

MAKE THE
WORLD SEE

Milestone Systems

XProtect® Smart Client 2024 R1

User manual (simplified)



Contents

Copyright, trademarks, and disclaimer	6
Supported VMS products and versions	7
Views (configuration)	8
Views and view groups (explained)	8
What can views contain?	9
Create view groups	10
Create views	11
Add cameras and other items to views	12
Managing views	13
Searching for views and cameras (explained)	13
Change individual cameras temporarily	15
Swap cameras	15
Send video between open views	16
Open additional views tabs and close them again	16
View video in multiple views simultaneously	17
Synch the time in a detached window with the main window	18
Working with detached windows	18
Navigating your cameras and views	20
Hotspots (explained)	20
Use hotspots	20
Carousels (explained)	20
Use carousels	21
Digital zoom (explained)	21
Use digital zoom	22
Virtual joystick and PTZ overlay buttons (explained)	23
Views and shortcuts (explained)	24
Keyboard shortcuts (overview)	24

- Viewing live video26**
 - Live video (explained)26
 - Live mode (overview)27
 - Camera toolbar (overview)28
 - Hide camera toolbar29
 - Camera indicators (explained)30
 - Record video manually31
 - Take single snapshots31
- Investigating incidents33**
 - Viewing recorded video (explained)33
 - In playback mode34
 - In live mode35
 - On the Search tab35
 - Playback mode (overview)36
 - View recorded video independently of the main timeline37
 - Investigate your search results38
 - The main timeline38
 - The timeline tracks39
 - The vertical line40
 - Navigating the recordings from the timeline40
 - The timeline controls40
- Searching for video data42**
 - Search for video42
 - Search for motion (smart search)46
 - Motion search threshold (explained)48
 - Search for bookmarks48
 - Search for alarms50
 - Search for events50
 - Search for people51
 - Search for vehicles51

Search for video at location	52
Search results, settings, and actions	53
The search timeline on the Search tab	53
Actions available from search results (overview)	54
MIP-related actions	55
Merged search results (explained)	55
Match any or all search criteria (explained)	56
Start search from cameras or views	56
Open search results in detached windows	57
Preview video from search results	57
Show or hide bounding boxes during search	59
Sorting options	59
Locate cameras while searching	60
Camera icons (explained)	63
Bookmark search results	64
Edit bookmarks from search results	66
Take snapshots from search results	67
Transfer the search time to the main timeline	68
Managing your searches	69
Save searches	69
Find and open saved searches	70
Edit or delete saved searches	72
Exporting video evidence	74
Exporting video, audio, and still images	74
Export formats	74
Add video sequences to the Export list	75
Adjusting export settings	76
Create the export	77
Add privacy masks to recordings during export	78
Storyboards (explained)	79

Export storyboards	79
Export locked video evidence	80
View exported video	80
Printing or creating surveillance reports	81
Print report from single cameras	81
Create reports from search results	82
Copy images to clipboard	83
Glossary	84

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All names of people and organizations used in the examples in this text are fictitious. Any resemblance to any actual organization or person, living or dead, is purely coincidental and unintended.

This product may make use of third-party software for which specific terms and conditions may apply. When that is the case, you can find more information in the file `3rd_party_software_terms_and_conditions.txt` located in your Milestone system installation folder.

Supported VMS products and versions

This manual describes features supported by the following XProtect VMS products:

- XProtect Corporate
- XProtect Expert
- XProtect Professional+
- XProtect Express+
- XProtect Essential+

Milestone tests the features described in this document with the XProtect VMS products in the current release version and the two previous release versions.

If new features are only supported by the current release version and not any previous release versions, you can find information about this in the feature descriptions.

You can find the documentation for XProtect clients and extensions supported by the retired XProtect VMS products mentioned below on the Milestone download page (<https://www.milestonesys.com/downloads/>).

- XProtect Enterprise
- XProtect Professional
- XProtect Express
- XProtect Essential

Views (configuration)

In setup mode, you can create views and specify which cameras or other types of content should be included in each view. To organize your views, you must create at least one view group. This is often done by your system administrator.



Your ability to edit views and groups depends on your user permissions. If you can create the view or group, you can also edit it.

Views and view groups (explained)

The way video is displayed in XProtect Smart Client is called a view. XProtect Smart Client can handle an unrestricted number of views, allowing you to switch between video from various groups of cameras. Views can hold between one and hundred cameras, but can also contain other types of content, for example images and text.

Views must be contained inside view groups that help you organize your views.

Views are available in live and playback mode. Views can be private or shared:

- Private views can only be accessed by the user who created them. To make the view private, create it inside the **Private** folder
- Shared views allow multiple operators to share the same views. Depending on your XProtect VMS system:
 - There may be a default folder for shared views named **Shared** or **Default group**
 - Shared views can be shared by all operators, or access to selected shared views can be given to certain operators. Typically, only a few people in an organization can create and edit shared views, for example the system administrators



Not all users may have access to all cameras on the XProtect VMS system. Some of the features you include in your shared view may not be supported in earlier versions of XProtect Smart Client. Always make sure that the users you want to share with have the necessary permissions and are running the same XProtect Smart Client version as yourself.

Your user settings, including information about your views, are stored centrally on the XProtect VMS server, so you can use your views on any computer that has XProtect Smart Client installed.

Example of a 2x2 view



What can views contain?

In setup mode in the **System overview** pane, you can see the elements that you can add to your views:



Content types	Purposes and benefits
Alarms	Share a list of prioritized alarms so XProtect Smart Client users can focus on and respond to alarm-related incidents.
Cameras	Show live video feeds or recorded video from cameras.
Carousels	Shows the live video from each camera in a camera group in rotation so you are aware of what is happening in your area.
Hotspots	See video in higher quality in the hotspot view item by selecting a camera in one of the other

	view items in the same view.
Maps and Smart Maps	Access your cameras and devices on the XProtect VMS system through a geographical map. The map improves the situational awareness in your area.
Matrix	You and your colleagues can send live video streams to each other to improve awareness of and collaboration around incidents.
Static images	For example, share a snapshot of a suspect or a diagram of emergency exits.
Text	For example, send a message, share instructions, or post a work schedule for security personnel.
HTML pages	Provide links, online instructions, or show company web pages.

If your organization uses any of the XProtect extensions, you can also add content related to these extensions:

Content types	Purposes and benefits
Access Monitor	Requires XProtect Access. Add access monitors to your views, for example, for a specific door.
LPR	Requires XProtect LPR. Add LPR cameras to your views.
Smart Wall controls	Requires XProtect Smart Wall. Push video from cameras and other types of content to your video walls.
Transact	Requires XProtect Transact. You can add metadata from, for example, point-of-sales systems to your views.

Create view groups

Your XProtect Smart Client may be preconfigured to display view groups that you can add your views to. However, you can create your own view groups to help you organize your views.

Example

Imagine that you have cameras installed on ten different levels in a multi-story building. You decide to create a view group for each level and name them accordingly: **Ground floor**, **First floor**, **Second floor**, and so on.

Steps:

1. In setup mode, in the **Views** pane, select the **Private** or **Shared** top-level folder you want to add a group to.
2. Click **Create new group** .
A new group is created named **New group**.
3. Select and click the **New group** to overwrite the name.
4. You can now create views within this group.

Create views

To view or play back video in XProtect Smart Client, first you must create a view, where you add the cameras you need.

Requirements

Before creating the view, you need a group that you can add the view to. See also [Create view groups on page 10](#).

Steps:

1. On the workspace toolbar, select **Setup** to enter into setup mode.
2. In the **Views** pane, select the group you want to add the view to.
3. Click  to create a new view.
4. Select a layout. The layouts are grouped according to their aspect ratio, and according to whether they are optimized for regular content or content in portrait mode (where the height is greater than the width).



5. Enter a name for the view by overwriting the default **New View** name.
6. Select **Setup** again to exit setup mode and save your changes.

Add cameras and other items to views

You can add different types of elements to your views, for example cameras.

Steps:

1. Open the view that you want to modify.
2. On the workspace toolbar, select **Setup** to enter into setup mode.
3. On the **System overview** pane, drag the wanted element into a view item.
4. Fill out any additional information about the element.
5. Select **Setup** again to exit setup mode and save your changes.

Managing views

Your views are available in live and playback mode and can contain cameras and other types of content. If views have been assigned shortcut numbers, you can select a view by using keyboard shortcuts. See also [Keyboard shortcuts \(overview\) on page 24](#).

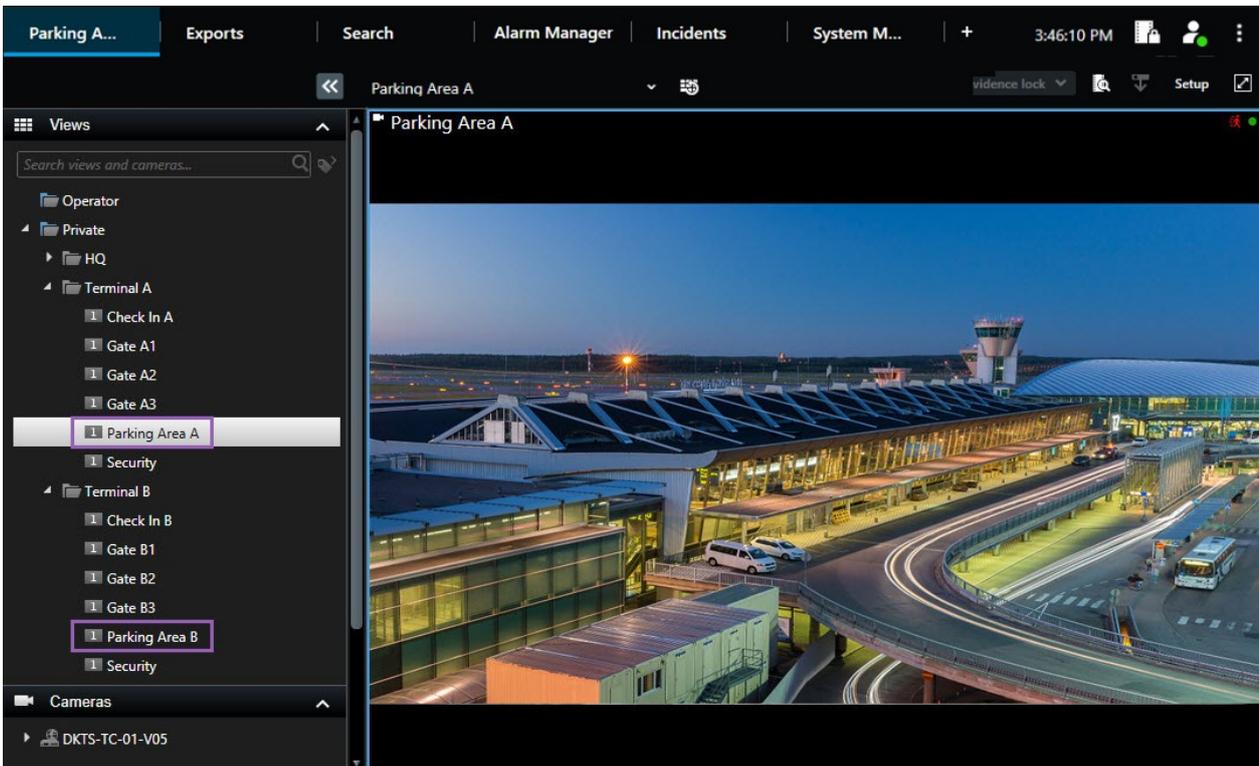
Searching for views and cameras (explained)

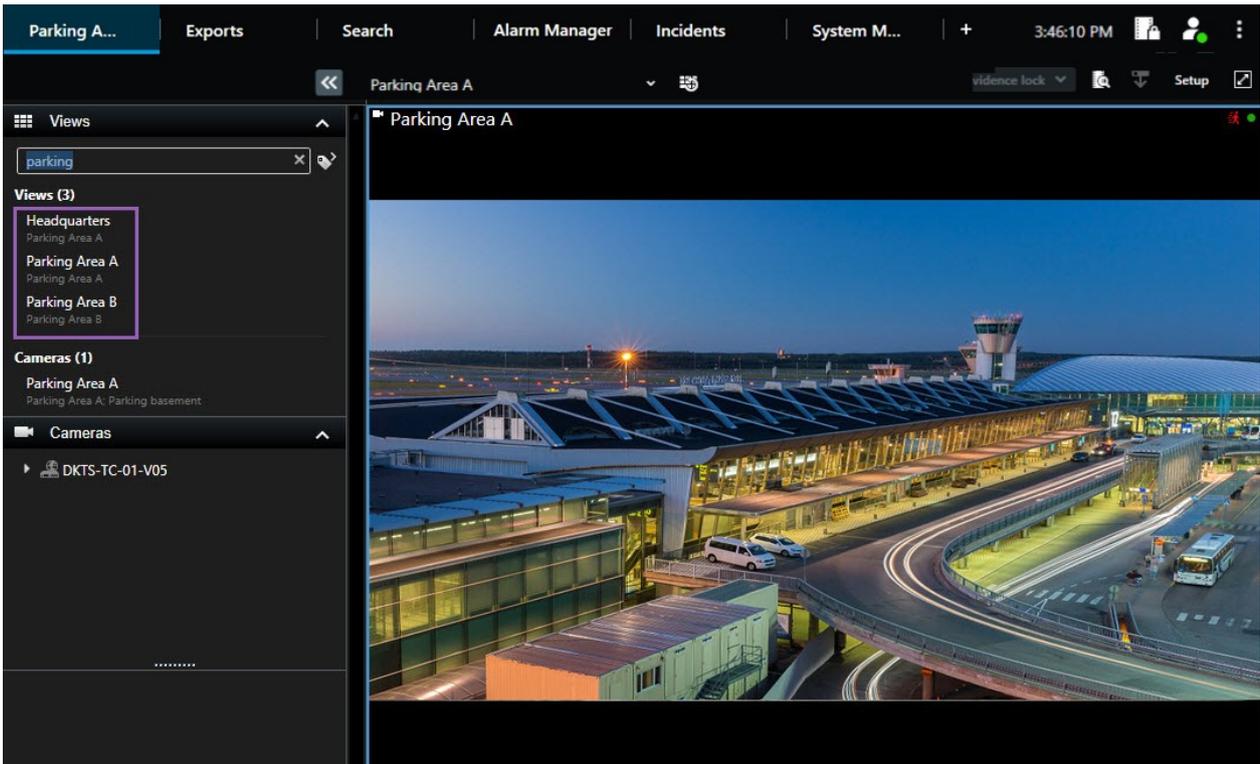
If you have a large or complex hierarchy of view groups, the search function makes navigation easier and allows you to search for views, cameras - including camera characteristics (see also [Camera characteristics on page](#)

14) - and keywords across the hierarchy. You can find an overview of common keywords if you click  next to the search field.

Example

The following two images show a hierarchy of views and what it looks like when you search for **parking**:





If a top-level folder has a red background , it is protected. You can still access any views under the protected top-level folder, but you can't create new views or edit existing views under it.

As you enter the search words, matching results for views and cameras are displayed. When you select one or more of the matching cameras, the cameras appear in a temporary view that is optimized for the number of cameras you select.

To view a single camera in a 1:1 view, click the search result in the **Cameras** section.

To view the first 25 cameras in a view, click the search result in the **Views** section. You can also select cameras manually if you press either **Ctrl** or **Shift** while clicking the cameras. Press **Enter** to view the cameras.

Camera characteristics

- Name
- Description
- Capability:

- PTZ
- Audio
- Input
- Output
- Views containing a specific camera
- Recording server name or address (shows connected cameras)



Your system administrator can add free text tags in the camera description field on the XProtect VMS server to make it possible to group cameras and search for these tags. An example could be that all outdoor cameras use the tag "Outdoor" in the description field. In that case, you can find all cameras of this type.

Change individual cameras temporarily

You can temporarily change the cameras in a view. However, it does not permanently change the view. If you want to permanently change the content of a view, you must be in setup mode.

Requirements

You can only change the camera if the view item contains a camera.

1. Select the relevant item in the view.
2. Do one of the following:
 - In the **Cameras** pane, drag the relevant camera into the wanted view item in the view.
 - On the camera toolbar, click **More > Send to window > Main window**, and then select a view item in the view.
3. To restore your original view, click  on the workspace toolbar.



In the **Cameras** pane, the list of cameras is grouped by server. If a server is listed with a red icon, it is unavailable, in which case you will not be able to select cameras from that server.

Swap cameras

You can temporarily swap two cameras in a view. The camera in that view item then exchanges places with the one you swap it with. You can only swap cameras with other cameras. This can be useful, for example, if you want to keep your most important cameras near each other.

1. Click the relevant camera title bar and drag it to a new view item.
2. To restore the original view, click  on the workspace toolbar.



If you want to make permanent changes to your view, you must first be in setup mode.

Send video between open views

You can send video from a camera view item in one open view to a camera view item in another open view. This feature also applies to open views in detached windows.



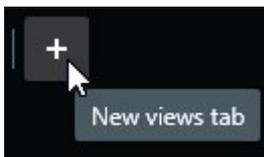
This feature is not available for view items with hotspots, carousels, or Matrix content.

1. On the camera toolbar, click **More > Send to window**.
2. Select the destination view, and then select the view item in the view where you want the video for that camera to display. If you can't select some of the view items, they might be unavailable or used for hotspots, carousels, or Matrix content.

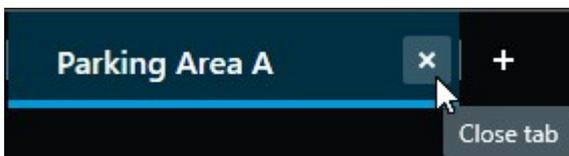
Open additional views tabs and close them again

To switch easily between different views, you can open as many views tabs you like in the main window and detached windows.

1. From the default menu, select **New views tab**.



2. Select the view that contains the video you want to view. The name of the new views tab is now the name of the view you have selected.
3. To close the additional views tab again, select **Close tab**.





You can assign shortcut keys to the opening and closing of additional views tabs. From the **Settings and more** menu, select **Settings** and then the **Keyboard** tab. Now you can assign shortcut keys for the options **Close selected tab** and **Open a new views tab**.



You can't close the main tabs in the default menu, only the additional tabs you have opened yourself.

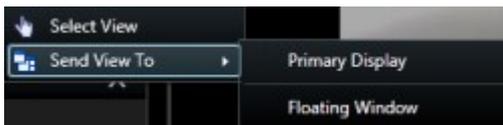
View video in multiple views simultaneously

You can send views to detached windows either to a specific display or to a floating window. This is useful, for example, if you have several monitors and want to view video from multiple views at the same time.

You can open any number of detached windows and drag them to any monitor that is connected to your computer.



1. In the **Views** pane, right-click the view that you want to send to a detached window.
2. Select **Send view to** and then the kind of detached window you want to send the view to.



See also [Working with detached windows on page 18](#)



When you log out of XProtect Smart Client, information about all open windows and tabs is stored on the local computer. To have your workspace arranged as you prefer as soon as you have logged in to XProtect Smart Client, you can define to restore all the windows and tabs.

Synch the time in a detached window with the main window

You can synchronize the time of the views you have sent to detached windows with the time of the view shown in the main window.

1. In the detached window, select **Sync time with the main views tab** .

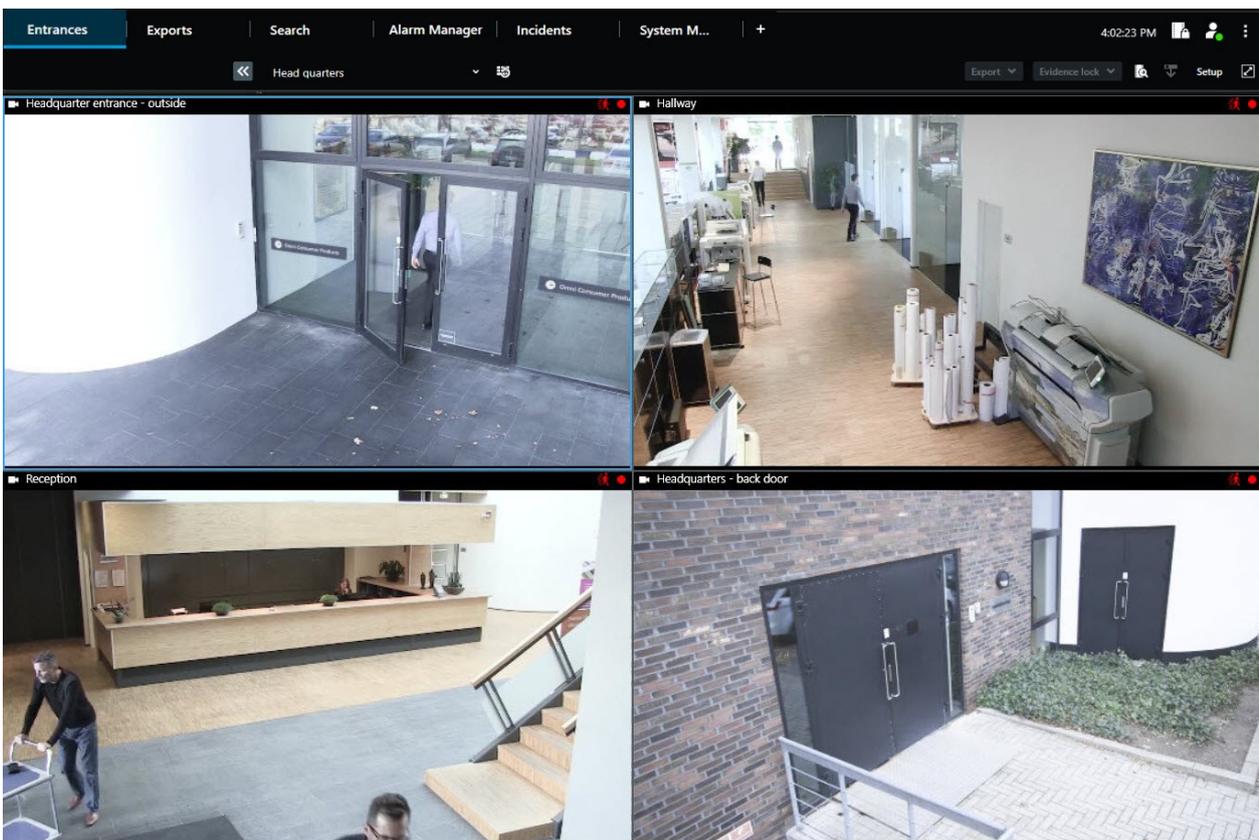
If the detached window is a display window, press **Esc** first to show the tabs and controls.

2. The main timeline is now hidden in the detached window.
3. From the main window, use the main timeline to navigate the video in both the main window and in the detached window.

Working with detached windows

You can send views to two different types of detached windows: display windows and floating windows.

A floating window shows the view in a detached window with all tabs and controls visible.



A display window shows the view in a detached full-screen window on the monitor you selected. A detached display window is shown on top of all other XProtect Smart Client windows. By default, the tabs and controls, for example **Sync time with the main views tab** , are hidden. Press **Esc** to show the tabs and controls.



Navigating your cameras and views

Learn about some of the ways of navigating within or between the cameras in XProtect Smart Client.

Hotspots (explained)

A hotspot lets you view magnified and higher quality video from a selected camera in a dedicated view item in a view. Hotspots are useful because you can use a low image quality or frame rate for cameras in the regular view items of the view and a high image quality or frame rate for the hotspot. This saves bandwidth on your remote connections.

There are two types of hotspots:

- Global hotspots, which display the selected camera regardless of whether the camera is in the main window or in a secondary display
- Local hotspots, which only display the selected camera of the local display

It is a good idea to have a hotspot in one of the larger view items of a view, for example, the large view item in a 1+7 view.

Use hotspots

- When you click a camera in a view, the hotspot view item updates with video feed of that camera
- The title bar displays the hotspot icon: 

When you view live or recorded video, you can double-click a hotspot (or any view items with cameras in a view) to maximize it. When you do this, the video in the hotspot is displayed in full quality, regardless of your image quality selection. If you want to make sure that the selected image quality also applies when maximized, in **Setup** mode, in the **Properties** pane, select **Keep when maximized**.

Carousels (explained)

A carousel is used for displaying video from several cameras, one after the other, in a single view item in a view. You can specify which cameras to include in the carousel as well as the interval between camera changes. Carousels are displayed with the carousel icon on the toolbar: .



Fisheye lens cameras cannot be included in a carousel.

You can maximize a carousel by double-clicking the carousel view item. When you do this, video from cameras included in the carousel is by default displayed in full quality, regardless of your image quality selection. This default cannot be overridden for carousels.

You can use digital zoom and PTZ controls from a carousel if the camera supports this. When you use the PTZ or digital zoom controls that appear, the carousel pauses automatically.

Use carousels

If any of your views contain carousels, this icon will appear in the title bar next to the camera name: .

Requirements

- Carousels must be configured before you can use them.
- In the **Settings** window, **Default for camera title bar** must be set to **Show**.

Steps:

1. In live mode, open a view that contains a carousel. When you hover over the view item, this toolbar appears: .
2. The carousel starts automatically. To pause it, click the **Pause** button.
3. To shift to the next or previous camera in the carousel, click the **Previous camera** or **Next camera** button.
4. Additional actions available in the toolbar:
 - Jump to the place on the smart map, where the camera is located
 - Start search from the camera currently in focus, in a new window
 - Create snapshot
 - Copy to clipboard



You can maximize a carousel by double-clicking the view item with the carousel. Video from cameras included in the carousel is by default displayed in full quality, regardless of your image quality selection.

Digital zoom (explained)

Digital zoom lets you magnify a portion of a given image so you are able to have a closer look at it. It works both in live and playback mode.

Digital zoom is a useful feature for cameras that do not have their own optical zoom capabilities. Using digital zoom will not affect any recording of the video. Recording will still take place in the regular format of the camera.



For non-PTZ cameras, digital zoom is enabled by default. If you enable or disable digital zoom on one camera, all cameras in your view are affected. For PTZ cameras, this setting only applies to one camera at a time.

When you export video data, you can choose to export the regular images or the digitally zoomed images in the AVI or in the JPEG formats. When you export in the XProtect format, this is unavailable because the recipient can use digital zoom on the exported recordings. If you print an image on which you have used digital zoom, the digitally zoomed area of the image will be printed.

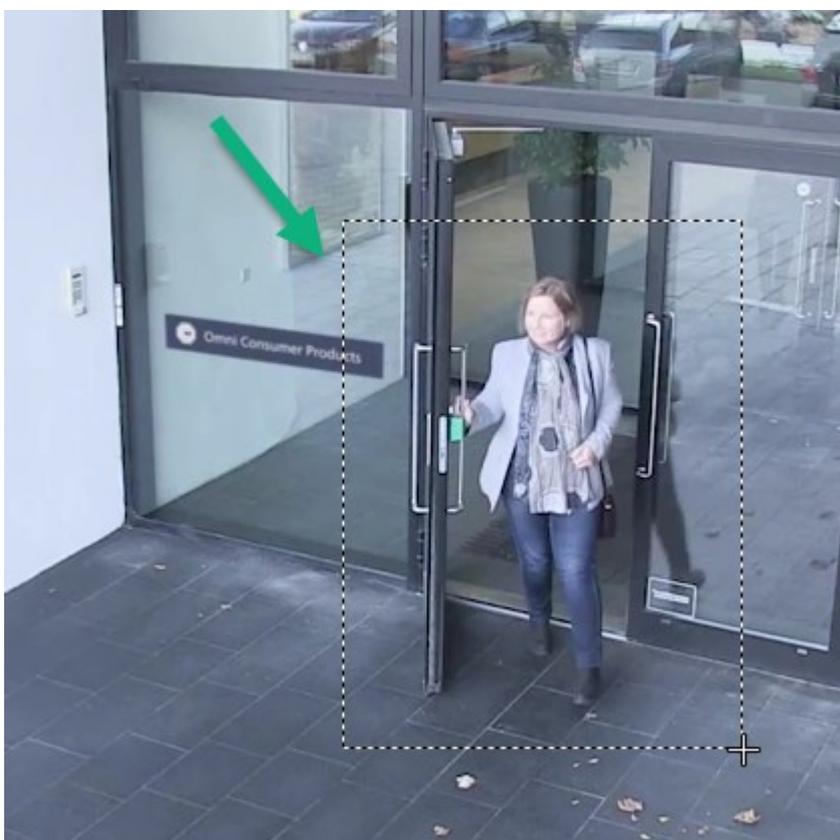
Use digital zoom

Requirements

To enable digital zoom, on the camera toolbar, click **More** and select **Digital zoom**.

Steps:

1. Click and drag inside the image to zoom. The area you select is highlighted by a dotted line. When you release the mouse button, the zoom will take effect.



2. To move to other areas of the image while maintaining your zoom level, in the overview frame, drag the highlighted area to the required position.



3. To adjust the zoom level, click inside the image and use the scroll wheel on your mouse.
4. Click the **Home** icon inside the virtual joystick to return to the normal zoom level.



Virtual joystick and PTZ overlay buttons (explained)

If your views include fisheye cameras or lenses, or PTZ devices, you can navigate the images by using the virtual joystick or the PTZ navigation buttons that may appear inside the image.

The virtual joystick:





If you do not want the camera toolbar to pop up when you hover over the view item, press and hold the **CTRL** key while moving the mouse.

Views and shortcuts (explained)

You can use keyboard shortcuts to select views if the views have been assigned numbers. You assign numbers to the views in setup mode.



Using keyboard shortcuts to select a view only works if you are using a numeric keypad.

Example

If you have assigned the number **1** to a particular view, you select the view by pressing *** + 1 + Enter**.

Keyboard shortcuts (overview)

In live or playback mode, a number of keyboard shortcuts allow you to navigate within and between views.



These shortcuts cannot be used for view items with Matrix content or static images.

You can also assign custom shortcut key combinations for particular actions in XProtect Smart Client.

Press these keys	To do this
Enter	Toggle maximized and regular display of the selected view item in the view.
Alt	<p>Select a specific view item within a view. First, press Alt. A number is displayed for each open window. If, for example, you want to select a view item in the second window, press 2. Multiple numbers now appear, one for each view item that is visible in the second window. Press the number of the view item that you want to select, for example 4. When a view item is in focus, it is marked with a blue frame.</p> <p>If you are using a PTZ camera or a hotspot, this allows you to control cameras with a joystick or to send the view item directly to the hotspot without using the mouse.</p>

Press these keys	To do this
/ + <camera shortcut number> +Enter	<p>Change the camera in the selected view item to the camera with the matching shortcut number. Example: if the required camera has the shortcut number 6, press /+ 6+Enter.</p> <p>Camera shortcut numbers may not necessarily be in use on your XProtect VMS system. They are defined on the server.</p>
/+Enter	Change the camera in the selected view item to the default camera.
/ +/+Enter	Change the cameras in all view items to the default cameras.
*+<view shortcut number> +Enter	<p>Change the selected view to the view with the matching shortcut number. Example: if the required view has the shortcut number 8, press *+ 8+Enter.</p> <p>If view shortcut numbers are used, you can see them in the Views pane, where they appear in parentheses before the names of the views.</p>
6 (numeric keypad only)	Move the view item selection one step to the right.
4 (numeric keypad only)	Move the view item selection one step to the left.
8 (numeric keypad only)	Move the view item selection one step up.
2 (numeric keypad only)	Move the view item selection one step down.

Viewing live video

You view live video mainly when in live mode. To view live video, you must find a view that shows video from the cameras that you are interested in. Select a tab with a view tab and then the relevant view from the **Views** pane. For each camera that appears in a view, different actions are available, for example taking snapshots or starting manual recording. See also [Camera toolbar \(overview\) on page 28](#). If something catches your attention, you can zoom in to take a closer look using the virtual joystick.

Live video (explained)

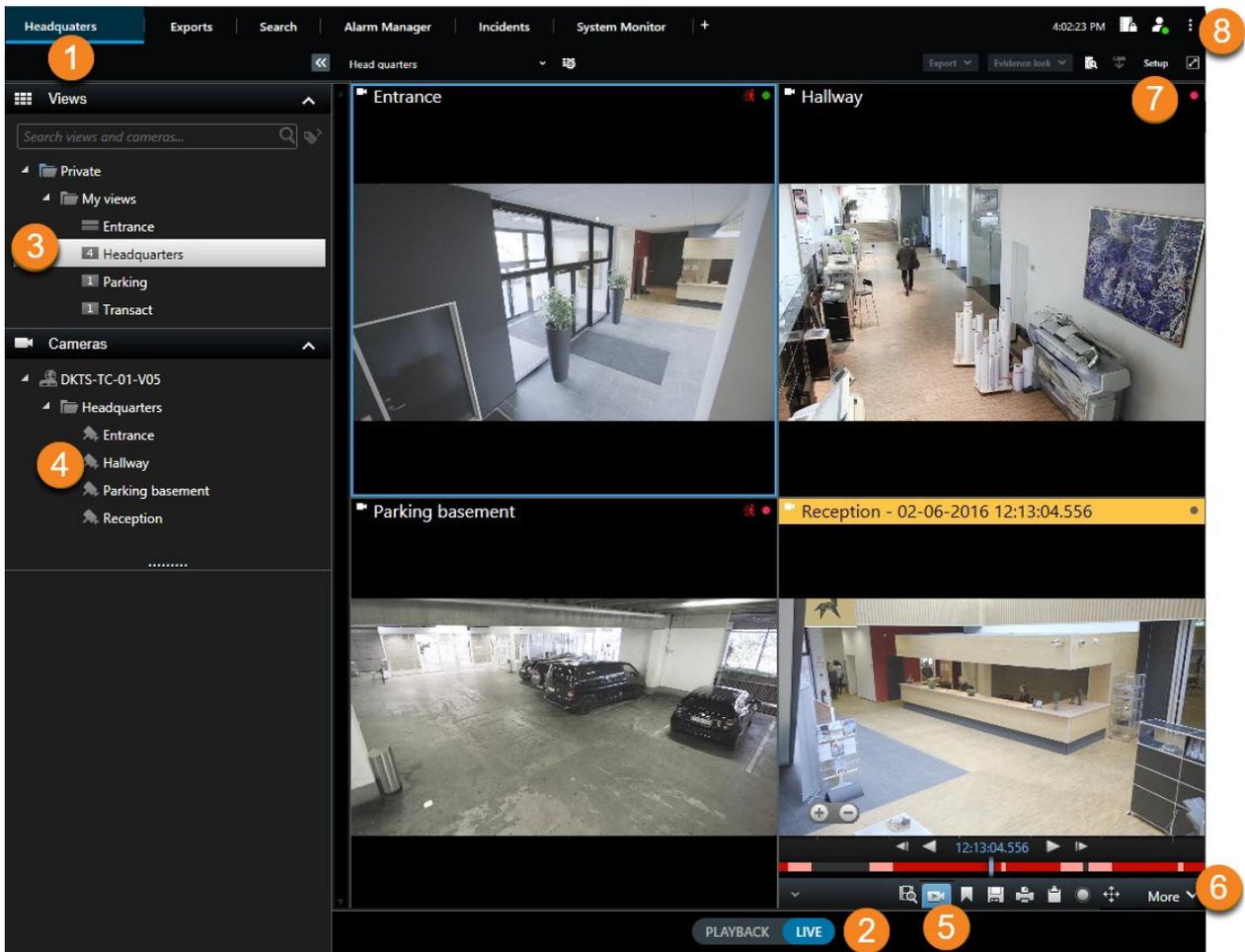
The video stream from the camera is not necessarily being recorded. Typically, recording takes place according to a schedule, for example, every morning from 10.00 to 11.30. Or whenever the XProtect VMS system detects special events, for example, motion generated by a person entering a room, a door is opened, or similar.



If multiple streams have been set up on the server, you can temporarily view a different stream by selecting this from the camera toolbar. On the camera toolbar, click **More** and then select a stream from the available list.

To investigate an incident that was recorded, enter into playback mode. To perform advanced searches, go to the **Search** tab.

Live mode (overview)

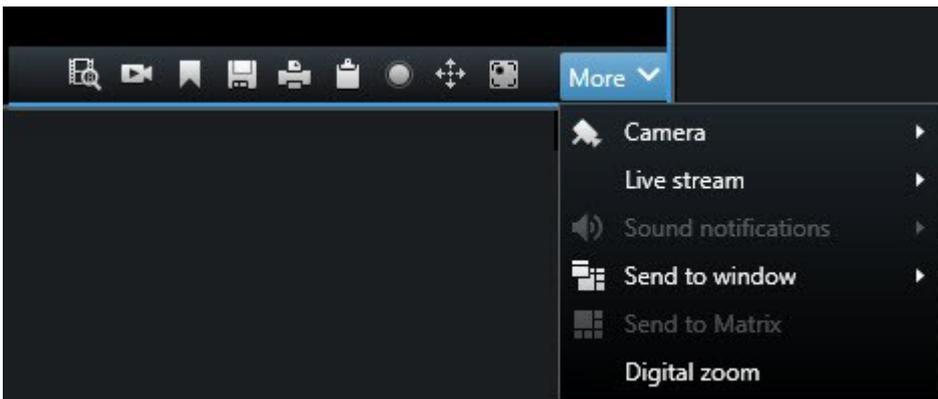


Number	Description
1	The main views tab.
2	Switch to live mode.
3	Select a view.
4	Change cameras in views temporarily. See also Change individual cameras temporarily on page 15.

Number	Description
5	View recorded video for individual cameras. See also View recorded video independently of the main timeline on page 37 .
6	The camera toolbar. See also Camera toolbar (overview) on page 28 .
7	Enter or exit setup mode to add cameras and other types of content to your views.
8	Buttons.

Camera toolbar (overview)

The camera toolbar appears whenever the cursor hovers over a camera inside a view. The camera toolbar is available both in live and playback mode.



Icon/menu	Description
	Open a new search window where the camera is preselected. See also Start search from cameras or views on page 56 .
	View recorded video independently of the main timeline. See also View recorded video independently of the main timeline on page 37 .

Icon/menu	Description
	Bookmark the video.
	Take simple snapshots of what you are viewing. See also Take single snapshots on page 31 .
	Print a surveillance report from a single camera. See also Print report from single cameras on page 81 .
	Copy single images to the clipboard. See also Copy images to clipboard on page 83 .
	Record video manually from a single camera. See also Record video manually on page 31 .
	Work with preset positions for fisheye and PTZ cameras.
Digital zoom	Enable digital zoom. See also Use digital zoom on page 22 .
Send to window	Change the camera in the view item temporarily. See also Change individual cameras temporarily on page 15 .
Camera	Select a camera.

Hide camera toolbar

When you minimize the camera toolbar in a view item, the toolbar remains minimized only to you in the current session. However, you can hide it permanently for a particular view item, for all users with access to the view item.

Steps:

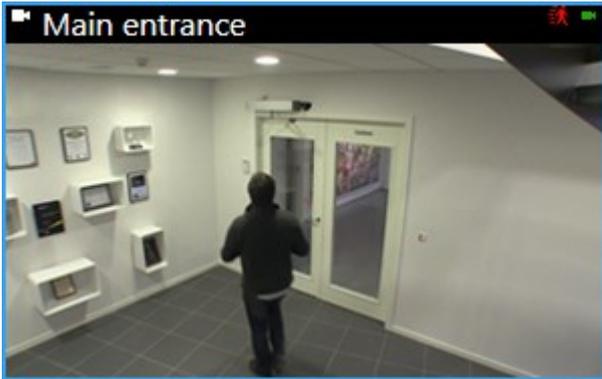
1. Click **Setup** to enter setup mode.
2. Find the view item where you want to hide the toolbar.
3. Click  to hide the toolbar.
4. Select **Setup** again to exit setup mode and save your changes.



The setting you make in setup mode is stored on the server, so that the change impacts other XProtect Smart Client operators.

Camera indicators (explained)

The camera indicators show you the status of the video that is displayed in the camera view items. The camera indicators are visible only if the camera title bar is enabled in the **Settings** window on the **Application** tab.



You can turn the camera title bar on and off on individual view items. Click **Setup** and select the **Show title bar** check box in the **Properties** pane.

Indicator	Description
	Motion is detected. Click inside the image to reset the motion indicator.
	The server connection to the camera is lost.
	Video from the camera is being recorded.
	A connection to the camera is established. This icon is only relevant for live video.
	Playing back recorded video.
	No new images have been received from the server for more than two seconds.



In the camera properties, you can add sound to notify you when there is motion.

Record video manually

Recording while watching live video is useful if you see something of interest.

Steps:

On the camera toolbar for the view item that you want to record, select one of the following options:

-  Start recording for # Minutes

Once started, recording will continue for the number of minutes determined by your system administrator. You cannot change this, and you cannot stop recording before the specified number of minutes has passed.

-  Start manual recording

Once started, recording will continue for the number of minutes determined by your system administrator, or you can click the icon again  to stop manual recording.



You can start recording the video stream from more than one camera simultaneously, but you must select them one by one.

Take single snapshots

As you are viewing live or recorded video, or searching for video, you can take an instant snapshot that you can share. The path to the folder, where the still image is saved, is specified in the **Settings** window under **Application settings**.

Requirements

In the **Settings** window under **Application**, **Snapshot** must be set to **Available**.

Steps:

1. In live or playback mode:
 1. Hover over a view item that contains a camera, a hotspot, or a carousel.
 2. In the camera toolbar, click . The icon momentarily turns green.
2. If you are on the **Search** tab, double-click a search result and click  in the camera toolbar. The icon

momentarily turns green.

3. To access the snapshots, go to the file location where the snapshots are saved.



If the image contains a privacy mask, this privacy mask is also applied to the snapshot image.

Investigating incidents

You investigate incidents mainly in playback mode by using the main timeline to browse recorded video. To view recorded video, you must find a view that shows video from the cameras that you are interested in. The views are available in the **Views** pane. For each camera that appears in a view, different actions are available, for example taking snapshots or launching search. See also [Camera toolbar \(overview\) on page 28](#). If something catches your attention, you can zoom in to take a closer look using the virtual joystick.

You can perform advanced searches on the **Search** tab and use the search results as a starting point for further investigation or actions, for example exporting and bookmarking.

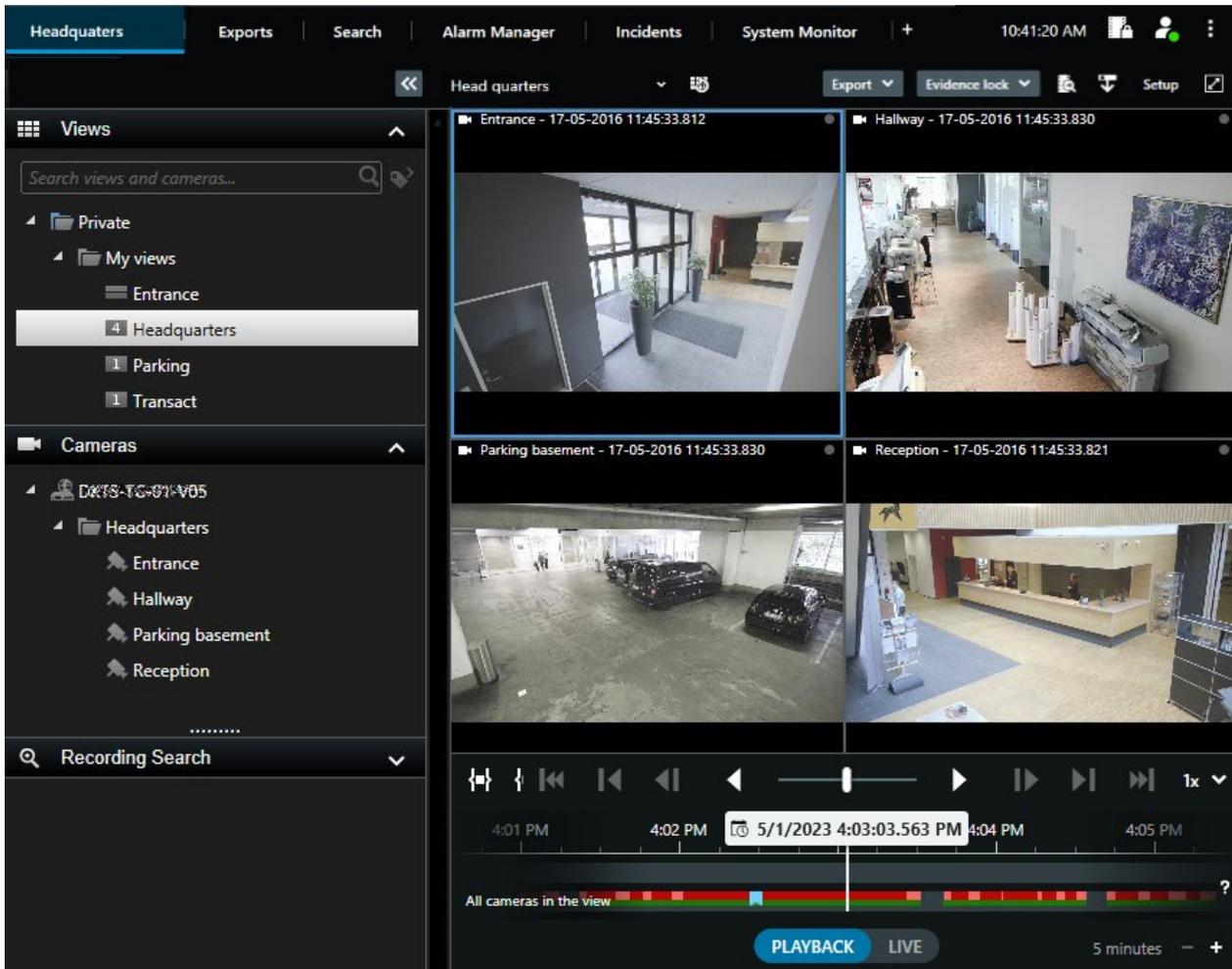
If the incident is associated with an alarm, go to the **Alarm Manager** tab, or select a view where the **Alarm List** has been added.

If you have an **Incidents** tab in XProtect Smart Client, you have XProtect® Incident Manager. If you do not have XProtect Incident Manager or want to investigate incidents with the built-in XProtect Smart Client functionality, you use the features and methods described in this section.

Viewing recorded video (explained)

There are different ways of viewing recorded video:

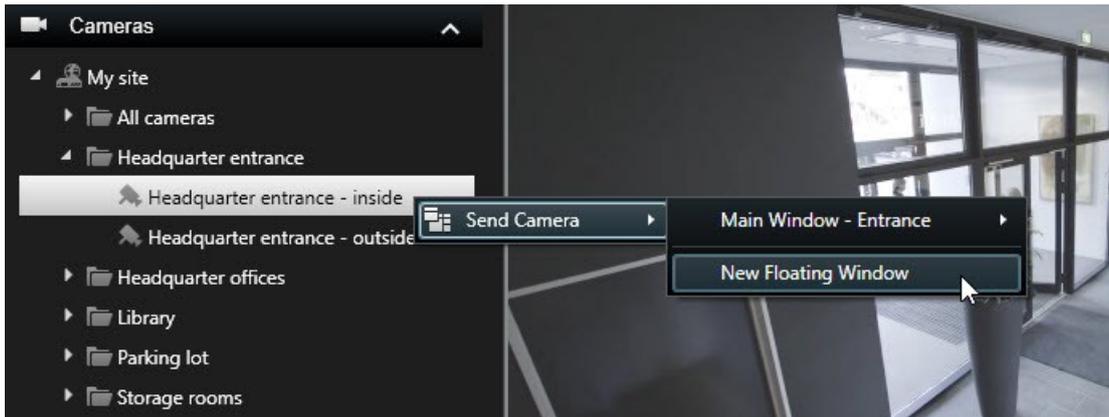
In playback mode



In playback mode, all cameras in a view display recordings from the same time shown in the main timeline. You can play back or browse recordings by using the controls and features in the main timeline.

However, you can also view and navigate recordings from individual cameras independently of the time in the main timeline. **Independent playback** must be enabled in the **Functions** settings.

If you are accessing your cameras through the tree structure in the **Cameras** pane, you can open individual cameras in a new window when in playback mode.



In live mode

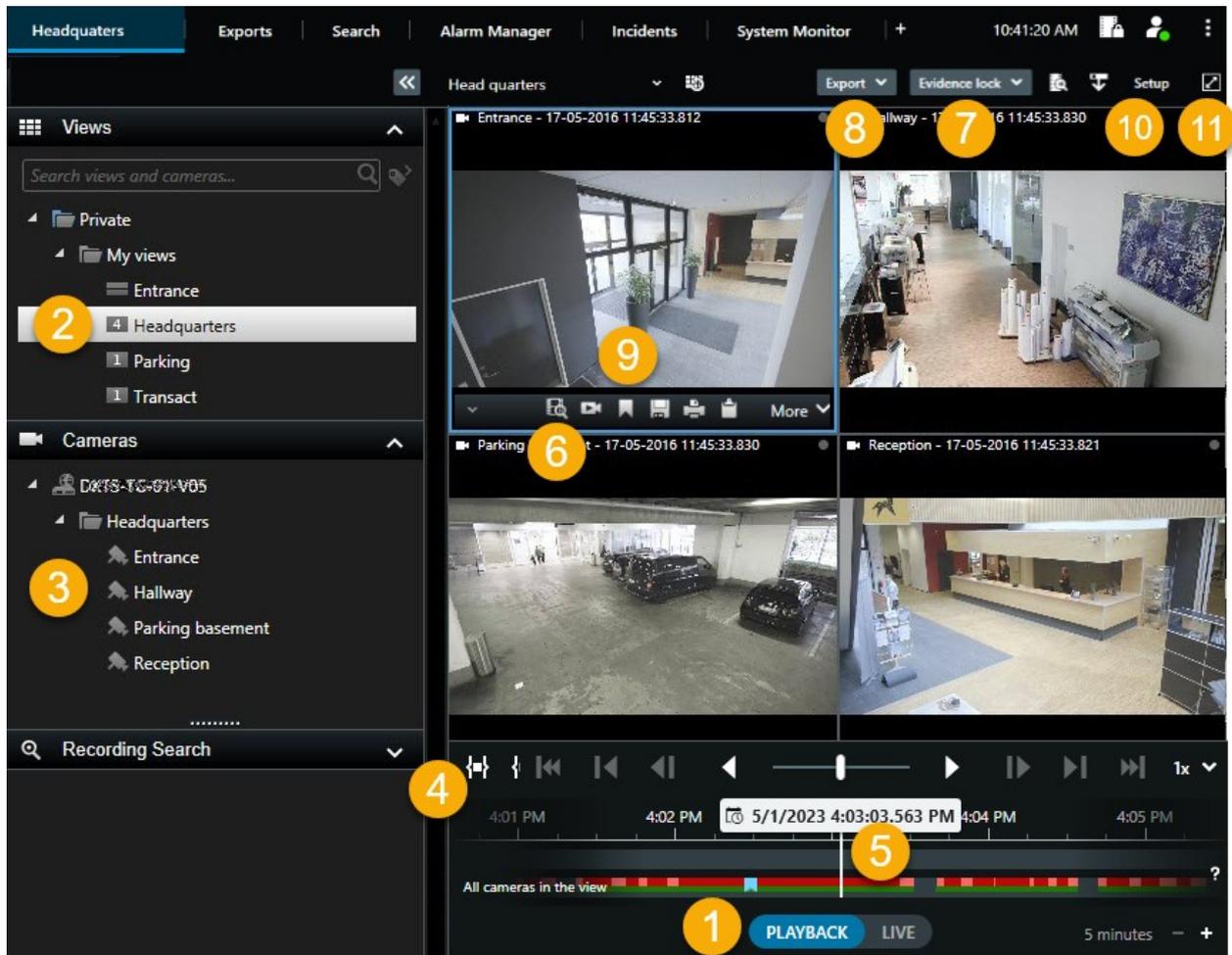
In live mode, you can watch recorded video for individual cameras by clicking the  button in the camera toolbar. This will open a new window where you can play back or browse the recordings. **Camera playback** must be enabled.

On the Search tab

The search results are basically video sequences that you can play back:

- Preview the search results. See also [Preview video from search results on page 57](#)
- Play back the search results in full screen mode or in a detached window. See also [Open search results in detached windows on page 57](#)

Playback mode (overview)



Number	Description
1	View recorded video in playback mode.
2	Select a view in the tree structure or use keyboard shortcuts. See also Keyboard shortcuts (overview) on page 24 .
3	Change individual cameras temporarily. See also Change individual cameras temporarily on page 15 .

Number	Description
4	Select a time span for exporting video.
5	Browse using the main timeline.
6	Open a new search window with the camera preselected. See also Start search from cameras or views on page 56 .
7	Create an evidence lock.
8	Export video data. See also Exporting video, audio, and still images on page 74 .
9	Perform various actions on the camera toolbar. See also Camera toolbar (overview) on page 28 .
10	Enter or exit setup mode to add cameras and other types of content to your views.
11	Switch to full screen mode.

View recorded video independently of the main timeline

You can play back video independently for individual cameras. In playback mode, the playback is independent of the selected main timeline. In live mode, the playback is independent of the live video.



You can only use this feature for ordinary view items with a single camera, not for view items with hotspots, carousels, or Matrix content.

Requirements

In the **Settings** window > **Functions** tab, you must set the **Independent playback** option to **Available**.

Steps:

1. Move your cursor to the bottom of the camera from which you want to view recorded video independently. On the toolbar that appears, select  **Independent playback**.

The top bar for the view item with the camera turns yellow, and the independent playback timeline appears:



In live mode, the video starts by replaying the video from 10 seconds before selecting the **Independent playback** button. In playback mode, what happens depends if the video is played or paused. If playing, the independent playback jumps 10 seconds from the current time on the main timeline in the opposite direction of the current playback direction and plays the video. If you have paused the video when in playback mode and select independent playback, the video remains paused at the current time on the main timeline.

2. Optionally. Drag the independent playback timeline to see recorded video from another time.
3. Optionally. To view recorded video from all cameras in your view from the same time as in the view item with independent playback, click the **Use the selected time on the playback timeline** button: .

This displays all cameras synchronized to the time you initially selected for the independent playback in playback mode.

Investigate your search results

There are different ways of investigating incidents that you have found on the **Search** tab:

- Open the search result in a detached window in playback mode. See also [Open search results in detached windows on page 57](#)
- Open the search result in a detailed view. Do one of the following:
 - In the list of search results, double-click the search result to view it in full screen mode. Double-click again to return to the list of search results
 - If you are previewing your search result in the preview area, double-click inside the video image. The search result opens in full screen mode. Double-click again to return to the preview area

The main timeline



The main timeline displays an overview of time periods with recordings from cameras and other devices in your current view. The main timeline is available on the views tabs and has various controls you can use to navigate your recordings during investigations or to select recording sequences for export, protection with evidence locks, addition of bookmarks, or other.

Select a views tab and switch to playback mode to show all the timeline controls.

You can adjust how your timelines look and behave. Select which recording types and other elements to show on the timeline tracks. For example, would you like to show recorded audio and bookmarks? You can also select how to play back gaps between recordings. You can also hide the main timeline during inactivity to free as much of the display for viewing video in XProtect Smart Client.

The timeline tracks



- The upper timeline track shows the recording periods of the selected camera.
- The lower timeline track shows the recording periods of all the cameras in the view, including the selected camera.

If you have detached windows that are synced in time with the main window, recordings from cameras and devices in these windows are also shown on the lower timeline track.

Color legend

On the timeline track, the different types of recordings have different colors. The most important colors to know are:

- Light-red indicates recordings
- Red indicates recordings with motion
- Light green indicates recordings with outgoing audio
- Green indicates recordings with incoming audio

For a legend of all the colors currently shown on the timeline tracks, select the small question mark  to the right of the timeline tracks.



Bookmarks

Timeline tracks show bookmarks with a blue bookmark icon . To view the bookmarked video, place your mouse over the icon.

Additional markers

If additional data sources are available in your XProtect VMS system, incidents from these sources are shown as markers in colors other than blue. The incidents can appear as pop-ups in the timeline tracks.



The vertical line

The vertical line shows the location of the playhead from where recordings are currently played back. This is called the main playback time, and the text above shows the exact date and time for the video currently played back. The main playback time applies to all the cameras in the view and any synchronized views unless you are viewing independent playback from some of the cameras. If there is no recorded video from one or more cameras in the view matching the main playback time, the last frame from the camera database before the main playback time is shown, but the frame is dimmed.

Navigating the recordings from the timeline

With the controls in the main timeline, you can go back and forth in your recordings in many ways. You can drag the timeline tracks to the right or left. If you press the CTRL key while dragging, the movement is slower.

You can use the timeline controls, the mouse scroll wheel, or select the date above the playhead to go to another time in your recordings.

The timeline controls

Controls	Description
	Switch between playback or live mode.
	Go back and forth in the video in different speeds. The further you drag the control to the sides, the faster the playback speed.
	Play backward  or forward  in time. When you select one of the play buttons, the button turns into a pause button  .
	Move to the frame just before  or after  the one currently viewed.
	Move to the start of the previous sequence  or the next sequence  .
	Move to the first sequence  or last sequence  in the database.
	<p>There are two ways of selecting a period of recordings for export, creation of evidence lock or other.</p> <p>Select start and end time in timeline : Select to switch the timeline and the view into selection mode. Select which view items to include and drag the time selection brackets on the timeline tracks to change the start and end time for the video sequences you want to select.</p> <p>Select start and end time in calendar : Select to specify the start and end date and time from a calendar. The timeline track jumps to the selected start time, and the time selection brackets surround the selected time period.</p>
	Change the playback speed.
	Specify the timespan of the timeline tracks. Alternative: use CTRL + scroll wheel .

Searching for video data

The search features are available mainly on the **Search** tab, but they are integrated with viewing video in live and playback mode.

Search for video

The **Search** tab lets you search for video recordings, and - based on the search results - lets you take action, for example by exporting.

What can you search for?

- Video sequences
- Video sequences with motion
- Bookmarked video
- Video sequences with alarms
- Video sequences with events
- Video sequences with people
- Video sequences with vehicles
- Video recorded at a certain location

Requirements

- Searching for people, vehicles, and location is only available if these search categories were enabled by your system administrator
- Searching for vehicles is also available if you have XProtect® LPR installed in your system. For more information, ask your system administrator

The search categories **Alarms, Events, People, Vehicles, and Location** are only available if you are using one of these products:

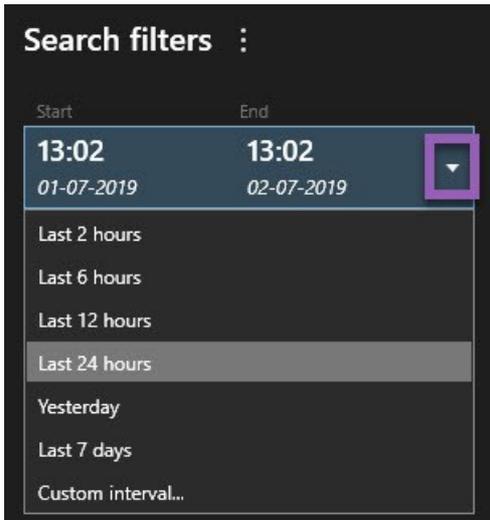


- XProtect Corporate
- XProtect Expert

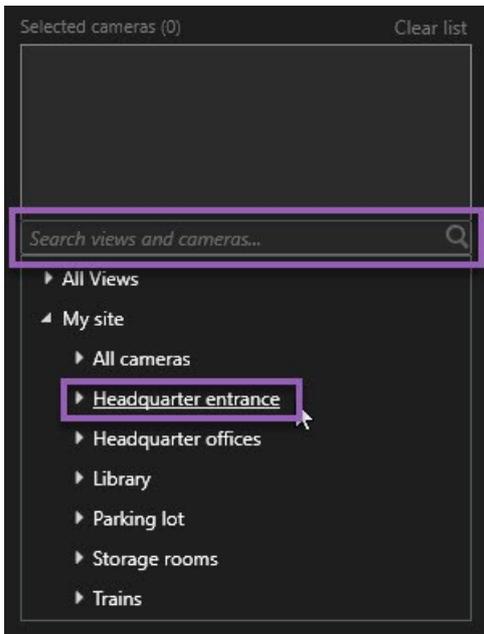
You can only combine search categories if you are using one of the products mentioned above.

Steps:

1. Click the arrow to select a predefined time span, or define your own **Custom interval**.



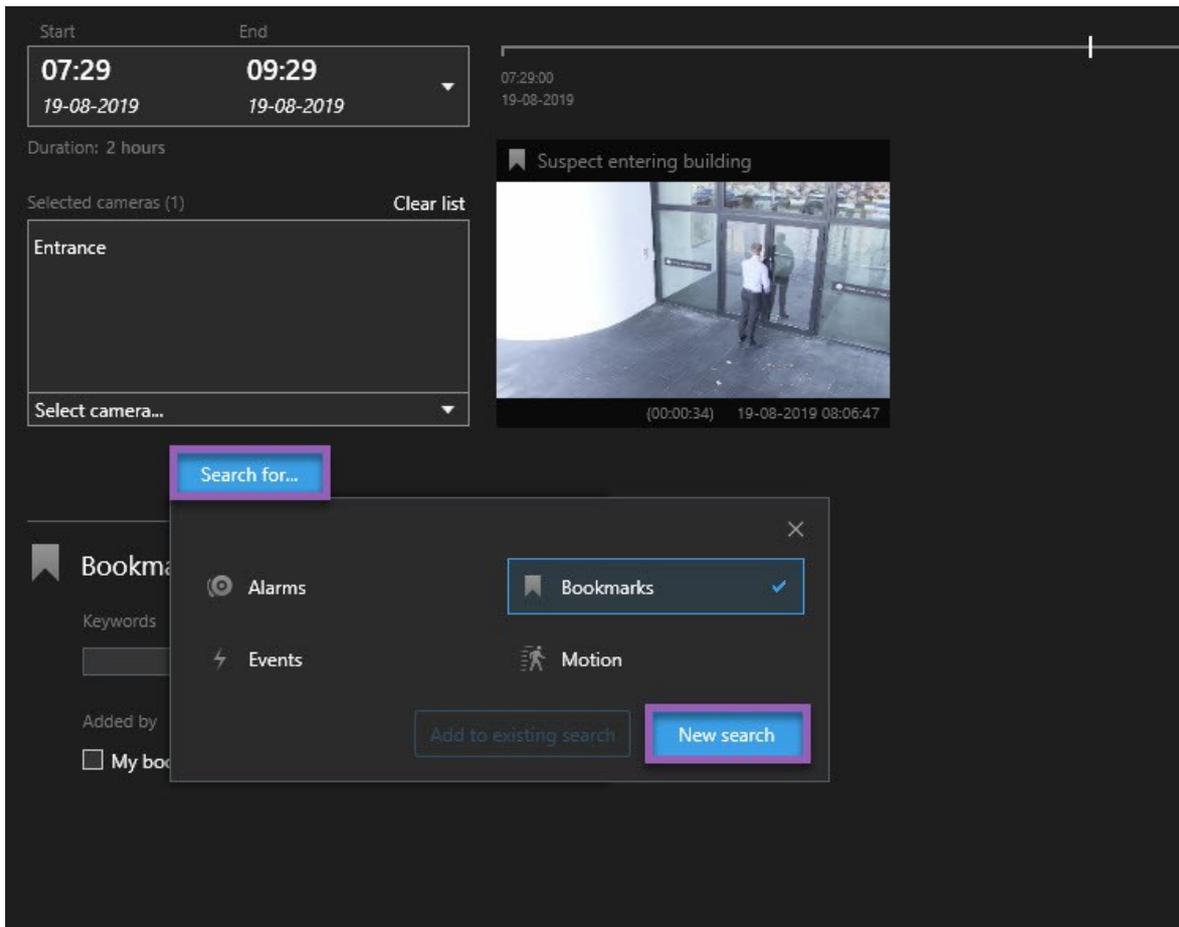
2. In the **Selected cameras** list, do one of the following to add cameras to your search:



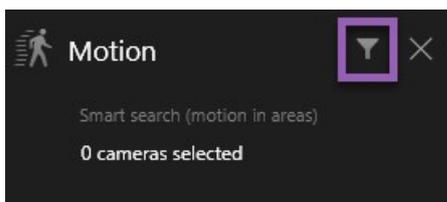
- Use the search function to find cameras or views
- Manually select the cameras in the tree structure. To add all cameras within a view, select the name of the view

As you add cameras, the search is run immediately.

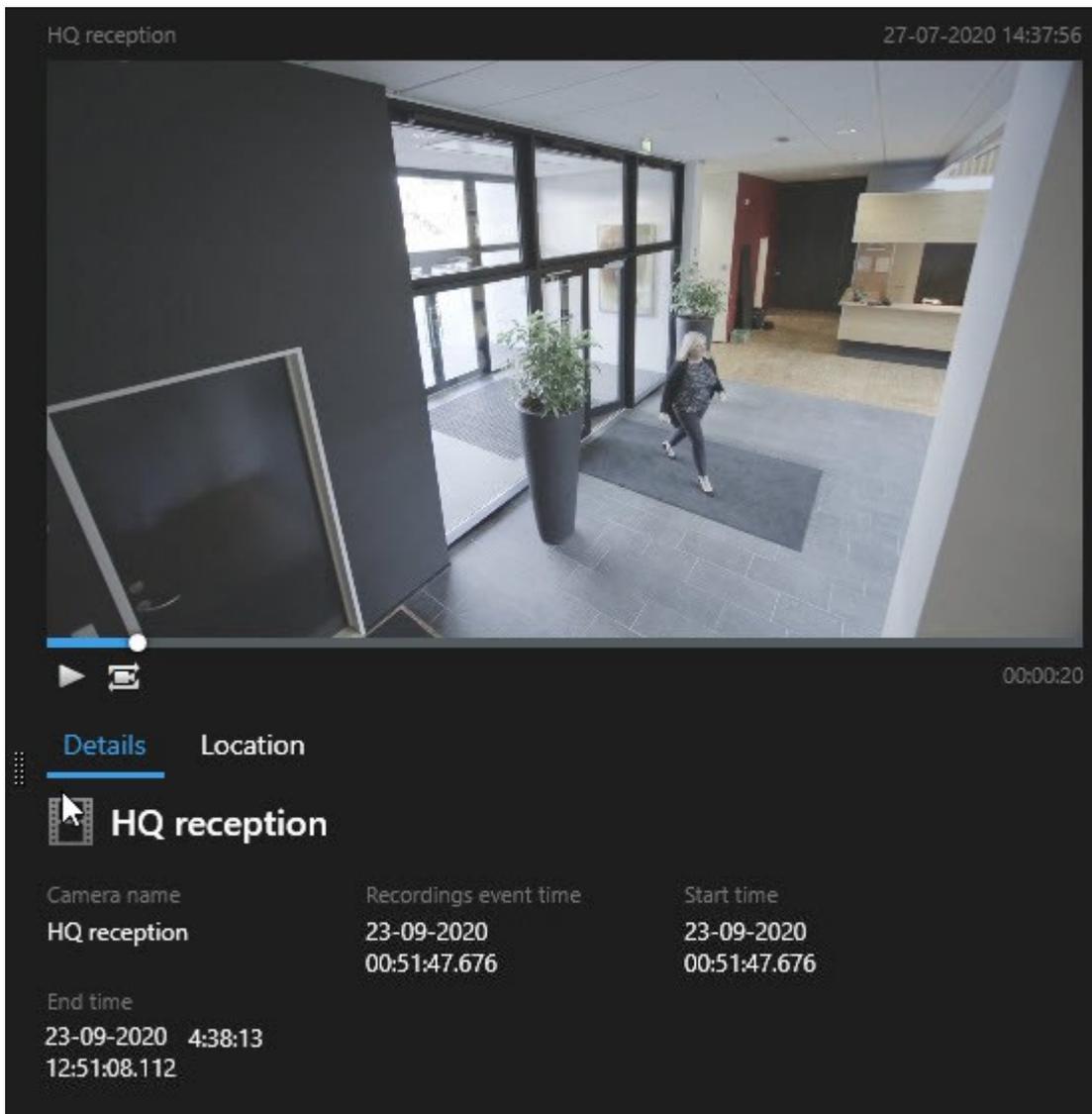
3. Click **Search for** to select the search categories. You can use search categories alone or combined.



4. For each search category that you add, you can refine the search by adding search filters.



5. To preview the video of a search result, select the search result and, in the preview pane, click .



To play back the video sequence in full-screen mode, double-click the search result.

6. To make the action bar appear, hover over the search results, one by one, and select the blue check box that appears.



The blue action bar appears:



Search for motion (smart search)

When you search for video recordings with motion, you can apply smart search filters to show only search results with motion in areas that you define.

Example

Use smart search to find video footage of a person entering through a doorway that is monitored by multiple cameras.

Requirements

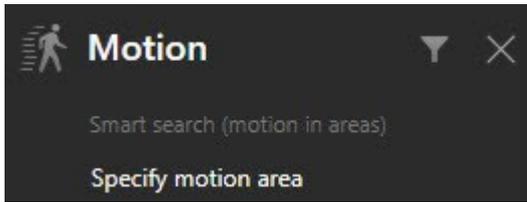
To use smart search filters, smart search must be enabled on your user profile by your system administrator.

Steps:

1. On the **Search** tab, select a time span.
2. Select the cameras that you want to include in your search.
3. Click **Search for > Motion > New search**. If the database has any recordings with motion within the selected time span and cameras, the recordings appear as thumbnail images in the search results pane.

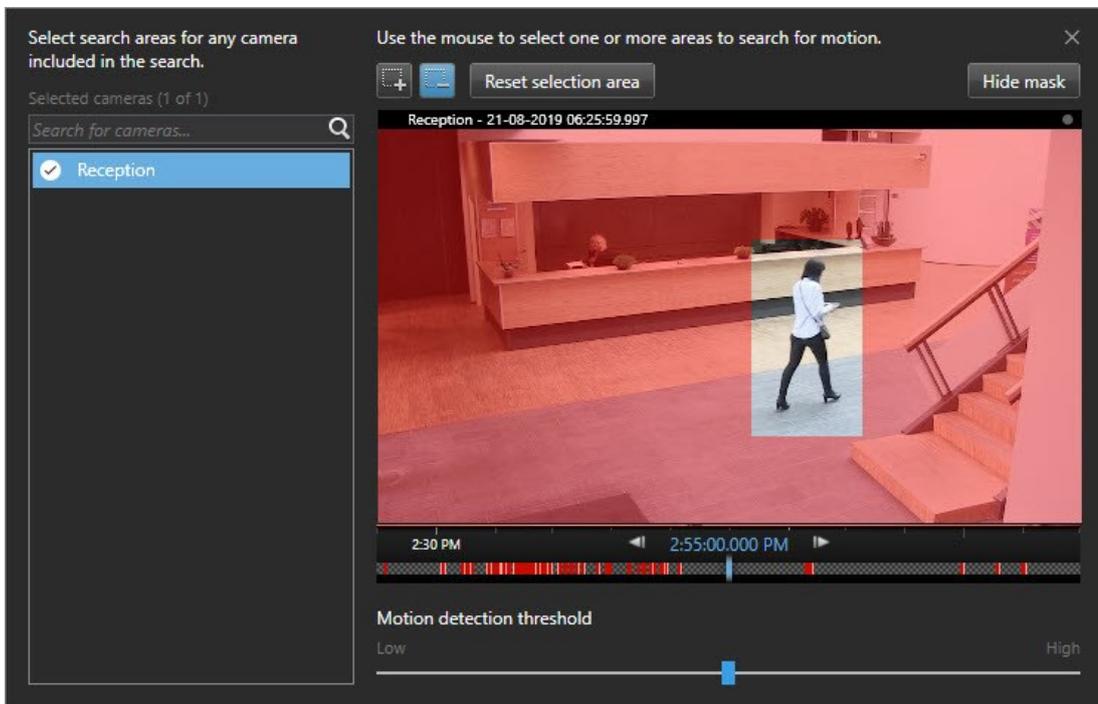
4. To find motion in selected areas only:

1. Below **Motion**, click **0 cameras selected**.



A dialog box appears with a list of the cameras that you selected.

2. Select one camera at a time and, in the red preview area, click and drag to unmask at least one area. The system will look for motion only in that area. You can unmask multiple areas.



The sensitivity of the motion detection is defined by your system administrator in Management Client on individual cameras. However, you can use the slider to adjust the sensitivity. For more information, see [Motion search threshold \(explained\) on page 48](#).

3. Automatically, the search is run. Click outside the dialog to return to the search results.

- To perform actions, for example bookmarking search results, hover over the search results and select the check box . The action bar appears.



Motion search threshold (explained)

When you search for motion in selected areas of a camera, you can adjust the motion threshold. The motion threshold determines how sensitive the motion search mechanism is:

- The higher the threshold, the more motion is required to activate motion detection. Likely, this will produce fewer search results
- The lower the threshold, the less motion is required to activate motion detection. Likely, this will produce more search results

Search for bookmarks

You can find incidents that are bookmarked by you or others for any number of cameras.

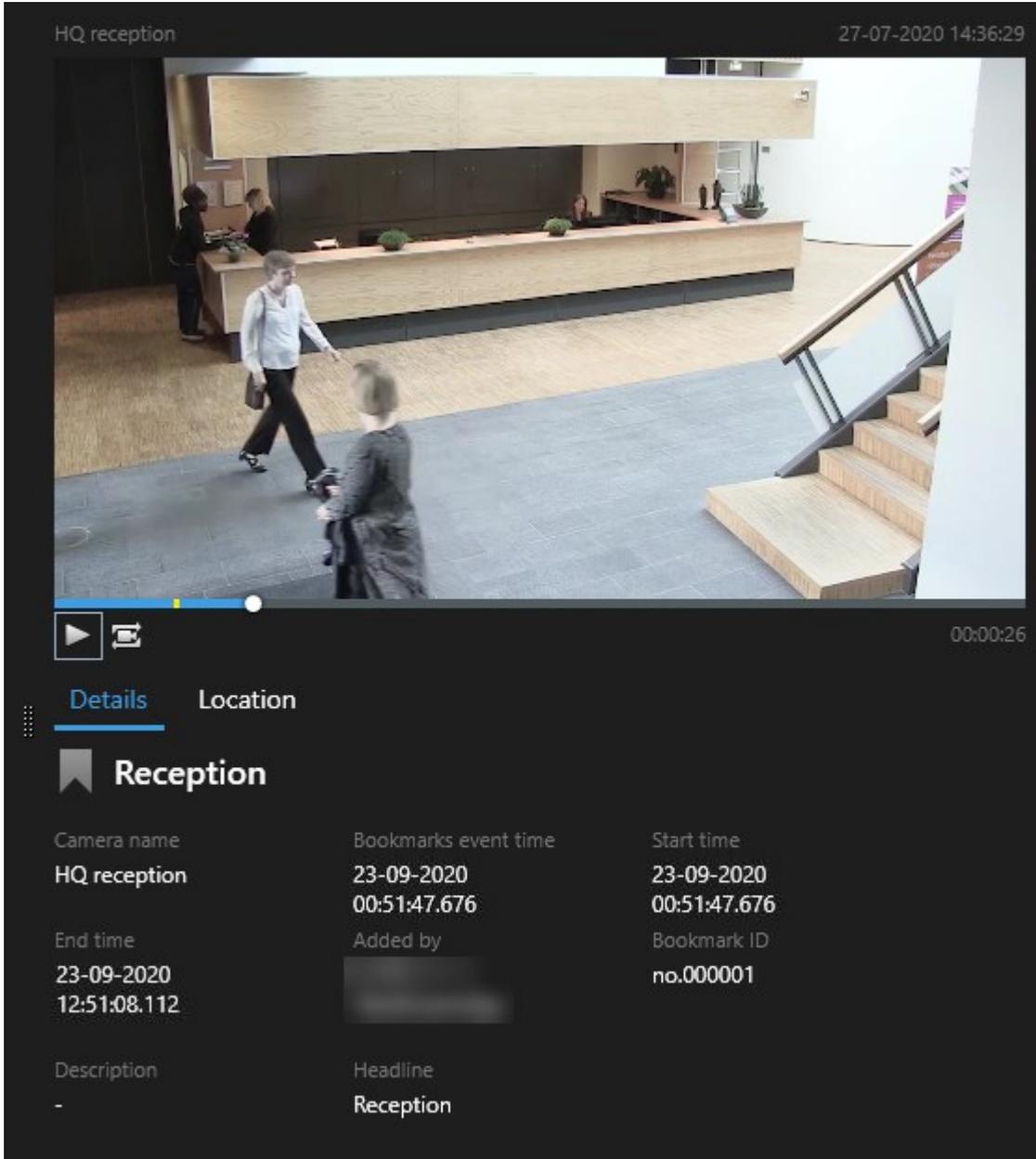
Steps:

- Select the cameras that you want to include in your search.
- Click **Search for > Bookmark > New search**. If the database has any bookmarked recordings, they appear as thumbnail images in the search results pane.
- Optionally, enter a keyword to filter the search results. The keyword can be:
 - The full **Bookmark ID**, for example no.000004
 - Who the bookmark was added by, for example site\user2
 - Any text that appears in the **Headline** or in the **Description**



By default, the system will search for the keyword both in the **Headline** and in the **Description**. Use **Search for keyword in** to change that.

4. To preview the video sequence and bookmark details, select a search result and play back the video in the preview pane on the right-hand side.



5. To view the recording in full-screen mode, double-click the search result.
6. To perform other actions, for example editing the bookmark, hover over the search result and select the check box . The action bar is displayed.



Search for alarms

When you search for video recordings associated with alarms, you can apply search filters to show only search results with certain alarms, for example alarms in a certain state that are assigned to a specific operator.

Steps:

1. Select the cameras that you want to include in your search.
2. Click **Search for > Alarms > New search**.
3. Apply search filters to narrow down search results. You can filter for:
 - **Priority**
 - **State**
 - **ID** - Type the full ID to filter for it
 - **Owner**
 - **Server** - available only if you are using Milestone Federated Architecture™



If you are using Milestone Federated Architecture™, the **Priority** and **State** filters are applied across all connected sites.

Search for events

When you search for video recordings associated with events, you can apply search filters to show only search results with certain events, for example events that come from a specific source or server.

Steps:

1. Select the cameras that you want to include in your search.
2. Click **Search for > Events > New search**.
3. Apply search filters to narrow down search results. You can filter for:
 - **Source**
 - **ID** - Type the full ID to filter for it
 - **Server** - available only if you are using Milestone Federated Architecture™

Search for people



This search category and its search filters are only available if they were enabled by your system administrator.

When you search for video recordings that include people, you can apply search filters to show only search results with people that have certain characteristics, for example people of a certain age or height.

1. Select the cameras that you want to include in your search.
2. Click **Search for > People > New search**.
3. Apply search filters to narrow down search results. You can filter for:
 - **Age** - Filter for people in a certain age range
 - **Gender** - Filter for males or females
 - **Height** - Filter for people in a certain height range
 - **Face** - Select the check box to limit search results to people whose face is visible

Search for vehicles



This search category and its search filters are only available if they were enabled by your system administrator.

Searching for vehicles is also available if you have XProtect® LPR installed in your system.

For more information, ask your system administrator

When you search for video recordings that include vehicles, you can apply search filters to show only search results with certain vehicles, for example a vehicle with a certain license plate that was issued by a certain country.

1. Select the cameras that you want to include in your search.
2. Click **Search for > Vehicles > New search**.
3. Apply search filters to narrow down search results. You can filter for:

- **Color** - Filter for vehicles of certain colors
- **License plate** - Type a part of a license plate number or the full license plate number to filter for it
- **Country** - Filter for license plates that were issued by certain countries



This search filter is only available if you have XProtect® LPR installed in your system.

- **Vehicle speed** - Filter for vehicles moving at a certain speed
- **Vehicle type** - Filter for types of vehicles, for example trucks
- **Match list** - Filter for license plates that are part of certain match lists



This search filter is only available if you have XProtect® LPR installed in your system.

Search for video at location



This search category and its search filters are only available if they were enabled by your system administrator.

When you search for video recordings recorded at a certain location, you can apply search filters to show only search results in a specific location.

1. Select the cameras that you want to include in your search.
2. Click **Search for > Location > New search**.
3. Apply search filters to narrow down search results. You can filter for geographic coordinates by specifying the latitude and longitude coordinates and the radius of the search area.

Search results, settings, and actions

This section describes the search timeline and the different settings and things you can do while searching.

For information about saving and managing searches, see [Managing your searches on page 69](#).

The search timeline on the Search tab

The search timeline gives you an overview of how the search results are distributed. You can also navigate the search results.

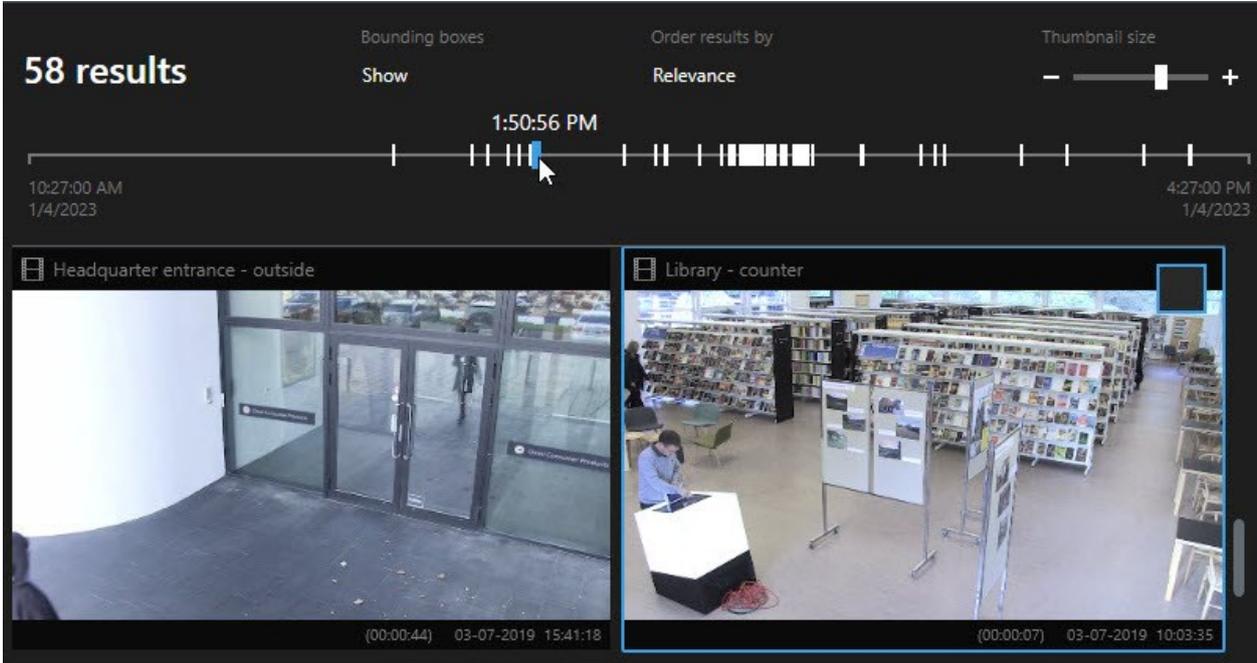
The scope of the search timeline changes according to the selected time span, for example **Last 6 hours**.



The white markers indicate where the search results are.

Individual markers may indicate that there are multiple search results. By hovering over the markers, information is displayed about the time and the cameras that recorded the events or incidents.

To navigate the search results, click a marker. The marker turns blue, and the associated search result is marked with a blue border.



If the marker that you select shows more than one search result, the first search result is marked.



If a marker indicates more than 10 search results, a message will inform you about the number of search results and the number of associated cameras.

Actions available from search results (overview)

Based on your search results, there are multiple actions available. Some actions are available in the blue action bar, others in the preview area.



The actions available may differ depending on your user permissions.

Action	Description
	<p>Add the selected sequences to the Exports tab > Export list.</p> <p>All the sequences that you add to the Export list are ready for export on the Exports tab. See also Exporting video, audio, and still images on page 74.</p>
	<p>Create PDF reports with information about the search results, for example still images from the video sequences.</p>
	<p>Bookmark multiple search results at the same time.</p>
	<p>Edit multiple bookmarks at the same time.</p>
	<p>Add evidence locks to protect the video sequences and data from related devices, for example audio, from being deleted.</p>
	<p>Open multiple search results in a detached window, where you can view the video in live or playback mode, export, create evidence locks, and retrieve recordings from devices and cameras belonging to interconnected VMS systems.</p>
	<p>Take multiple snapshots of your search results at the same time.</p>
	<p>When you are previewing video, you can transfer the current time to the independent playback timeline. This is useful, for example, if you want to look at related cameras in playback mode at the time that an incident took place.</p>

MIP-related actions

There may be additional actions available, related to third-party software. The MIP SDK is used to add these additional actions.

Merged search results (explained)

If you are using multiple search categories, and the search results overlap in time, they are merged into one. In some situations into multiple search results. This happens when different search criteria match video from the same camera within the same time span. Instead of returning different search results that show basically the same video sequences, XProtect Smart Client simply gives you one search result that contains all details, for example the camera name, indications of event time, and search categories.

Examples:

Find vehicle on Memory Lane 15

Suppose you want to find a vehicle of the type truck on Memory Lane 15 within the last two hours. To configure your search:

1. Select 10 cameras placed in the right area.
2. Set **Duration** to **Last 2 hours**.
3. Add the search category **Vehicles** and filter on **Truck**.
4. Add the search category **Location** and filter on the geo coordinates of the address and a search radius.
5. Select the **Match all criteria** check box.



For more information, see [Search for vehicles on page 51](#) or [Search for video at location on page 52](#).

Find bookmarked alarm

Two days ago an alarm went off in your XProtect VMS system. To make it easy to find the alarm again, you bookmarked it. Now you want to find the bookmark again to make an export. To configure your search:

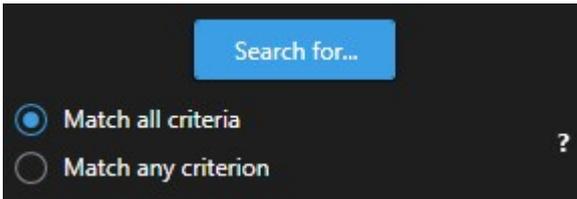
1. If you remember which camera recorded the incident, select the camera. Otherwise, select a range of possible cameras.
2. Set **Duration** to **Last 24 hours**, or specify a **Custom interval**.
3. Add the search categories **Bookmarks** and **Alarms**.
4. Select the **Match all criteria** check box.



For more information, see [Search for bookmarks on page 48](#) or [Search for alarms on page 50](#).

Match any or all search criteria (explained)

If you are using XProtect Corporate or XProtect Expert, you can use multiple search categories in the same search. While configuring your search, specify whether your search must match any or all the search categories.



Matching all criteria gives you fewer but more accurate search results. In addition, if the search results overlap, they are combined into fewer results. See also [Merged search results \(explained\) on page 55](#).

Matching any criterion gives you more but less accurate search results.



Actions that are normally available in the action bar may not be available for merged search results. This happens if the action that you are trying to perform cannot be used with one of the search categories.

Start search from cameras or views

If you are looking for something specific in one or more video streams, you can start search from a single camera, or from an entire view. The search workspace opens in a new floating window.

Steps:

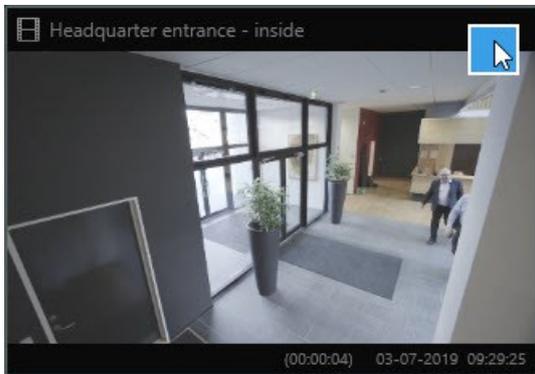
1. Switch to live or playback mode.
2. To search a single camera:
 1. Hover over the view item. The camera toolbar appears.
 2. Click . A new **Search** window opens, and a search for recorded video starts immediately based on the camera in the view item.

3. To search all cameras in a view:
 1. Make sure the correct view is open.
 2. At the top of the view, click . A new **Search** window opens, and a search for recorded video starts immediately based on the cameras in the view.
 3. Depending on your goal, change the time span, search categories and filters, or similar. For more information, see [Searching for video data on page 42](#).

Open search results in detached windows

You can open a search result in a new window. The window opens in playback mode allowing you to investigate the incident using the main timeline and perform other actions, for example exporting video.

1. Hover over the search result and select the blue check box that appears.



2. The blue action bar appears:



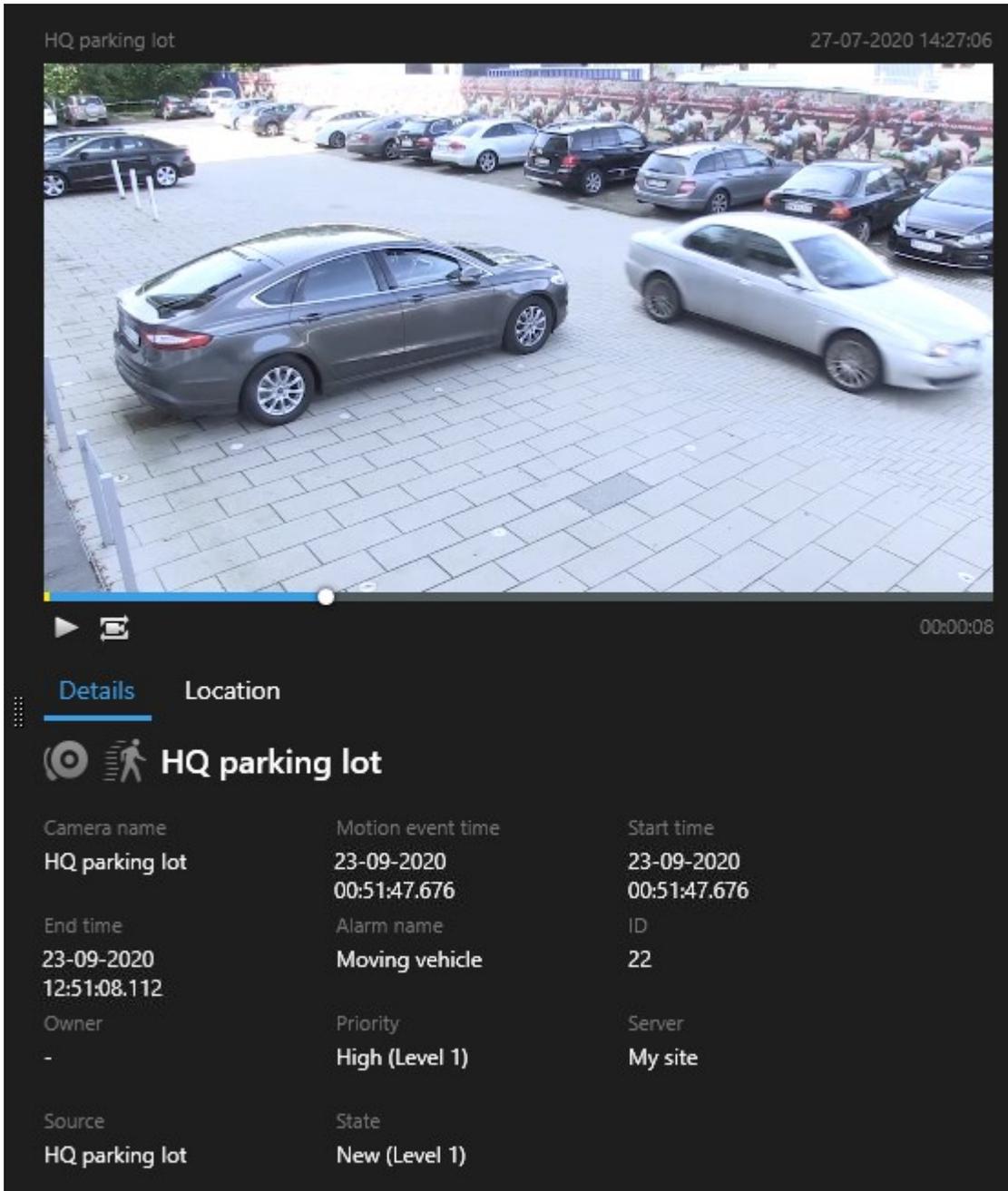
3. Click  to open the search result in a new floating window in playback mode.
4. To move the window to a different monitor, click and drag the window and release when appropriate.

Preview video from search results

To determine whether you have found the video sequence you were looking for, you can do a quick preview.

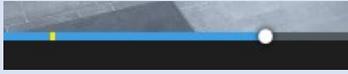
Steps:

1. When you have run a search on the **Search** tab, select a search result. A still image from the associated video sequence appears in the preview area.

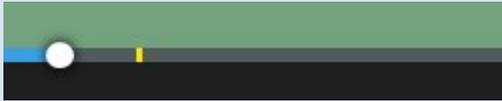


2. Click  to play back the video.
3. To preview the video in full-screen mode, double-click the individual search results. Double-click again to return to the search results.
4. Scroll with your mouse wheel to zoom in or out. You can even click and drag to zoom in on a specific area.

The yellow marker in the search timeline indicates the event time. Hover over the marker to view the event time.



Multiple markers appear in the same search timeline when search results are combined.



This happens, for example, if you have searched for **Motion** and **Vehicles**, and the search result match both criteria. In this example, one marker would indicate when the motion started. The other marker would indicate when the vehicle was identified as a vehicle.

Show or hide bounding boxes during search

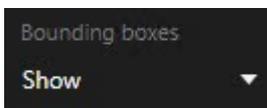
During search, bounding boxes help you identify objects, for example based on motion detection. You can turn the bounding boxes on or off.



The bounding boxes mostly appear in the thumbnail images of your search results. However, if your VMS system is configured to search for metadata, bounding boxes may also appear when you preview video from the search results.

Steps:

1. Go to the **Search** tab and run a search.
2. In the upper-right corner below **Bounding boxes**, do one of the following:
 - Select **Show** to make the bounding boxes appear
 - Select **Hide** to hide the bounding boxes



Sorting options

You can sort your search results by:

Name	Description
Relevance	<p>This sorting option is only available if you are using one of these products:</p> <ul style="list-style-type: none"> • XProtect Corporate • XProtect Expert <p>Relevance means different things depending on how your search is configured:</p> <ul style="list-style-type: none"> • None or one search category selected - the search result with the newest event time is displayed first • Multiple search categories selected/Match any criterion - the search result with most matching search categories is displayed first. If two search results have the same number of matching search categories, the search result with the newest event time is displayed first • Multiple search categories selected/Match all criteria - the search result with most event times is displayed first. If two search results have the same number of event times, the search result with the newest event time appears first
Newest event time	Search results with the most recent event time appear first.
Oldest event time	Search results with the oldest event time appear first.
Newest start time	Search results with the most recent start time appear first.
Oldest start time	Search results with the oldest start time appear first.

Locate cameras while searching

If your VMS system is configured to use smart map , you can view the geographical location of the cameras in a smart map preview while searching for video and related data.

Requirements

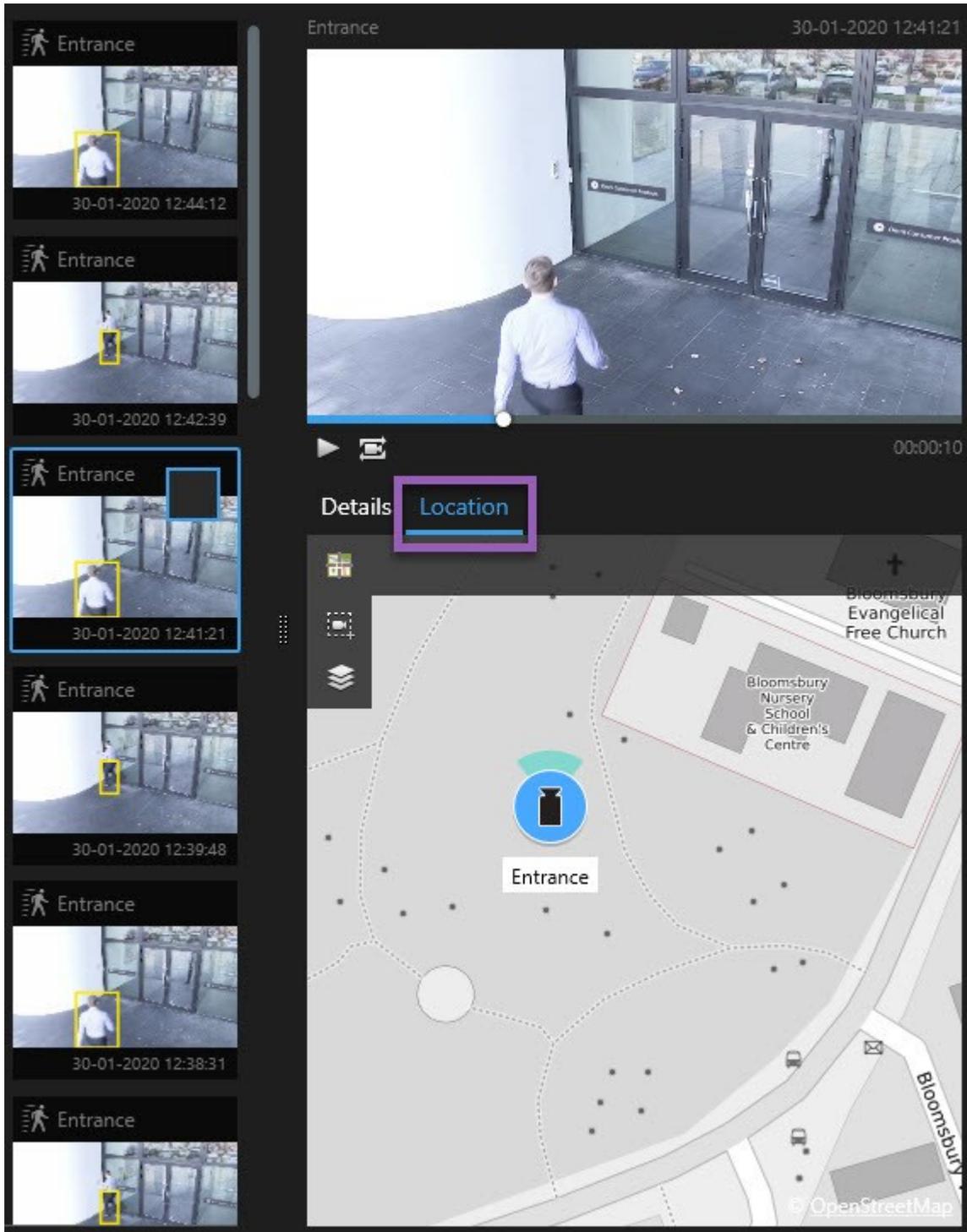
- You are using one of these XProtect products:
 - XProtect Corporate
 - XProtect Expert



- Cameras must be geographically positioned. If in doubt, ask your system administrator

Steps:

1. Select the search result that you are interested in.



2. In the preview area, click **Location**. The camera is displayed in its geographic context.

3. To get an overview of the surroundings, you can zoom out with the scroll wheel on your mouse, or if the camera is a PTZ camera, you can pan.
4. To return to the camera, click  **Re-center**.

Camera icons (explained)

Some of the icons described in this topic appear only in the **Location** area on the **Search** tab, whereas icons with red are associated with alarms and also appear in views that contain the smart map. The icons differ depending on the situation.

In the table below:

- Gray background indicates that you have *not* selected the camera
- Blue background indicates that you have selected the camera

Icon	Tabs/modes	Description
	Search tab	The camera is not associated with any of the search results.
	Search tab	You have selected the search result that the camera is associated with.
	Live mode, Playback mode, and Search tab	This is a source camera: a camera that triggered an alarm.
	Live mode, Playback mode, and Search tab	This is a related camera: a camera associated with the selected source camera, which triggered the alarm. This icon only appears after you select a source camera.
	Live mode, Playback mode, and Search tab	This is both a source camera and a related camera. This camera: <ul style="list-style-type: none"> • Triggered an alarm, and

Icon	Tabs/modes	Description
		<ul style="list-style-type: none">• Is associated with the selected source camera, which triggered the alarm <p>This icon only appears after you select a source camera.</p>



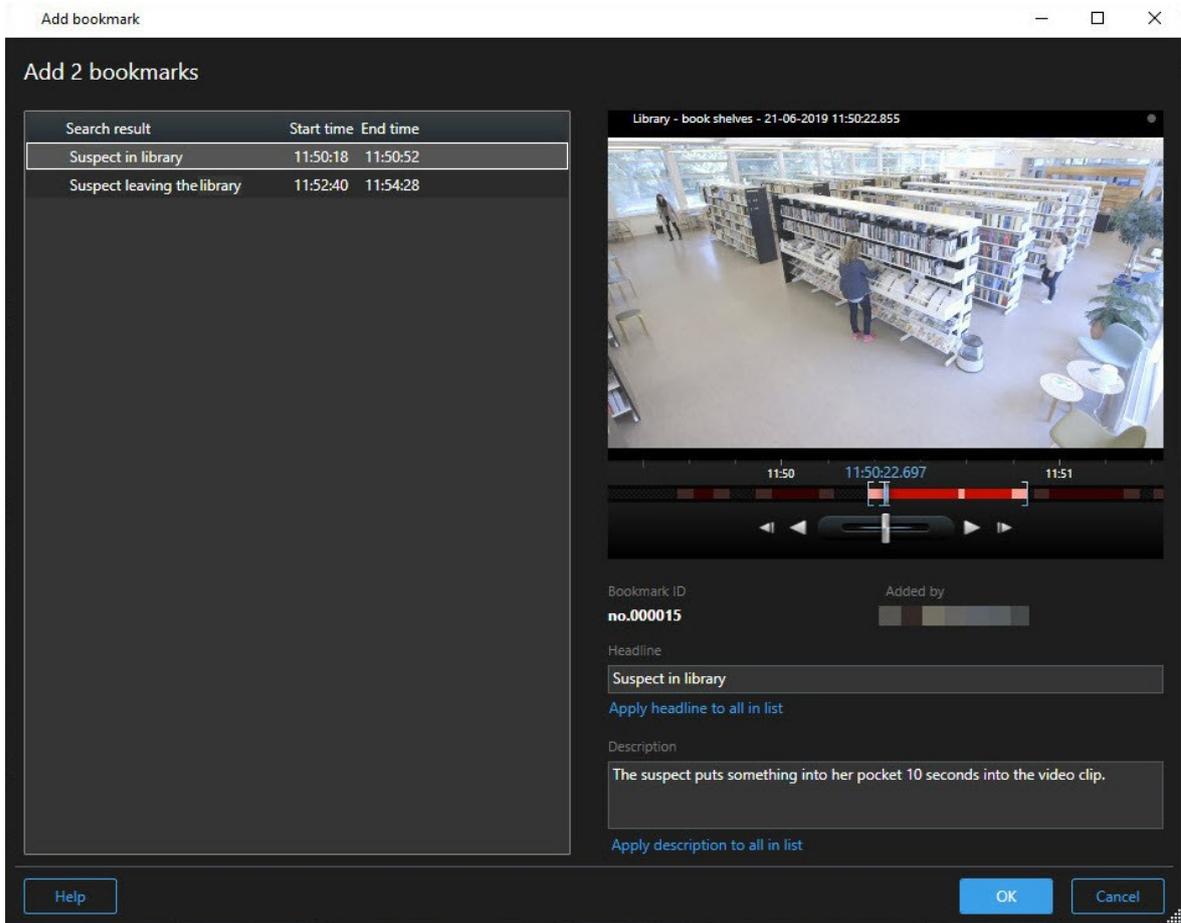
Source cameras and related cameras are defined in XProtect Management Client as part of the alarm definition.

Bookmark search results

To document or share incidents that you have found by searching, you can bookmark multiple search results at the same time. Bookmarking incidents allows you or other operators to find the incidents later.

Steps:

1. For each search result that you want to bookmark, hover over it and select the blue check box .
2. In the blue action bar, click . A window appears. The picture reflects the situation where you have selected two search results.



3. Select the search results one by one to add details to the bookmarks and follow these steps:
 1. To change the default time span, drag the handles in the search timeline to a new position.



2. Enter a headline and possibly also a description of the incident.
3. If you want the same headline or description to apply to all the bookmarks, click:
 - **Apply headline to all in list**
 - **Apply description to all in list**
4. Click **OK** to save the bookmarks. A progress bar informs you when the bookmarks are created.



If XProtect Smart Wall is set up in your system, click **Display on Smart Wall** to send a bookmark to a monitor in a Smart Wall.

Edit bookmarks from search results

You can edit the details of bookmarks in your system, for example the time span, headline, and description. You can also edit multiple bookmarks at the same time.

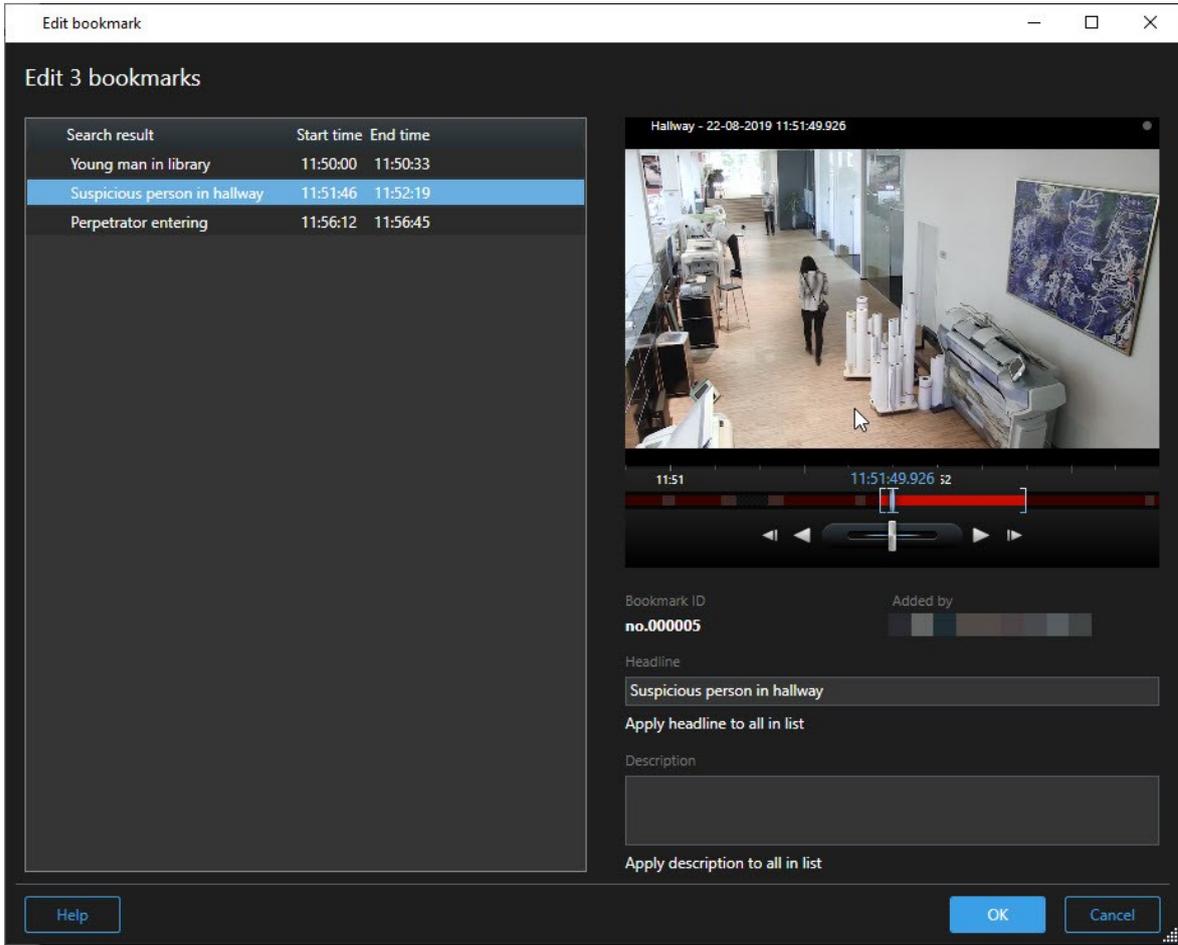
Requirements

You must have the user permissions to edit bookmarks. This is done by your system administrator in Management Client under **Roles > Overall Security**.

Steps:

1. On the **Search** tab, find the bookmarks that you want to edit. When you perform the search, make sure that you have selected **Search for > Bookmarks**.
2. For each bookmark that you want to edit, hover over it and select the blue check box .

- In the blue action bar, click . A window appears.



- Select the search results one by one to edit the details, for example time span, headline, and description.
- Click **OK** to save your changes. A progress bar informs you when the changes are saved.



If XProtect Smart Wall is set up in your system, click **Display on Smart Wall** to send the bookmarks a video wall.

Take snapshots from search results

To save and share still images from your search results, you can take multiple snapshots at the same time.

Steps:

1. When you have performed your search, hover over the search results, one by one, and select the check box .
2. In the blue action bar, click  and select **Create snapshot**. A progress bar informs you when the snapshots are created.
3. To locate the snapshots on your computer, go to the location that is specified in the **Settings** dialog > **Application** > **Path to snapshots**.

Transfer the search time to the main timeline

When you are previewing a search result on the **Search** tab, you can synchronize the time in main timeline with the time in the search timeline. This is useful if, for example, you have found an incident, and you want to investigate what happened at that time on other cameras.

1. On the **Search** tab, select a search result.
2. In the preview area, click  to transfer the current time in the search timeline to the main timeline. You will stay on the **Search** tab.



3. To check other related cameras, switch to playback mode and select a view that contains the cameras that you are interested in. The main timeline is now in sync with the search result.

Managing your searches



This feature is only available in certain XProtect VMS systems. For more information, see the product comparison chart: <https://www.milestonesys.com/products/software/product-index/>

You can save your searches to reuse them and share them with other operators. Depending on your user permissions, you can also access and use the searches made by others, unless they are private. When a search has been saved, you can:

- Change the name and description, and make the search private or public.
- Modify how the search is configured, for example by adding or removing cameras or by adjusting the search categories.
- Delete the searches as they become obsolete.

Save searches

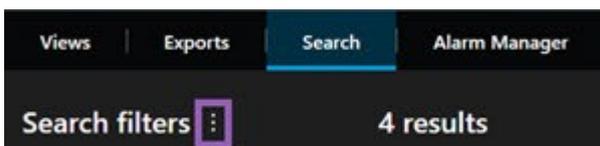
You can save your searches, so you can reuse them later or share them with other operators.

Requirements

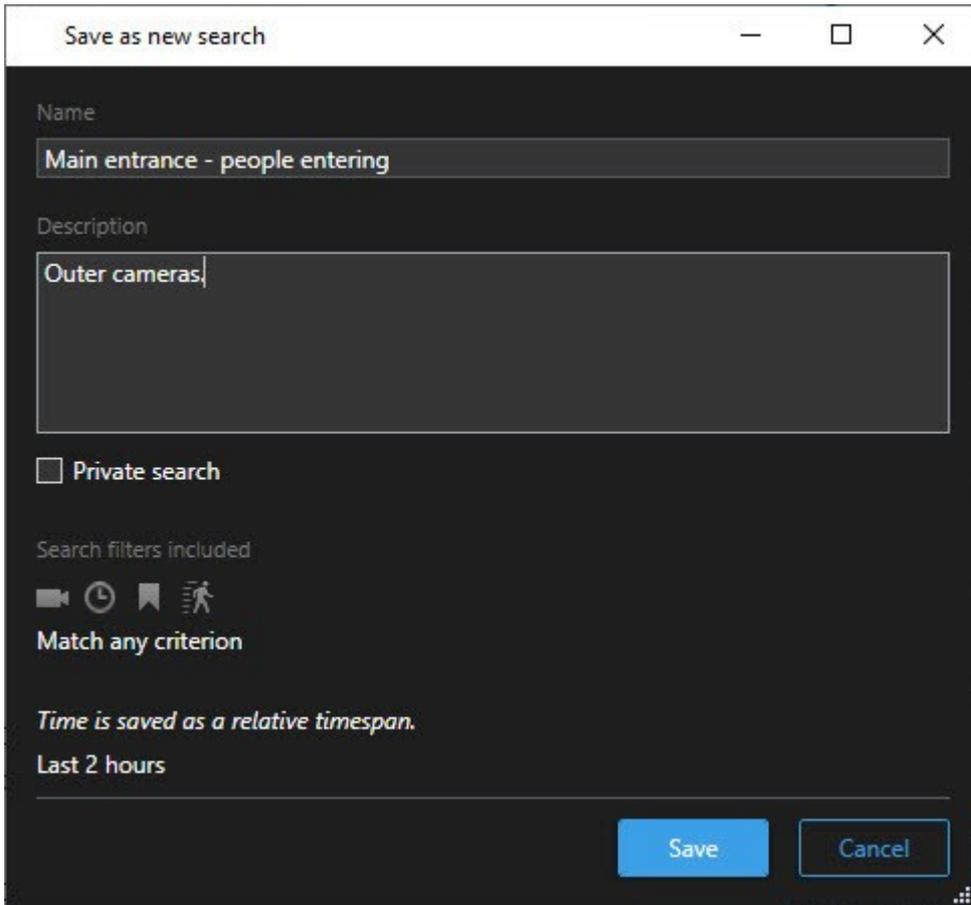
To save new searches that will be available to other users of your VMS system, the **Create public searches** user permission must be enabled on your role in XProtect Management Client.

Steps:

1. On the **Search** tab, configure your search. See [Searching for video data on page 42](#).
2. Click  to the right of **Search filters**.



3. In the list that appears, click **Save as**. A window appears.



4. Select a name that will make it easy for you to find the search, and possibly also a description. Later, when you use keywords to find the search, the search includes both the **Name** and the **Description** fields.
5. To make the search visible only to you, select the **Private search** check box.
6. Click **Save**. A progress bar informs you when the search is saved.



To get an overview of saved searches, click  and then **Open and manage searches**.

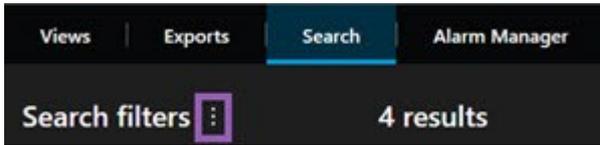
Find and open saved searches

Requirements

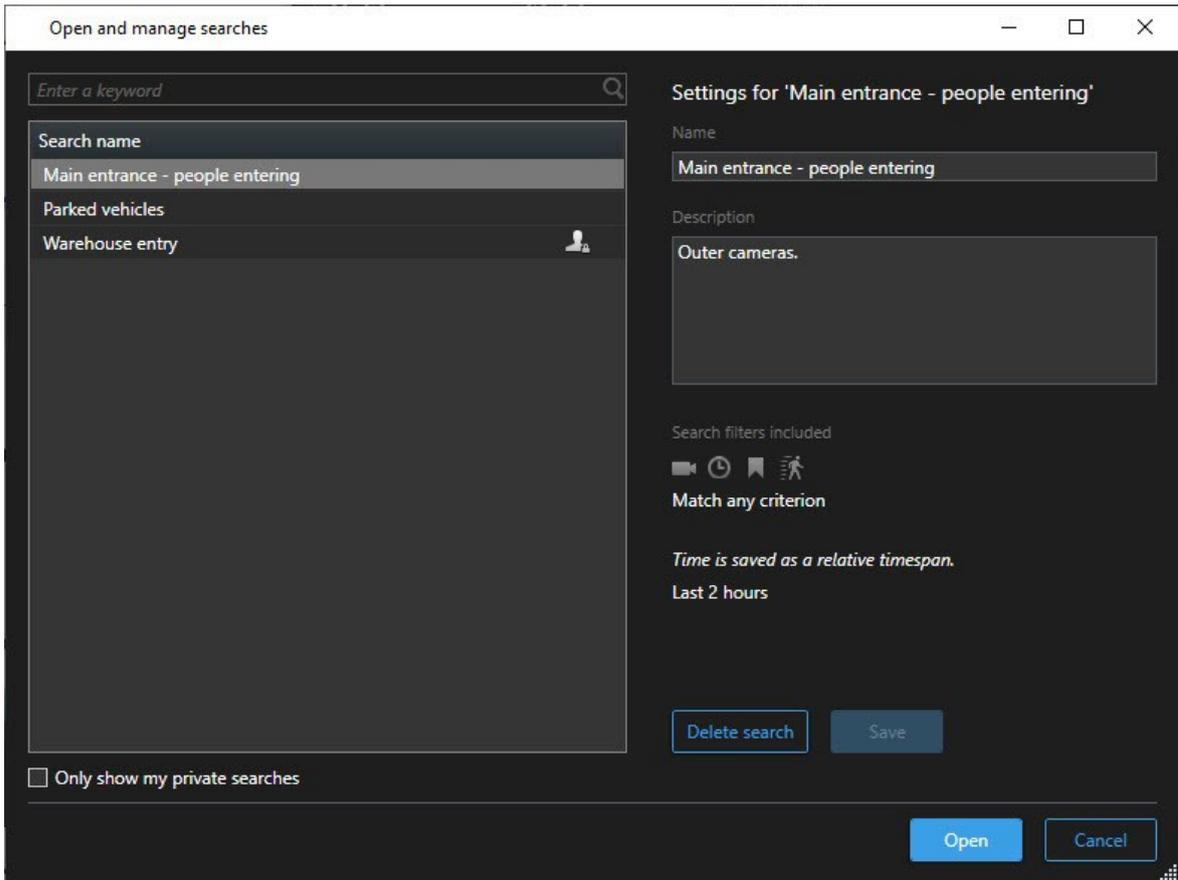
To find and open public searches, the **Read public searches** user permission must be enabled on your role in XProtect Management Client.

Steps:

1. On the **Search** tab, click  to the right of **Search filters**.



2. In the list that appears, click **Open and manage searches**. A window appears.



3. Find and double-click the search that you want to open, or click **Open**. Immediately, the search is run.

 If many searches are listed, you can use keywords to find the search. The search includes both the **Name** field and the **Description** field.

4. You can modify the search, for example by adding cameras. Click  > **Save** to save the changes.

Edit or delete saved searches



This feature is only available in certain XProtect VMS systems. For more information, see the product comparison chart: <https://www.milestonesys.com/products/software/product-index/>

You can change the details of a saved search, or you can change how the search is configured, for example the search categories.

If the searches become obsolete, you can delete them.

Requirements

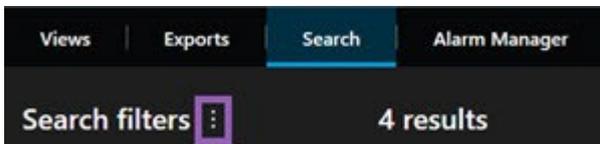
The following user permissions are enabled on your role in XProtect Management Client:

- To find and open public searches, the **Read public searches** user permission must be enabled
- To edit a public search, the **Edit public searches** user permission must be enabled
- To delete a public search, the **Delete public searches** user permission must be enabled

Learn how to:

Edit the details of a saved search

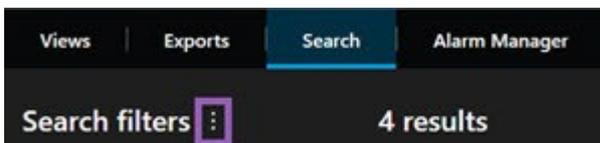
1. On the **Search** tab, click  to the right of **Search filters**.



2. In the list that appears, click **Open and manage searches**. A window appears.
3. Find and select the search that you want to change.
4. Make your changes, for example by entering a name for the search, and click **Save**.

Change how a search is configured

1. On the **Search** tab, click  to the right of **Search filters**.



2. In the list that appears, click **Open and manage searches**. A window appears.

3. Find and double-click the search that you want to open, or click **Open**. Immediately, the search is run.



If many searches are listed, use the search function to find the search.

4. Modify the search, for example by adding cameras, and click  > **Save**.

Delete a saved search

1. Open the **Open and manage searches** window as described above.
2. Find and select the search that you want to delete.
3. Click **Delete search**.

Exporting video evidence

If you need to document an incident that has occurred, for example, to give legal evidence, you can export a video sequence from XProtect Smart Client. If you need to prove that the video evidence has not been tampered with, you can export it in the XProtect format. If you use this format, you can "lock" the evidence behind a digital signature that verifies the authenticity of the exported video.

Exporting video, audio, and still images

You export video and associated audio in different formats. Depending on your VMS system, you can also export still images and other types of data that might be available.

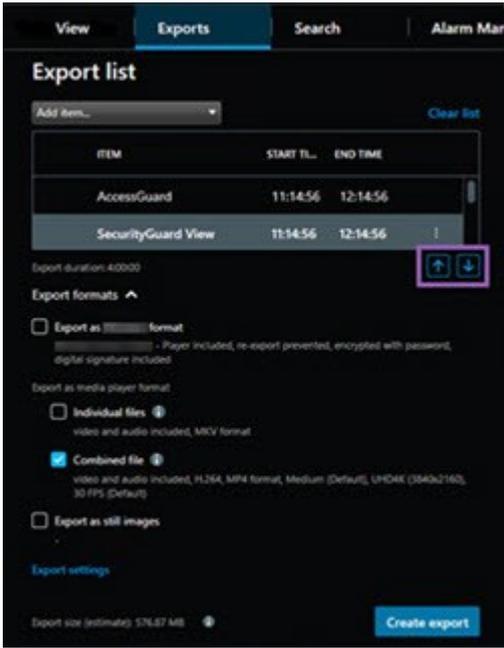
Export formats

XProtect Smart Client enables you to export in one or more of the following formats.

Format	Description
XProtect format	Use the XProtect format to include the XProtect Smart Client – Player along with the export which is the only media player that can play this format. To verify that the exported evidence has not been tampered with, select Export settings > XProtect format > Include digital signature . This setting enables the Verify signatures button in the XProtect Smart Client – Player.
Media player format	Use a format that requires no XProtect knowledge, and that most media players can play. You only need an installed media player to play this format.
Still images	Export a still image file for each frame for the time period you have selected.

When you export video sequences with the **Export as media player format** option, you can export them in two formats:

- **Individual files** format that exports a file for each video sequence you have added to the export list.
- **Combined file** format that exports a single file that contains all the video sequences you have added to the export list, according to the order you have arranged them. To rearrange any of your added video sequences before you start an export, use the arrows to reorder the files in the export list.



Add video sequences to the Export list

You must add video sequences to the **Export list** before you can create the export. You can add files from several places in XProtect Smart Client:

1. From the **Exports** tab, in the **Export list**, select **Add item** to add the video sequences.
2. From the **Search** tab, for each search result to export, select the blue check box , then select **Add to export list** in the blue action bar. To select all your search results, select one search result and press **Ctrl+A**. In the blue action bar that is displayed, select **Add to export list** .

3. From the **View** tab, in **Playback** mode, you have two options for adding video sequences to the **Export list**:

Option 1:

1. In the timeline, select **Set start and end time on timeline**  to select the start and end time of the sequence to export.
2. For each item to include in the export, select the associated check box . If you want to export all your search results at the same time, choose the **Select all** button  on the workspace toolbar in the upper-right corner.
3. Select **Export > Export** to add the selected video sequences to the **Export list**. This action automatically takes you to the **Exports** tab. Alternatively, select **Export > Add to export list** to add the selected video sequences to the **Export list** while you remain in playback mode and can add more sequences to the export list.

Option 2:

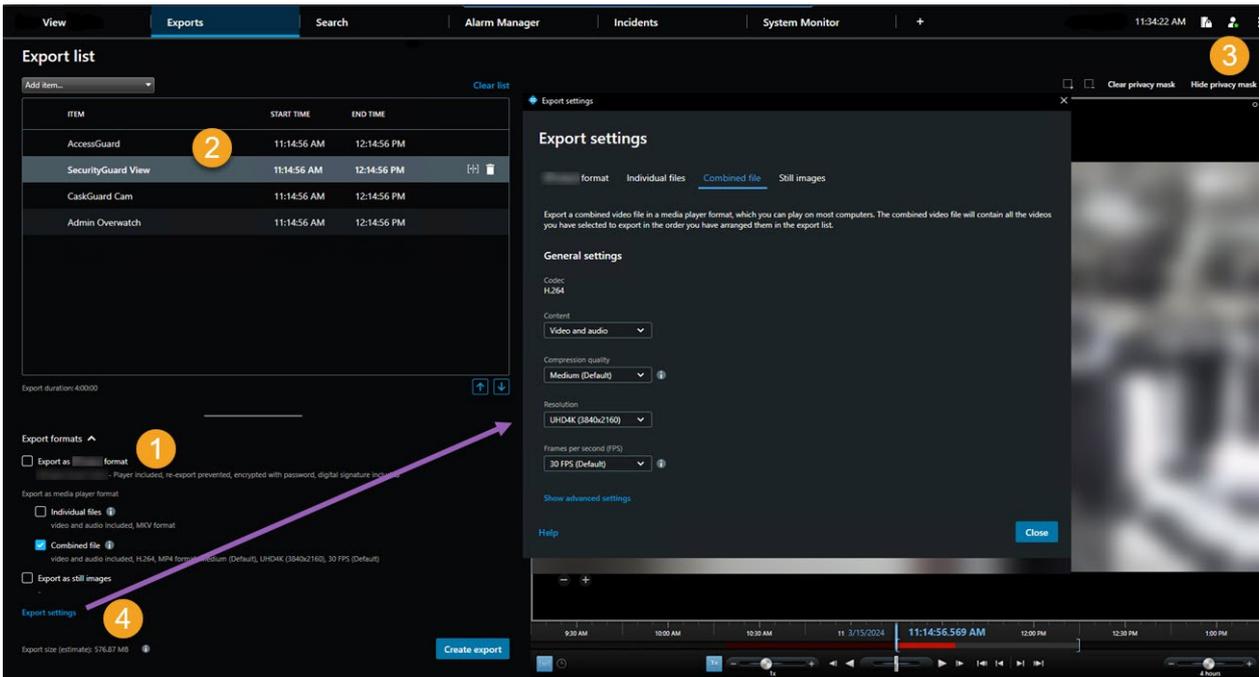
1. In the **Evidence lock list**, select an existing evidence lock.
2. Select **Add to export list** to add the selected evidence lock to the **Export list** and to stay in playback mode, or select **Evidence lock > View > Evidence lock list**.



To export several video sequences from the same camera on the **Export list**, select the sequence and click the split camera icon .

Adjusting export settings

When you have added at least one video sequence to the **Exports** tab > **Export list**, you must also select at least one export format. See [Export formats on page 74](#). Optionally, you can adjust export settings.



Under the **Export list**, select at least one export format. See [Export formats on page 74](#).

For each video sequence on the **Export list**, you can change the **Start time** and the **End time**.

You can add privacy masks to video sequences to cover different video areas. See also [Add privacy masks to recordings during export on page 78](#).

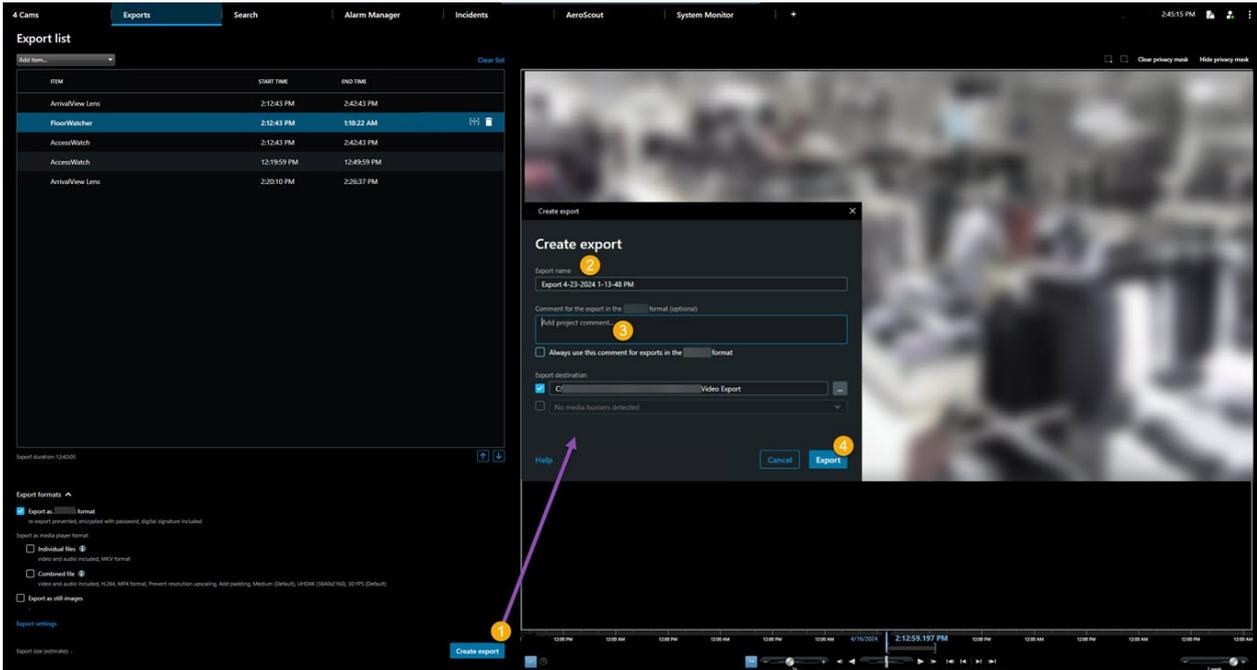
For each format, you can change the **Export settings**.

 The duration of the export and the number of cameras affect how long it takes to complete the export.

Create the export

After you added at least one sequence to the **Exports** tab > **Export list** and selected at least one export format, you can create the export.

 You might not have user permissions to export video data.



1. Select the **Create export** button. The **Create export** window opens.
2. In the **Export name** field, an export name is automatically created for you. You can change the name.
3. In the **Export destination** field, specify a path for the export. The export you create is stored in the folder you choose here.
4. Select **Export** to export the evidence.
5. The export is created and stored in the folder that you specified as the **Export destination**. See also [View exported video on page 80](#).

To stop an export before it's finished, select **Cancel**, then confirm by clicking **Cancel** in the displayed window. You can always restore your export list after canceling it, by selecting **Restore export list**. In the same way, you can restore the export list after failed and successful exports. When you restore an export list, it has the same order as the original export list and you don't need to reorder any video sequences.

If you start an export of a combined file and you delete or rename one of the video sequences in the export list before the files are combined, that specific video sequence will be missing in the final exported file. It is listed as **Completed with errors**, **Failed**, or **Partly failed** in the export result window. You must create a new export.

You are now ready to store and share the video safely. See the [GDPR Privacy Guide](#) and the [Milestone GDPR e-learning for VMS Operators](#) for more information on handling exported data.

Add privacy masks to recordings during export

When you export video, you can add privacy masks to cover selected areas. When someone watches the exported video, the areas with privacy masks appear as solid blocks.



The privacy masks you add here apply to all the video sequences in the current export from the camera you selected in the **Export list**. If you remove a privacy mask from one video sequence, it is also automatically removed from all other video sequences for that camera. The export may already include privacy masks which your system administrator has already defined for certain cameras.

1. On the **Exports** tab > **Export list**, select the camera you want to add a privacy mask to.
2. For each area you want to add a privacy mask to, click the  button, and drag the pointer over the area.
3. To remove a part of a privacy mask, click the  button, and drag the pointer over the area you want to remove a privacy mask from. Repeat this step for each part you want to remove.



To temporarily hide privacy masks, click and hold the **Hide privacy mask** button.

4. Click **OK** to return to the **Exports** tab.



The preview image contains an invisible grid with cells. If the area you select includes any portion of a cell, the system adds a privacy mask to the entire cell. The result can be that the system adds a privacy masks to slightly more of the image than you intended.

Storyboards (explained)

The storyboard function helps you paste together video sequences from one camera or from multiple cameras into one cohesive flow. You can use the sequence of events, the storyboard, as proof of evidence in internal investigations or the court of law.

You can skip all sequences that are not relevant and avoid wasting time looking through long sequences of video that you do not need. Also, you avoid wasting storage space on stored sequences that do not contain relevant video.

Export storyboards

You can create a storyboard by pasting together video sequences into one cohesive flow and then export it.

1. In playback mode, start by opening a view that contains items that you want to add to your storyboard.
2. In the timeline, click .
3. Select the start time and the end time for the storyboard.

4. For each item in the view that you want to add, select the corresponding check box and click **Export > Add to export list**.

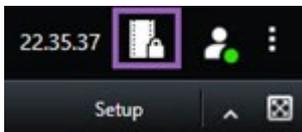
Repeat steps 1-4 until you have added all items that you need for your storyboard.

5. Continue with the export process. See [Adjusting export settings on page 76](#) and [Create the export on page 77](#).

Export locked video evidence

When you export evidence locks, also the data from devices related to the cameras is included in the export.

1. Switch to playback mode.
2. On the workspace toolbar in the upper-right corner, click **Evidence lock** and select **View**.
3. If you want to stay in live mode instead of in playback mode, select **Evidence lock** on the global toolbar.



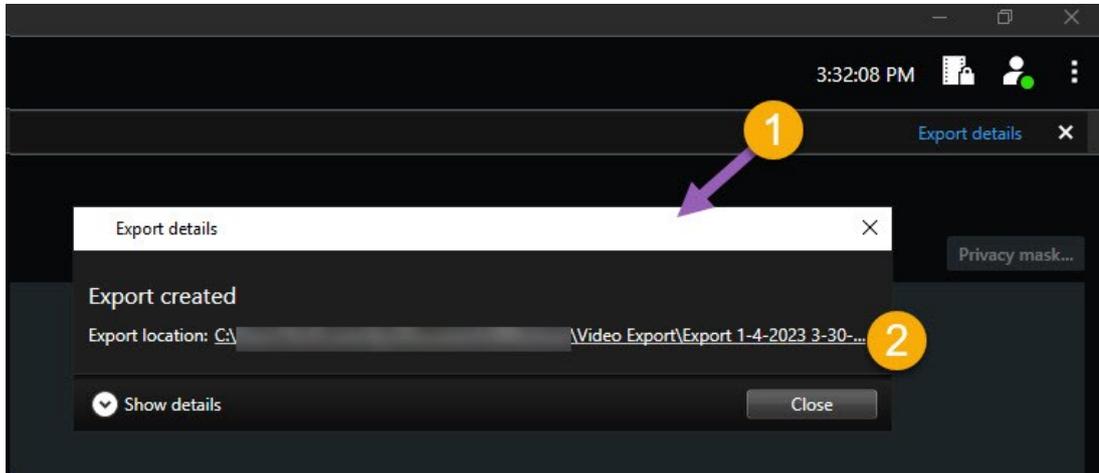
A list of existing evidence locks with devices that you have permission to access appears.

4. Select an evidence lock and click **Add to export list**.
5. Continue with the export process. See [Adjusting export settings on page 76](#) and [Create the export on page 77](#).

View exported video

The exports that you create are stored in the folder that you specified in the **Create export window > Export destination** field.

1. To view the exported video immediately after creating it:
 1. In the upper-right corner of XProtect Smart Client, select **Export details**.
In the **Export details** window > **Export location** field, a link shows the location of the output folder.
 2. Click the link to open the output folder and to access the exported files.



2. If you exported video at a previous point in time:
 1. Go to the folder where you store exports. The default location is C:\Users\[username]\Documents\Milestone\Video Export. You can check the folder location in the **Create export** window > **Export destination** field. This works only if you always use the same export destination.
 2. Depending on the output format, open the relevant folder and double-click the video file or still image. If the format is **XProtect format**, double-click the Smart Client – Player file with the .exe extension.

Printing or creating surveillance reports

Depending on your needs, you can either print surveillance reports on the fly based on still images from surveillance cameras, or you can create surveillance reports that you save to your computer.

Print report from single cameras

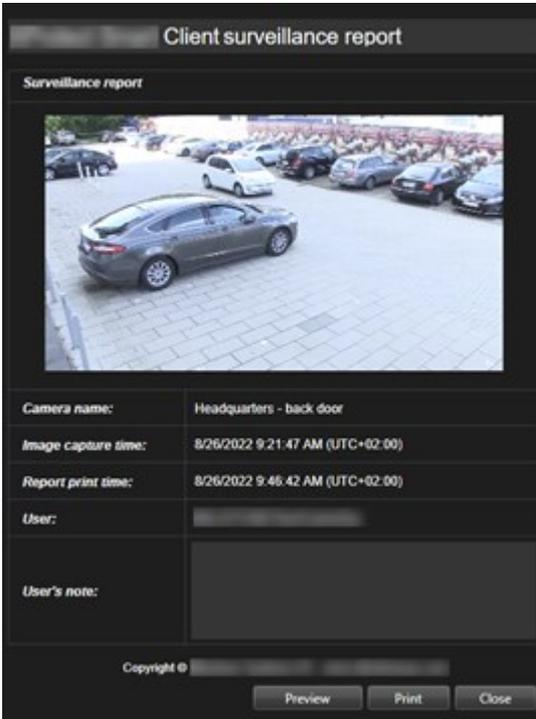
You can print single still images and related information from live cameras or from recorded video. Notes that you add are also printed.

1. To print a recorded still image, switch to playback mode.
2. To print a live still image, switch to live mode.
3. Open the view that contains the camera you are interested in.

4. Hover over the view item. The camera toolbar appears.



5. Click the  icon. A window appears.



6. Add notes if required.
7. Click **Print**. The Windows **Print** dialog appears.
8. If necessary, change the print settings and print. Otherwise, just click **Print**.



You can also print information about alarms if your organization uses the alarm handling features.

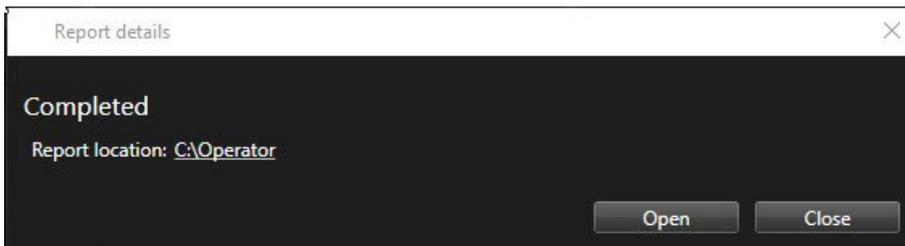
Create reports from search results

Based on search results, you can create a surveillance report that contains information about the events or incidents, for example still images, event time, information about the cameras, and notes. The report is saved as a PDF file.

1. Go to the **Search** tab and run a search.
2. For each search result that you want to include in the report, hover over it and select the blue check box .
3. In the blue action bar, click . A window appears.
4. Change the default report name into something meaningful. In the report, the name is displayed as the page header.
5. To change the folder that the report is saved to, in the **Report destination** section, click  and select a different folder.
6. Optionally, write a note in the **Report note** field.
7. Click **Create**. A progress bar shows that the report is generated.



8. When the report is generated, select **Details** from the progress bar.
9. Select **Open** to open the report or click the link to open the report's destination folder.



-  To change the layout of the report, open the **Settings** dialog, click **Advanced**, and then select a different value in the **PDF report format** list.

Copy images to clipboard

You can copy single still images from selected cameras. Copied images can then be pasted (as bitmap images) into other applications, such as word processors, e-mail clients, etc. You can only copy a single image from one camera at a time.

- On the camera toolbar, click the **Copy to clipboard** button  to copy an image



You can now paste (CTRL+V) the image into your application of choice.

Glossary

A

access control

A security system that controls the entering of persons, vehicles, or others into a building or area.

adaptive streaming

A feature that improves the video decoding capability and thereby the general performance of the computer running XProtect Smart Client or another video viewing client.

alarm

Incident defined on surveillance system to trigger an alarm in XProtect Smart Client. If your organization uses the feature, triggered alarms are displayed in views that contain alarm lists or maps.

archiving

The automatic transfer of recordings from a camera's default database to another location. This way, the amount of recordings you are able to store will not be limited by the size of the camera's default database. Archiving also makes it possible to back up your recordings on backup media of your choice.

aspect ratio

Height/width relationship of an image.

AVI

A popular file format for video. Files in this format carry the .avi file extension.

B

bookmark

An important point in a video recording, marked and optionally annotated so that you and your colleagues will easily be able to find it later.

C

cardholder

A person that possesses a card that is recognizable to an access control system and gives access to one or more areas, buildings or similar. See also access control.

carousel

A particular position for viewing video from several cameras, one after the other, in a view in XProtect Smart Client.

cluster

a grouping of devices or plug-in elements – or a combination - on the smart map displayed visually as a circular icon with a number. Clusters appear on certain zoom levels indicating the number of devices or plug-in elements within a particular geographical area.

codec

A technology for compressing and decompressing audio and video data, for example in an exported AVI file.

CPU

Short for "central processing unit", the component in a computer that runs the operating system and applications.

custom overlay

A user-defined, graphic element that users can add to a smart map, for example to illustrate a floor plan in a building, or to mark borders between regions. A custom overlay can be an image, a CAD drawing, or a shapefile.

D

deadzone

A deadzone determines how much a joystick handle should be allowed to move before information is sent to the system. Ideally, a joystick handle should be completely vertical when not used, but many joystick handles lean at a slight angle. When

joysticks are used for controlling PTZ cameras, even a slightly slanting joystick handle could cause PTZ cameras to move when it is not required. Being able to configure deadzones is therefore often desirable.

DirectX

A Windows extension providing advanced multimedia capabilities.

E

event

A predefined incident occurring on the surveillance system; used by the surveillance system for triggering actions. Depending on surveillance system configuration, events may be caused by input from external sensors, by detected motion, by data received from other applications, or manually through user input. The occurrence of an event could, for example, be used for making a camera record with a particular frame rate, for activating outputs, for sending e-mails, or for a combination thereof.

evidence lock

A video sequence that is protected, so it cannot be deleted.

external IDP

An external entity that can be associated with the XProtect VMS to manage user identity information and provide user authentication services to the VMS.

F

FIPS

Short for "Federal Information Processing Standards".

FIPS 140-2

A U.S. government standard that defines the critical security parameters that vendors must use for encryption before selling the software or hardware to U.S. government agencies.

fisheye lens

A lens that allows the creation and viewing of 360° panoramic images.

FPS

Frames Per Second, a measure indicating the amount of information contained in video. Each frame represents a still image, but when frames are displayed in succession the illusion of motion is created. The higher the FPS, the smoother the motion will appear. Note, however, that a high FPS may also lead to a large file size when video is saved.

frame rate

A measure indicating the amount of information contained in motion video. Typically measured in FPS (Frames Per second).

G

GOP

Group Of Pictures; individual frames grouped together, forming a video motion sequence.

GPU

Short for "graphics processing unit", which is a processor designed to handle graphics operations.

H

H.264/H.265

A compression standard for digital video. Like MPEG, the standard uses lossy compression.

hotspot

A particular position for viewing magnified and/or high quality camera images in XProtect Smart Client views.

I

i-frame

Short name for intraframe. Used in the MPEG standard for digital video compression, an I-frame is a single frame stored at specified intervals. The I-

frame records the entire view of the camera, whereas the following frames (P-frames) record only the pixels that change. This helps greatly reduce the size of MPEG files. An I-frame is similar to a keyframe.

J

JPEG

An image compression method, also known as JPG or Joint Photographic Experts Group. The method is a so-called lossy compression, meaning that some image detail will be lost during compression. Images compressed this way have become generically known as JPGs or JPEGs.

K

keyframe

Used in the standard for digital video compression, such as MPEG, a keyframe is a single frame stored at specified intervals. The keyframe records the entire view of the camera, whereas the following frames record only the pixels that change. This helps greatly reduce the size of MPEG files. A keyframe is similar to an i-frame.

L

layer

The geographic background on a smart map, a custom overlay, or a system element, for example a camera. Layers are all the graphic elements that exist on the smart map.

LPR

Short for "license plate recognition".

M

MAC address

Media Access Control address, a 12-character hexadecimal number uniquely identifying each device on a network.

map

1) XProtect Smart Client feature for using maps, floor plans, photos, etc. for navigation and status visualization. 2) The actual map, floor plan, photo, etc. used in a view.

Matrix

A product integrated into some surveillance systems, which enables the control of live camera views on remote computers for distributed viewing. Computers on which you can view Matrix-triggered video are known as Matrix-recipients.

Matrix-recipient

Computer on which you can view Matrix-triggered video.

MIP

Short for "Milestone Integration Platform".

MIP element

A plug-in element added through the MIP SDK.

MIP SDK

Short for "Milestone Integration Platform software development kit".

MKV

Short for "Matroska Video". An MKV file is a video file saved in the Matroska multimedia container format. It supports several types of audio and video codecs.

MPEG

A group of compression standards and file formats for digital video, developed by the Moving Pictures Experts Group (MPEG). MPEG standards use so-called lossy compression as they store only the changes between keyframes, removing often considerable amounts of redundant information: Keyframes stored at specified intervals record the entire view of the camera, whereas the following frames record only pixels that change. This helps greatly reduce the size of MPEG files.

O

operator

A professional user of an XProtect client application.

output

Data going out of a computer. On IP surveillance systems, output is frequently used for activating devices such as gates, sirens, strobe lights, and more.

overlay button

A button appearing as a layer on top of the video when you move your mouse cursor over individual view items with cameras when in live mode. Use overlay buttons to activate speakers, events, output, move PTZ cameras, start recording, clear signals from cameras.

P

P-frame

Short name for predictive frame. The MPEG standard for digital video compression uses P-frames together with I-frames. An I-frame, also known as a keyframe, is a single frame stored at specified intervals. The I-frame records the entire view of the camera, whereas the following frames (the P-frames) record only the pixels that change. This helps greatly reduce the size of MPEG files.

pane

Small groups of buttons, fields and more located in the left side of the XProtect Smart Client window. Panes give you access to the majority of the XProtect Smart Client features. Exactly which panes you see depends on your configuration and on your task, for example on whether you are viewing live video when in live mode or recorded video when in playback mode.

patrolling profile

The exact definition of how patrolling with a PTZ camera is carried out, including the sequence for

moving between preset positions, timing settings, etc. Also known as a "patrol scheme".

port

A logical endpoint for data traffic. Networks use different ports for different types of data traffic. Therefore, it is sometimes, but not always, necessary to specify which port to use for particular data communication. Most ports are used automatically based on the types of data included in the communication. On TCP/IP networks, port numbers range from 0 to 65536, but only ports 0 to 1024 are reserved for particular purposes. For example, port 80 is used for HTTP traffic which is used when viewing web pages.

PoS

Short for "Point of Sale" and typically refers to a cash register or cashier counter in a retail shop or store.

preset position

Can be used for making the PTZ camera automatically move in different defined directions when particular events occur, and for specifying PTZ patrolling profiles.

privacy mask

A blurred or solid color that covers an area of the video in the camera view. The defined areas are blurred or covered in live, playback, hotspot, carousel, smart map, smart search, and export modes in the clients.

PTZ

Pan-tilt-zoom; a highly movable and flexible type of camera.

PTZ patrolling

The automatic turning of a PTZ camera between a number of preset positions.

Q

QVGA

A video resolution of 320×240 pixels. QVGA stands for "Quarter Video Graphics Array" and is named as such because the resolution 320×240 pixels is a quarter of the size of the standard VGA resolution which is 640×480 pixels.

R

recording

In IP video surveillance systems, the term recording means saving video and, if applicable, audio from a camera in a database on the surveillance system. In many IP surveillance systems, all of the video/audio received from cameras is not necessarily saved. Saving of video and audio in is in many cases started only when there is a reason to do so, for example when motion is detected, when a particular event occurs, or when a specific period of time begins. Recording is then stopped after a specified amount of time, when motion is no longer detected, when another event occurs or similar. The term recording originates from the analog world, where video/audio was not taped until the record button was pressed.

S

SCS

File extension (.scs) for a script type targeted at controlling XProtect Smart Client.

Sequence Explorer

The Sequence Explorer lists thumbnail images representing recorded sequences from an individual camera or all cameras in a view. The fact that you can compare the thumbnail images side-by-side, while navigating in time simply by dragging the thumbnail view, enables you to very quickly assess large numbers of sequences and identify the most relevant sequence, which you can then immediately play back.

smart map

A map functionality that uses a geographic information system to visualize devices (for example, cameras and microphones), structures, and topographical elements of a surveillance system in geographically accurate, real-world imagery. Maps that use elements of this functionality are called smart maps.

smart search

A search feature that lets you find video with motion in one or more selected areas of recordings from one or more cameras.

Smart Wall control

A graphical representation of a video wall that allows you to control what is displayed on the different monitors.

Smart Wall preset

A predefined layout for one or more Smart Wall monitors in XProtect Smart Client. Presets determine which cameras are displayed, and how content is structured on each monitor on the video wall.

snapshot

An instant capture of a frame of video at a given time.

still image

A single static image.

T

TCP

Transmission Control Protocol; a protocol (i.e. standard) used for sending data packets across networks. TCP is often combined with another protocol, IP (Internet Protocol). The combination, known as TCP/IP, allows data packets to be sent back and forth between two points on a network for longer periods of time, and is used when connecting computers and other devices on the Internet.

TCP/IP

Transmission Control Protocol/Internet Protocol; a combination of protocols (i.e. standards) used when connecting computers and other devices on networks, including the Internet.

V

view

A collection of video from one or more cameras, presented together in XProtect Smart Client. A view may include other content than video from cameras, such as HTML pages and static images. A view can be private (only visible by the user who created it) or shared with other users.

VMD

Video Motion Detection. In IP video surveillance systems, recording of video is often started by detected motion. This can be a great way of avoiding unnecessary recordings. Recording of video can of course also be started by other events, and/or by time schedules.

VMS

Short for "Video Management Software".

X

XProtect Transact

Product available as an add-on to surveillance systems. With XProtect Transact, you can combine video with time-linked Point of Sale (PoS) or ATM transaction data.



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About Milestone

Milestone Systems is a leading provider of open platform video management software; technology that helps the world see how to ensure safety, protect assets and increase business efficiency. Milestone Systems enables an open platform community that drives collaboration and innovation in the development and use of network video technology, with reliable and scalable solutions that are proven in more than 150,000 sites worldwide. Founded in 1998, Milestone Systems is a stand-alone company in the Canon Group. For more information, visit <https://www.milestonesys.com/>.

