

# OPERATOR GUIDE MANUAL

**iSENTRY**

POWERED BY **IntelXvision**

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# CONTENTS

PREREQUISITES.....	2
COMPATABILITY.....	3
<b>SECTION 1: USING THE SYSTEM.....</b>	<b>4</b>
NOTES ON ROLES AND RIGHTS.....	6
ALERT LIST.....	7
THREE DIFFERENT LIVE VIEWS EXIST.....	8
SINGLE ALERT VIEW.....	9
PROCESSING AN ALERT.....	11
iSENTRY PAST ALERTS.....	12
EXPORT THE ALERTS LIST.....	16
BASIC SEARCH FILTER AND GROUP.....	16
TEXT OPERATORS.....	17
NUMERIC OPERATORS.....	17
FILTERING.....	18
GROUPING.....	19
ADVANCED SEARCH.....	20
ALARM MANAGER.....	21
<b>SECTION 2: SYSTEM STATUSES.....</b>	<b>22</b>
SYSTEM LOGS.....	24
<b>SECTION 3: TROUBLESHOOTING.....</b>	<b>27</b>
OPERATION.....	28
DATABASE CONNECTION ISSUES.....	29

## **PREREQUISITES**

.NET Framework 4.6.1

Installed and functional Milestone VMS system with H.264 encoded camera feeds

### **Minimum Hardware Requirement**

See Milestone XProtect Minimum Hardware requirement for Smart Client workstations.

## **COMPATIBILITY**

### **Supported Microsoft Operating Systems**

Windows 10 Professional

Windows Server 2016

### **Supported Milestone Versions**

Milestone 2019

XProtect Express+

XProtect Professional+

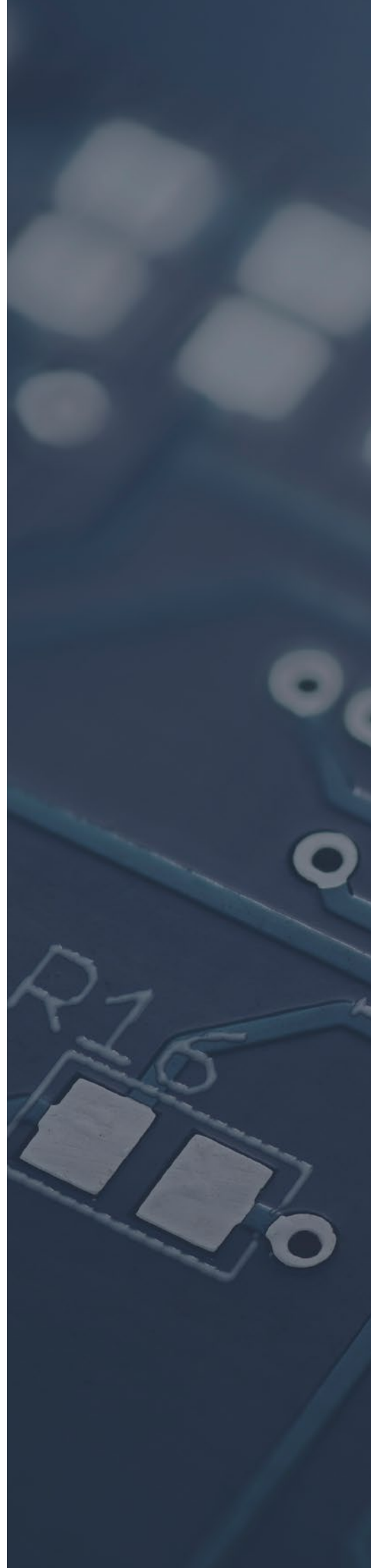
XProtect Expert

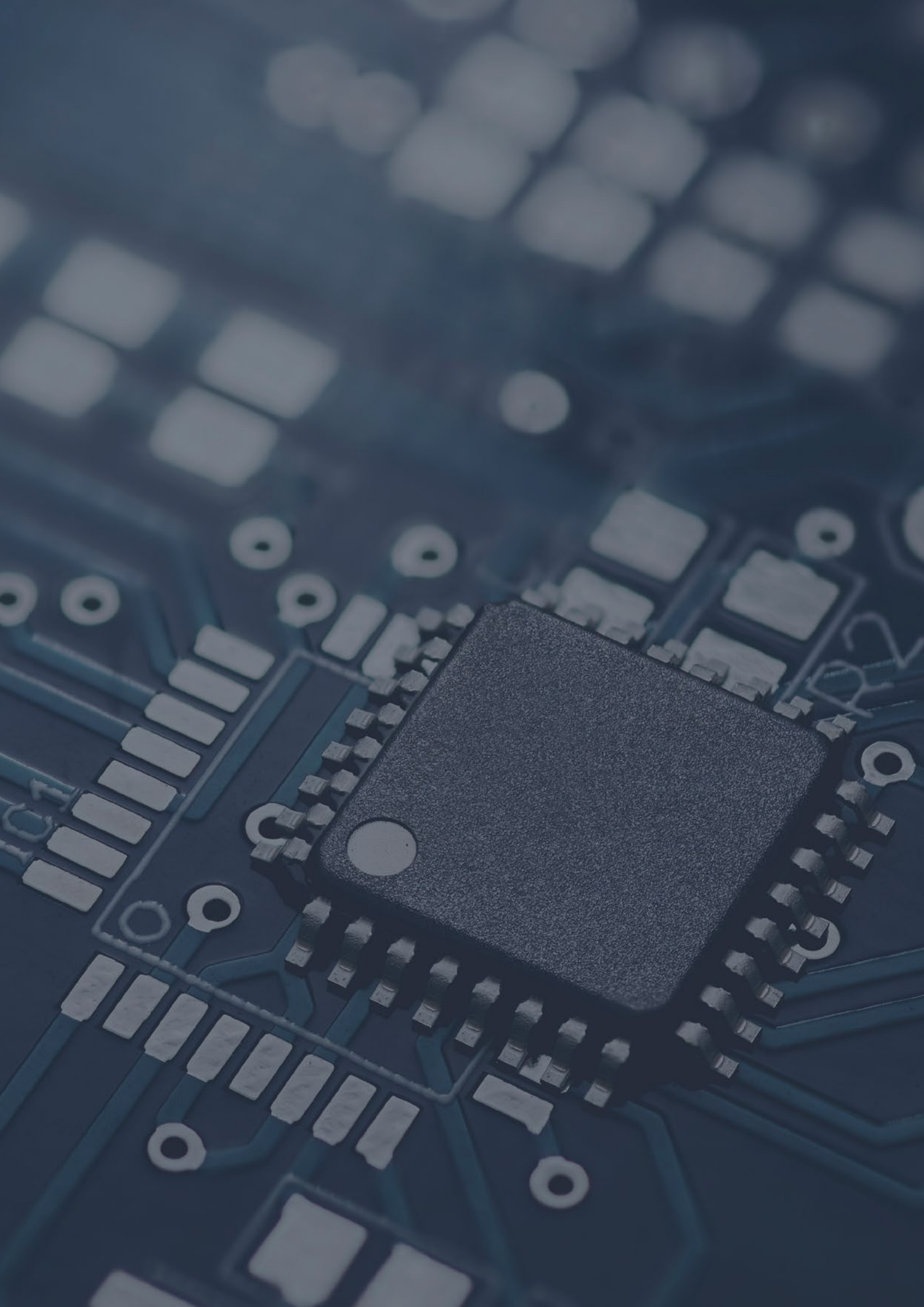
XProtect Corporate



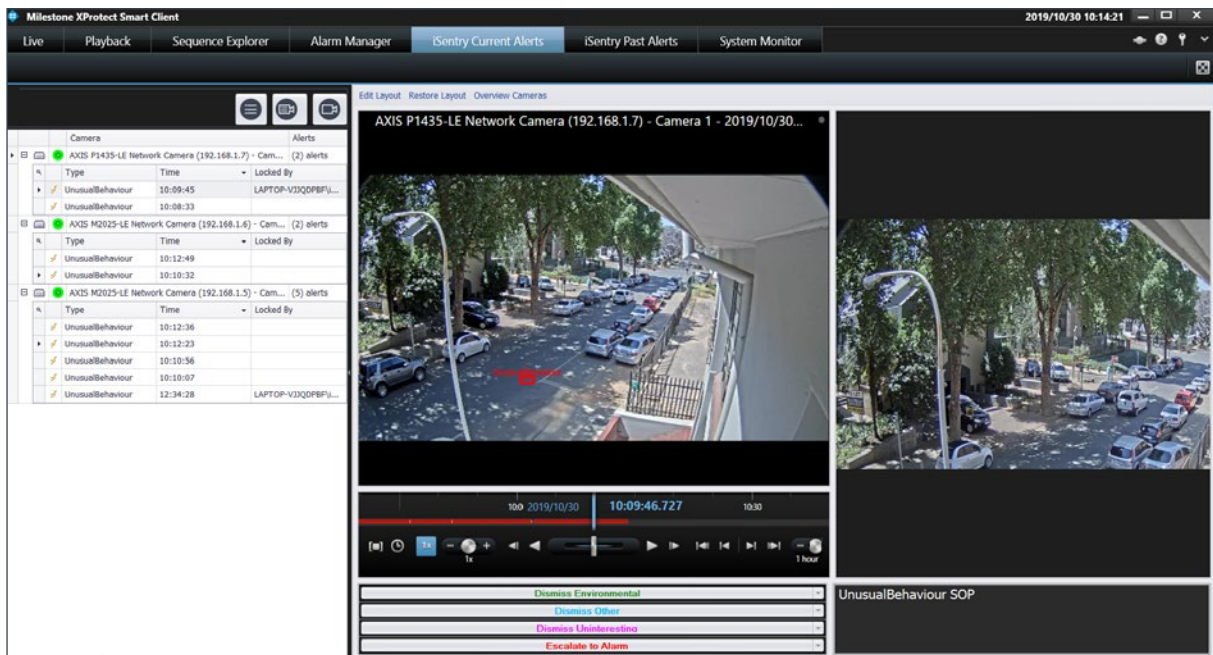
Section 1

# USING THE SYSTEM









After Successful Installation the iSentry Smart Client Plugin will be visible in the XProtect Smart Client.

## NOTE ON ROLES AND RIGHTS

Cameras are configured for Milestone Roles and users, therefore only alerts (for cameras) that are configured for a particular user will be available in the XProtect Smart Client.

### iSentry Current Alerts

This tab represents a “Live” view of alerts that require operator review.

When an alert is generated by the iSentry system, the alert will pass through the Rules Engine for enrichment, and, if no escalation or dismissal rule is applied, the alert will appear in the “iSentry Current Alerts” tab in the XProtect Smart Client.

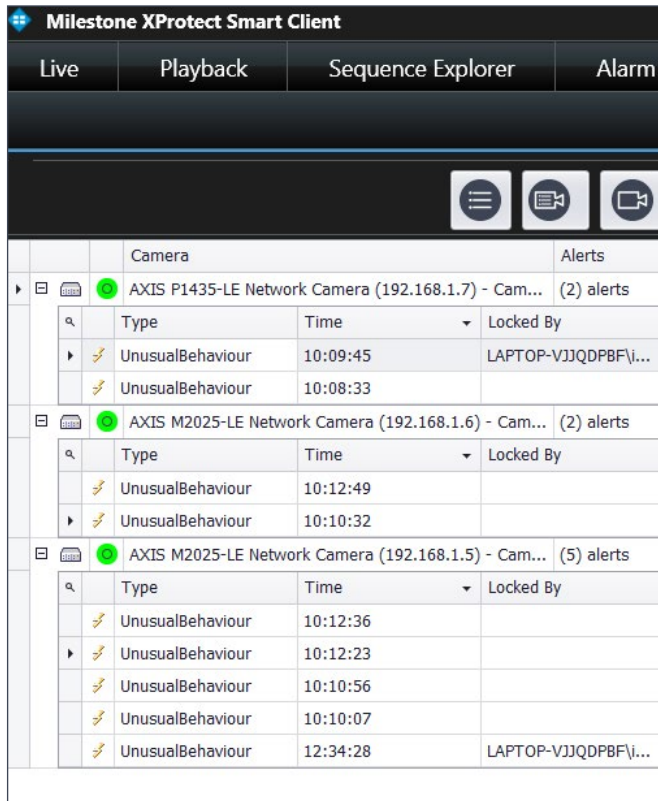
Alerts in this tab must be immediately reviewed by an operator, to determine if an alarm should be created, or is the alert should be dismissed.

If an alert is ignored by an operator, the system will automatically convert (Promote) the alert to an alarm, after a configured period of time. Alerts can also be dismissed in this way, although this is not recommended.



# ALERT LIST

The alert list can be found on the left of the “iSentry Current Alerts” tab. This is a list of currently active alerts.



The screenshot shows the Milestone XProtect Smart Client interface. At the top, there are navigation tabs: Live, Playback, Sequence Explorer, and Alarm. Below these are three icons: a menu icon, a video camera icon, and a document icon. The main area displays a table of alerts. The table has columns for Camera, Alerts, Type, Time, and Locked By. There are three camera entries, each with a search icon and a camera icon. The first camera has 2 alerts, the second has 2 alerts, and the third has 5 alerts. All alerts are of the type 'UnusualBehaviour'.

Camera	Alerts	
AXIS P1435-LE Network Camera (192.168.1.7) - Cam...	(2) alerts	
Type	Time	Locked By
UnusualBehaviour	10:09:45	LAPTOP-VJJQDPBF\i...
UnusualBehaviour	10:08:33	
AXIS M2025-LE Network Camera (192.168.1.6) - Cam...	(2) alerts	
Type	Time	Locked By
UnusualBehaviour	10:12:49	
UnusualBehaviour	10:10:32	
AXIS M2025-LE Network Camera (192.168.1.5) - Cam...	(5) alerts	
Type	Time	Locked By
UnusualBehaviour	10:12:36	
UnusualBehaviour	10:12:23	
UnusualBehaviour	10:10:56	
UnusualBehaviour	10:10:07	
UnusualBehaviour	12:34:28	LAPTOP-VJJQDPBF\i...

As soon as an operator selects an alert to review it, the alert will be assigned to that operator.

All other operators that can view the same alerts will be notified that the alert has been allocated, because the “Locked By” field will now contain the name of the operator reviewing the alert.

As soon as an alert has been “Locked”(assigned), it cannot be automatically promoted to an alarm or dismissal anymore.

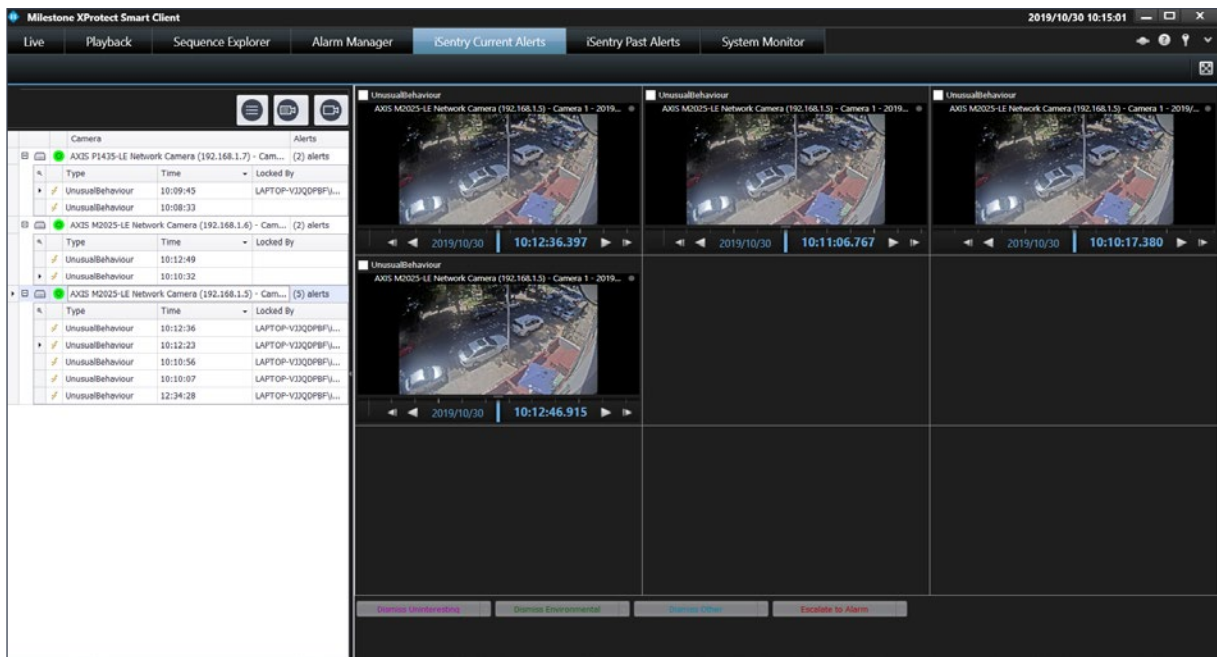
It is therefore important that the operator fully deals with an alert after selecting it.

Object classification bounding boxes is displayed on the Alert snapshot (if enabled) and indicators for each alert type is displayed in the video. The indicators and bounding boxes will assist the operator in understanding why the alert was raised.

Once the minimum amount of playback time has elapsed, when the alert video is reviewed, an “Alert Completed” message will appear in green text to the bottom of the video playback window. Once the alert is completed the operator will be allowed to process (Escalate or Dismiss) the alert.

## Multiple Alert View

As soon as an operator selects a single alert, by clicking on the alert, the Single Alert View will be displayed to the right of the Alert list.



When a device (camera) is clicked, in the alert list (when cameras are visible), the multiple alert processing window is displayed. This window will simultaneously play the video for up to nine live alerts. It is up to the operator to confirm that each video has been inspected by checking the checkbox in the top right-hand corner of each video, where after the selected alerts can be processed simultaneously.

This manner of processing is not recommended for normal use, but it is useful in the case where an environmental factor (e.g. strong wind) is temporarily causing multiple nuisance alerts. The operator then has the ability to quickly confirm that all the alerts are in fact nuisance alerts and quickly dismiss them.

## THREE DIFFERENT LIVE ALERT VIEWS EXIST

### All Cameras

This view will display a list of all the cameras for an operator, and the number of alerts for each camera is shown along with a sub-list of alerts in a tree structure. Cameras with zero alerts will also be displayed. The advantage of this view is that the alerts are grouped per camera and that the statuses of all the cameras are visible to the Operator.

## Only Cameras With Alerts

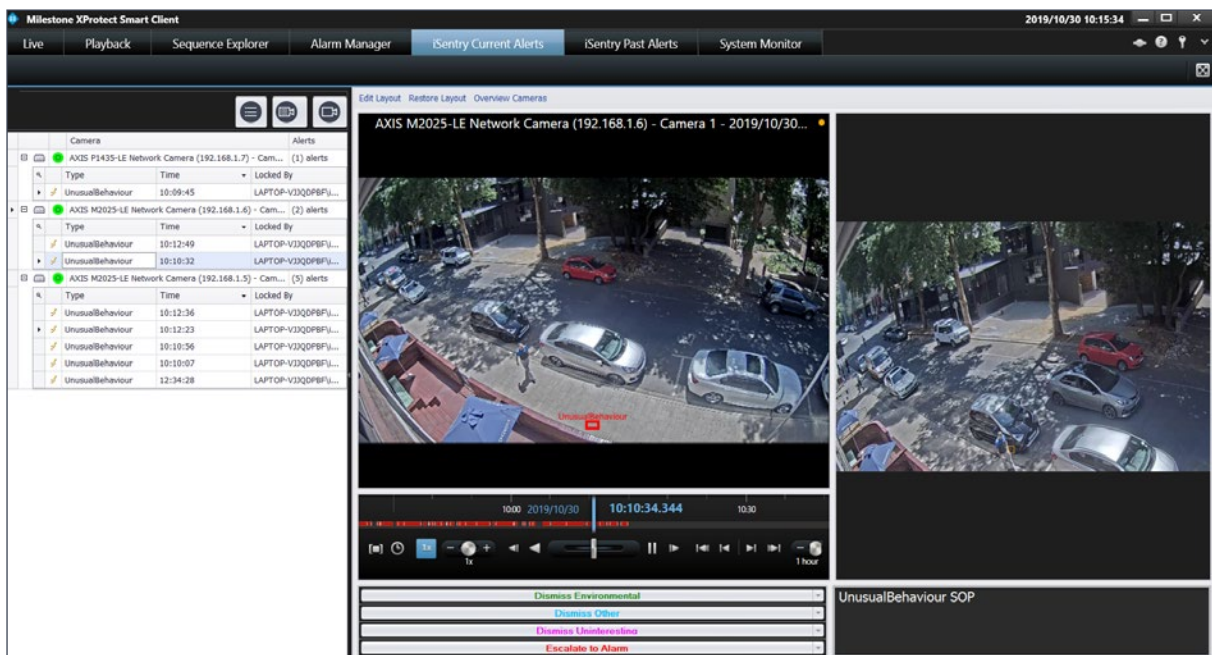
For larger numbers of cameras, this view removes all cameras with zero alerts from the view. This view then still has the benefit of grouping alerts per camera.

## Only Alerts

This view only displays the alerts list with no camera grouping. This name of the alert device is now listed along with the alert type. This view works best in the case of a large amount of cameras.

## SINGLE ALERT VIEW

As soon as an operator selects a single alert, by clicking on the alert, the Single Alert View will be displayed to the right of the Alert list.



Depending on the configuration settings, an alert snapshot, or live video along with playback video is displayed when an alert is selected. The Standard Operating Procedure for the Camera and Alert Type, will also be displayed, to guide the operator in his or her actions.

## PROCESSING AN ALERT

Alerts are processed when an operator clicks one of the Action buttons, in the window. Each action will display a list of sub-categories that the operator must choose from.

### Dismissal

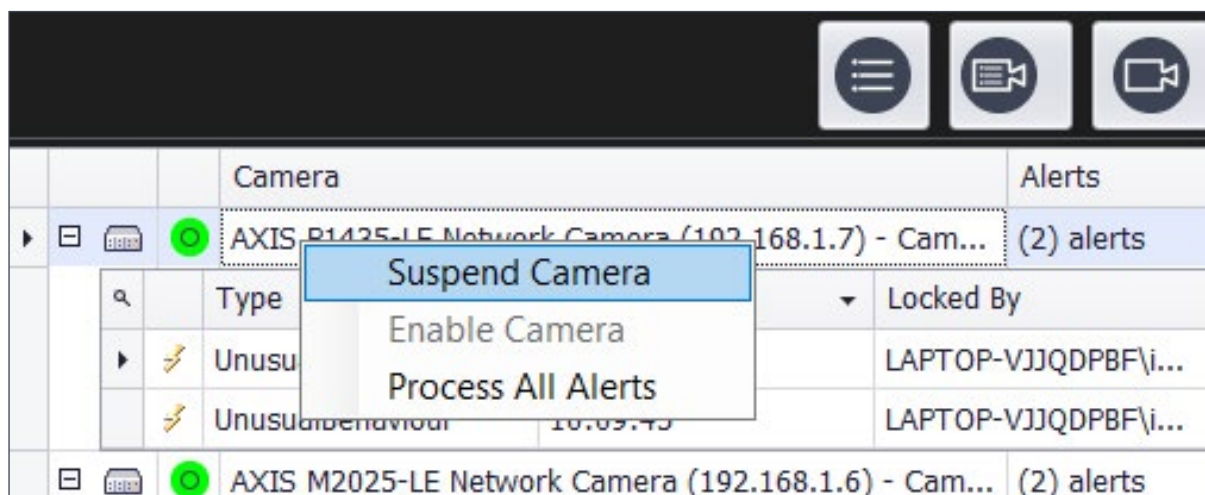
Each dismissal action button, will pop-up a list of sub-categories for the dismissal action chosen. The operator must choose one of these categories, and the alert will be processed and removed from the active alert list.

### Escalations

Each escalation action button, will pop-up two lists as well as a note space. The first list is the alert classification list, which classifies the alarm that will be created. The second list defines the action that should be taken for this alarm. The alert note field allows the operator to add additional information to the alert, for later reference. Once the operator makes the required selections, the “Send” button will process the alert and create an alarm for it. The alarm will be transferred to the “Alarm Manager” in the XProtect Smart Client.

## Suspending a Camera

(Administrators Only)



Right-clicking on a device (camera) in the live alert list, will show a context menu, where the option to “Suspend Camera” is available.

When suspending a Camera, all alerts for that camera will be ignored for the time specified. This is useful if a camera is experiencing a high volume of nuisance alerts due to something like a spiders web, or hailstorm etc. in this case, alerts can be temporarily stopped until a maintenance crew can clean the lens or the storm passes.

## Simultaneous Processing of All Alerts For a Device

(Administrators Only)

Right-clicking on a device (camera) in the live alert list, will show a context menu, where the option to “Process All Alerts” is available. Selecting this option, will display the available action buttons. All the alerts for a particular camera will be simultaneously processed in this way.

This processing method allows an Administrator to remove a group of confirmed nuisance alerts for a camera.

The screenshot shows a dialog box with three sections: "Alert Classification", "Alert Action", and "Note".

- Alert Classification:** A list of alert types with "Armed Robbery" selected. Other options include Assault, Car Crash, Hijacking, Robbery, Suspicious Activity, Suspicious Person, and Suspicious Vehicle.
- Alert Action:** A list of actions with "Alert Armed Reaction" selected. Other options include Alert Police, Keep Watch, and No Action Needed.
- Note:** An empty text input field.

At the bottom right, there are "Cancel" and "Send" buttons.

The screenshot shows a context menu titled "Process All Alerts" with a close button (X) in the top right corner. The menu contains four items, each with a dropdown arrow on the right:

- Dismiss Environmental (green text)
- Dismiss Other (blue text)
- Dismiss Uninteresting (purple text)
- Escalate to Alarm (red text)

At the bottom of the menu, there are left and right navigation arrows.



# iSENTRY PAST ALERTS

The iSentry Past Alerts tab contains a list of all alerts generated by the system.

When the list is refreshed or searched, a “Snapshot in time” of the current and previous alert list is displayed. This list is not updated in real time (as with the Live Alerts Tab).

The alerts list contains the following fields:

**Alert Type:** Type of Alert e.g. Unusual Behaviour, Left Object etc.

**Device Name:** The name of the camera related to the alert.

**Event Started Time:** The Start time of the alert.

**Accepted By:** Name of the operator that processed the alert.

**Accepted Time:** The time when the operator accepted the alert.

**Processed Action:** Action taken by the operator or the rules engine.

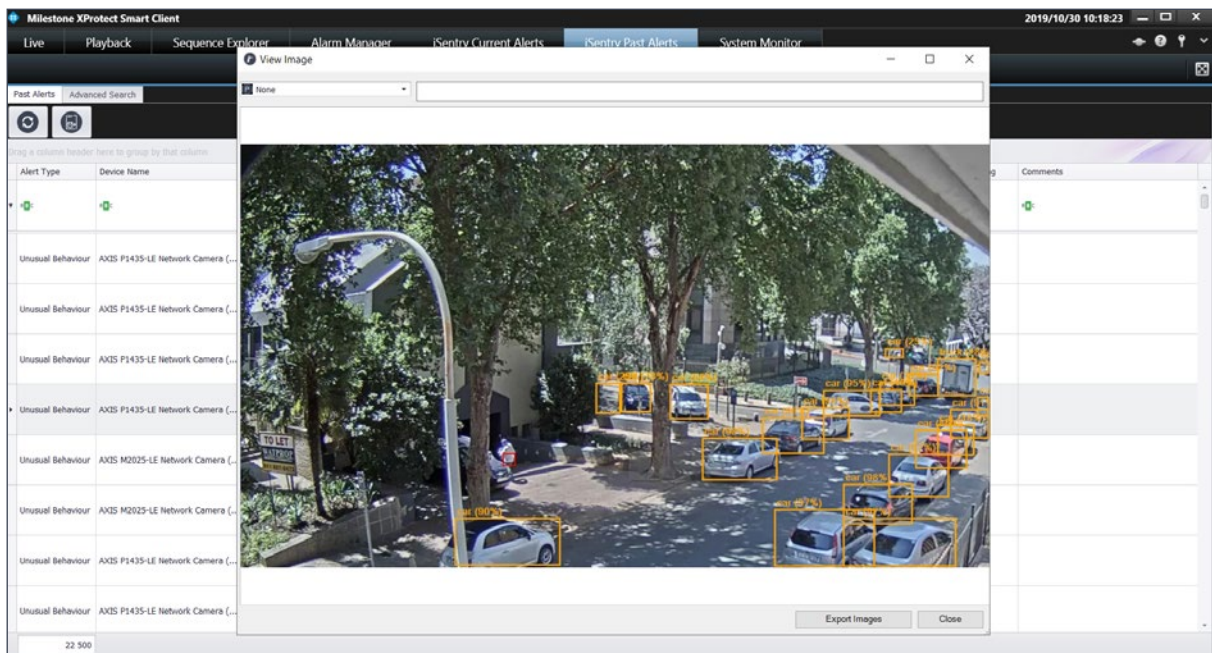
**Processed Category:** The Sub-category of the action taken.

**Escalation Action:** In the case of escalations, the action recommended.

**Alert Note:** Note added to the alert when it was processed by the operator or rules engine.

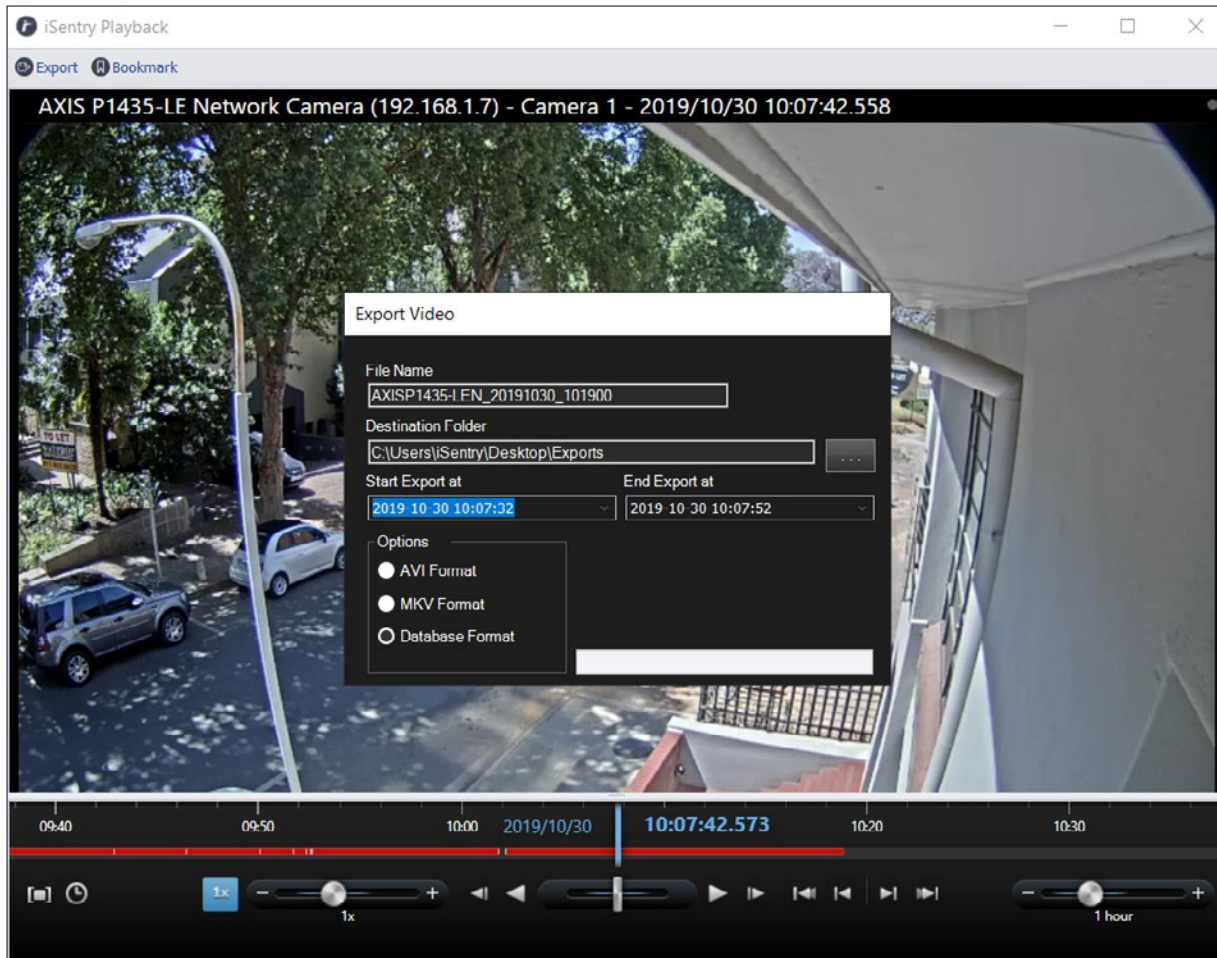
**Processed Time:** The time when the Alert was processed, by an operator or the rules engine.

**Video:** Clicking this button will pop-up a Video playback window, where the alert video can be reviewed.



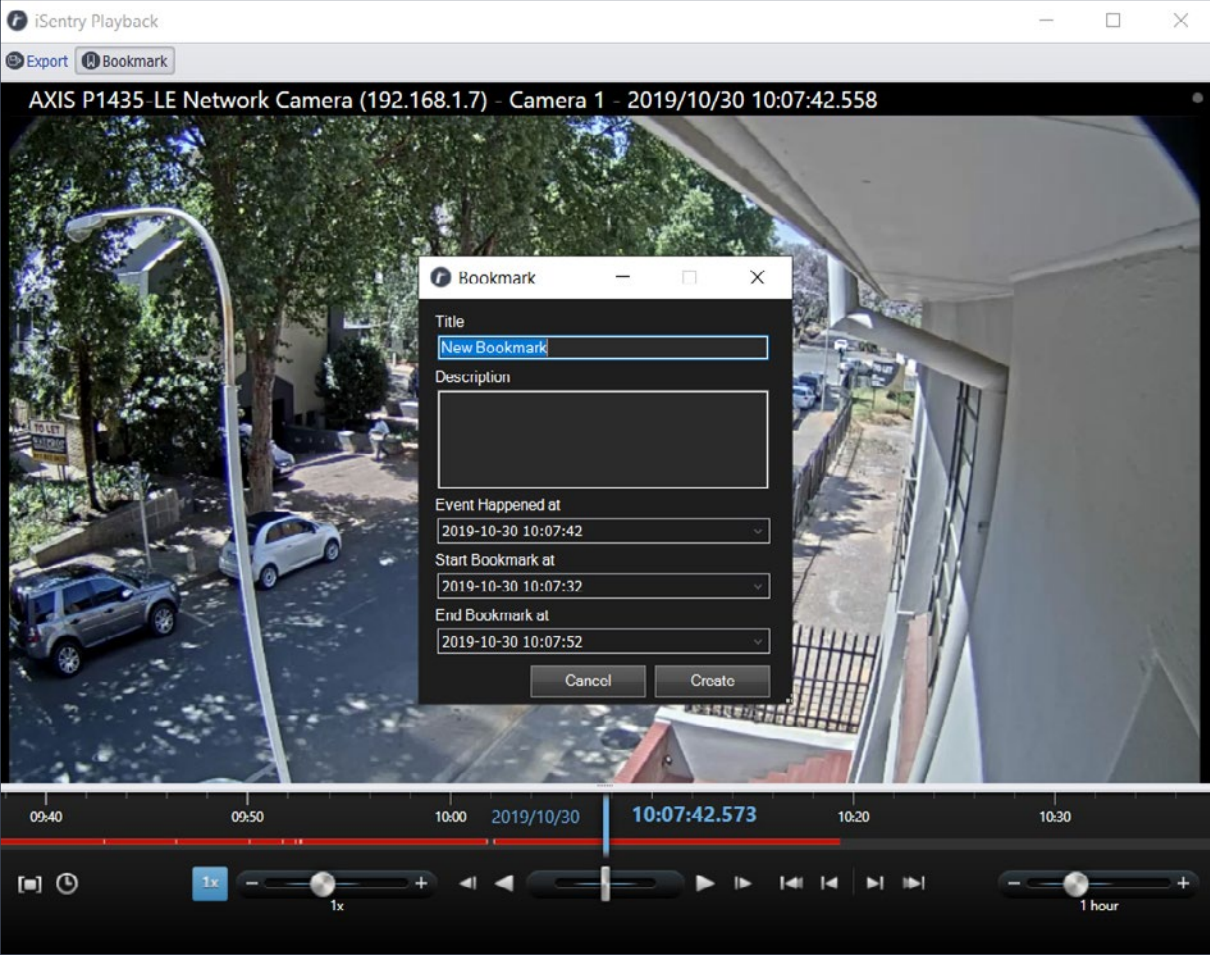


Video can be exported by clicking the button



Choose a Filename, the destination folder for the video, the Start and End time, as well as the export format, and click “Create”, to start the export. Please note that only database format will export the accompanying metadata with the video.

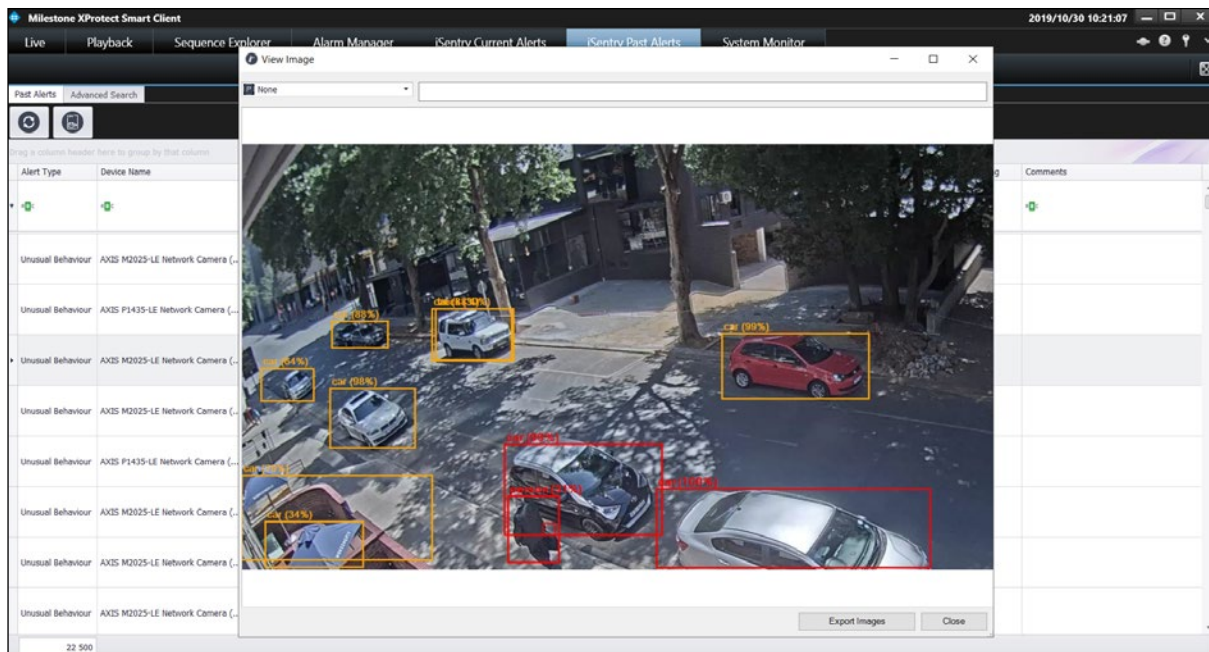
A bookmark can also be created for an alert, in order to be searched for in the Milestone Smart Client, in the future. Complete the Title, Description of the alert, Alert Time, Bookmark Start and end times, and click “Create” to save the bookmark.



In the case of Left objects, the button will show the placement of the Left object (if the Video was recorded by Milestone)

## Picture

This column displays a thumbnail of the master alert image. Clicking this Thumbnail will pop-up a window containing all the alert images for the chosen alert, in full resolution. Images with classified objects as well as without them are available. Clicking “Export Images” allows the operator to export the images for the chosen alert.



A flag and comment can also be added here.

**Flag:** A Flag can be assigned to any alert, marking the alert for future reference. Flags can be customised in the General settings window under the “Smart Client” section.

**Comments:** General comments may be added to any alert, for future reference.

## EXPORT THE ALERTS LIST

At the top of the Alert list, click the export button, choose a location and a name for your export file. All the data displayed in the Alert list will be exported as CSV format.

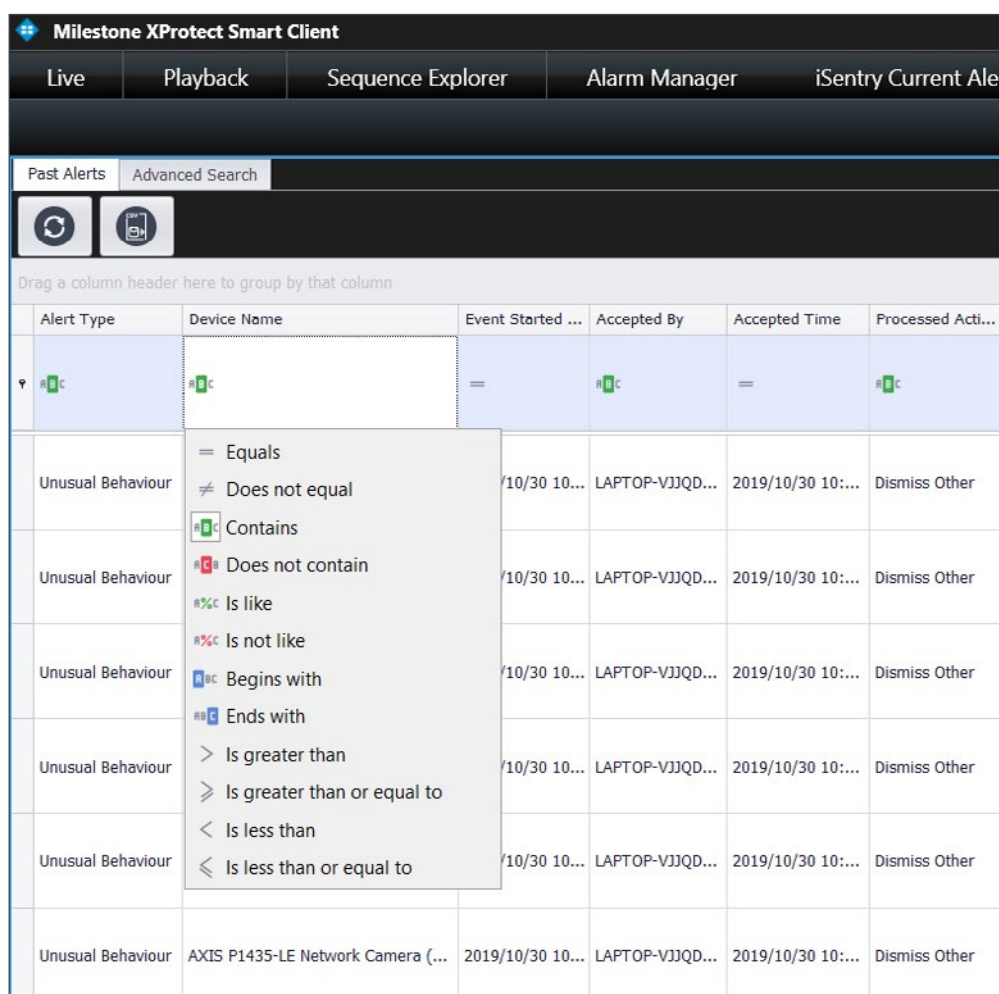
No Images or video is included in this export.

## BASIC SEARCH, FILTER AND GROUP

The Alert list interface is a fairly sophisticated search and grouping interface, which can be used to investigate past alerts and extract useful information.

### Searching

Nearly every column of the past alerts grid allows for searching and filtering. Simply typing a search value in the top row of the grid will immediately search for the value that has been typed, in the same column. The mechanism by which the matching is done can be adjusted as required.



The screenshot shows the Milestone XProtect Smart Client interface. At the top, there are navigation tabs: Live, Playback, Sequence Explorer, Alarm Manager, and iSentry Current Alerts. Below these is a 'Past Alerts' section with an 'Advanced Search' tab. A search bar is present with a refresh icon. Below the search bar is a grid of alerts. The first row of the grid is highlighted, and a dropdown menu is open over it, showing various search operators. The grid has columns for Alert Type, Device Name, Event Started, Accepted By, Accepted Time, and Processed Action. The dropdown menu lists the following operators: Equals, Does not equal, Contains, Does not contain, Is like, Is not like, Begins with, Ends with, Is greater than, Is greater than or equal to, Is less than, and Is less than or equal to.

Alert Type	Device Name	Event Started ...	Accepted By	Accepted Time	Processed Acti...
Unusual Behaviour		=		=	
Unusual Behaviour		/10/30 10...	LAPTOP-VJJQD...	2019/10/30 10:...	Dismiss Other
Unusual Behaviour		/10/30 10...	LAPTOP-VJJQD...	2019/10/30 10:...	Dismiss Other
Unusual Behaviour		/10/30 10...	LAPTOP-VJJQD...	2019/10/30 10:...	Dismiss Other
Unusual Behaviour		/10/30 10...	LAPTOP-VJJQD...	2019/10/30 10:...	Dismiss Other
Unusual Behaviour		/10/30 10...	LAPTOP-VJJQD...	2019/10/30 10:...	Dismiss Other
Unusual Behaviour	AXIS P1435-LE Network Camera (...	2019/10/30 10...	LAPTOP-VJJQD...	2019/10/30 10:...	Dismiss Other

## TEXT OPERATORS

**Equals:** The results must match the search phrase exactly.

**Does not equal:** The results must not exactly match the search phrase.

**Contains:** The results must contain the search phrase. E.g. Typing “Axis” in the Device name column, will result in returning all Device names that has the word “Axis” in it like “123 Axis (192.168.1.1)...”

**Does not contain:** The results must not contain the search phrase.

**Is like:** This operator stems from the SQL Comparison operator “Like” allowing us to use wildcard characters in searching.

**Is not like:** The reverse of the “Like” operator above. Will return all values NOT matching the search criteria.

**Begins with:** Search for all items starting with the characters in the search phrase.

**Ends with:** Search for all items ending in the characters in the search phrase.

Symbol	Description	Example
%	Represents zero or more characters	bl% finds bl, black, blue, and blob
_	Represents a single character	h_t finds hot, hat, and hit
[]	Represents any single character within the brackets	h[oa]t finds hot and hat, but not hit
^	Represents any character not in the brackets	h[^oa]t finds hit, but not hot and hat
-	Represents a range of characters	c[a-b]t finds cat and cbt

## NUMERIC OPERATORS

**Equals:** The results must match the search number exactly.

**Does not equal:** The results must not exactly match the search number.

**Is greater than:** Returns all numbers greater than the search number.

**Is greater than or equal to:** Returns all numbers greater than or equal to the search number.

**Is less than:** Returns all numbers smaller than the search number.

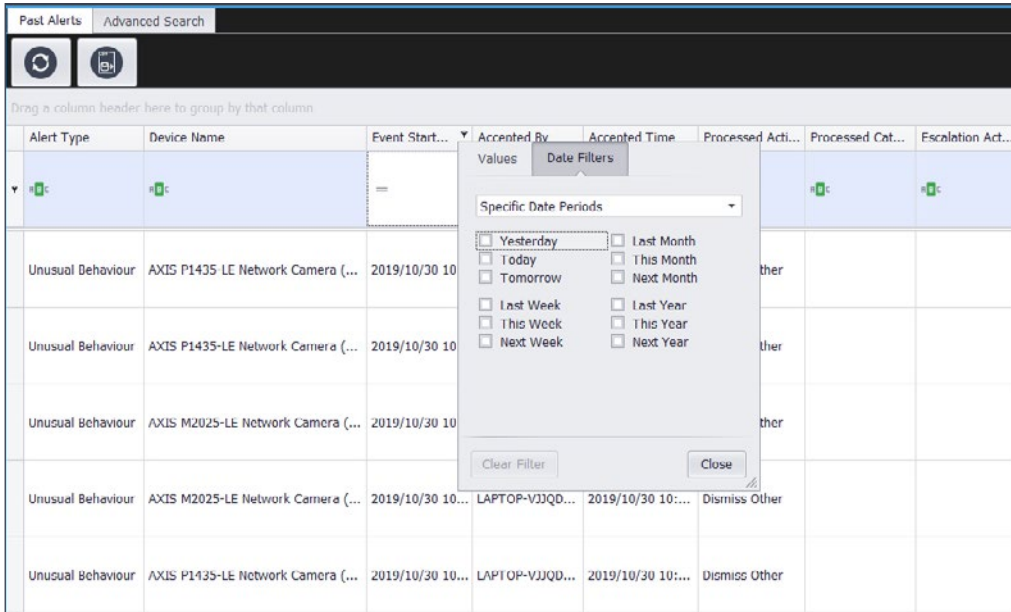
**Is less than or equal to:** Returns all numbers smaller than or equal to the search number.



# FILTERING

All the columns in the Past alerts grid will have a “filter” available.

## Date Filters

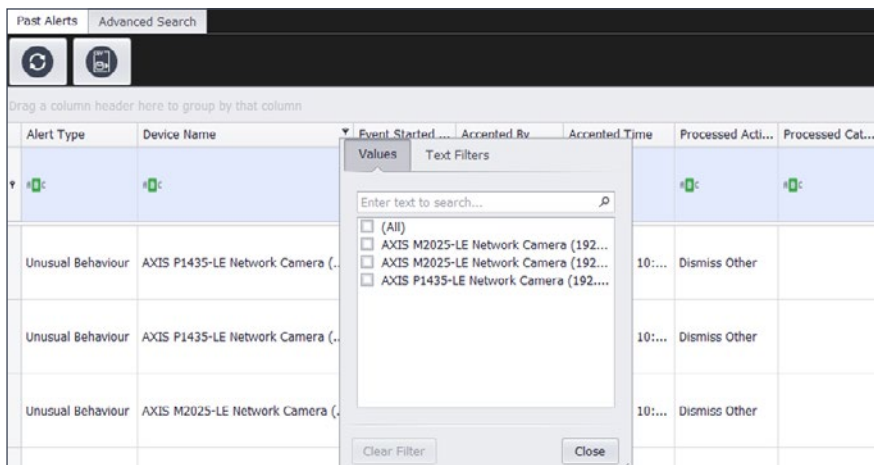


By selecting a date filters tab, (by default “Specific Date Periods” selected) a specific time period can be easily selected by checking the appropriate check box, or by changing a comparison criterion in the dropdown box, and selecting a value from the date time picker.

A custom criterion is available allowing for customised filtering on multiple date values.

The Values Tab, will list date values that may be selected.

## Text Filters





By selecting the values tab, a list of available items will be displayed and by checking the appropriate items, the data will be filtered. The Text Filters Tab functions in much the same way as described in the search section above.

A custom criterion is available allowing for customised filtering on multiple text values.

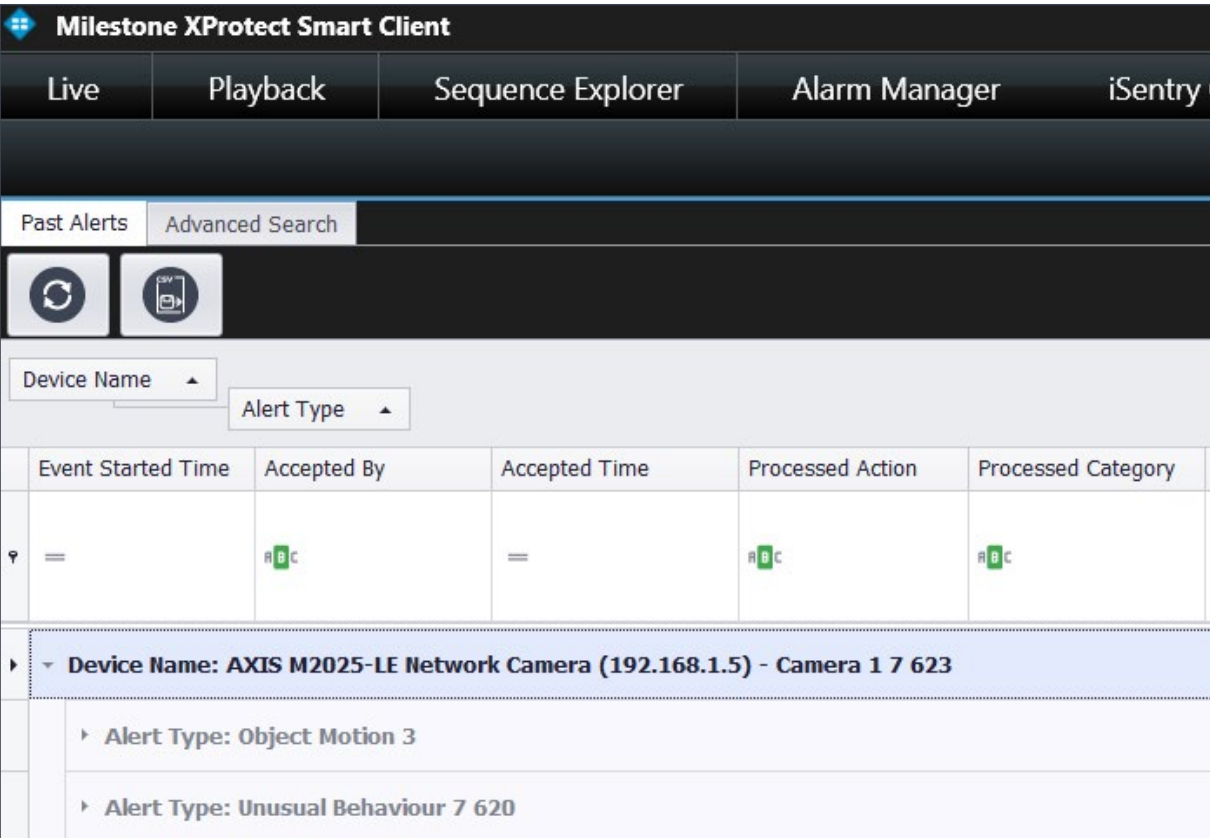
## GROUPING

Grouping allows for a customised view of the available data. In order to group by a column value, the column must be dragged and dropped, by left mouse button, to the bar at the top of the grid marked “Drag a column header here to group by that column”.

Multiple columns can be grouped and sub-grouped in this way.

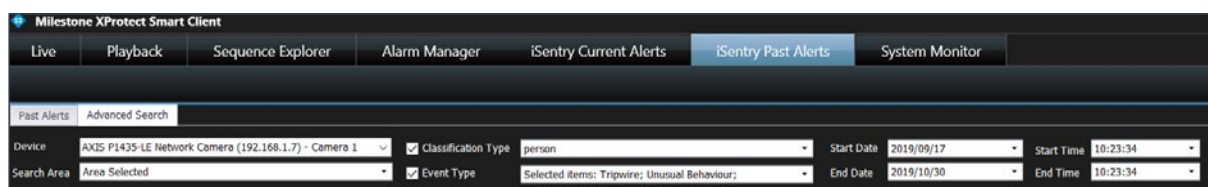
The resultant number of alerts for each group is displayed at the end of each row.

Any number of search criteria, filters and groups may be combined to produce a resultant view of the data.



## ADVANCED SEARCH

Besides the Basic Searching available in the display grid, an “Advanced Search” tab is also available for detailed investigation of the data contained in the database. At the top of the Tab page the following selections must be made in order to use the Advanced searching process:



**Device:** The Advanced search is Camera related, so please select the device for which the metadata should be searched.

**Search Area:** By default the entire image is selected for the advanced search function, however, by selecting a region within the image for the selected camera, only a particular region within the view of a camera may be used for searching.

**Classification Type:** By Checking the Checkbox for Classification Types and selecting one or more types with their relative probabilities and quantities, the search engine will filter for only these item parameters.

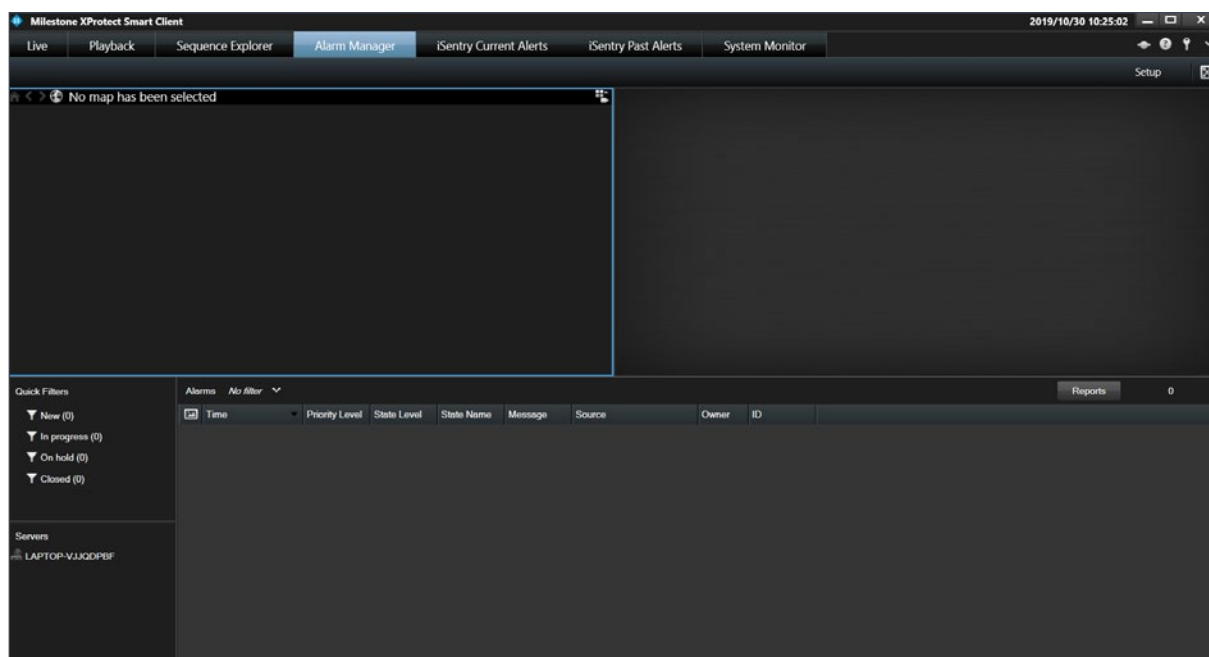
**Event Type:** By checking the checkbox for Event Types, and selecting one or more types, the search engine will add the selected type(s) to its filtering criteria.

**Start Date and Time:** The start date and time for the search.

**End Date and Time:** The end date and time for the search.

After the above selections have been made the search button may be pressed to start the search process. Results will be displayed after some time. If the operation takes too long, it can be cancelled by clicking the cancel button .

# ALARM MANAGER



The Alarm Manager tab in the Milestone XProtect Smart Client is a standard component of the Milestone system. For detailed information on its full capabilities please consult the Milestone XProtect Manuals.

The iSentry system will create alarms when, rules are triggered based on the alert information, or if an operator escalates an alert from the “iSentry Current Alerts” tab in the smart client.

In each case an alarm will be created and visible in the Alarm Manager. Double clicking on an alarm in the alarm list will display a floating window with all of the details for the alarm including live and playback video.





Section 2

# SYSTEM STATUSES

In the XProtect Management Client as well as the XProtect Smart Client, iSentry Alert Plugin, the Status of Cameras and various other components are visible in the form of various status icons.

Status icons can take the following forms:

**Unknown:** Status for this item is not available or has not been reported. Usually this status will be replaced by another status within a few seconds. If this Status Persists, please ensure that the Processing Server is Started and Connected.

**Good:** This means that this item is running within normal parameters.

**Warning:** This means that the item is running, but that there is a trouble condition.

**Error:** This means that this item is not functioning, or has experienced an error.

Hovering your mouse pointer over any of these icons will reveal detail describing the current condition of the item in question.

This information will also include limited diagnostic info for fault finding and performance of the system.

## SYSTEM LOGS

The system will create a wide variety of logs, to report on warnings, errors as well as performance of the system.

In iSentry Processing Server Settings, as well as the iSentry Plugin, Settings Tab in the XProtect Management Client, the “Log Level” of the system may be adjusted to increase or decrease the amount of information written to the log files. A log Level of “Normal” will only log errors and basic status information, a log level of “Full” will log debug information, will result in large log files as some additional processing overhead. Setting the Log to “Trace” is not generally recommended, as this will maximise logging and create a substantial processing overhead. “Trace” can be used for short periods of time to allow for detailed investigation.



**The default location of all the system logs is:**

C:\ProgramData\SmartProtect\iSentry\Logs

*Milestone iSentry Alert Plugin Logs*

**XProtect Event Server Logs:** "Service\_YYYYMMDD.log"

**XProtect Management Client Logs:** "Administration\_YYYYMMDD.log"

**XProtect Smart Client Logs:** "SmartClient\_YYYYMMDD.log"

*Processing Server Logs*

**Processing Server Master Log:** "SPiSentryServer\_YYYYMMDD.log"

**Processing Server Manager Log:** "SPiSentryServerManager\_YYYYMMDD.log"

**Deep Learning Server Communications Log:** "DLServerYYYYMMDD.log"


**Rules Processor Log:** "RulesProcessorYYYYMMDD.log"

*Deep Learning Server Logs*

**Deep Learning Server Master Log:** "SPiSentryDLServerYYYYMMDD.log"

**Deep Learning Server Manager Log:** "SPiSentryDLServerManagerLogYYYYMMDD.log"





Section 3

# TROUBLESHOOTING GUIDE

When troubleshooting, the investigation of logs are one of the most valuable tools at your disposal, and it is recommended that logs are investigated as part of any trouble shooting procedure. Setting the “Log Level” to “Full” is recommended when trying to solve issues.

## **OPERATION**

User is not authorised to view cameras error, or not all expected cameras are shown in the Smart Client:

In the Milestone System, security roles exist, which groups different users together in terms of access rights.

The system administrator must confirm that the required cameras are mapped to the correct milestone role, in order for the user in question to have access to the required cameras and alerts. This mapping is managed in the XProtect Management Client, iSentry Alert Plugin, “Profiles” Tab.

### **MIP Messaging Connection:**

In the XProtect Smart Client the following message is displayed: “MIP messaging connection to one or more servers was lost: http://yourservername:port/”

The iSentry system is reliant on the underlying milestone MIP messaging communication system. When this mechanism is down, whenever this message is displayed, the iSentry communications will also fail.

### **The Following iSentry Functions Will be Affected:**

**Database Connection Error:** The Database Connection Error pop-up warning will be displayed, when communications are down.

This will result in the iSentry Current Alerts as well as iSentry Past Alerts tabs in the Smart client to fail to initialise.

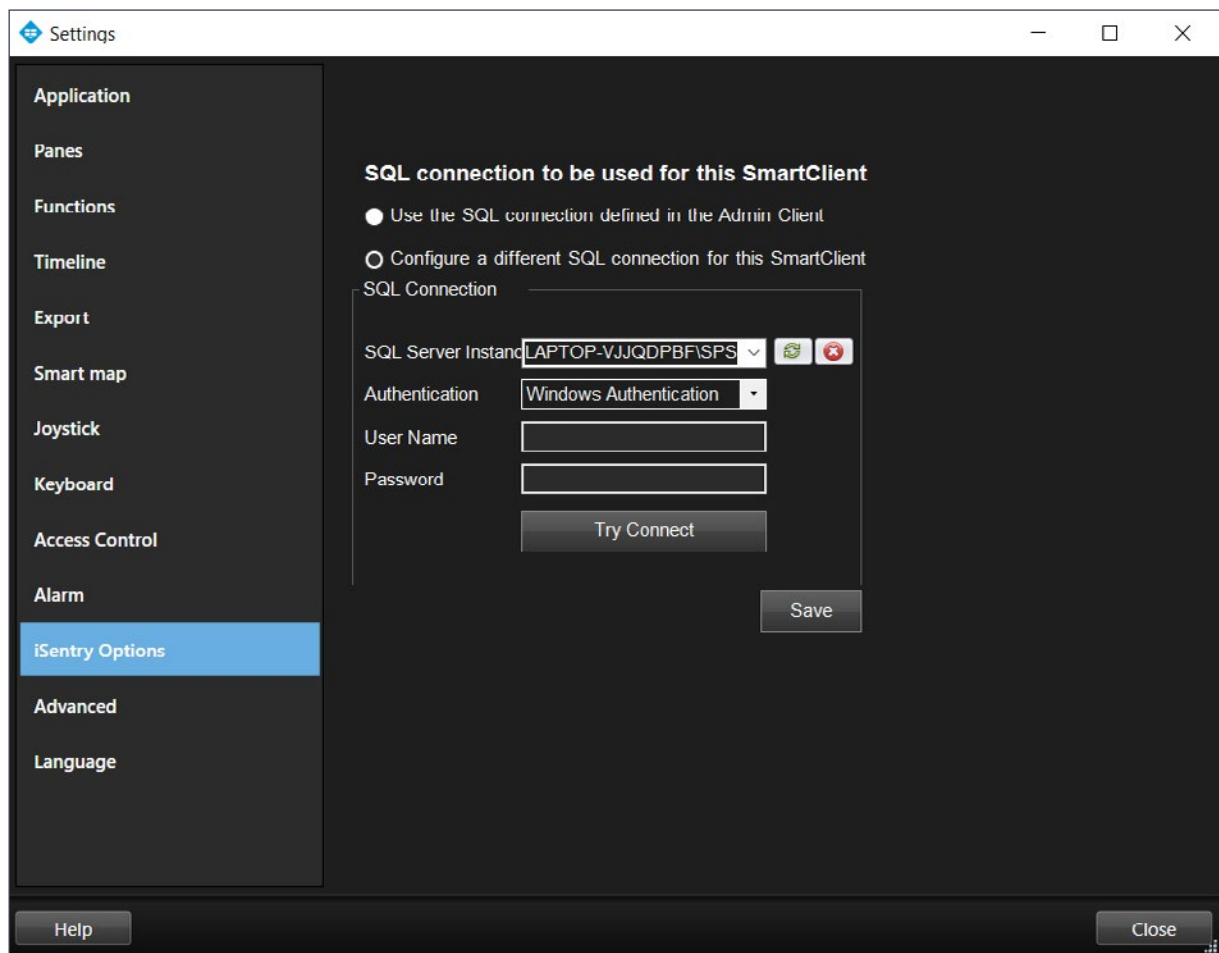
**Current Alerts Failure:** The iSentry Current Alerts tab will not receive any new alerts, so the operator will be unaware of new alerts.

**Milestone Alarm Manager Failure:** The Milestone Alarm manager will also not report new alarms.

Please consult your milestone support representative and the Milestone XProtect manual for troubleshooting information. Common causes for this failure are, DNS resolution failure, or general network connection failure, between the Milestone XProtect Event server and the Smart Client.

## DATABASE CONNECTION ISSUES

By default the XProtect Smart Client utilises the database connection as defined in the Milestone XProtect Management Client, iSentry Alert Plugin, “Settings” tab. Depending on the Network setup, the address may not resolve from the Smart Client, and in this case the connection must be specifically configured. The connection can be configured in the “Settings” menu, within the “iSentry Options” tab. Please ask your system administrator to setup this connection for you.



**iSENTRY**

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