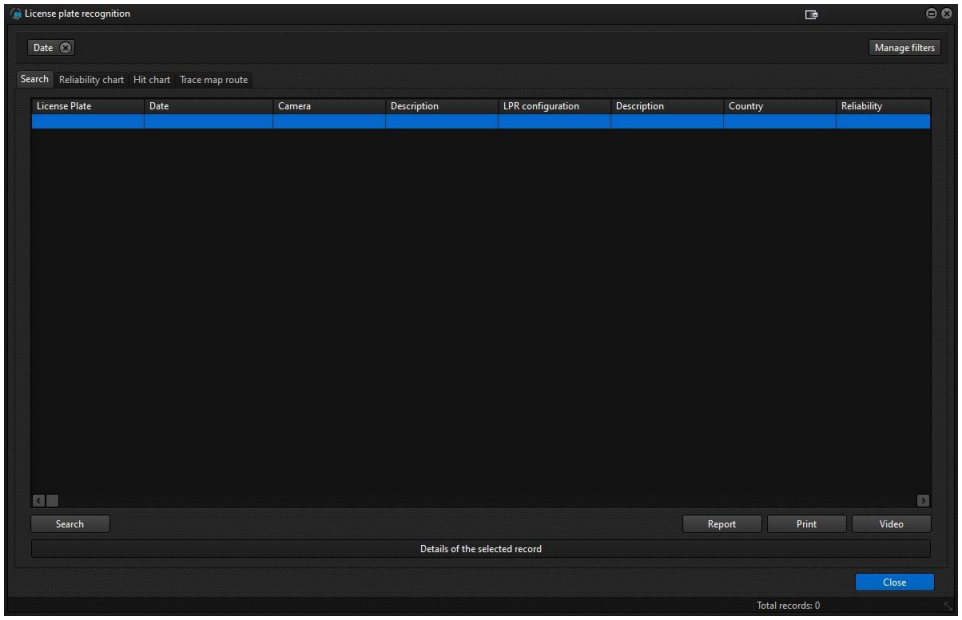
The system has a powerful tool for searching and reporting on LPR records. In this topic you will learn how to search, generate reports and graphs for LPR.

16.5.1 Searching Records

To search for records, click on the LPR records option as shown in the image below:



The following screen will be displayed:



On this screen you can search for records by various methods. We'll look at each of them in the following chapters

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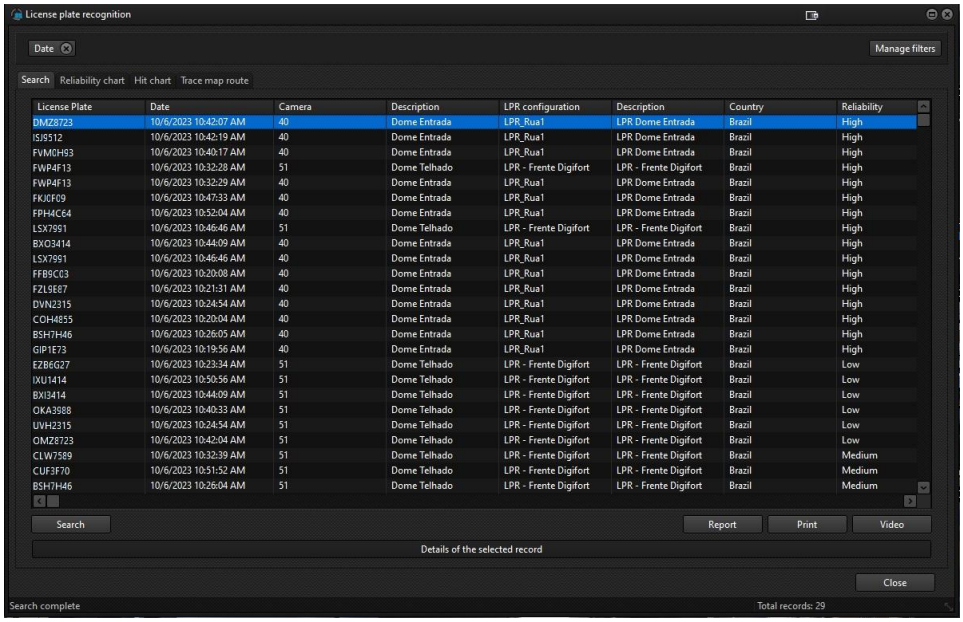
When the **Search** key is pressed, the system will query the records according to the filters selected in the filter bar:



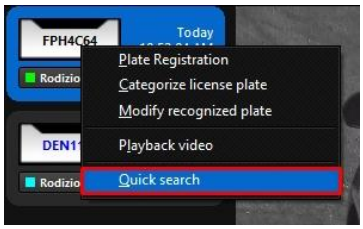
License Plate	Date	Camera	Description	LPR configuration	Description	Country	Reliability
DMZ8723	10/6/2023 10:42:07 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
ISJ9512	10/6/2023 10:42:19 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
FVM0H93	10/6/2023 10:40:17 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
FWP4F13	10/6/2023 10:32:28 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	High
FWP4F13	10/6/2023 10:32:29 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
FKJ0F09	10/6/2023 10:47:33 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
FPH4C64	10/6/2023 10:52:04 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
LSX7991	10/6/2023 10:46:46 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	High
BXO3414	10/6/2023 10:44:09 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
LSX7991	10/6/2023 10:46:46 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
FFB9C03	10/6/2023 10:20:08 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
FZL9E87	10/6/2023 10:21:31 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
DVN2315	10/6/2023 10:24:54 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
COH4855	10/6/2023 10:20:04 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
BSH7H46	10/6/2023 10:26:05 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
GIP1E73	10/6/2023 10:19:56 AM	40	Dome Entrada	LPR_Rua1	LPR Dome Entrada	Brazil	High
EZB6G27	10/6/2023 10:23:34 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	Low
IXU1414	10/6/2023 10:50:56 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	Low
BXI3414	10/6/2023 10:44:09 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	Low
OKA3988	10/6/2023 10:40:33 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	Low
UVH2315	10/6/2023 10:24:54 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	Low
OMZ8723	10/6/2023 10:42:04 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	Low
CLW7589	10/6/2023 10:32:39 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	Medium
CUF3F70	10/6/2023 10:51:52 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	Medium
BSH7H46	10/6/2023 10:26:04 AM	51	Dome Telhado	LPR - Frente Digifort	LPR - Frente Digifort	Brazil	Medium

To play the video of a record, select the desired item and click on the Video button. The Media Player 94 will open with the video of the vehicle passing.

16.5.1.1 Quick Search

You can quickly open the search screen via the live LPR visual control.

To do this, right-click on a recognized license plate to open the quick search with this license plate:



With this option, the system will bring up the search screen, with the date and license plate filters applied.

You can also access the quick search via the **Quick Search** button on the LPR object interface:

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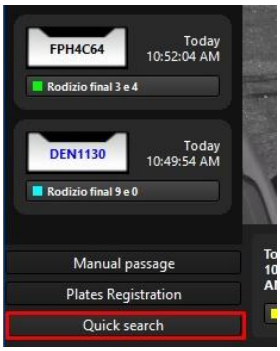
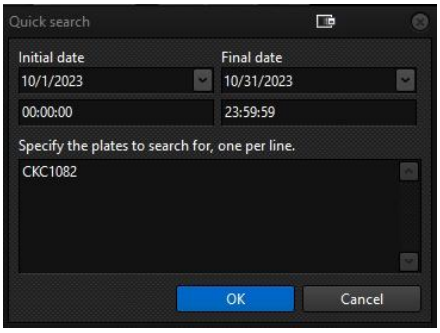
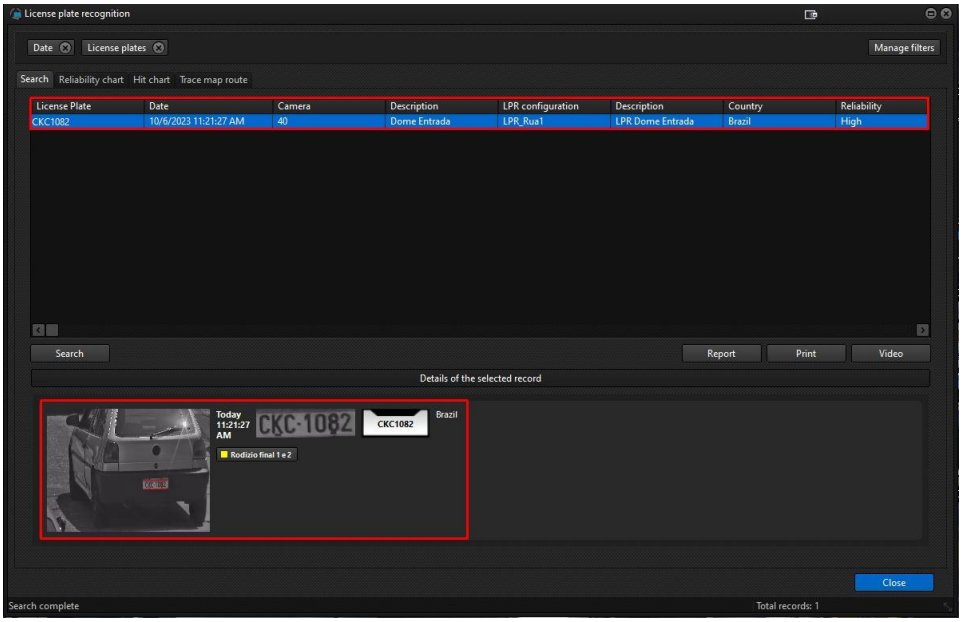


This option however, will display a screen, for you to fill in with the date and time and the license plates you want to search for:



Fill in the search date and time and a list of license plates (One per line) and click **OK**. The standard LPR record search screen will be displayed, with the date and license plate filters already applied and the search already started:



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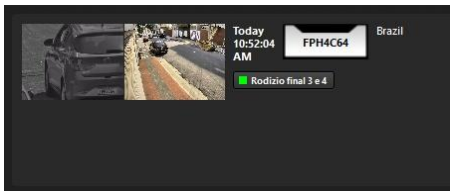
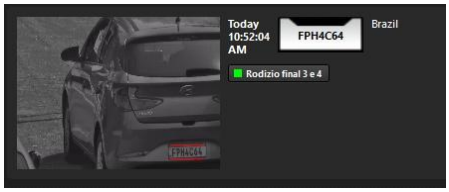
16.5.1.2 Record Details

LPR records store the photo of the captured license plate in the database, as well as extra information. To view this information, open the details tab.

To view the details of a record, simply select it and click on Details for the selected record, as shown in the image below:

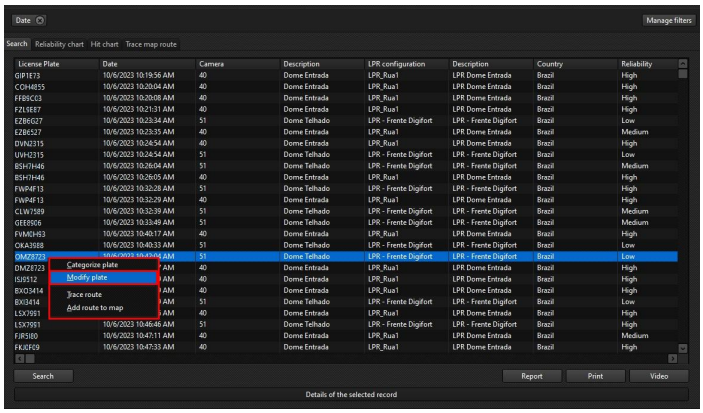


The control will display the image of the main camera and the peripheral cameras, you can place the mouse over an image to see it larger:



You can save an image by clicking on the desired image and a popup will appear with the option to save the image in the desired directory.

The system allows you to change a license plate that has not been recognized correctly directly on the search screen. To do this, right-click on a record and select the **Modify License Plate** option:



The following window will appear, allowing the record to be changed by the System Administrator, or an operator with the appropriate permissions:

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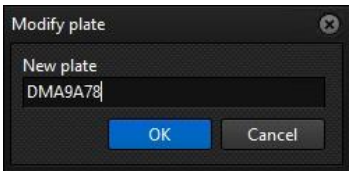


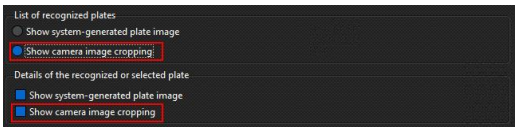
16.5.1.2.1 Show Plate Cutout in Results

The LPR record viewer (Live and query) allows the display of the cutout of the recognized license plate, as well as the digital representation of the recognized license plate.

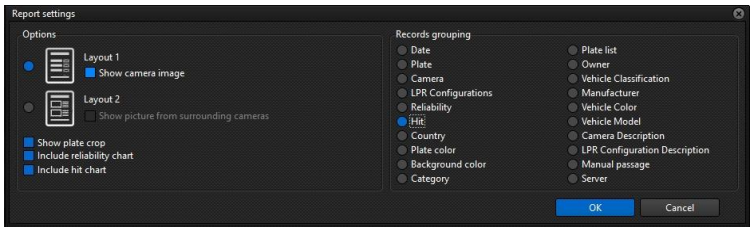
For live records, the system allows you to choose between the image cut-out or the virtual representation of the license plate:

In the details of a record in the LPR record search, it is possible to configure the display of both the license plate cutout and the virtual license plate:

These options can be changed in the LPR configuration of 50 the Surveillance Client:



It is also possible to add the license plate cutout to the printed LPR reports:



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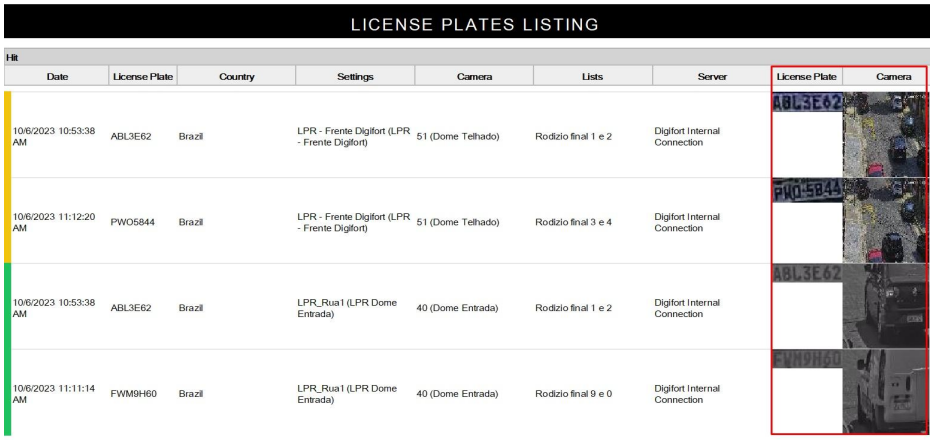


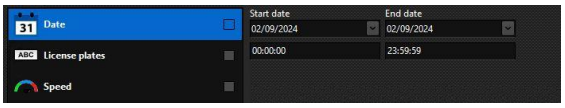
16.5.1.3 Searching with Filters

The search allows the selection of various filters to help you find records. Click on the **Manage Filters** button to add new filters:

16.5.1.3.1 Date Filter

The date filter allows searching for records by the selected date.

To add the filter, click on **Manage Filters**, then click on the **Date** tab.
To activate the filter, click on the checkbox to the right of the filter.



Choose the time interval for searching the records.

16.5.1.3.2 License Plate Filter

The license plate filter allows a license plate or several license plates of interest to be located in the records quickly.

To add the filter, click on **Manage Filters**, then click on the **License Plates** tab.
To activate the filter, click on the checkbox to the right of the filter.

16.5.1.3.2.1 Dealing w ith Repeat Plates

At the top of the filter selection screen, you can configure how the system will handle repeated license plates in this search:

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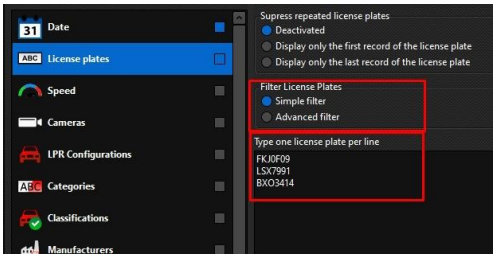
The options are:

- **Deactivated:** If this option is selected, the system will display the repeated license plates normally, in all their occurrences.
- **Display only the first license plate record:** If this option is selected, the system will only display the first license plate capture.
- **Display only the last license plate record:** If this option is selected, the system will display only the most recent license plate capture.

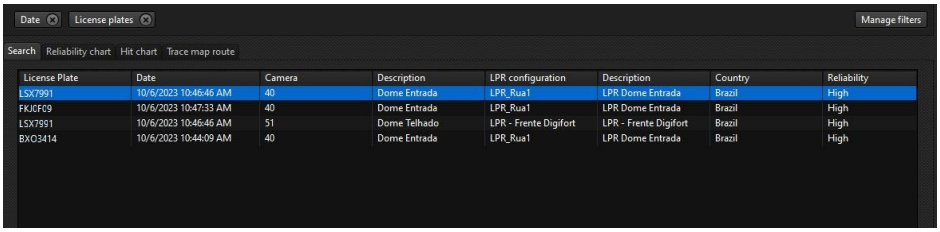
16.5.1.3.2.2 Simple Search

In the simple search, the entire license plate will be searched, i.e. what you type will be searched for, as shown in the figure below:



After typing the license plate of interest click **OK**.

Choose the time interval for searching the records. Click **OK** and then on the main search screen click **Search**:



16.5.1.3.2.3 Advanced Search

In the advanced filter option, we will have a wider range of options to locate a record in the database. Select the **Advanced Filter** option and the following options will be available:

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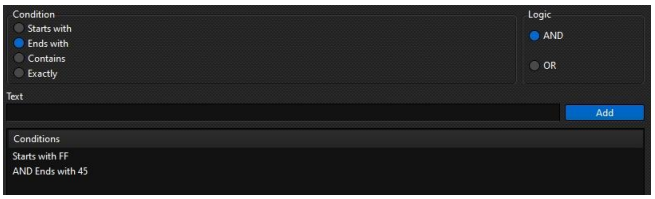
This screen has the following features:

The options below can be combined with AND and OR logic with the conditions Starts with, Ends with, Exists and Exact:

- **Starts with**: Defines the character or characters the license plate should start with.
- **Ends with**: Defines the final character or characters of the license plate.
- **Exists**: Defines a character or combination of characters that exist on the license plate in the desired order.
- **Exact**: Defines the exact license plate for the search.
- **AND**: Does the logical AND with the combinations creating a condition.
- **OR**: Uses OR logic with the combinations to create a condition.

For example: Search for license plates that start with "F" and end with "45":



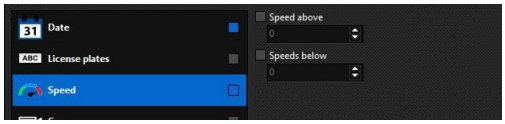
16.5.1.3.3 Speed Filter

The speed filter allows you to search for records of captured vehicles traveling above or below a specified speed.

Important

The engine or camera must support the speed detection feature for this filter to be applied.

To add the filter, click on **Manage Filters**, then click on the **Speed** tab.
To activate the filter, simply click on the checkbox to the right of the filter.



- **Speed Above**: Choose this option to filter out records with a speed above the specified value.
- **Speed Below**: Choose this option to filter records with a speed below the specified value.

16.5.1.3.4 Camera Filter

The camera filter allows you to search for license plate records recognized on the specified cameras.

To add the filter, click on **Manage Filters**, then click on the **Cameras** tab.
To activate the filter, click on the checkbox to the right of the filter.

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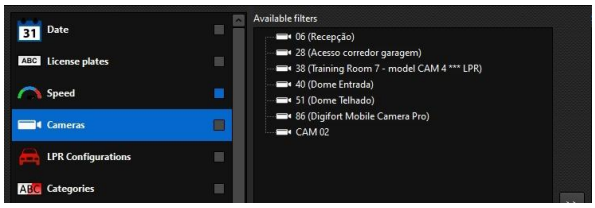
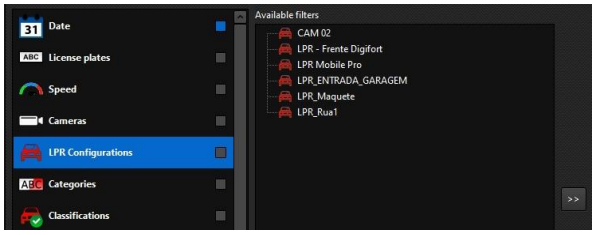


Select the cameras you want by dragging from the left list to the right list.

16.5.1.3.5 LPR Configurations Filter

The LPR Configuration filter allows you to search for license plate records recognized in the specified LPR Configurations.

To add the filter click on **Manage Filters**, then click on the **LPR Configurations** tab.
To activate the filter, click on the checkbox to the right of the filter.

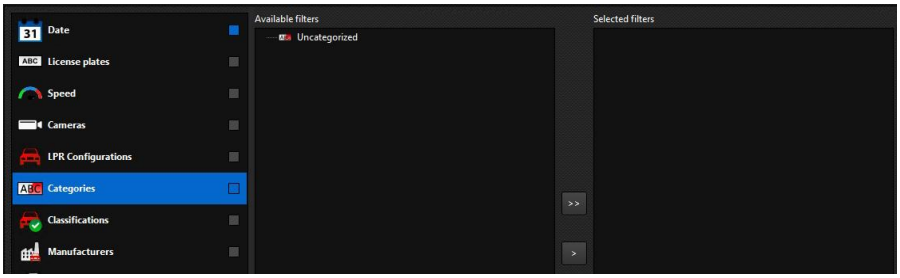


Select the desired LPR Configurations by dragging from the left list to the right list.

16.5.1.3.6 Category Filter

The category filter allows you to search for recognized license plate records in certain categories.

To add the filter, click on **Manage Filters**, then click on the **Categories** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the categories by dragging from the left list to the right list.

16.5.1.3.7 Sort Filter

The classification filter allows you to search for recognized license plate records of specified classifications.

Important

The engine or camera must support the license plate classification feature for this filter to be applied.

To add the filter, click on **Manage Filters**, then click on the **Classification** tab.

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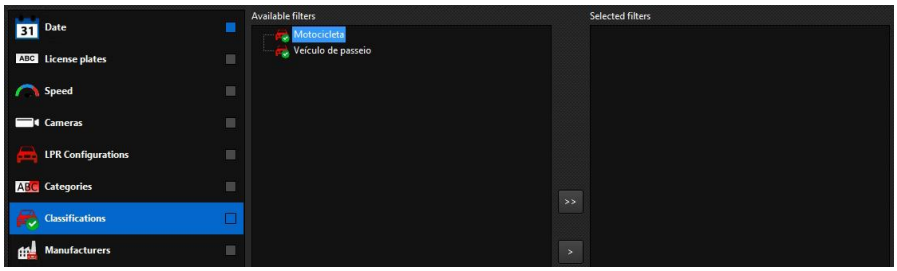
To activate the filter, click on the checkbox to the right of the filter.



Select the classifications by dragging from the left list to the right list.

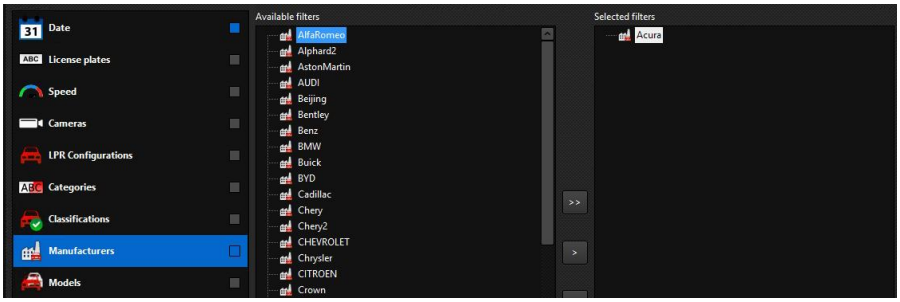
16.5.1.3.8 Manufacturer Filter

The manufacturer filter allows you to search for recognized license plate records for vehicles from specific manufacturers.

Important

The engine or camera must support the vehicle manufacturer recognition feature for this filter to be applied.

To add the filter, click on **Manage Filters**, then click on the **Manufacturers** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the manufacturers by dragging from the left list to the right list.

16.5.1.3.9 Model Filter

The model filter allows you to search for recognized license plate records for vehicles of specific models.

Important

The engine or camera must support the vehicle model recognition feature for this filter to be applied.

To add the filter, click on **Manage Filters**, then click on the **Models** tab.
To activate the filter, click on the checkbox to the right of the filter.

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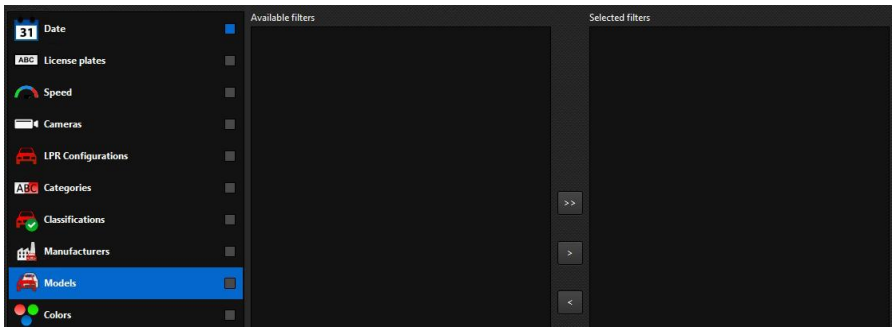


Select the models by dragging from the left list to the right list.

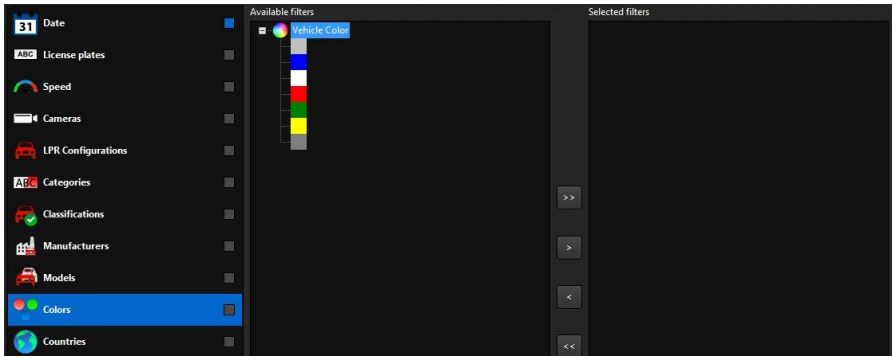
16.5.1.3.10 Color Filter

The color filter allows you to search for license plate or vehicle records of certain colors.

Important

The engine or camera must support the license plate or vehicle color recognition feature for this filter to be applied.

To add the filter, click on **Manage Filters**, then click on the **Colors** tab.
To activate the filter, click on the checkbox to the right of the filter.



The system will be able to display filters for license plate colors as well as vehicle colors, depending on the type of information that is currently available in the database.

Select the desired colors by dragging from the left list to the right list.

16.5.1.3.11 Country Filter

The country filter allows you to search for recognized license plate records from specific countries.

Important

The engine or camera must support the country recognition feature for this filter to be applied.

To add the filter, click on **Manage Filters**, then click on the **Countries** tab.
To activate the filter, click on the checkbox to the right of the filter.

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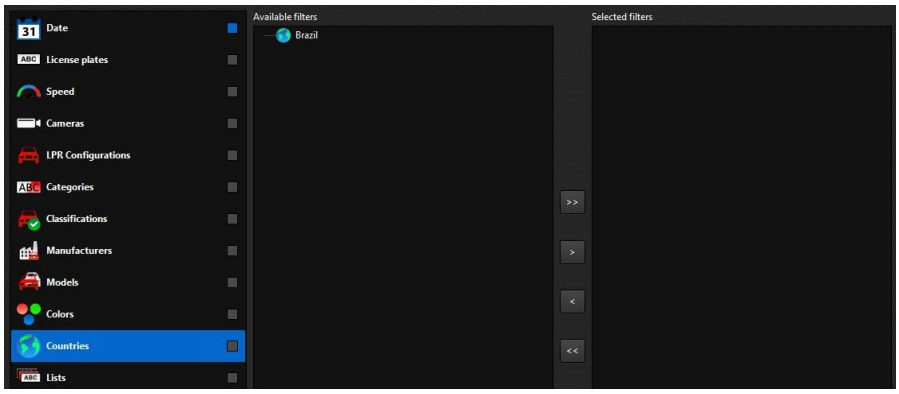
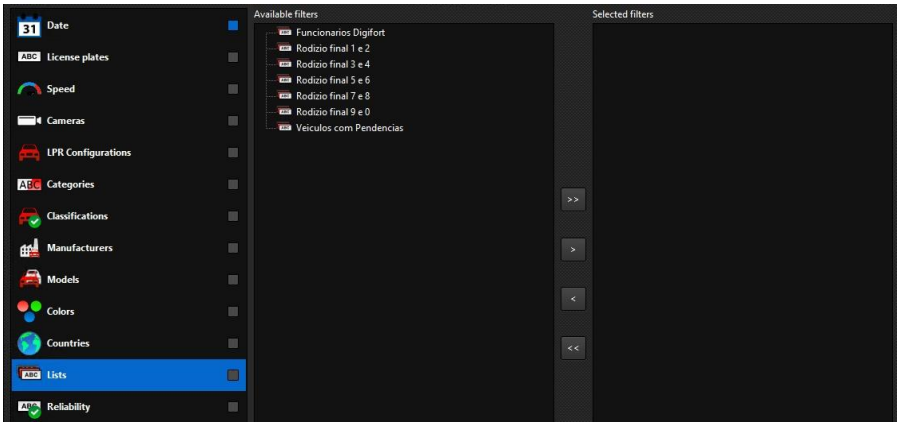


Select the countries by dragging from the left list to the right list.

16.5.1.3.12 List Filter

The list filter allows you to search for recognized license plate records that are part of specific lists.

To add the filter, click on **Manage Filters**, then click on the **Lists** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the lists by dragging from the left list to the right list.

16.5.1.3.13 Reliability Filter

The reliability filter allows you to search for license plate records that have been recognized with a certain reliability.

To add the filter, click on **Manage Filters**, then click on the **Reliability** tab.
To activate the filter, click on the checkbox to the right of the filter.

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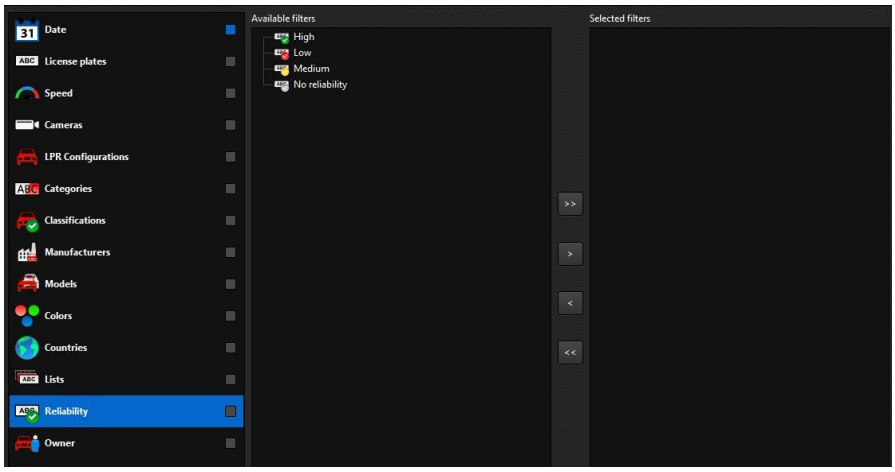
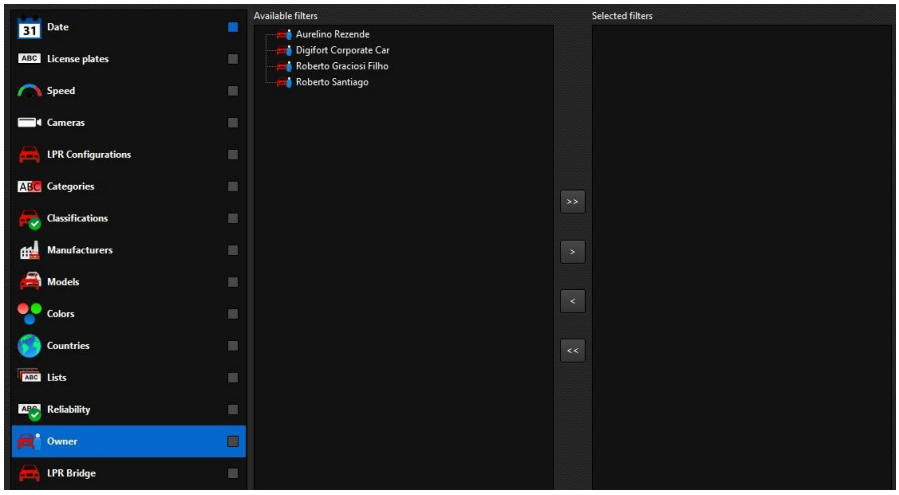


Select the reliabilities by dragging from the left list to the right list.

16.5.1.3.14 Owner Filter

The owner filter allows you to search the license plate records of certain owners.

To add the filter, click on **Manage Filters**, then click on the **Owners** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the owners by dragging from the left list to the right list.

16.5.1.3.15 LPR Bridge Filter

The LPR Bridge filter allows you to search for license plate records according to the associated data received by the LPR Bridge module.

To add the filter, click on **Manage Filters**, then click on the **LPR Bridge** tab.
To activate the filter, simply click on the checkbox to the right of the filter.

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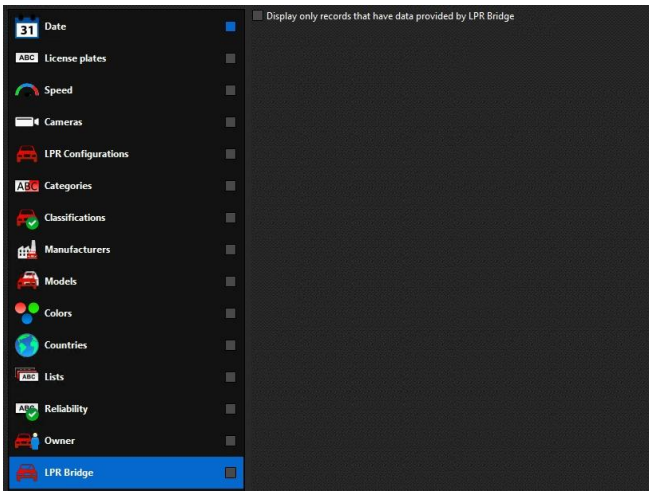
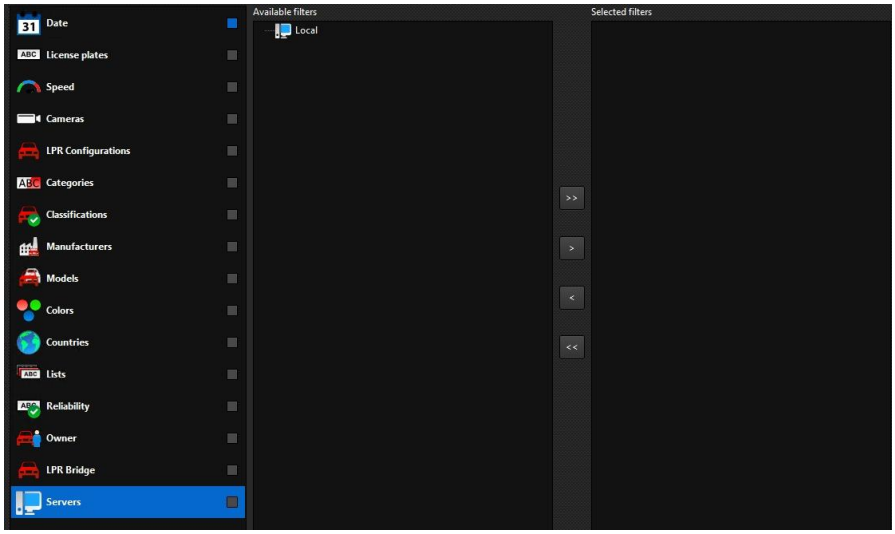


- **Exclude only records with data provided by LPR Bridge**: Select this option so that the search only contains records that have some data received by LPR Bridge. If no information was returned by the LPR Bridge for a particular license plate record, it will be excluded from the results.

16.5.1.3.16 Server Filter

The server filter allows you to search for license plate records recognized on specific servers.

To add the filter, click on **Manage Filters**, then click on the **Servers** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the servers by dragging from the left list to the right list.

16.5.1.4 Generating Reports

The LPR record search screen allows you to save or print reports from the results of the current search.

After searching for the license plates of interest, click on the **Report** button.

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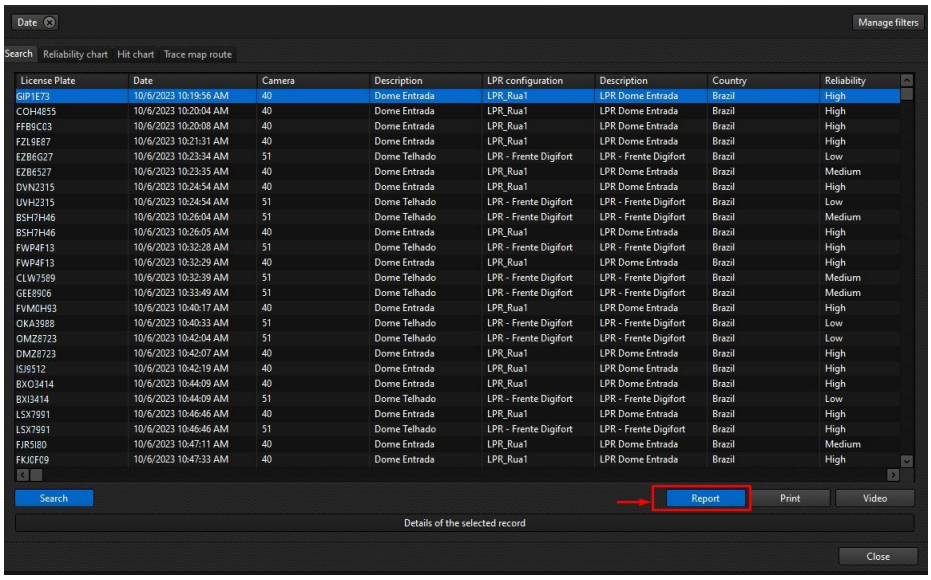
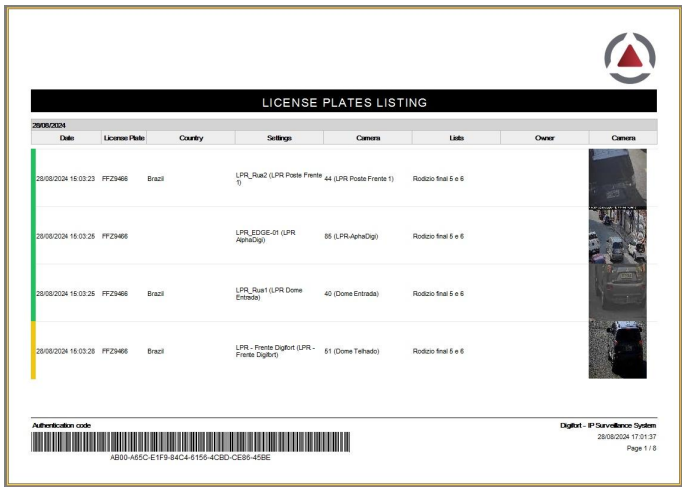


A pop-up will open with the title of the report configuration.

- **Layout 1**: Layout in list format, with the possibility of adding a photo of the capture.
  - **Display camera image**: Displays the capture snapshot in the report



- **Layout 2**: Layout in single page format, where each capture will be added to a full page of the report, including the image of the capture and with the option to add an image of the surrounding cameras.
  - **Display image of surrounding cameras**: Display the snapshot of the surrounding cameras in the report.

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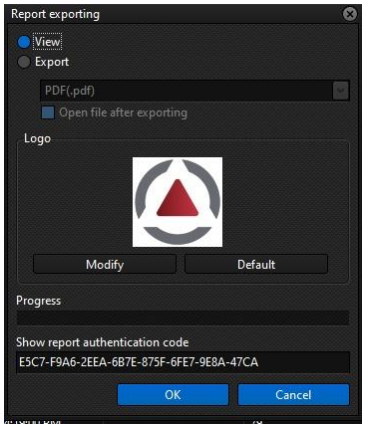
- **Show license plate cutout**: Displays the license plate image cutout in the report.
- **Include Reliability Chart**: Include the reliability chart at the end of the report.
- **Include Hit Chart**: Includes the hit chart at the end of the report.

Select the type of record grouping. Records can be grouped using different options. Select the most appropriate options for your report and click **OK.**

Now select the format and whether you want to view only, print or export (*.pdf, or *.html) and click **OK** and the standard report viewer will be displayed:



16.5.1.5 Printing a Record

The LPR record search allows you to print a single record. Simply select the desired item and click the **Print** button:

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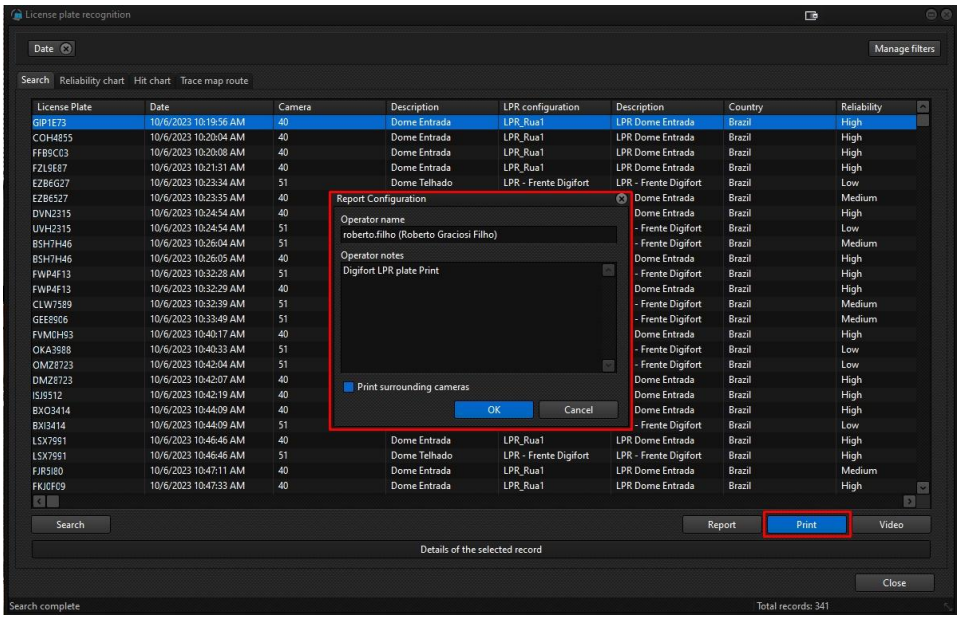
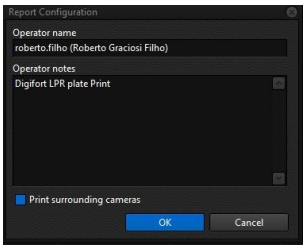
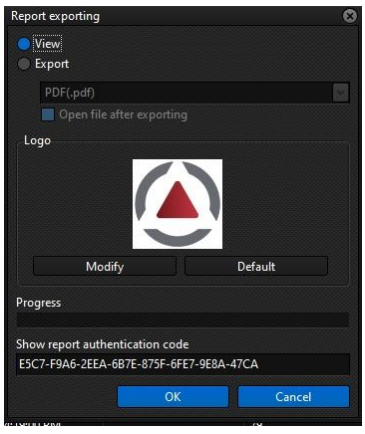


Enter the Information for the Printout:



Now select the format and whether you want to view only, print or export (*.pdf, or *..html) and click **OK** and the standard report viewer will be displayed:



The single record report will be displayed:

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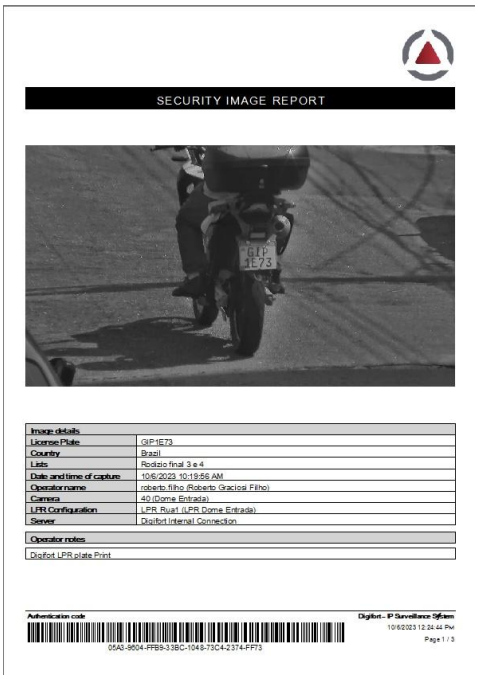


SECURITY IMAGE REPORT

Image details	
License Plate	GIP1E73
Country	Brazil
Lists	Rodizio final 3 e 4
Date and time of capture	10/6/2023 10:19:56 AM
Operator name	roberto filho (Roberto Graciosi Filho)
Camera	40 (Dome Entrada)
LPR Configuration	LPR Rua1 (LPR Dome Entrada)
Server	Digifort Internal Connection

Operator notes
Digifort LPR plate Print

Authentication code
05A3-9604-FFB8-33BC-1048-73C4-2374-FF73

Digifort - IP Surveillance System
10/6/2023 12:34:44 PM
Page 1 / 3

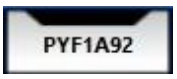
16.5.2 Reliability Chart

The LPR records a level of reading reliability per character. The software generates an average and shows us the degree of reliability per license plate.

Example: License plate ABC1234 had a recognition reliability index of 90%, which is considered a high hit rate.

Reliability indices:

- **High**: Reliability greater than 90%, license plate letters will be displayed in black:



- **Medium**: Reliability between 70% and 90%. License plate letters will be displayed in blue:

- **Low**: Reliability less than 70%: License plate letters will be displayed in red:

After searching the records of the recognized license plates, you can generate a chart of the reliability index. To do this, click on **Reliability Graph** as shown in the image below:

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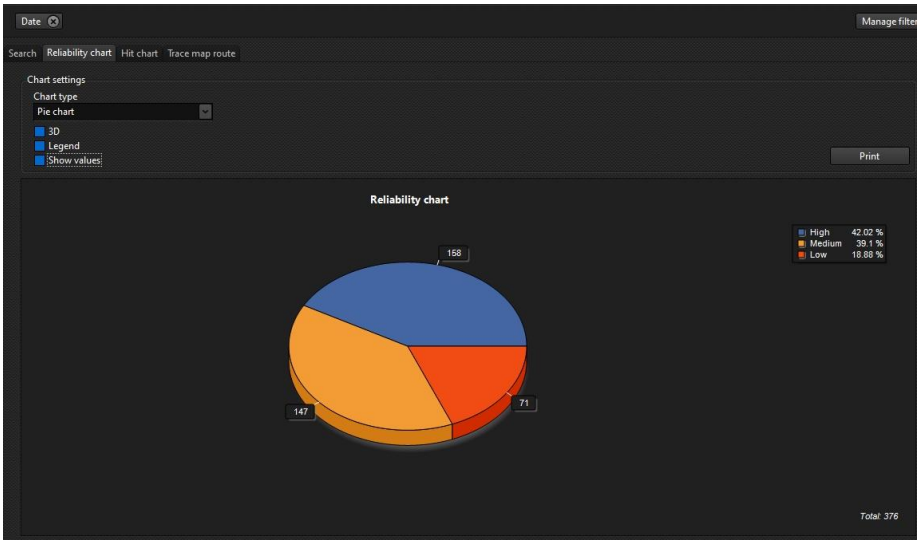
- **Chart Type**: Select the type of chart.
  - o **Bar**: Bar chart.
  - o **Pie**: Pie chart.
- **3D**: Adds a 3D effect to the chart.
- **Legend**: Adds a legend to the chart values.
- **Display Values**: Displays the count values in the chart.
- **Print**: Prints the current chart.

Example pie chart:



The generated chart can be printed or saved by clicking **Print**:

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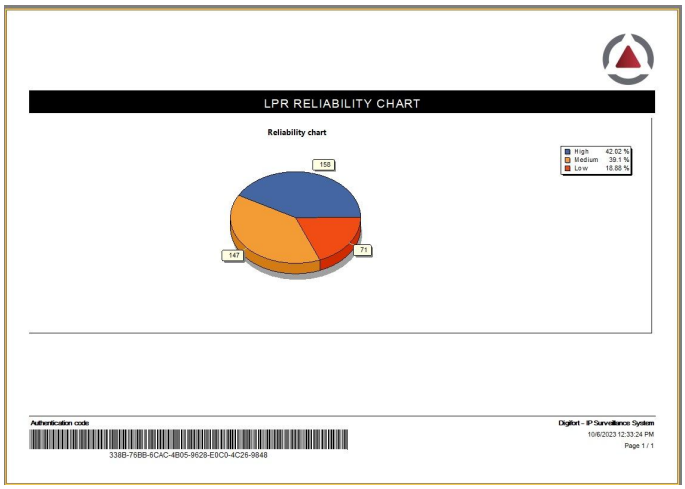
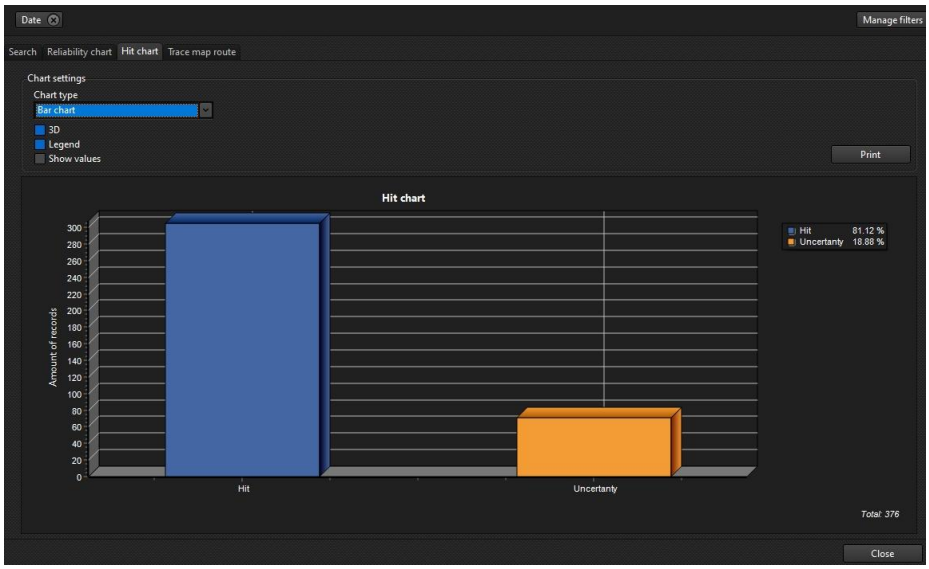


16.5.3 Hit Chart

The system considers a license plate reading to be correct when the degree of reliability, mentioned in the previous topic, is **High** or **Medium**. Based on this information, the system has a hit chart that can be generated from the records searched.

Click on **Hit Chart** to generate a chart of this information, as shown in the image below:



- **Chart Type**: Select the type of chart.
  - **Bar**: Bar chart.
  - **Pie**: Pie chart.
- **3D**: Adds a 3D effect to the chart.
- **Legend**: Adds a legend to the chart values.
- **Display Values**: Displays the count values in the chart.
- **Print**: Prints the current chart.

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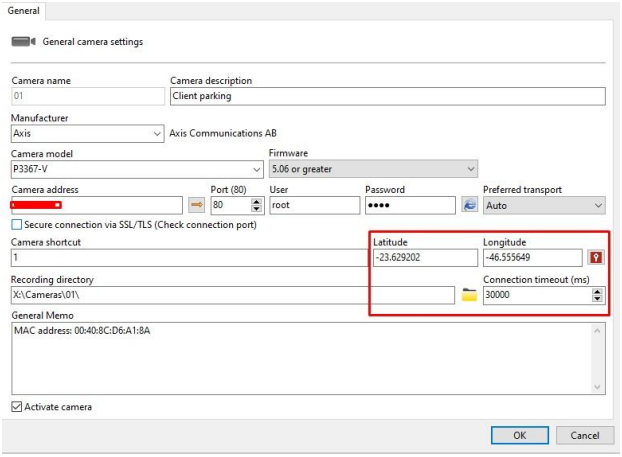
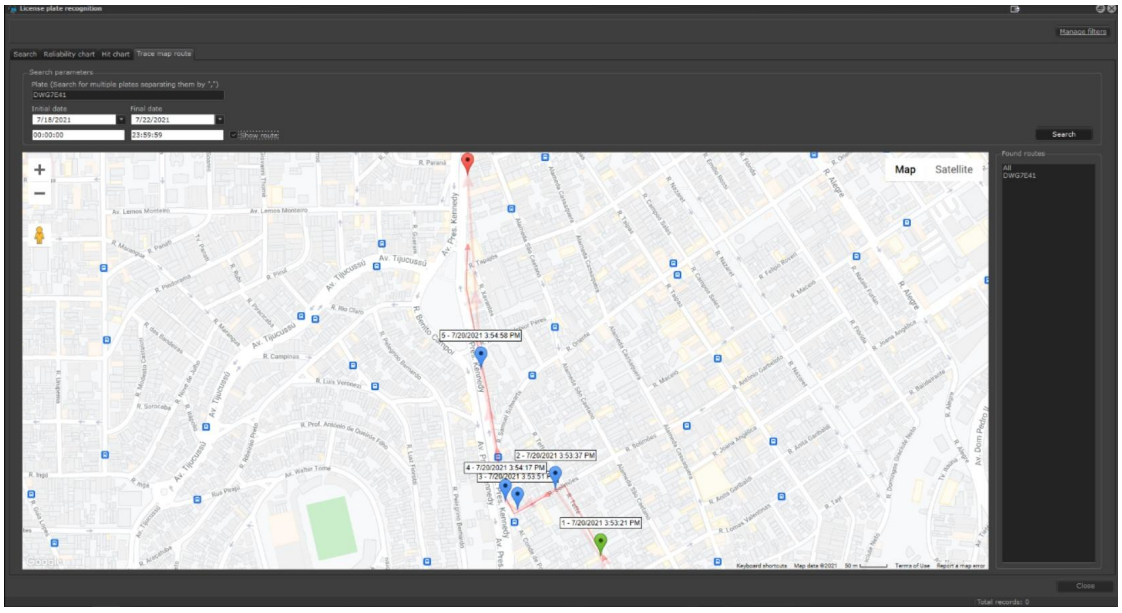
16.5.4 Trace Plate Routes

The system for consulting LPR records in the Surveillance Client has integration with Google Maps, making it possible to display all the recognition points of a license plate on the map, simply by registering the GPS position of the LPR cameras.

First of all, the cameras configured to generate LPR readings must have their coordinates configured. See the **Administration Client Manual** to learn how to configure the coordinates:



The screen for plotting the LPR route will display all the points at which the license plates reported in the search were found in the specified period and will link the points by time, and it is also possible to use the Google Maps route engine and plot a route between the recognized points, however for this feature to work correctly it is necessary for the license plate to have been recognized on several cameras to generate greater route accuracy. This is an excellent feature for LPR installations in smart cities.



The records will be saved in the system database, and the Latitude and Longitude data from the cameras that generated the record will be accompanied by the times at which the vehicle was detected. From this data, the Surveillance Client is able to plot the vehicle's route on a Google Maps map.

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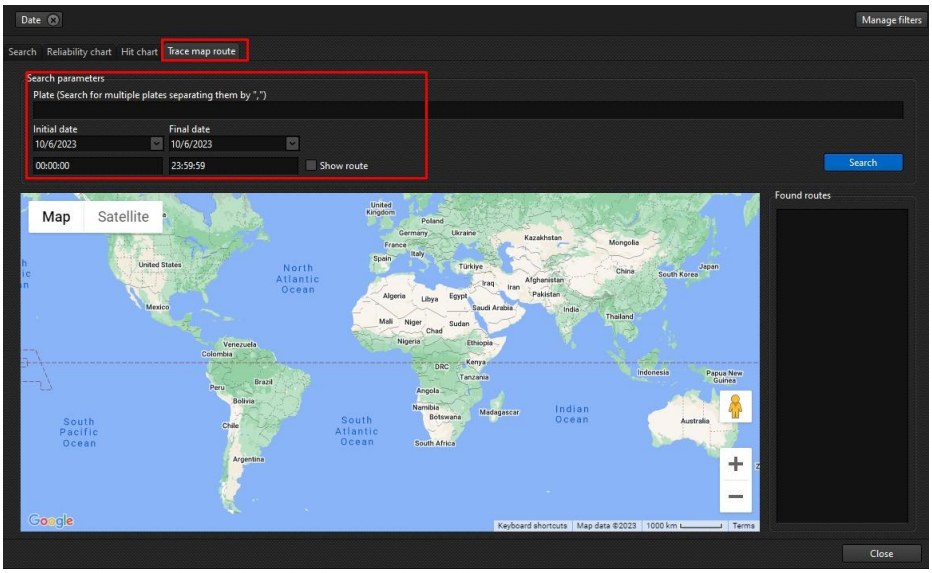
Click on the **Trace Map Route** tab:



- **License Plate**: Enter the license plate number to be located. You can consult multiple license plates by entering each license plate separated by a comma.
- **Start and End Date**: Times and days to be searched.
- **Show Route**: Based on the times and places where the license plate was detected, the system calculates the route taken by the vehicle and displays it on the map screen.
- **Routes Found**: After the search, the license plates located will be added in the **Found Routes** column. Click on the license plate you want to see its route or select **All** to see all the routes for all the license plates simultaneously.

16.6 LPR Zones

LPR Zones can be used for more advanced concepts such as the occupancy rate of the premises monitored by the system. A zone has **Entry** and **Exit** LPR configurations. Vehicles recognized by the settings associated with entering the zone will be added within the zone, just as vehicles recognized by the zone's exit configurations will be removed from the zone.

The **LPR Zone** object in the Surveillance Client will display the number of vehicles within the zone, as well as the number of entries and exits for the day, average occupancy rate and the list of all vehicles currently within the zone.

The system also allows you to create **Zone Groups**, with the function of grouping, displaying the sum of the records of all the grouped zones.

The system also has reports and searches for zone entries and exits.

LPR Zones can be found in your object list:

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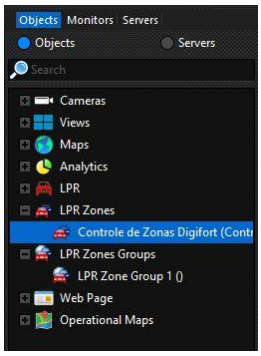
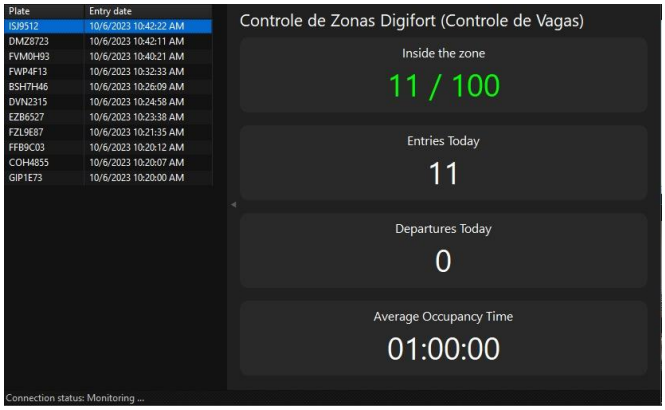
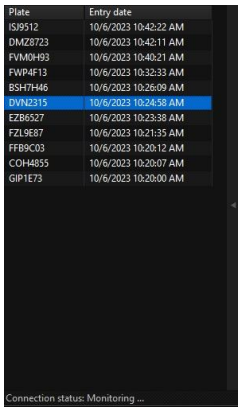


Interface:



On the left-hand side of the control, the system presents a list with the license plates within the zone at the moment.



On the main panel there is a range of information:

- **Inside the zone:** How many license plates are inside that LPR zone (have passed through the entrance but not yet passed through the exit).
- **Entries today:** How many license plates were captured in the entry configurations today.
- **Departures today:** How many exits were captured in the exit configurations today.
- **Average occupancy time:** What is the average time between the entry and exit of the captured vehicles.

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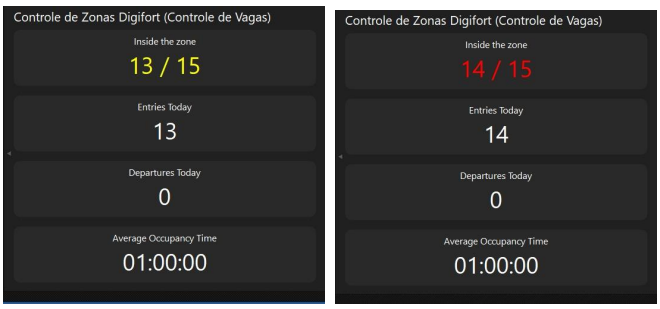
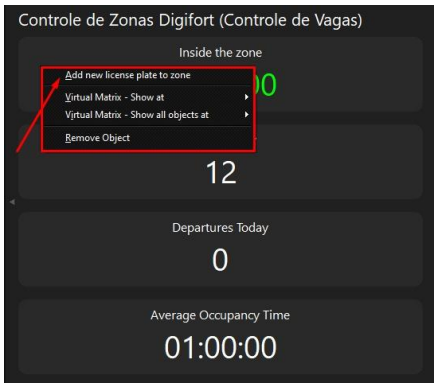
The item indicating the number of vehicles in the zone has programmed colors (via the Administration Client) to indicate whether the zone's capacity is being reached:



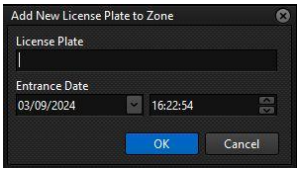
16.6.1 Adding Plates Manually

In cases where the entry camera has not recognized a license plate, the operator can manually add the license plate to the zone.

To add a license plate to the zone, right-click on the main panel and select **Add new license plate to zone**:



The screen for adding a new license plate will be displayed:



- **License plate**: Provide the license plate to be added to the zone.
- **Entry Date**: Enter the date and time the vehicle entered the zone. This field will be filled in automatically with the current date and time.

16.6.2 Removing Plates Manually

In cases where the exit camera has not recognized a license plate, the operator can manually remove the license plate from the zone.

To remove a license plate from the zone, select the desired item from the license plate list, right-click on it and select the **Remove** option:

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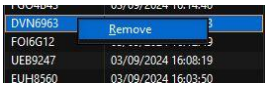
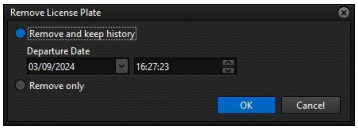


The screen to remove the license plate will be displayed:

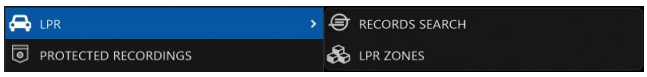


- **Remove and keep history**: Removes the license plate and adds a record of the license plate's exit from the zone.
  - **Exit date**: Enter the date and time the vehicle left the zone. This field will be filled in automatically with the current date and time.
- **Remove only**: Removes the license plate from the zone, without recording its exit.

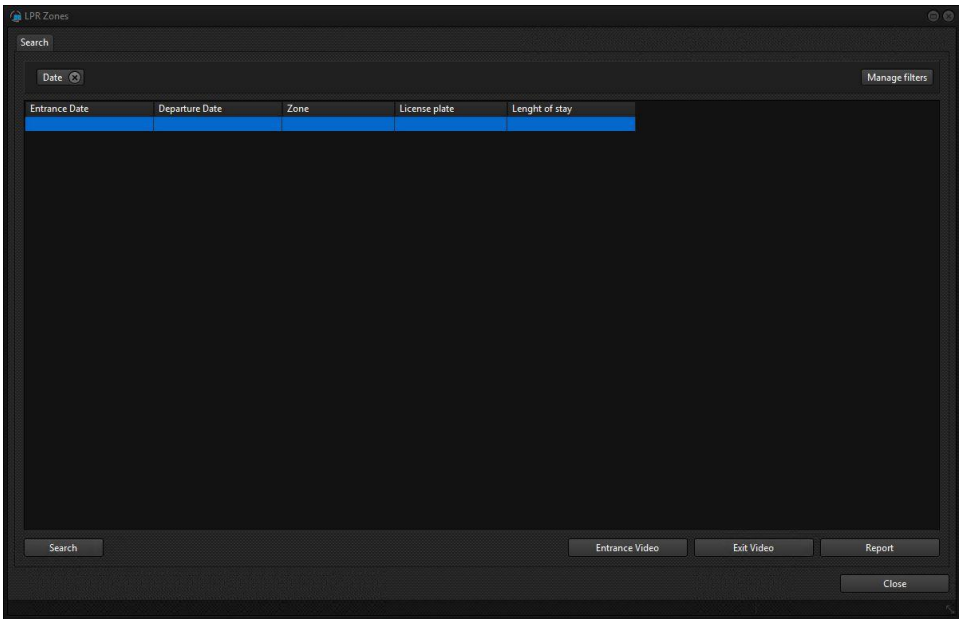
16.6.3 Records Search

The system allows detailed consultation of the entry and exit records of the LPR zones.

To open the search screen, click on the **LPR Zones** button in the Options Menu:



The following screen will be displayed:



By default, the date filter with the current day will be applied, and when you click on search, the events will be displayed as shown in the image below:

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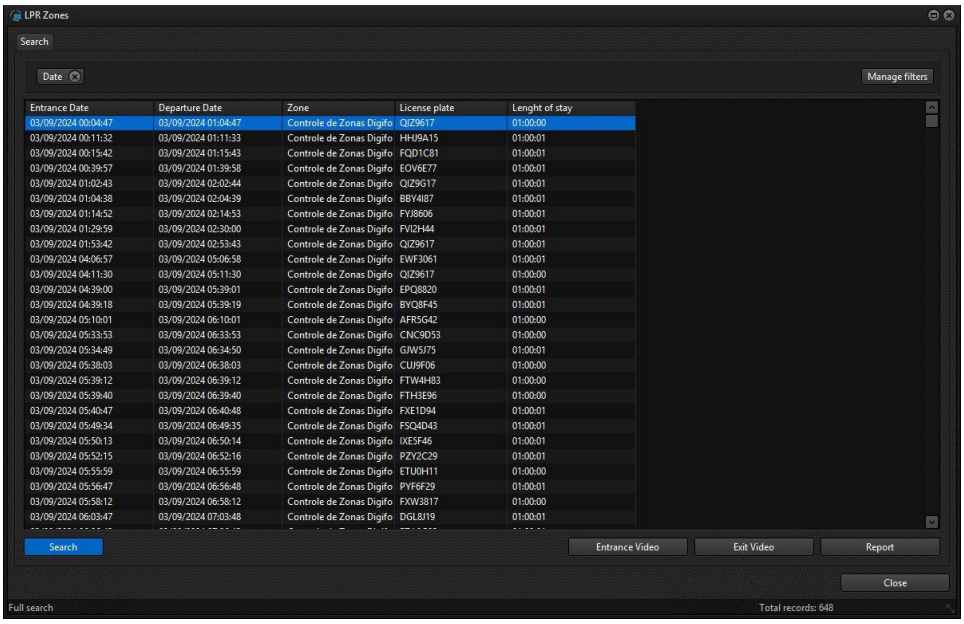


You can play the video of the vehicle entering and leaving the zone. To do this, select the desired record and click on **Entry Video** to view the video of the vehicle entering the zone and Exit Video to view the video of the vehicle leaving the zone. The Media Player 94 will open.

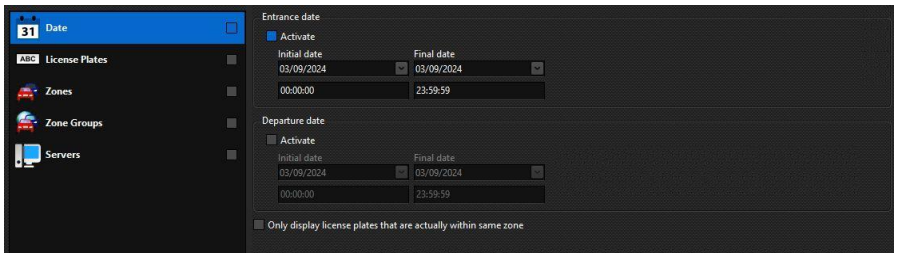
16.6.3.1 Filters

The search allows you to select various filters to help you find records. Click on the **Manage Filters** button to add new filters:

16.6.3.1.1 Date Filter

The date filter allows you to search for records by the selected date.

To add the filter, click on **Manage Filters**, then click on the **Date** tab.
To activate the filter, click on the checkbox to the right of the filter.



- **Entry Date**: Activate to filter records by their entry date.
  - o **Start and End Date**: Date and time scope for filtering by entry date.
- **Exit Date**: Activate to filter records by their exit date.
  - o **Start and End Date**: Date and time scope to filter by exit date.
- **Only display license plate records that are in the zone**: Filters the results to only display license plate records that are still in the zone.

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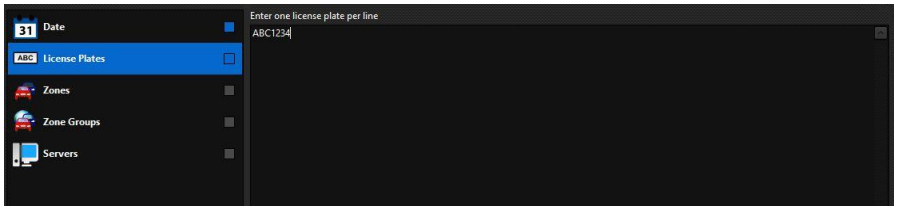
16.6.3.1.2 Plate Filter

The license plate filter allows you to search for LPR zone entry and exit records for specific license plates.

To add the filter, click on **Manage Filters**, then click on the **License Plates** tab.
To activate the filter, click on the checkbox to the right of the filter.

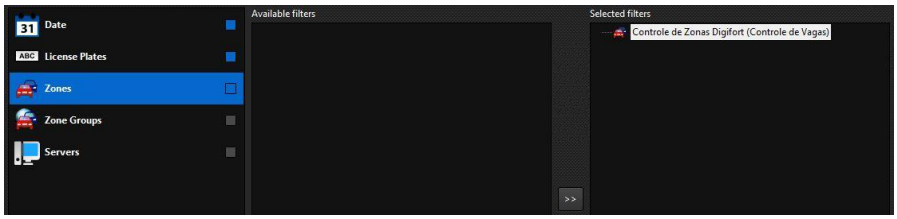


Enter the license plates you want to filter. Provide one license plate per line.

16.6.3.1.3 Zone Filter

The zone filter allows you to search for entry and exit records for a specific zone.

To add the filter, click on **Manage Filters**, then click on the **Zones** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the items you want by dragging from the left list to the right list.

16.6.3.1.4 Zone Group Filter

The zone group filter allows you to search for zone entry and exit records that are part of specific groups.

To add the filter, click on **Manage Filters**, then click on the **Zones** tab.
To activate the filter, click on the checkbox to the right of the filter.

Select the items you want by dragging them from the left list to the right list.

16.6.3.1.5 Server Filter

The server filter allows you to search for the LPR zone records of specific servers.

To add the filter, click on **Manage Filters**, then click on the **Servers** tab.
To activate the filter, click on the checkbox to the right of the filter.

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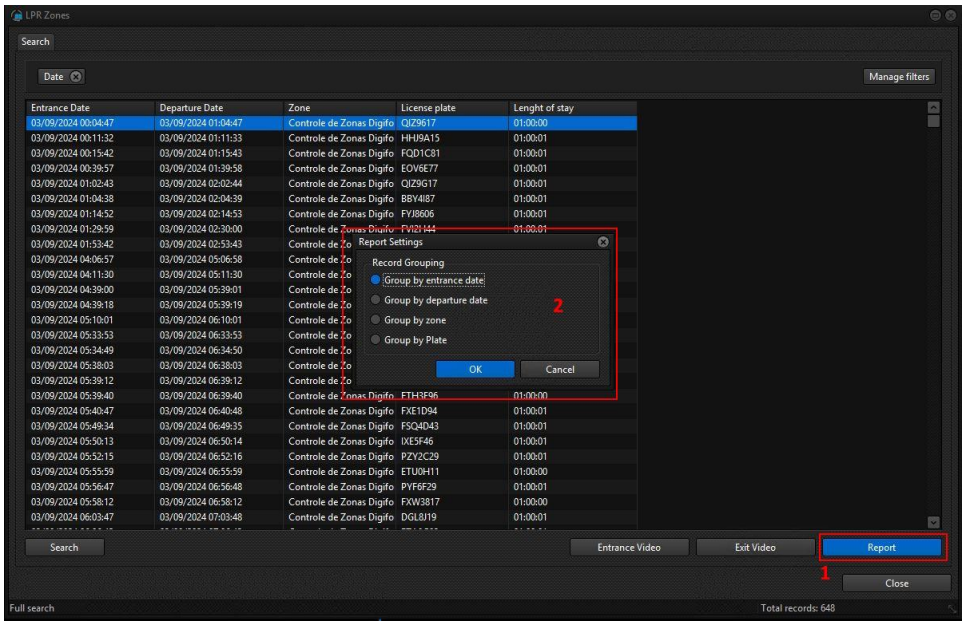
Select the servers by dragging from the left list to the right list.

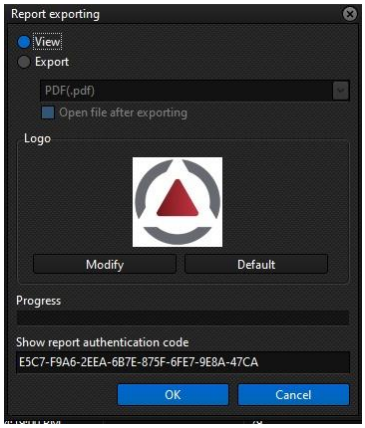
16.6.4 Records Printing

By clicking on the **Report** button, you can generate a printable report with all the filtered records:



Select the type of record grouping. Records can be grouped by different options. Select the most appropriate options for your report and click **OK.**

Now select the format and whether you want to view only, print or export (*.pdf, or *.html) and click **OK** and the standard report viewer will be displayed:



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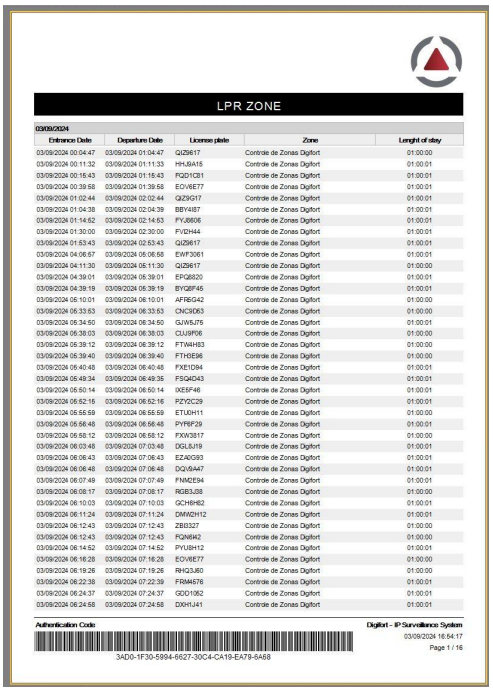
The generated report will look like the image below:



LPR ZONE

03/09/2024

Entrance Date	Departure Date	License plate	Zone	Lenght of stay
03/09/2024 00:04:47	03/09/2024 01:04:47	QIZ9617	Contrôle de Zonas Digifort	01:00:00
03/09/2024 00:11:32	03/09/2024 01:11:33	HHJ9A15	Contrôle de Zonas Digifort	01:00:01
03/09/2024 00:15:43	03/09/2024 01:15:43	FQD1CB1	Contrôle de Zonas Digifort	01:00:01
03/09/2024 00:39:58	03/09/2024 01:39:58	EOVBE77	Contrôle de Zonas Digifort	01:00:01
03/09/2024 01:02:44	03/09/2024 02:02:44	QIZ9G17	Contrôle de Zonas Digifort	01:00:01
03/09/2024 01:04:38	03/09/2024 02:04:39	BBY4I87	Contrôle de Zonas Digifort	01:00:01
03/09/2024 01:14:62	03/09/2024 02:14:63	FYJ6606	Contrôle de Zonas Digifort	01:00:01
03/09/2024 01:30:00	03/09/2024 02:30:00	FVI2H44	Contrôle de Zonas Digifort	01:00:01
03/09/2024 01:53:43	03/09/2024 02:53:43	QIZ9617	Contrôle de Zonas Digifort	01:00:01
03/09/2024 04:06:57	03/09/2024 05:06:58	EWF3061	Contrôle de Zonas Digifort	01:00:01
03/09/2024 04:11:30	03/09/2024 05:11:30	QIZ9617	Contrôle de Zonas Digifort	01:00:00
03/09/2024 04:39:01	03/09/2024 05:39:01	EPQ8520	Contrôle de Zonas Digifort	01:00:01
03/09/2024 04:39:19	03/09/2024 05:39:19	BYQ8F46	Contrôle de Zonas Digifort	01:00:01
03/09/2024 05:10:01	03/09/2024 06:10:01	AFBEG42	Contrôle de Zonas Digifort	01:00:00
03/09/2024 05:33:63	03/09/2024 06:33:63	CNC9D63	Contrôle de Zonas Digifort	01:00:00
03/09/2024 05:34:50	03/09/2024 06:34:50	GJW5J76	Contrôle de Zonas Digifort	01:00:01
03/09/2024 05:38:03	03/09/2024 06:38:03	CUJ9F06	Contrôle de Zonas Digifort	01:00:00
03/09/2024 05:39:12	03/09/2024 06:39:12	FTW4H83	Contrôle de Zonas Digifort	01:00:00
03/09/2024 05:39:40	03/09/2024 06:39:40	FTH0E96	Contrôle de Zonas Digifort	01:00:00
03/09/2024 05:40:48	03/09/2024 06:40:48	FXE1D94	Contrôle de Zonas Digifort	01:00:01
03/09/2024 05:49:34	03/09/2024 06:49:35	FSQ4D43	Contrôle de Zonas Digifort	01:00:01
03/09/2024 05:50:14	03/09/2024 06:50:14	IXE5F46	Contrôle de Zonas Digifort	01:00:01
03/09/2024 05:52:15	03/09/2024 06:52:16	PZY2C29	Contrôle de Zonas Digifort	01:00:01
03/09/2024 05:55:59	03/09/2024 06:55:59	ETUDH11	Contrôle de Zonas Digifort	01:00:00
03/09/2024 05:56:48	03/09/2024 06:56:48	PYF8F29	Contrôle de Zonas Digifort	01:00:01
03/09/2024 05:58:12	03/09/2024 06:58:12	FXW3817	Contrôle de Zonas Digifort	01:00:00
03/09/2024 06:03:48	03/09/2024 07:03:48	DGL8J19	Contrôle de Zonas Digifort	01:00:01
03/09/2024 06:06:43	03/09/2024 07:06:43	EZA0G93	Contrôle de Zonas Digifort	01:00:01
03/09/2024 06:06:48	03/09/2024 07:06:48	DQV9A47	Contrôle de Zonas Digifort	01:00:01
03/09/2024 06:07:49	03/09/2024 07:07:49	FNNDE94	Contrôle de Zonas Digifort	01:00:01
03/09/2024 06:08:17	03/09/2024 07:08:17	RGB3J38	Contrôle de Zonas Digifort	01:00:00
03/09/2024 06:10:03	03/09/2024 07:10:03	GCH6H82	Contrôle de Zonas Digifort	01:00:01
03/09/2024 06:11:24	03/09/2024 07:11:24	DMWZH12	Contrôle de Zonas Digifort	01:00:01
03/09/2024 06:12:43	03/09/2024 07:12:43	ZBG327	Contrôle de Zonas Digifort	01:00:00
03/09/2024 06:12:43	03/09/2024 07:12:43	FQN6M42	Contrôle de Zonas Digifort	01:00:00
03/09/2024 06:14:52	03/09/2024 07:14:52	PYU8H12	Contrôle de Zonas Digifort	01:00:01
03/09/2024 06:16:28	03/09/2024 07:16:28	EOV6E77	Contrôle de Zonas Digifort	01:00:00
03/09/2024 06:19:26	03/09/2024 07:19:26	RHQ3J60	Contrôle de Zonas Digifort	01:00:00
03/09/2024 06:22:38	03/09/2024 07:22:39	FRM4576	Contrôle de Zonas Digifort	01:00:01
03/09/2024 06:24:37	03/09/2024 07:24:37	GDD1I62	Contrôle de Zonas Digifort	01:00:01
03/09/2024 06:24:58	03/09/2024 07:24:58	DXH1J41	Contrôle de Zonas Digifort	01:00:01

Authentication Code

34D0-1F30-5994-6627-30C4-CA19-EA79-5A68

Digifort - IP Surveillance System

03/09/2024 16:54:17

Page 1 / 16

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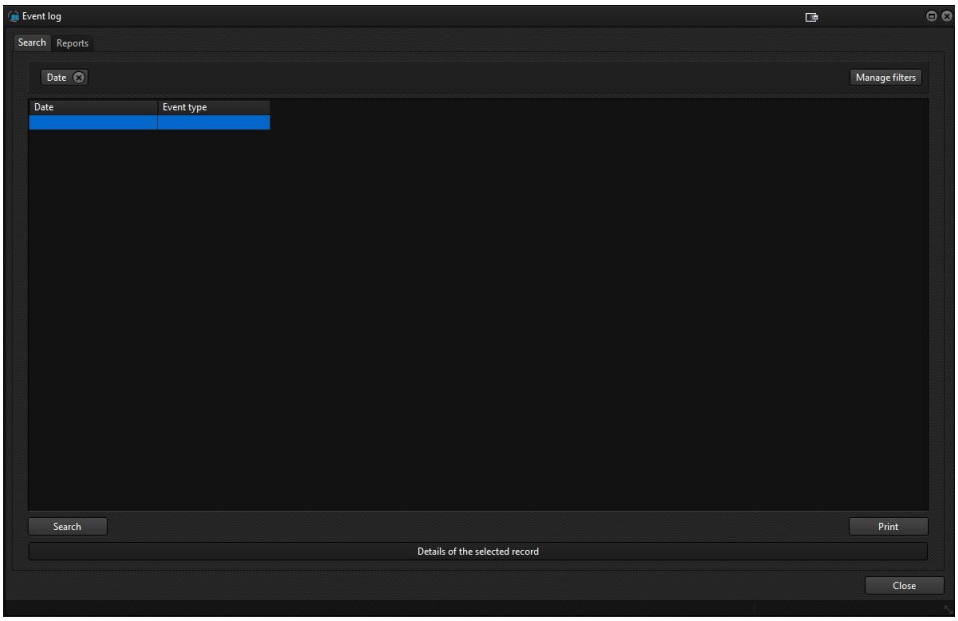
Chapter XVII

17 Event Logs

The event log allows any system event to be found quickly, viewed and used as data for retrieving a recording.

To open the event screen, click on the **Event log** button in the Options Menu:

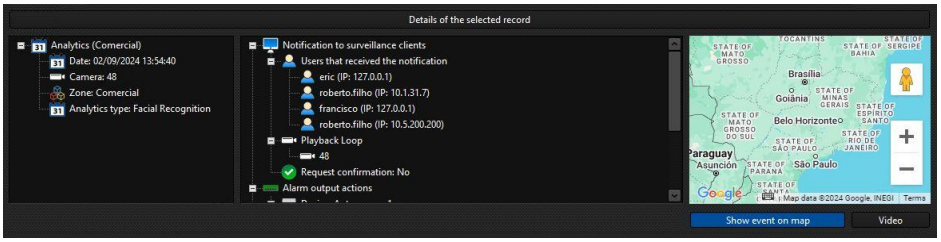
The following screen will be displayed:



17.1 Record Details

Every record has extended details that can be viewed via the details panel.

Click on the **Selected Record Details** button to open the details screen. You can keep this panel open while navigating between different records.



In the left details panel, you will see information about the event, such as the event type, trigger date and time and additional details. Each type of event can have different details pertinent to its type.

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The right panel will display information about the actions generated from this event, such as: emails sent, cameras that were shown on the screen in a pop-up, messages sent, operator response to an alarm, etc.

If the event has geographic coordinates associated with it, you can view the location where the event was triggered on a mini-map, which can be displayed by clicking on the **Show Event on Map** button.

In the bottom right-hand corner, you can also activate the **Video** button. Clicking this will open the Media Player, with video of the time the event took place and the cameras associated with the event's alarm actions.

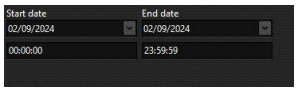
17.2 Filters

The search allows you to select various filters to help you find records. Click on the **Manage Filters** button to add new filters:

17.2.1 Date Filter

The date filter allows you to search for records by the selected date.

To add the filter, click on **Manage Filters**, then click on the **Date** tab.
To activate the filter, click on the checkbox to the right of the filter.



Choose the time interval for searching the records.

17.2.2 Alarm Input Filter

The alarm input filter allows you to search for event records triggered by alarm inputs (I/O) from cameras or I/O devices.

To add the filter, click on **Manage Filters**, then click on the **Alarm Input** tab.
To activate the filter, simply click on the checkbox to the right of the filter.

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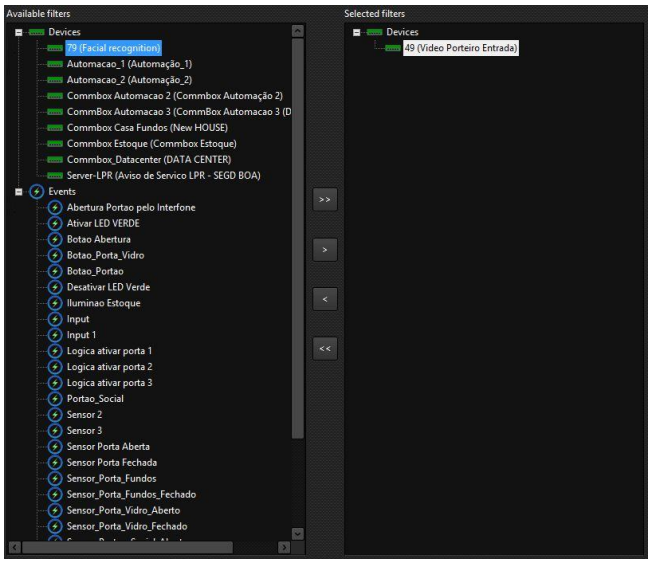
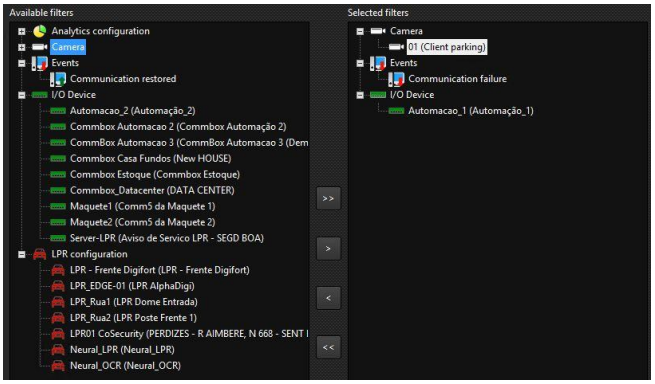


You can filter events by I/O devices, cameras or specific events. Select the items you want by dragging from the left list to the right list.

17.2.3 Communication Filter

The communication filter allows you to search for event logs triggered when devices or objects in the system go out of operation or return to an operational state.

To add the filter, click on **Manage Filters**, then click on the **Communication** tab.
To activate the filter, click on the checkbox to the right of the filter.



Different types of objects can trigger Communication Failure and Communication Restore events and you can select the objects you want to filter, as well as selecting the type of communication event, whether it is Communication **Failure** or Communication **Restore**. Select the items you want by dragging from the left list to the right list.

17.2.4 Recording Filter

The recording filter allows you to search for event logs triggered when recording errors occur on cameras.

To add the filter, click on **Manage Filters**, then click on the **Recording** tab.
To activate the filter, simply click on the checkbox to the right of the filter.

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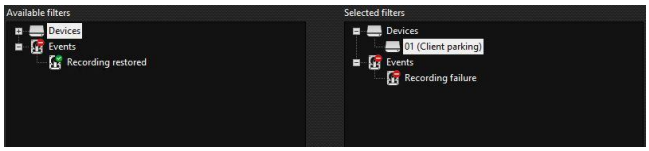
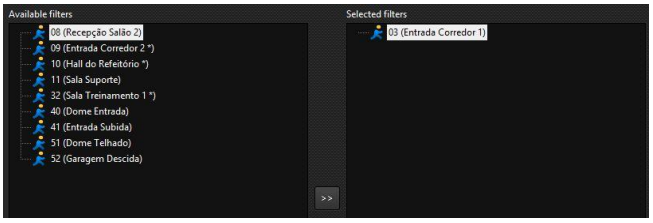


You can select the devices you want to filter, as well as the type of recording event, whether it's a **Failure** or **Restore** recording. Select the items you want by dragging from the left list to the right list.

17.2.5 Motion Detection Filter

The motion detection filter allows you to search for records of motion detection events triggered by cameras.

To add the filter click on **Manage Filters**, then click on the **Motion Detection** tab.
To activate the filter, click on the checkbox to the right of the filter.

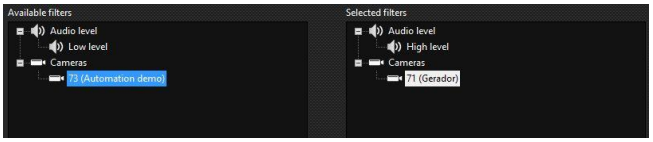


Select the items you want by dragging from the left list to the right list.

17.2.6 Audio Level Detection Filter

The audio level detection filter allows you to search for event logs triggered when cameras recognize that the audio level is too high or too low.

To add the filter, click on **Manage Filters**, then click on the **Audio Level Detection** tab.
To activate the filter, simply click on the checkbox to the right of the filter.



You can select the devices you want to filter, as well as the type of detection event, either **High Level** or **Low Level**. Select the items you want by dragging from the left list to the right list.

17.2.7 Manual Event Filter

The manual event filter allows you to search for manual event records triggered by system operators.

To add the filter, click on **Manage Filters**, then click on the **Manual Event** tab.
To activate the filter, click on the checkbox to the right of the filter.

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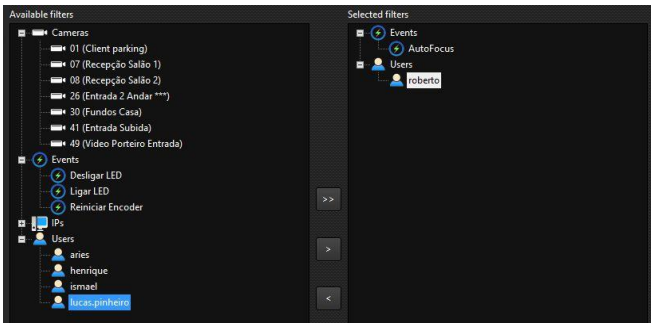
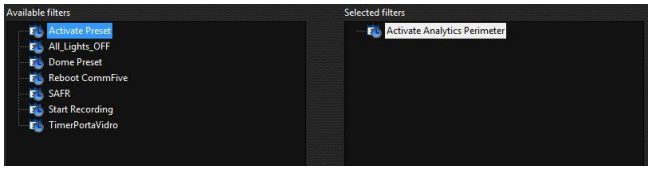


You can select from various types of filters such as **Device** (where the manual event is registered), **Event**, **IP** of the station that triggered the event or **User** who triggered the event. Select the items you want by dragging from the left list to the right list.

17.2.8 Scheduled Event Filter

The scheduled event filter allows you to search for event records triggered by scheduled events.

To add the filter, click on **Manage Filters**, then click on the **Scheduled Events** tab.
To activate the filter, click on the checkbox to the right of the filter.

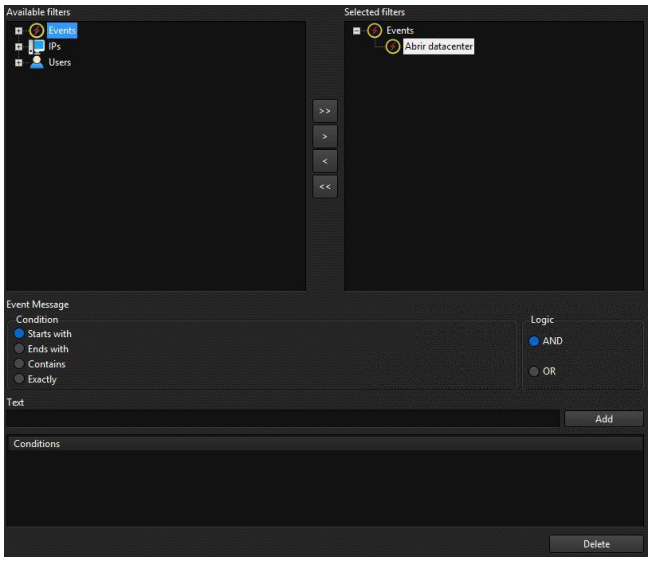


Select the desired items by dragging from the left list to the right list.

17.2.9 Global Event Filter

The global event filter allows you to search for global event records triggered by system operators.

To add the filter, click on **Manage Filters**, then click on the **Global Events** tab.
To activate the filter, click on the checkbox to the right of the filter.



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This screen allows you to filter events by:
- **Event**: Filter by the name of the triggered event.
- **User**: Filter by the operator who triggered the event.
- **IP**: Filter by the IP address of the workstation used to trigger the event.

Select the items you want by dragging from the left list to the right list.

You can also add filters for the event messages (if available).

Conditions:
- **Starts with**: The system will filter for messages that begin with the text entered.
- **Ends with**: The system will filter for messages that end with the text entered.
- **Contains**: The system will filter for messages that contain the text entered anywhere in the message.
- **Exact**: The system will filter for messages that contain exactly the text you entered.

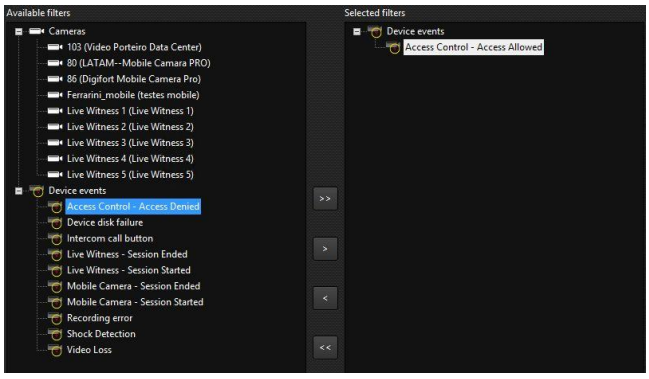
Logical:
- **AND**: The system will only consider messages that have all the texts added.
- **OR**: The system will consider all messages that contain at least one of the added texts.

Select the condition, logic and text you want to filter and click **Add**.

17.2.10 Device Event Filter

Some devices in the system have extra events, called Device Events. The device event filter allows you to search for records of these events.

To add the filter, click on **Manage Filters**, then click on the **Device Event** tab.
To activate the filter, simply click on the checkbox to the right of the filter.



You can select the devices you want to filter, as well as the type of device event. Select the items you want by dragging from the left list to the right list.

17.2.11 Analytics Event Filter

The analytics event filter allows you to search for system event records generated from analytics configurations.

Although similar, Analytics Events are different from Analytics Records 180. The difference between these two modules is fundamentally that Events are the by-products of an Analytics Records. Analytics Records are generated from the engine and have a lot of metadata information associated with the

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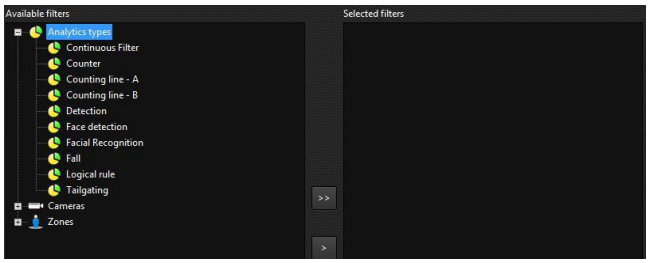
record, but analytics records don't trigger actions, for which they are converted into a System Event, with reduced information, and so can be used in the system to trigger actions, as well as being used as input for other events.

To add the filter, click on **Manage Filters**, then click on the **Analytics** tab.
To activate the filter, simply click on the checkbox to the right of the filter.



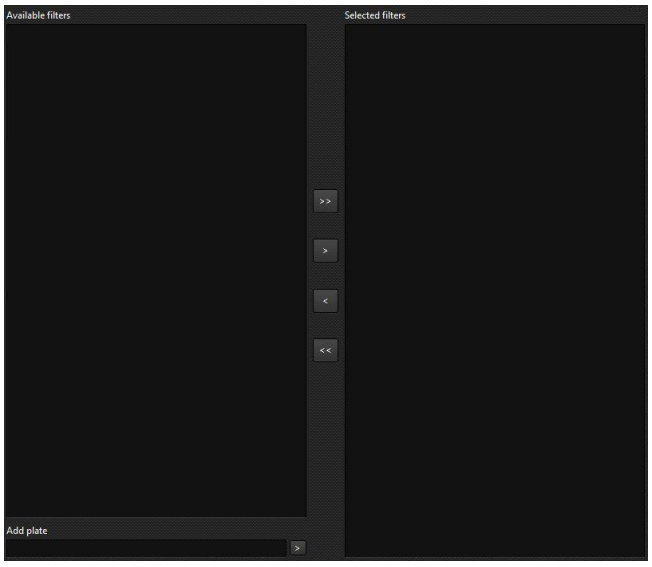
You can select the types of rule you want to filter, as well as the cameras and analytics zones. Select the items you want by dragging from the left list to the right list.

17.2.12 LPR Event Filter

The LPR event filter allows you to search for LPR event records (registered with the Administration Client).

LPR Events are different from LPR Records 214. LPR Records contain all license plates recognized by the system, while LPR Events are only events triggered according to a certain condition, such as when a recognized vehicle is on a blacklist.

To add the filter, click on **Manage Filters**, then click on the **License Plate Recognition** tab.
To activate the filter, simply click on the checkbox to the right of the filter.



You can select cameras and events. Select the items you want by dragging from the left list to the right list.

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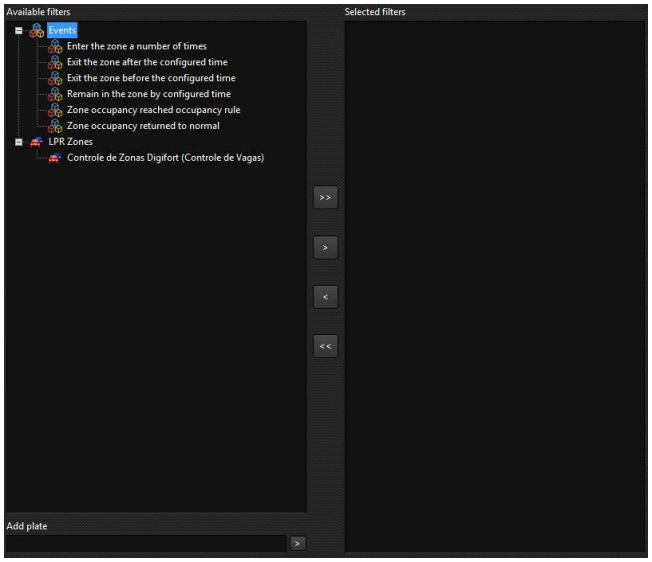
Recognized license plates will not be displayed in the filter list as this list could be too long. To filter by a specific license plate, type the license plate in the **Add Plate** field and click the add button.

17.2.13 LPR Zone Event Filter

The LPR zone event filter allows you to search for event records triggered by LPR zones.

To add the filter, click on **Manage Filters**, then click on the **LPR Zone** tab.
To activate the filter, click on the checkbox to the right of the filter.

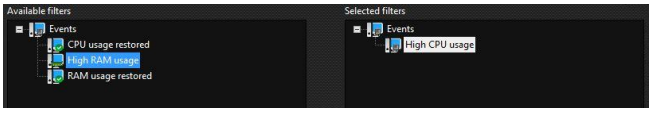


You can select the zones and type of event you want. Select the items you want by dragging them from the left list to the right list.

17.2.14 Server Event Filter

The server event filter allows you to search for server health event records.

To add the filter, click on **Manage Filters**, then click on the **Server Events** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the types of events you want by dragging from the left list to the right list.

17.2.15 Server Filter

The server filter allows you to search for event logs triggered on specific servers.

To add the filter, click on **Manage Filters**, then click on the **Servers** tab.
To activate the filter, click on the checkbox to the right of the filter.

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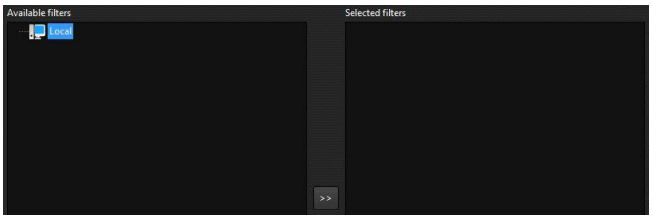
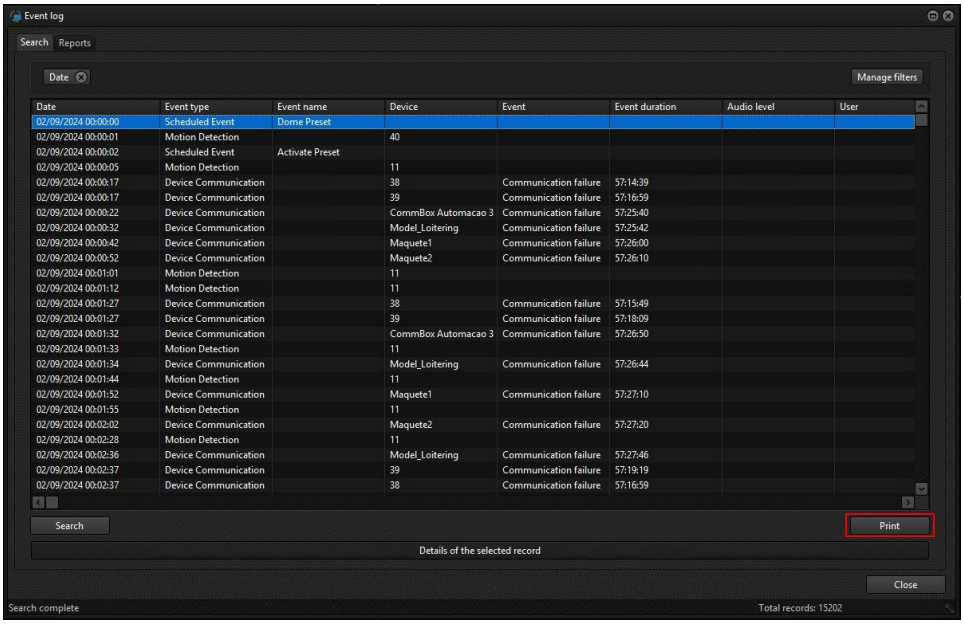


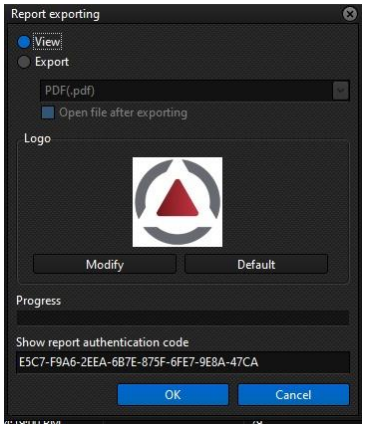
Select the servers by dragging from the left list to the right list.

17.3 Printing a Record

Searching for event records allows you to print the searched records. To do this, click on the **Print** button after performing the search.



Now select the format and whether you want to view only, print or export (*.pdf, or *..html) and click **OK** and the standard report viewer will be displayed:



The report will be displayed:

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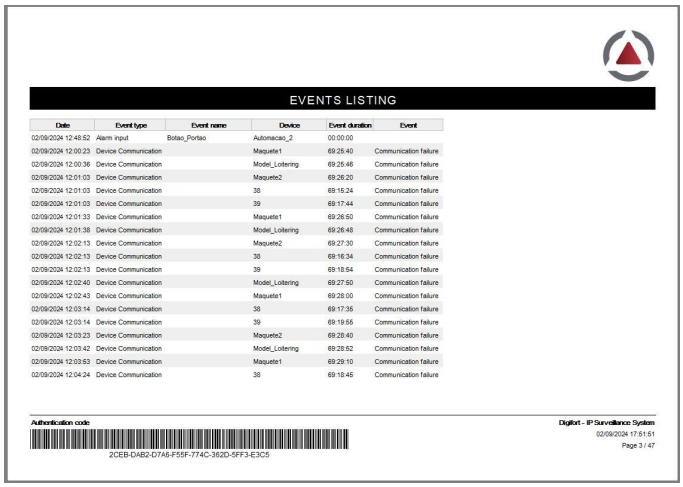
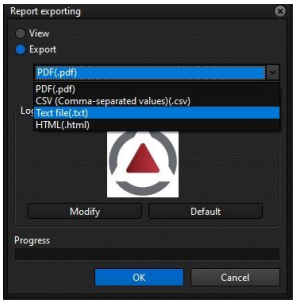


17.4 Reports

The system provides some event-related reports. Click on the **Reports** tab:

Click on the desired report. See the following chapters for details of each type of report.

All reports can be exported in the following formats: PDF, CSV, TXT, RTF, XLS and HTML.



The screen allows you to change the logo in order to personalize the report. Simply click on **Modify** and choose another image file.

17.4.1 Operator Responses to Events Report

The Operator Responses to Events report includes the information entered by operators in the alarm pop-ups, so you can check the actions taken by operators for all triggered events.

Click on the **Operators Responses to Events** button and the Filters 245 screen will appear. You must enter the desired filters (this report is independent of the record search).

Once you have set the filters, the system will start generating the report:

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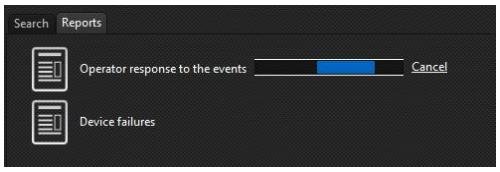
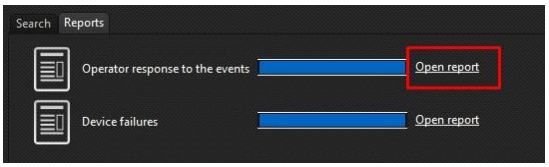
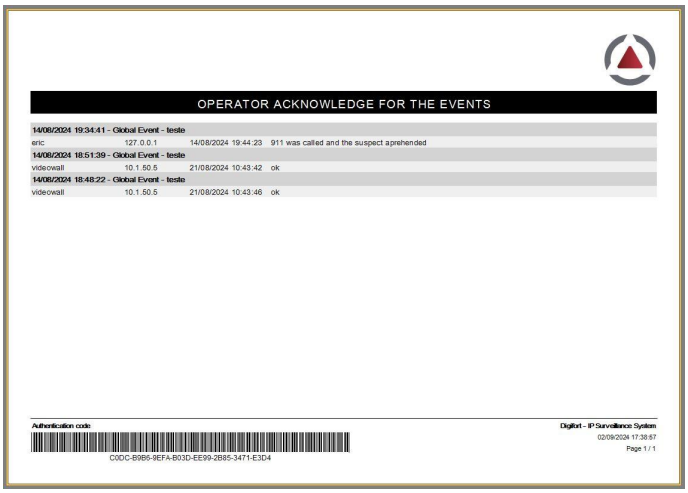


Once the search is complete, the system will provide the button to open the report. Click on **Open Report** to view, print or export.



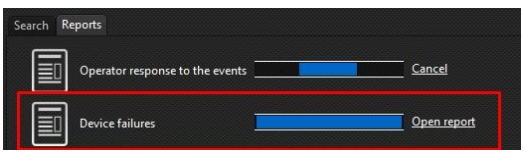


17.4.2 Device Failure Report

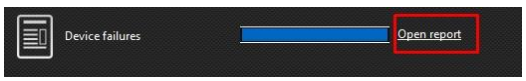
The device failure report will list all communication failures and recoveries with the system's devices, also providing the total failure time for each device.

Click on the **Device Failures** button and the Filters 245 screen will be displayed with reduced options. You must provide the desired filters (This report is independent of the log search).

Once you have set the filters, the system will start generating the report:



Once the search is complete, the system will provide the button to open the report. Click on **Open Report** to view, print or export.



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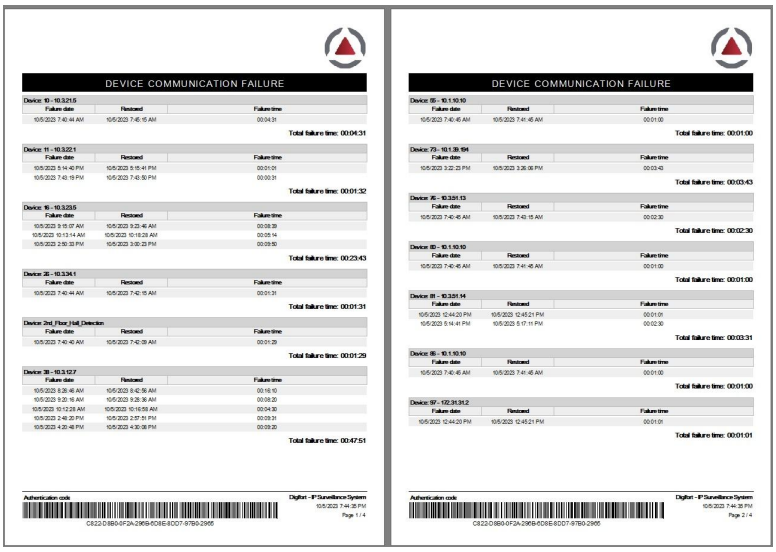

DEVICE COMMUNICATION FAILURE

Device: 10 - 10.3.21.5

Failure date	Restored	Failure time
10/5/2023 7:40:44 AM	10/5/2023 7:45:15 AM	00:04:31

Total failure time: 00:04:31

Device: 11 - 10.3.22.1

Failure date	Restored	Failure time
10/5/2023 5:14:40 PM	10/5/2023 5:15:41 PM	00:01:01
10/5/2023 7:43:19 PM	10/5/2023 7:43:50 PM	00:00:31

Total failure time: 00:01:32

Device: 16 - 10.3.23.5

Failure date	Restored	Failure time
10/5/2023 9:15:07 AM	10/5/2023 9:23:46 AM	00:08:39
10/5/2023 10:13:14 AM	10/5/2023 10:18:28 AM	00:05:14
10/5/2023 2:50:33 PM	10/5/2023 3:00:23 PM	00:09:50

Total failure time: 00:23:43

Device: 25 - 10.3.34.1

Failure date	Restored	Failure time
10/5/2023 7:40:44 AM	10/5/2023 7:42:15 AM	00:01:31

Total failure time: 00:01:31

Device: 2nd_Floor_Hall_Detection

Failure date	Restored	Failure time
10/5/2023 7:40:40 AM	10/5/2023 7:42:09 AM	00:01:29

Total failure time: 00:01:29

Device: 38 - 10.3.12.7

Failure date	Restored	Failure time
10/5/2023 8:26:46 AM	10/5/2023 8:42:56 AM	00:16:10
10/5/2023 9:20:16 AM	10/5/2023 9:28:36 AM	00:08:20
10/5/2023 10:12:28 AM	10/5/2023 10:16:58 AM	00:04:30
10/5/2023 2:48:20 PM	10/5/2023 2:57:51 PM	00:09:31
10/5/2023 4:20:48 PM	10/5/2023 4:30:08 PM	00:09:20

Total failure time: 00:47:51

Authentication code

C822-D8B0-0F2A-296B-6D8E-8DD7-97B0-2965

Digifort - IP Surveillance System

10/5/2023 7:44:25 PM

Page 1 / 4

DEVICE COMMUNICATION FAILURE

Device: 55 - 10.1.10.10

Failure date	Restored	Failure time
10/5/2023 7:40:45 AM	10/5/2023 7:41:45 AM	00:01:00

Total failure time: 00:01:00

Device: 73 - 10.1.39.194

Failure date	Restored	Failure time
10/5/2023 3:22:23 PM	10/5/2023 3:26:06 PM	00:03:43

Total failure time: 00:03:43

Device: 76 - 10.3.51.13

Failure date	Restored	Failure time
10/5/2023 7:40:45 AM	10/5/2023 7:43:15 AM	00:02:30

Total failure time: 00:02:30

Device: 80 - 10.1.10.10

Failure date	Restored	Failure time
10/5/2023 7:40:45 AM	10/5/2023 7:41:45 AM	00:01:00

Total failure time: 00:01:00

Device: 81 - 10.3.51.14

Failure date	Restored	Failure time
10/5/2023 12:44:20 PM	10/5/2023 12:45:21 PM	00:01:01
10/5/2023 5:14:41 PM	10/5/2023 5:17:11 PM	00:02:30

Total failure time: 00:03:31

Device: 85 - 10.1.10.10

Failure date	Restored	Failure time
10/5/2023 7:40:45 AM	10/5/2023 7:41:45 AM	00:01:00

Total failure time: 00:01:00

Device: 97 - 172.31.31.2

Failure date	Restored	Failure time
10/5/2023 12:44:20 PM	10/5/2023 12:45:21 PM	00:01:01

Total failure time: 00:01:01

Authentication code

C822-D8B0-0F2A-296B-6D8E-8DD7-97B0-2965

Digifort - IP Surveillance System

10/5/2023 7:44:25 PM

Page 2 / 4

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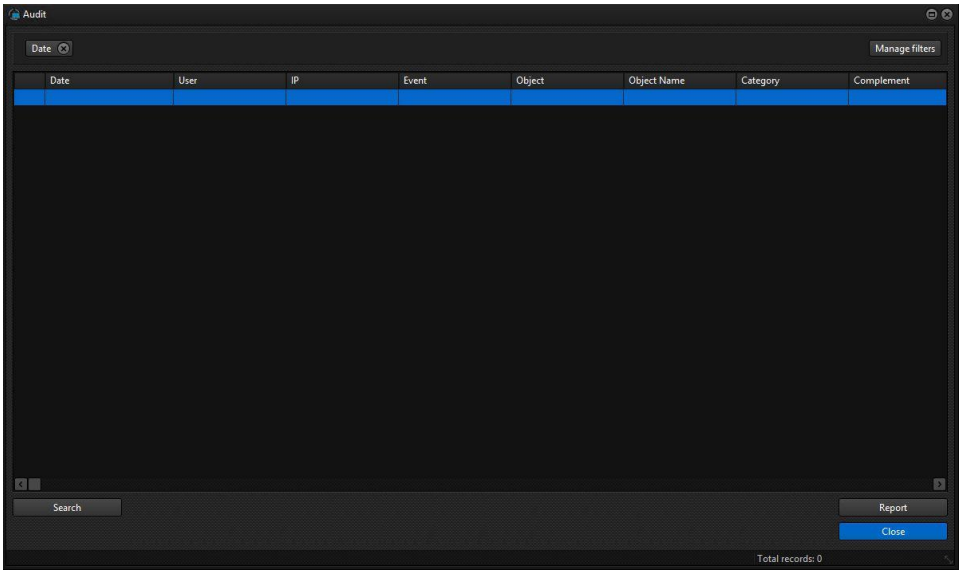
Chapter XVII

18 Audit Logs

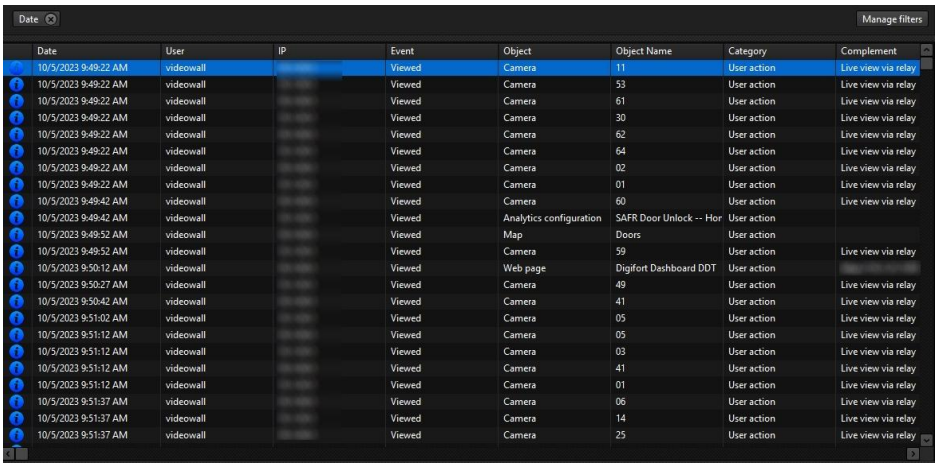
The purpose of the Audit feature is to record all user actions in the system and connections to the server.

To open the audit screen, click on the **Audit** button in the Options Menu:

The following screen will be displayed:



By default, the date filter with the current day will be applied, and when you click on search, the events will be displayed as shown in the image below:



18.1 Filters

The search allows you to select various filters to help you find records. Click on the **Manage Filters** button to add new filters:

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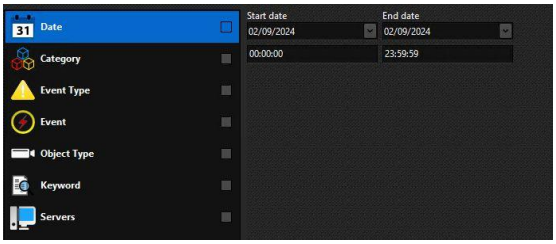
18.1.1 Date Filter

The date filter allows you to search for records by the selected date.

To add the filter, click on **Manage Filters**, then click on the **Date** tab.
To activate the filter, click on the checkbox to the right of the filter.

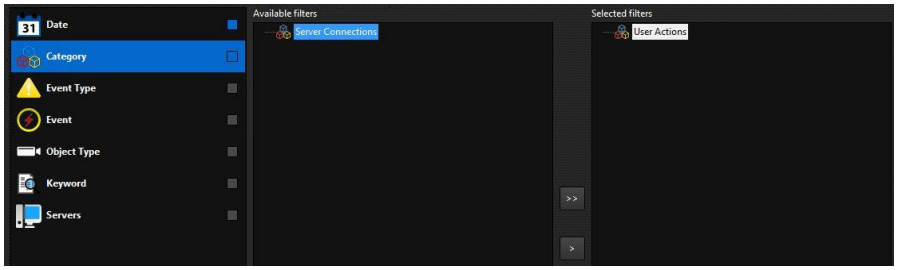


Choose the time interval for searching the records.

18.1.2 Category Filter

The category filter allows you to search for audit records according to their category

To add the filter, click on **Manage Filters**, then click on the **Category** tab.
To activate the filter, click on the checkbox to the right of the filter.



- **Server Connections**: This category records all user connections to the server.
- **User Actions**: This category records all user actions in the system, such as changing parameters and viewing cameras.

Select the desired items by dragging from the left list to the right list.

18.1.3 Event Type Filter

The event type filter allows you to search for audit records according to their type.

To add the filter, click on **Manage Filters**, then click on the **Event Type** tab.
To activate the filter, click on the checkbox to the right of the filter.

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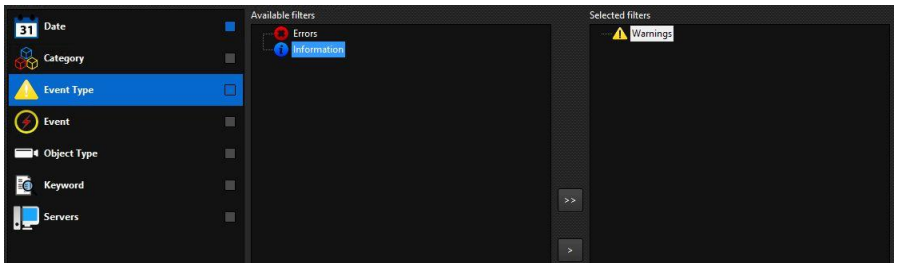


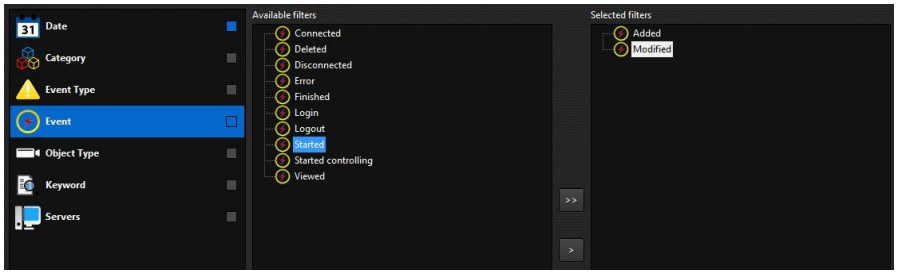
- **Warnings**: This type of event records all user actions relating to system administration, such as adding/removing objects, changing camera or user registrations, etc.
- **Errors**: This event type records errors, such as a user connection refused due to authentication failure.
- **Information**: This type of event records informational logs, such as camera views.

Select the desired items by dragging from the left list to the right list.

18.1.4 Event Filter

The event filter allows you to search the audit records for certain events.

To add the filter, click on **Manage Filters**, then click on the **Event** tab.
To activate the filter, simply click on the checkbox to the right of the filter.



The list will be populated according to the events available. The system has many types of events, so you should select the events according to your needs. For example, if you want to search for changes to objects (when a user changes an object), select the **Changed** event. If you want to search for added objects (when a user creates a new object in the system), select the **Added** event.

Select the items you want by dragging from the left list to the right list.

18.1.5 Object Type Filter

The object type filter allows you to search for audit records according to the type of object affected.

To add the filter, click on **Manage Filters**, then click on the **Object Type** tab.
To activate the filter, click on the checkbox to the right of the filter.

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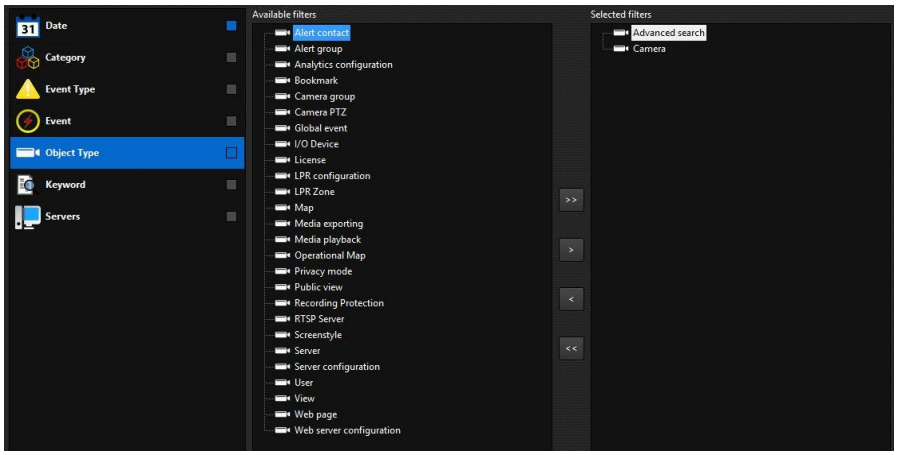
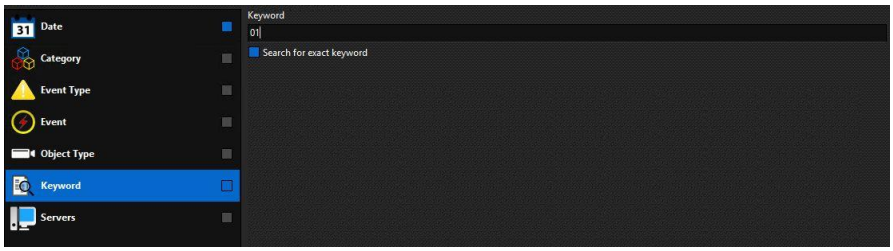


Select the items you want by dragging from the left list to the right list.

18.1.6 Keyword Filter

The keyword filter allows you to search the records for a text or word. This text will be consulted in the **User**, **IP**, **Object Name** and **Complement** fields.

To add the filter, click on **Manage Filters**, then click on the **Keyword** tab.
To activate the filter, simply click on the checkbox to the right of the filter.



- **Keyword**: Enter the text or word to search for.
- **Search by exact keyword**: With this option activated, the text should match exactly what is recorded in the field. If this option is deactivated, the field will be searched to see if there is an occurrence of the text, and a complete match is not required. **NOTE**: Deactivating this option will slow down the search.

18.1.7 Server Filter

The server filter allows you to search for audit records registered on specific servers.

To add the filter, click on **Manage Filters**, then click on the **Servers** tab.
To activate the filter, click on the checkbox to the right of the filter.

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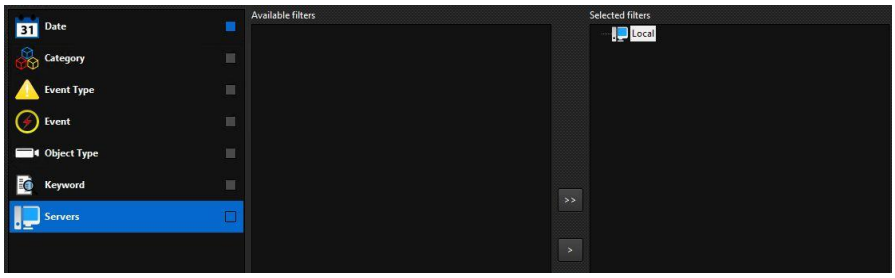


Select the servers by dragging from the left list to the right list.

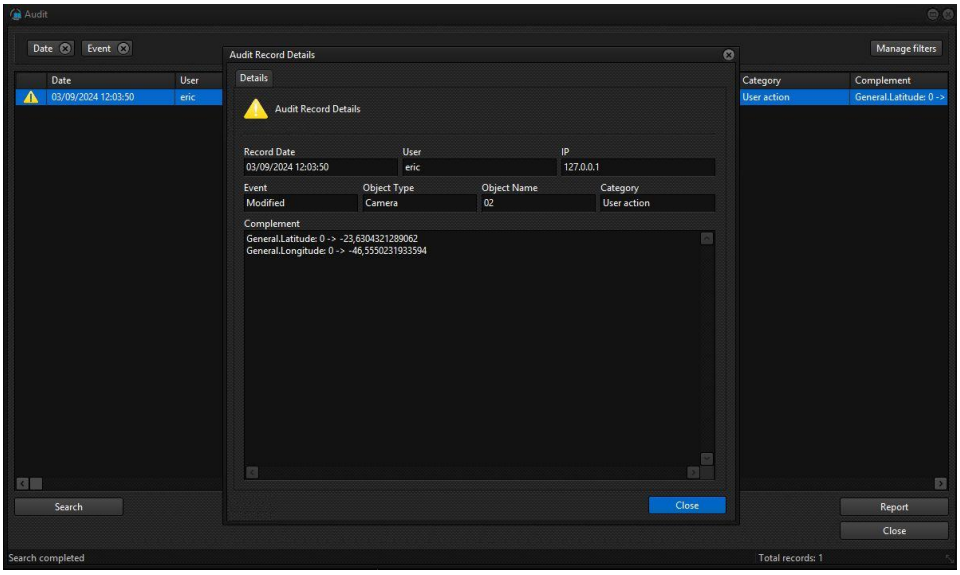
18.2 Record Details

The audit of user actions contains details of changes to the system. Any change made to any object will be recorded in the audit log details. For example, if a user changes the recording directory of a camera, or the configured recording time, this information will be detailed in the audit log, including the old and new values.

Detailed auditing is applied to all system objects, including server settings, thus making the auditing tool super powerful for recording and identifying user actions on the system.

Critical fields such as passwords or binary fields (or data storage containers) that cannot be displayed in text will only be referenced as "changed" but their values will not be displayed.

To access the details of a record, double-click with the left mouse button on the desired record and the details screen will be displayed:



- **Record date**: Date of this record.
- **User**: User who carried out the action.
- **IP**: IP of the workstation used by the user to perform this action.
- **Event**: Action taken by the user.
- **Object Type**: Type of object affected by the action.
- **Object Name**: Name of the affected object.
- **Category**: Category of this action.

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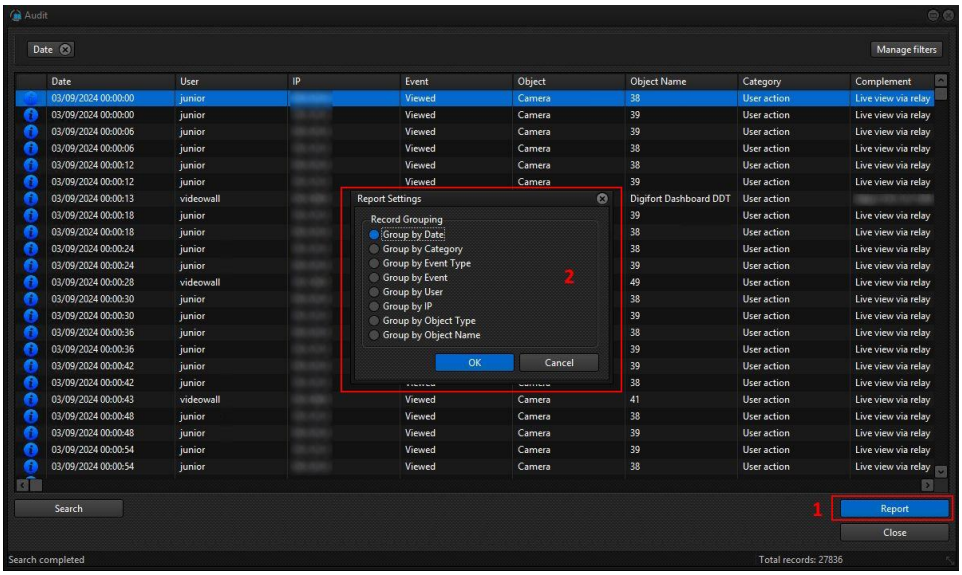
- **Complement**: Contains complementary data, such as what changes were made to an object.

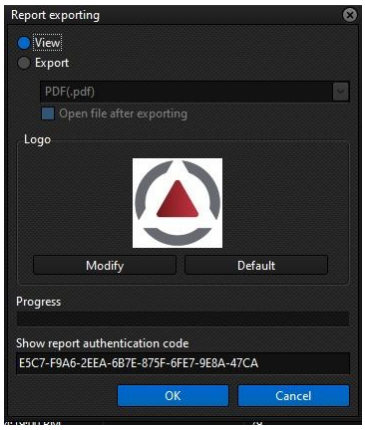
18.3 Records Printing

By clicking on the **Report** button, you can generate a printable report with all the filtered records:



Select the type of record grouping. Records can be grouped by different options. Select the most appropriate options for your report and click **OK.**

Now select the format and whether you want to view only, print or export (*.pdf, or *.html) and click **OK** and the standard report viewer will be displayed:



The generated report will look like the image below:

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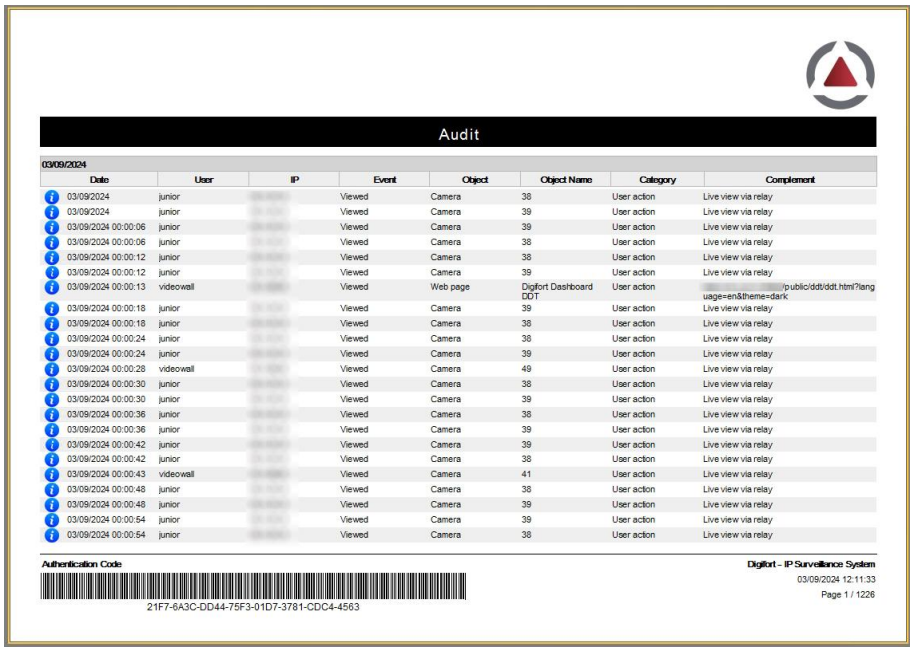

Audit

03/09/2024

Date	User	IP	Event	Object	Object Name	Category	Complement
03/09/2024	junior		Viewed	Camera	38	User action	Live view via relay
03/09/2024	junior		Viewed	Camera	39	User action	Live view via relay
03/09/2024 00:00:06	junior		Viewed	Camera	39	User action	Live view via relay
03/09/2024 00:00:06	junior		Viewed	Camera	38	User action	Live view via relay
03/09/2024 00:00:12	junior		Viewed	Camera	38	User action	Live view via relay
03/09/2024 00:00:12	junior		Viewed	Camera	39	User action	Live view via relay
03/09/2024 00:00:13	videowall		Viewed	Web page	Digifort Dashboard DDT	User action	/public/ddt/ddt.html?language=en&theme=dark
03/09/2024 00:00:18	junior		Viewed	Camera	39	User action	Live view via relay
03/09/2024 00:00:18	junior		Viewed	Camera	38	User action	Live view via relay
03/09/2024 00:00:24	junior		Viewed	Camera	38	User action	Live view via relay
03/09/2024 00:00:24	junior		Viewed	Camera	39	User action	Live view via relay
03/09/2024 00:00:28	videowall		Viewed	Camera	49	User action	Live view via relay
03/09/2024 00:00:30	junior		Viewed	Camera	38	User action	Live view via relay
03/09/2024 00:00:30	junior		Viewed	Camera	39	User action	Live view via relay
03/09/2024 00:00:36	junior		Viewed	Camera	38	User action	Live view via relay
03/09/2024 00:00:36	junior		Viewed	Camera	39	User action	Live view via relay
03/09/2024 00:00:42	junior		Viewed	Camera	39	User action	Live view via relay
03/09/2024 00:00:42	junior		Viewed	Camera	38	User action	Live view via relay
03/09/2024 00:00:43	videowall		Viewed	Camera	41	User action	Live view via relay
03/09/2024 00:00:48	junior		Viewed	Camera	38	User action	Live view via relay
03/09/2024 00:00:48	junior		Viewed	Camera	39	User action	Live view via relay
03/09/2024 00:00:54	junior		Viewed	Camera	39	User action	Live view via relay
03/09/2024 00:00:54	junior		Viewed	Camera	38	User action	Live view via relay

Authentication Code

21F7-6A3C-DD44-75F3-01D7-3781-CDC4-4563

Digifort - IP Surveillance System

03/09/2024 12:11:33

Page 1 / 1226

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Chapter XIX

19 Recording Protection

The system allows you to create locks against the natural deletion of recordings, i.e. protected recordings from a specified period and cameras will not be deleted during the recycling of recordings as long as the lock exists.

For added protection, the recording lock system, instead of preventing a recording file from being deleted from the main disk, will copy the protected files to another secure folder (which can be on another disk drive) configured on the **Recordings** tab in the system options in the **Administration Client**. The file copy only takes place during the recycling process, i.e. instead of deleting the file, the system will move the file to the protected folder, which prevents duplicate recordings because the copy will only take place if the protected file is the oldest on the disk.

This allows the primary recording disks not to be occupied by protected recordings that exceed the normal retention period, freeing up space for new recordings while still providing protection for the recordings.

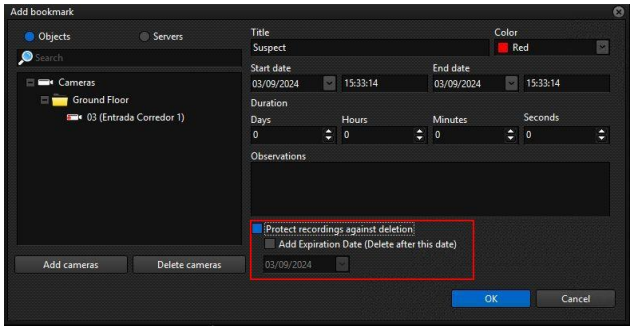
Playback of the locked videos (after they have been moved to the new folder) will be completely transparent to the user.

Note

System recording files are generated every 30 minutes of video, so if a small block of time of for example 2 minutes is locked, the entire 30-minute file will be protected. If the lock extends to multiple files, all files will be locked.

19.1 Protecting a Recording

To create a new recording protection, simply create a new bookmark 138 with the desired period and select the **Protect recordings against deletion** option and a new protection record will be created for the cameras specified in the bookmark and the desired period.



- **Protect recordings against deletion**: Select this option to protect the recordings for the period of this bookmark.
  - **Add expiration date**: Select this option so that the protection of these recordings expires on a set day.
    - **Date**: Select the protection expiry date.

By default, the recordings will be locked in perpetuity, unless the **Add expiration date** option is selected, in which case the lock will be deleted on the specified date and the recordings will consequently re-enter the recordings recycle bin and be deleted as normal during video maintenance.

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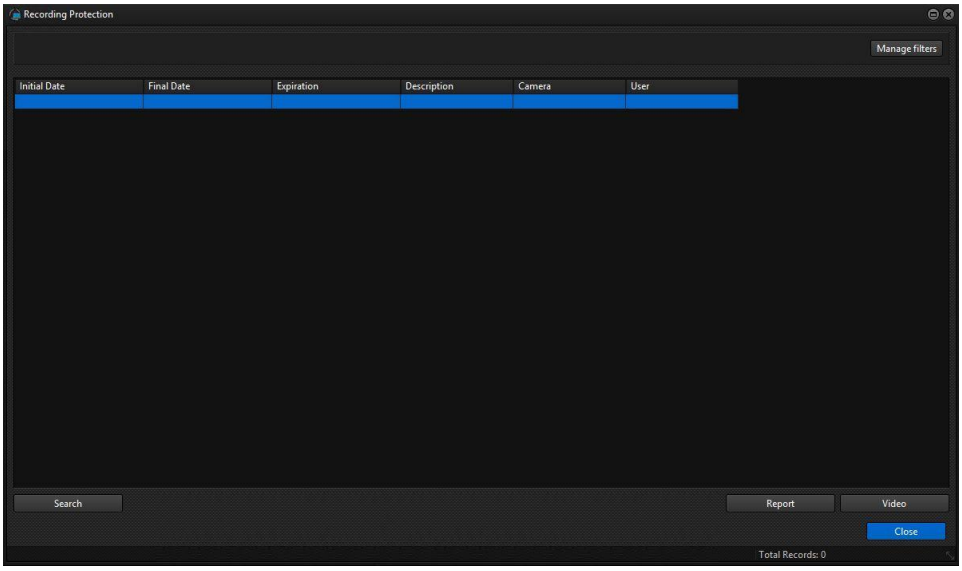
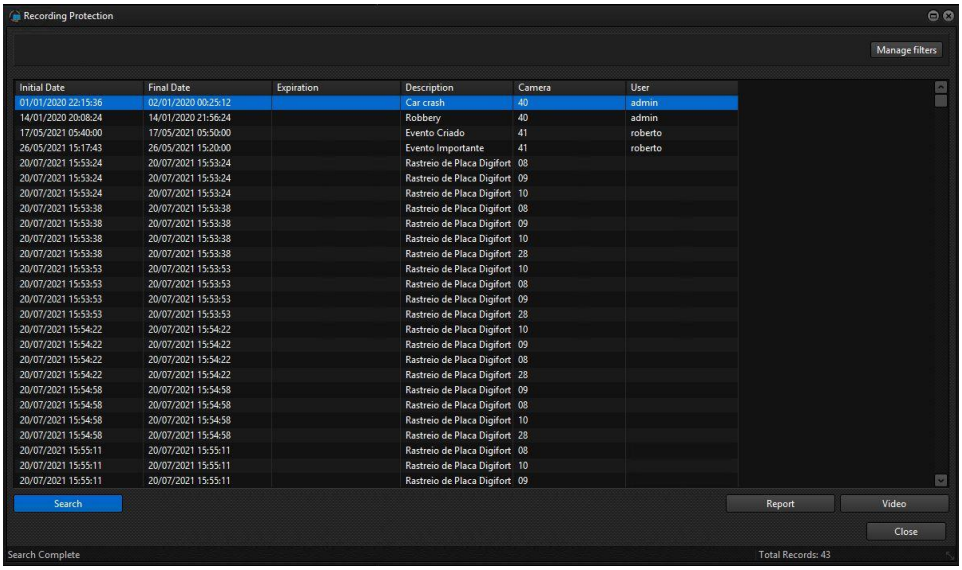
19.2 Protected Recordings Lookup

To open the protected recordings query screen, click on the **Protected Recordings** button in the Options Menu:

The following screen will be displayed:



By default, the system will not apply any filters. Click on the **Search** button to display all protected recordings.



Click on the **Video** button to play the protected video.

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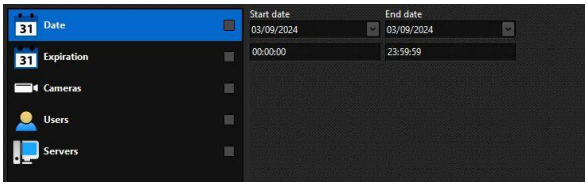
19.2.1 Filters

The search allows you to select various filters to help you find records. Click on the **Manage Filters** button to add new filters:

19.2.1.1 Date Filter

The date filter allows you to search for records by the selected date.

To add the filter, click on **Manage Filters**, then click on the **Date** tab.
To activate the filter, click on the checkbox to the right of the filter.



Choose the time interval for searching the records.

19.2.1.2 Expiration Filter

The expiration filter allows you to search for records by their expiration date.

To add the filter, click on **Manage Filters**, then click on the **Expiry** tab.
To activate the filter, click on the checkbox to the right of the filter.

- **Display all protected records**: Applies the filter to the expiration field, with the date and time scope provided, for all records.
- **Display only records with an expiration date**: Applies the filter in the expiration field, with the date and time scope provided, only to records that have an expiration date.
- **Display only records without expiration date**: Filters and displays only records that do not have an expiration date. In this option, it is not possible to provide the date and time scope.
- **Start and End Date and Time**: Start and end date and time scope for expiration date filter.

19.2.1.3 Camera Filter

The camera filter allows you to search for protected recordings on the specified cameras.

To add the filter, click on **Manage Filters**, then click on the **Cameras** tab.
To activate the filter, click on the checkbox to the right of the filter.

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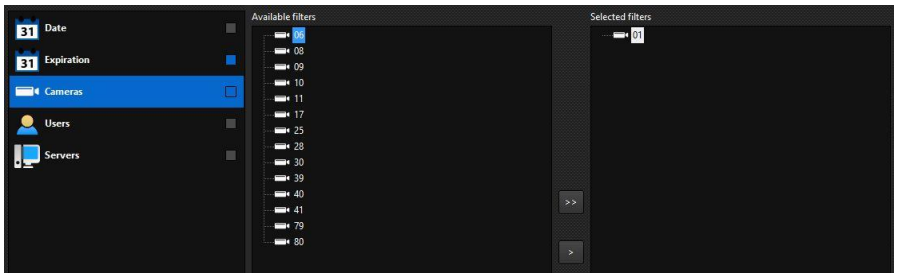
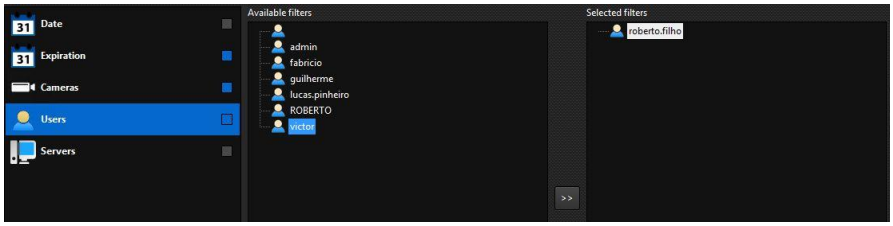


Select the cameras you want by dragging from the left list to the right list.

19.2.1.4 User Filter

The camera filter allows you to search for protected recordings created by selected users.

To add the filter, click on **Manage Filters**, then click on the **Users** tab.
To activate the filter, click on the checkbox to the right of the filter.

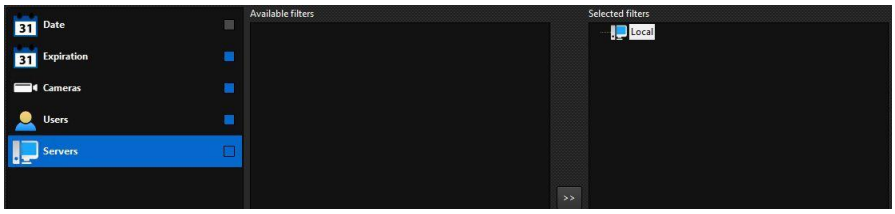


Select the desired users by dragging from the left list to the right list.

19.2.1.5 Server Filter

The server filter allows you to search for protected recordings on specific servers.

To add the filter, click on **Manage Filters**, then click on the **Servers** tab.
To activate the filter, click on the checkbox to the right of the filter.



Select the servers by dragging from the left list to the right list.

19.3 Records Printing

By clicking on the **Report** button, you can generate a printable report with all the filtered records:

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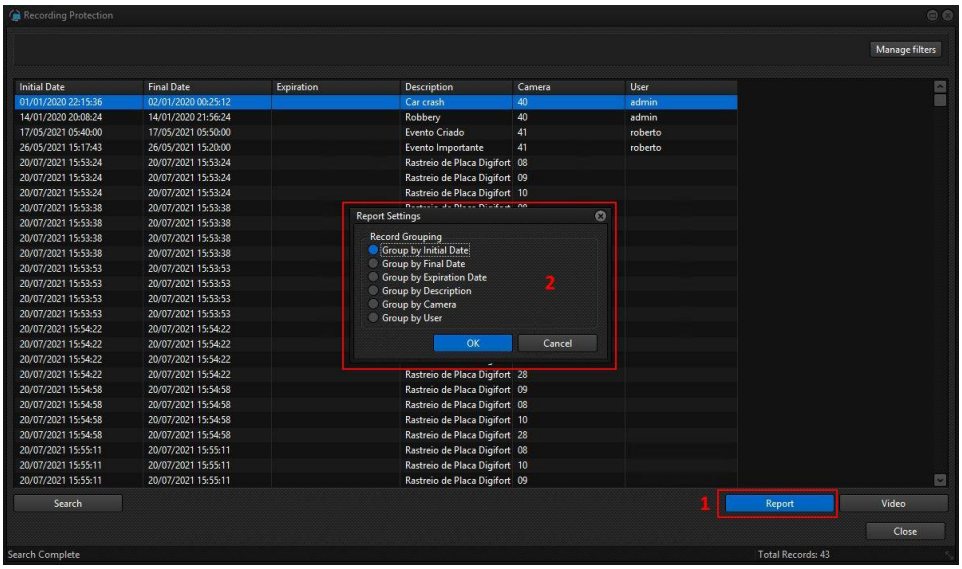
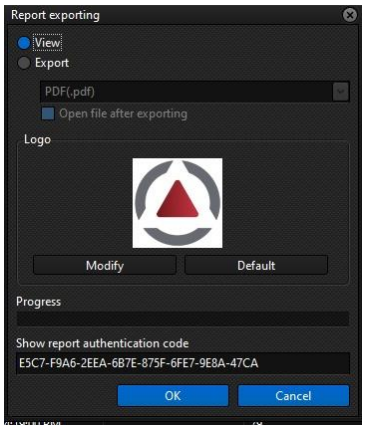


Select the type of record grouping. Records can be grouped by different options. Select the most appropriate options for your report and click **OK.**

Now select the format and whether you want to view only, print or export (*.pdf, or *.html) and click **OK** and the standard report viewer will be displayed:



The generated report will look like the image below:

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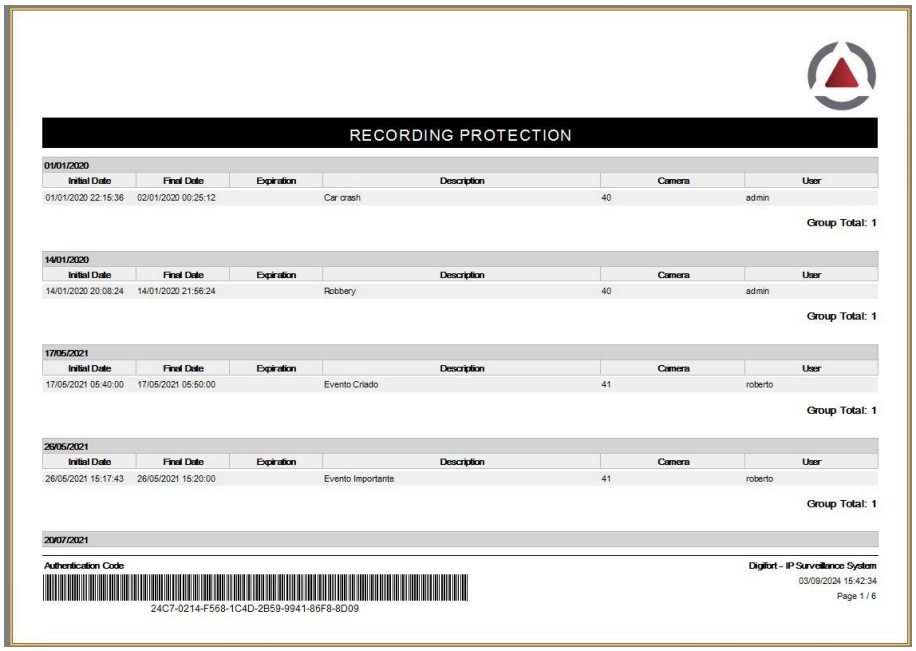

RECORDING PROTECTION

01/01/2020

Initial Date	Final Date	Expiration	Description	Camera	User
01/01/2020 22:15:36	02/01/2020 00:25:12		Car crash	40	admin

Group Total: 1

14/01/2020

Initial Date	Final Date	Expiration	Description	Camera	User
14/01/2020 20:08:24	14/01/2020 21:56:24		Robbery	40	admin

Group Total: 1

17/05/2021

Initial Date	Final Date	Expiration	Description	Camera	User
17/05/2021 05:40:00	17/05/2021 05:50:00		Evento Criado	41	roberto

Group Total: 1

26/05/2021

Initial Date	Final Date	Expiration	Description	Camera	User
26/05/2021 15:17:43	26/05/2021 15:20:00		Evento Importante	41	roberto

Group Total: 1

20/07/2021

Authentication Code

24C7-0214-F568-1C4D-2B59-9941-86F8-8D09

Digifort - IP Surveillance System

03/09/2024 15:42:34

Page 1 / 6

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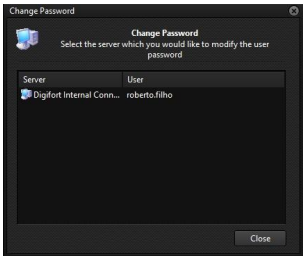
Chapter

20 Changing the user password

The Surveillance Client has the functionality to change the user's password on logged-in servers. To do this, press **F12** on your keyboard and the password change screen will appear, as shown in the figure below.



This screen lists all the servers you are logged into and their respective users.

To change a user's password, double-click on the desired server and the screen below will open:

Enter your current password, the new password and confirmation of the new password.

If all the data is correct, the password will be changed and must be used at the next login.

If the server with the changed password has the auto-login option enabled, you will need to change this setting by entering the new password.

You can only change a user's password if they are a native user of the system. You cannot change the password of an Active Directory user.

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