Tech support guide

AXIS Optimizer for Milestone XProtect®

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1 About AXIS Optimizer for Milestone XProtect®

AXIS Optimizer for Milestone XProtect® is an application that brings the best from your Axis devices when used in a Milestone XProtect environment. It offers maximum value to end users and system integrators by delivering several valuable plugins for optimally installing, managing and running Axis devices in XProtect. The Optimizer will save you time and improve your user experience. And it's free!

With the Optimizer, Axis and Milestone are better together!

2 System requirements

AXIS Optimizer is fully supported on the following platforms:

- Express+
- Professional+
- Expert
- Corporate

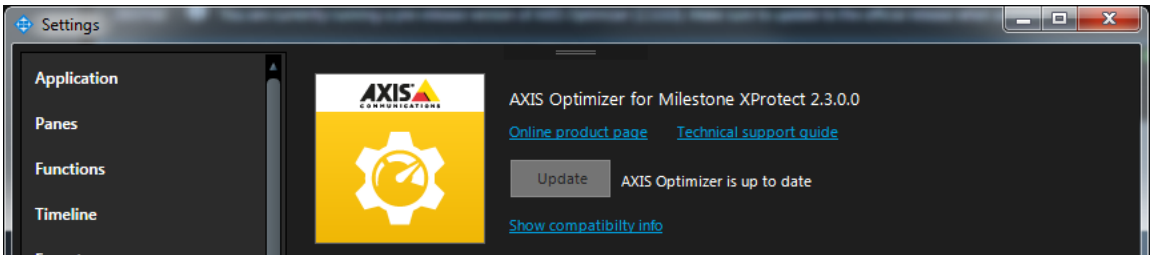
These platforms only support the dewarping functionality of AXIS Optimizer:

- Essential+
- Express
- Professional Editions

Most plugins in AXIS Optimizer for Milestone XProtect® are compatible with XProtect® Corporate and Expert from 2016 R3, but you will need newer versions to e.g. use the dewarping optimally, to use the Axis On-screen controls plugin as well as the Door Station plugin. Most features work best with the latest versions of XProtect clients. Therefore, we do recommend that you always use the latest Management Client and Smart Client.

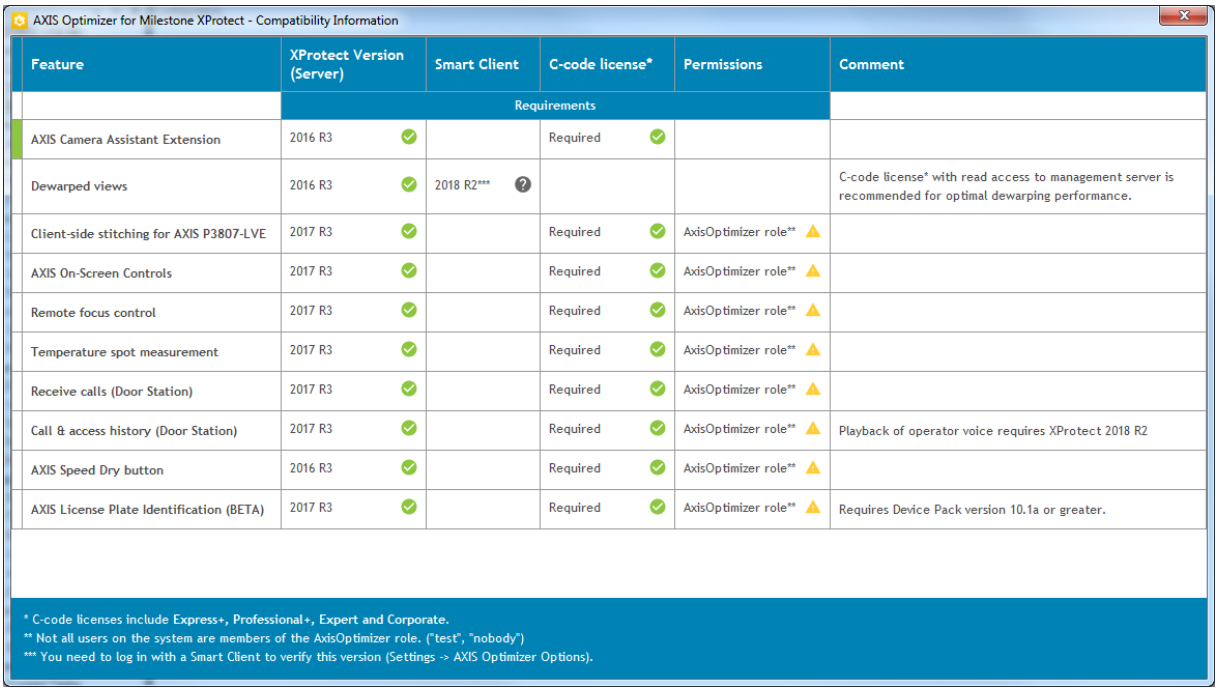
2.1 Compatibility information

Also, to simplify overview of how well your versions of clients installed are supported, as of version 2.3 we created a Compatibility Information page (see screen shots below). You reach it via the Show compatibility info link as shown in the screen shot below:



The compatibility information page available from the Management Client will display Optimizer features as well as if these are supported by your version of the Management

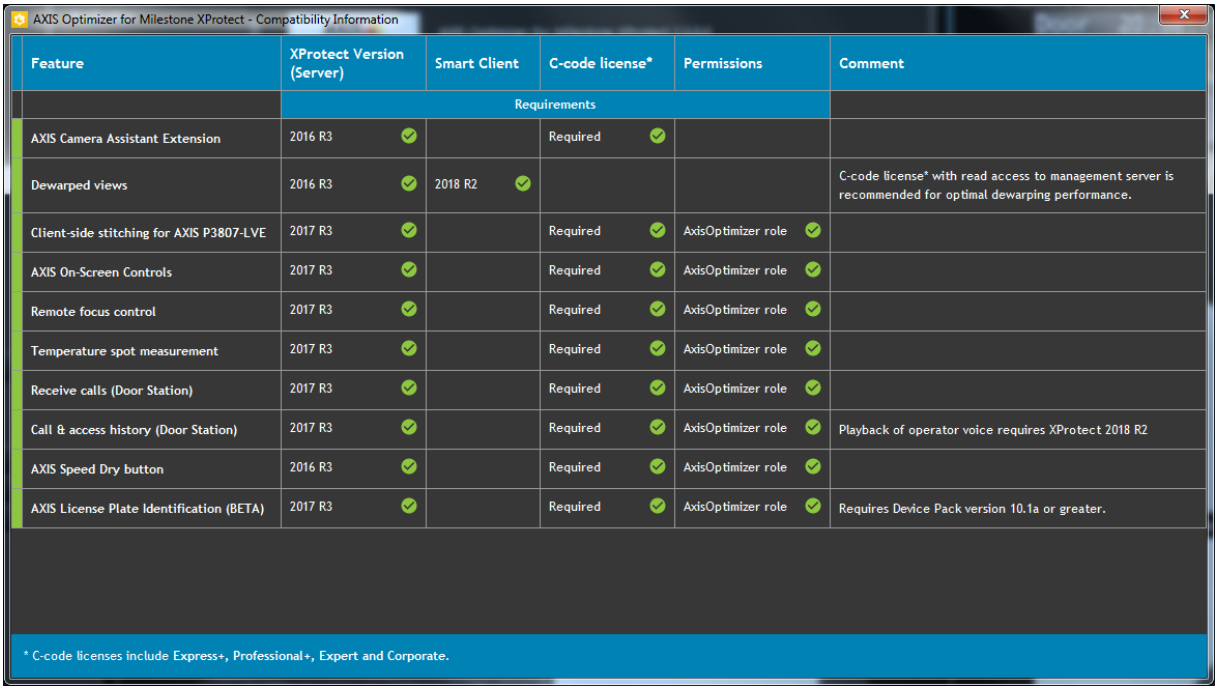
Client. However, some parts of the compatibility information require you to open the Smart Client in order to verify. See differences in screen shots below.



AXIS Optimizer for Milestone XProtect - Compatibility Information

Feature	XProtect Version (Server)	Smart Client	C-code license*	Permissions	Comment
	Requirements				
AXIS Camera Assistant Extension	2016 R3		Required		
Dewarped views	2016 R3	2018 R2***			C-code license* with read access to management server is recommended for optimal dewarping performance.
Client-side stitching for AXIS P3807-LVE	2017 R3		Required	AxisOptimizer role**	
AXIS On-Screen Controls	2017 R3		Required	AxisOptimizer role**	
Remote focus control	2017 R3		Required	AxisOptimizer role**	
Temperature spot measurement	2017 R3		Required	AxisOptimizer role**	
Receive calls (Door Station)	2017 R3		Required	AxisOptimizer role**	
Call & access history (Door Station)	2017 R3		Required	AxisOptimizer role**	Playback of operator voice requires XProtect 2018 R2
AXIS Speed Dry button	2016 R3		Required	AxisOptimizer role**	
AXIS License Plate Identification (BETA)	2017 R3		Required	AxisOptimizer role**	Requires Device Pack version 10.1a or greater.

* C-code licenses include Express+, Professional+, Expert and Corporate.
** Not all users on the system are members of the AxisOptimizer role. ("test", "nobody")
*** You need to log in with a Smart Client to verify this version (Settings -> AXIS Optimizer Options).



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* C-code licenses include Express+, Professional+, Expert and Corporate.

3 Installation

The application is available via the below web page:

https://www.axis.com/products/axis-optimizer-for-milestone-xprotect

NB! You must be logged in to Axis MyPages to download AXIS Optimizer for Milestone XProtect®.

Place the installation file on each computer that runs the Management Client or Smart Client and would like to benefit from the features of AXIS Optimizer for Milestone XProtect®.

Double click the installation file to install the package including all plugins.

You may still install AXIS Optimizer for Milestone XProtect® even if you have previously installed any of the plugins included in its installation file as this application will first remove old plugins.

Previously available plugins include AXIS Dewarping Plugin for Milestone XProtect®, AXIS Speed Dry Plugin for Milestone XProtect®, AXIS Radar Configuration Plugin for Milestone XProtect®.

In order to install silently, use one of the following flags:

/SILENT, /VERYSILENT
Instructs Setup to be silent or very silent. When Setup is silent the wizard and the background window are not displayed but the installation progress window is. When a setup is very silent this installation progress window is not displayed. Everything else is normal so for example error messages during installation are displayed and the startup prompt is (if you haven't disabled it with DisableStartupPrompt or the '/SP-' command line option explained above).
If a restart is necessary and the '/NORESTART' command isn't used (see below) and Setup is silent, it will display a Reboot now? message box. If it's very silent it will reboot without asking.

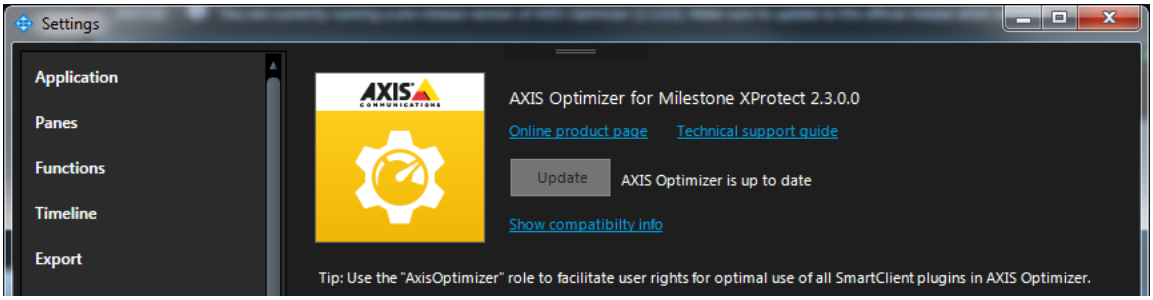
Read more here: http://www.jrsoftware.org/ishelp/index.php?topic=setupcmdline

3.1 Auto update of Axis Optimizer

From version 1.2, the Optimizer is configured to regularly check for new versions of itself and notify about new updates in the notification bar in the Smart Client. To benefit from this feature, Internet connection is required.

NB! To update the Optimizer application, Administrator user rights will be required.

If you would rather like to manually check for updates, this option is available both from the Smart Client and from the Management Client (see Smart Client screen shot below).



3.2 About user privileges

In this section, we describe general user privileges to be applied for operators to be able to benefit from the Optimizer's capabilities.

Please note that for more device specific privileges, such as being able to handle calls from an AXIS Door Station or to manage the License Plate Verifier plugin, these are described in the respective section of each plugin.

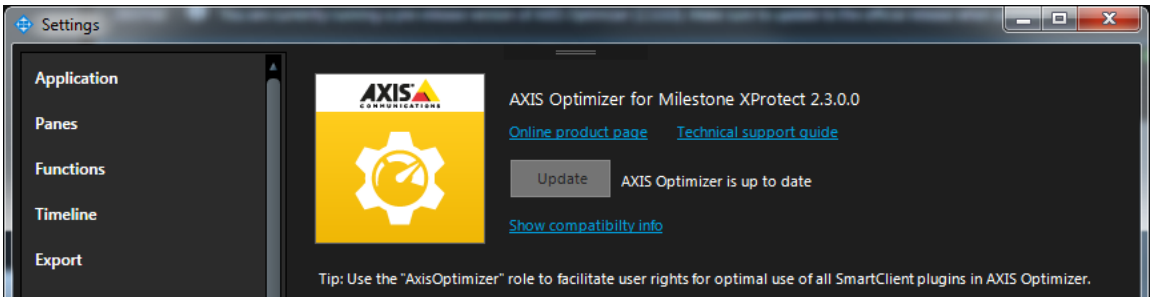
3.2.1 Axis Optimizer user role (XProtect Corporate)

As of version 1.2, a specific Axis Optimizer user role has been included. The purpose is to make it simple to give users the required Smart Client privileges to benefit from the Optimizer features and capabilities.

NB! If you run XProtect 2018 R3 or earlier, this role is only available in XProtect Corporate.

If you run XProtect 2019 R1 or later, this role is available for the below XProtect editions.

- Corporate
- Expert
- ProfessionalPlus
- EssentialPlus
- ExpressPlus



3.2.2 Manual configuration of Operator user role

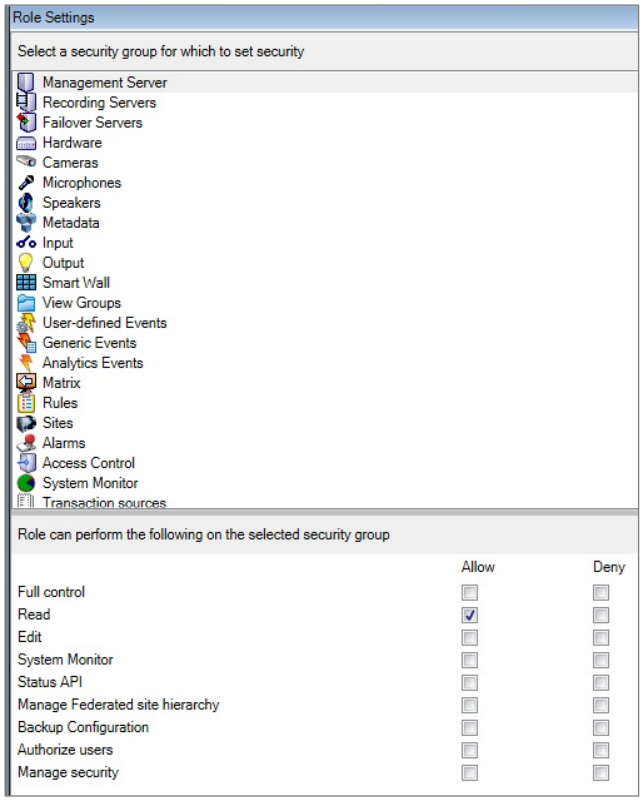
If you would rather configure privileges manually, use the below configuration to make a Smart Client operator benefit from all capabilities included in AXIS Optimizer for Milestone XProtect®:

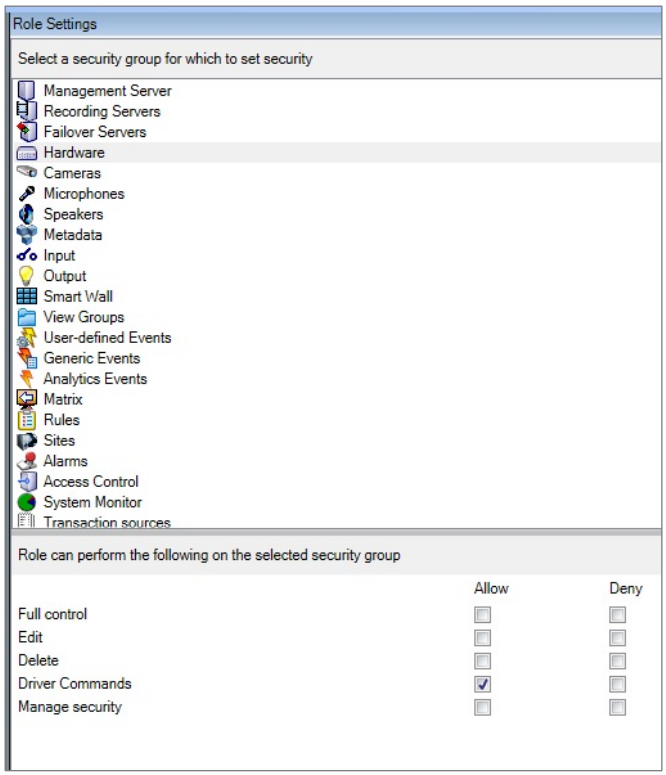
- Management server: Read (not needed from 2019 R1)
- Hardware: Driver Commands
- Cameras: AUX commands

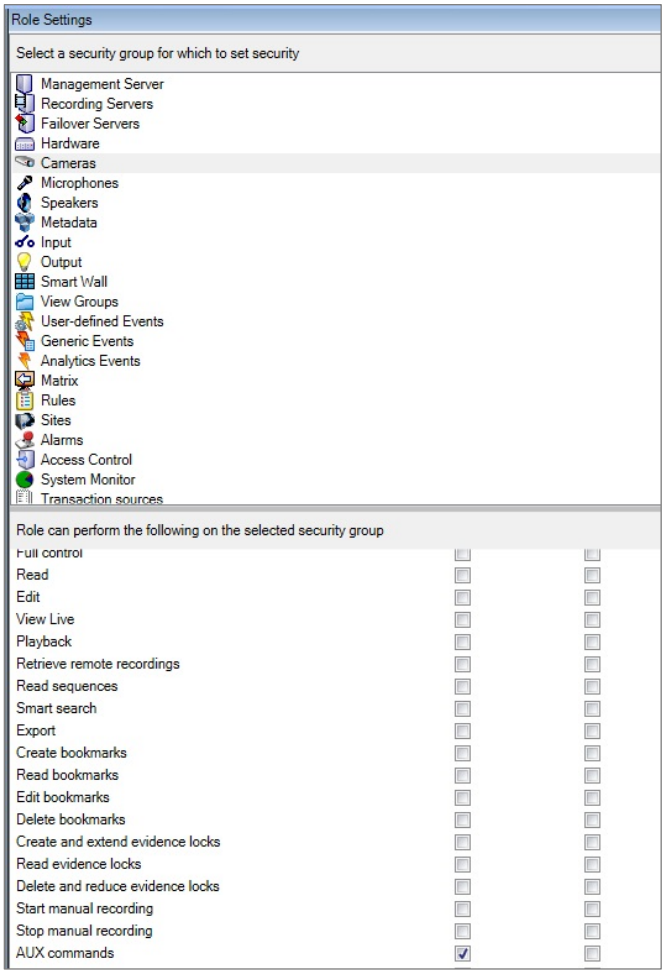
See screen shots below for information on privilege configuration.

3.3 Release information

See latest release notes for more information:
https://www.axis.com/ftp/pub_soft/cam_srv/optimizer_milestone/latest/relnote.txt




Role Settings
Select a security group for which to set security
Management Server
Recording Servers
Failover Servers
Hardware
Cameras
Microphones
Speakers
Metadata
Input
Output
Smart Wall
View Groups
User-defined Events
Generic Events
Analytics Events
Matrix
Rules
Sites
Alarms
Access Control
System Monitor
Transaction sources
Role can perform the following on the selected security group
Allow
Deny
Full control
Edit
Delete
Driver Commands
Manage security


Role Settings
Select a security group for which to set security
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Hardware
Cameras
Microphones
Speakers
Metadata
Input
Output
Smart Wall
View Groups
User-defined Events
Generic Events
Analytics Events
Matrix
Rules
Sites
Alarms
Access Control
System Monitor
Transaction sources
Role can perform the following on the selected security group
Full control
Read
Edit
View Live
Playback
Retrieve remote recordings
Read sequences
Smart search
Export
Create bookmarks
Read bookmarks
Edit bookmarks
Delete bookmarks
Create and extend evidence locks
Read evidence locks
Delete and reduce evidence locks
Start manual recording
Stop manual recording
AUX commands

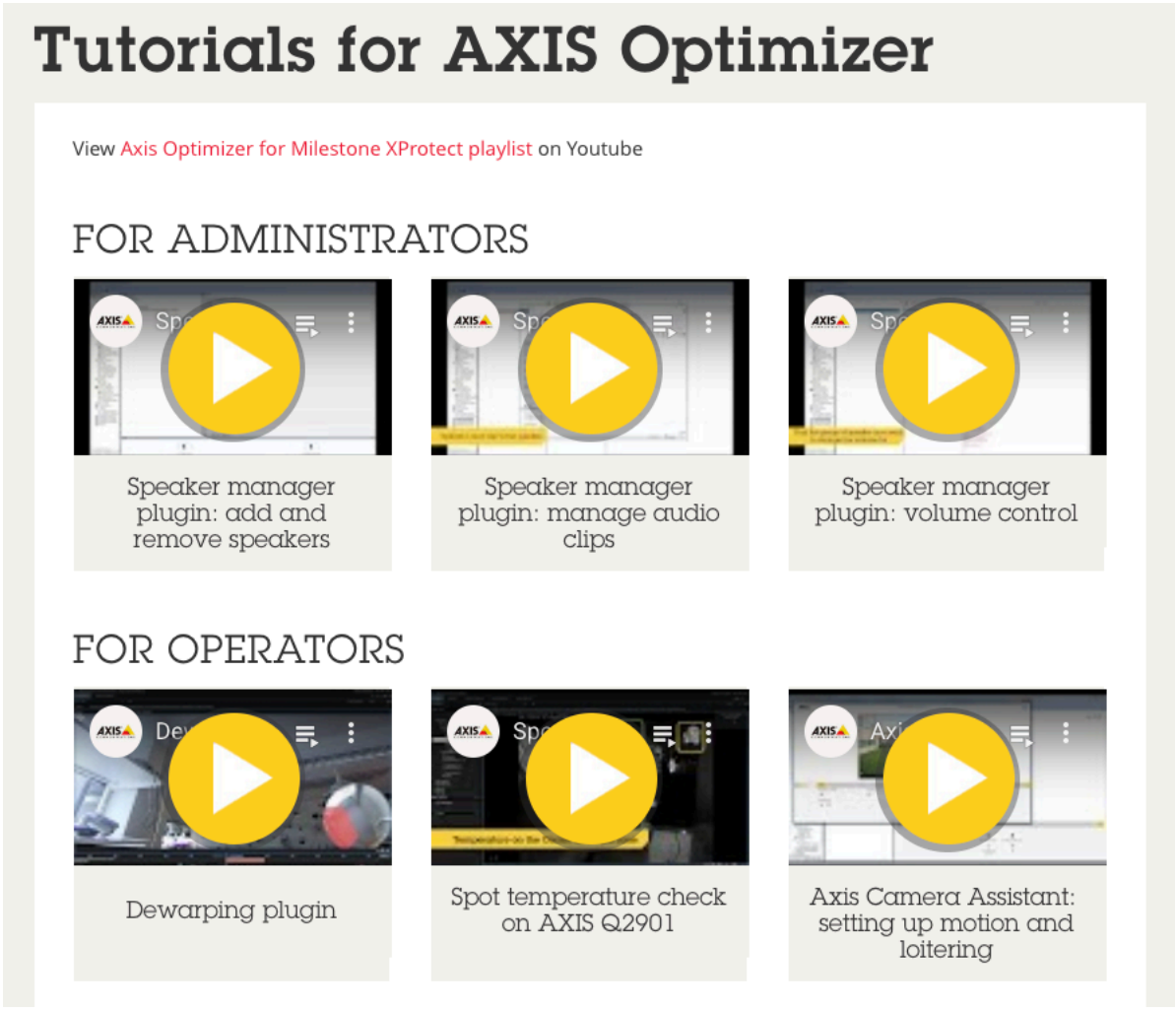
4 User guide

4.1 Video tutorials for AXIS Optimizer

On the Optimizer web page on axis.com you can find a web page dedicated to video tutorials that will help you understand and use many of the capabilities of the Optimizer:

https://www.axis.com/products/axis-optimizer-for-milestone-xprotect/tutorials

Below is a screenshot of the video tutorial page:



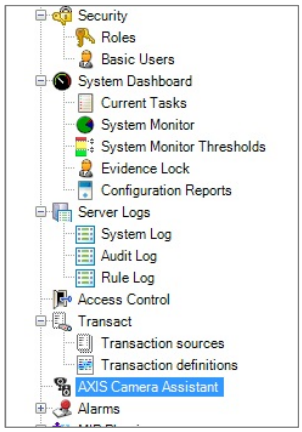
4.2 Camera Assistant (ACA)

The Camera Assistant (ACA) plugin gives you the power of configuring AXIS devices directly from within the Milestone XProtect® Management Client. In short, you get smooth access to the web interface of Axis devices. Here are a few examples of what you can use ACA to configure:

- Image settings
- Stream settings
- Text overlay settings
- Audio settings
- Privacy masks
- Certificates
- HTTPS
- User settings
- Built in Video Motion Detection
- ACAP applications, and much more.

As of Optimizer v. 1.2, the ACA plugin will also make visible a new tab “Applications” which will display the start page of each edge application (ACAP) installed on to the device.

Enter the ACA interface (or Radar configuration) by logging in to the Management Client and then select Camera Assistant in the tree menu on the left. See screen shot below.



4.2.1 ACA troubleshooting

NB! The Axis device must be directly reachable from the Management Client in order to use this functionality, e.g. be on the same LAN.

4.3 Dewarping

4.3.1 Available views

Modes / Mounting	Ceiling	Wall	Desk
Normal view	✓	✓	✓
Quad view	✓		✓
Panorama view	✓	✓	✓
Normal view + overview	✓	✓	✓

4.3.2 Capabilities

The latest client side dewarping includes the following capabilities:

- Smooth client-side dewarping in both live and recorded video
- Saves latest dewarping state/location for when you return to view
- Dewarping in exported video from Milestone
- If the GPU is incompatible with dewarping, CPU will be used instead

A number of other features have been added as part of the dewarping plugin:

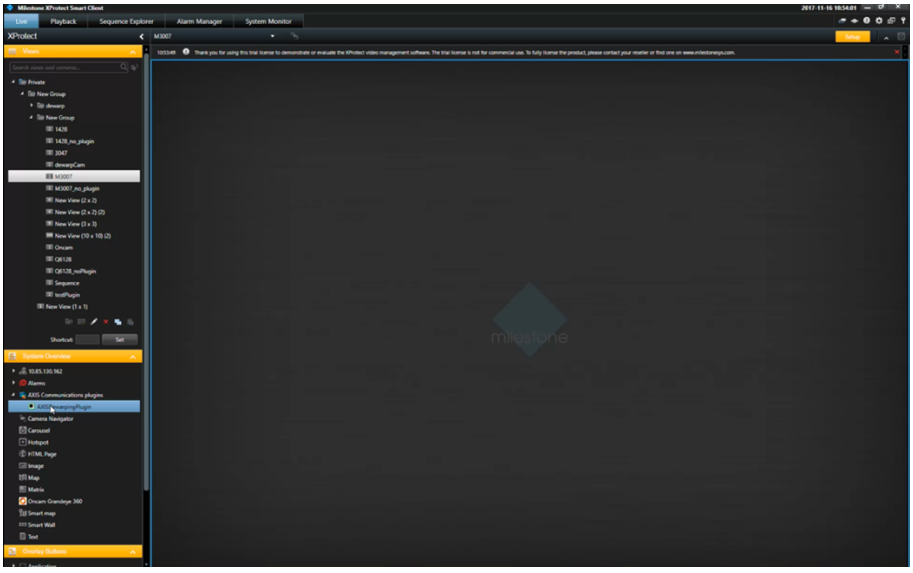
- Set ”Home Position”
- Take Snapshot
- Allow-operator-control setting to be able to lock/unlock dewarped views
- Motion/Recording/Live indicators
- Copy to clipboard button
- FPS counter (enable from Settings window)

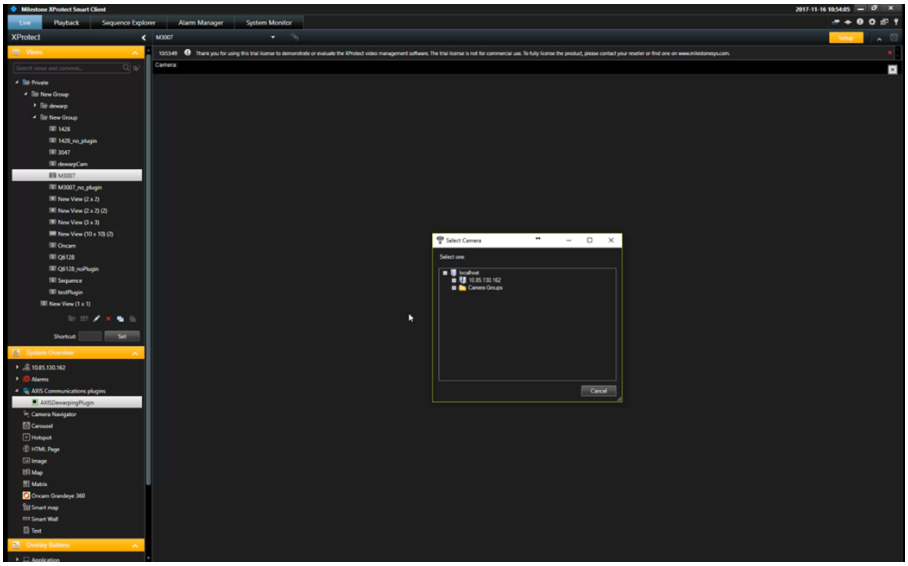
NB! The dewarp plugin currently does not support the Matrox graphic card.

4.3.3 How do I use the Dewarping plugin?

1. In the Smart Client, go to “Setup” to configure one or more dewarped views.
2. Configure the Views page accordingly.
3. Then, drag the dewarping plugin into one or more views.
4. After that, select the correct camera and mounting from the drop-down menus.
5. When done adding dewarped views, press “Setup” to finish.

See also screen shots below.





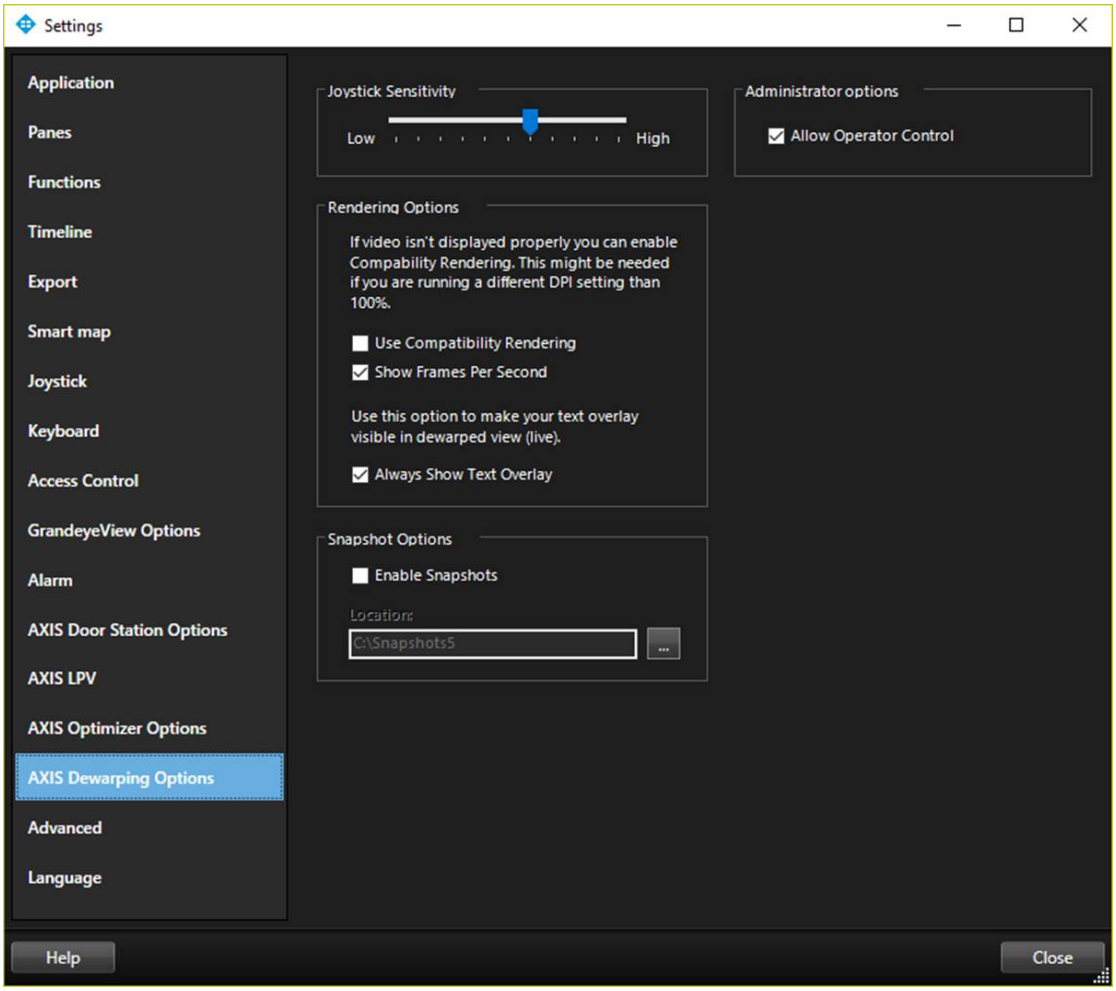
4.3.4 DPI settings in Windows

If a different dpi setting than 100% is used in Windows, the Dewarp plugin on secondary monitors may only be partially visible.

Follow the instructions via the link below to solve these problems:

https://supportcommunity.milestonesys.com/s/article/Client-GUI-scaling-on-high-DPI-displays

If there's still problems with the Dewarp plugin, you can change to "Compatibility Rendering" in the AXIS Dewarping Options (see below).



4.3.5 Support for client-side stitching when using AXIS P3807-LVE

From version 1.3 and forward, the Optimizer supports the client-side stitching/dewarping of the four video streams from P3807-LVE into one patched stream.

Requirements for running P3807-LVE with the dewarp plugin:

- XProtect Corporate, Expert, Professional+, Express+ or Essential+ running at least Smart Client 2017 R3+
- Regarding user rights, one of the follwing:
  - User with “Optimizer role”
  - User that has "Hardware - > Driver commands (Allow)
- A P3807-PVE camera

To activate, start by configuring your P3807-LVE. Ensure Capture Mode is set to “Client Dewarp”. In order to increase frame rate, it is recommended to turn of WDR and disable ACAP’s.

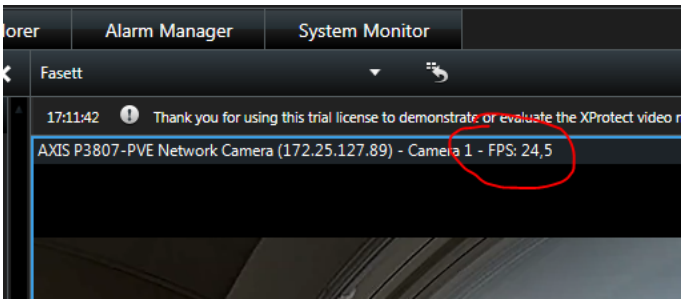
Next step is to add your P3807-LVE in the Management Client (as any other device). Then open the Smart Client, enter “Setup” and create a new view.

From the side panel, drag the ”Axis Dewarping Plugin” into the view (as you would when adding a dewarped fisheye view). Select your P3807-LVE from the dialogue menu. Exit setup mode.

Now, you should be able to see a nice composition of the four video streams from the device, patched using the dewarp capabilities. It is also possible to zoom (digital) in the image.

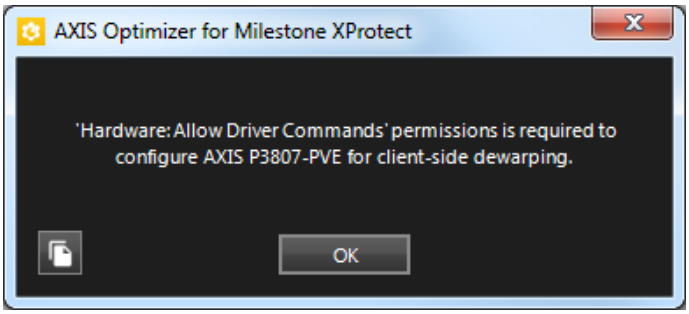
We have also added the possibility to see the frames per second (FPS) for the P3807-LVE view. To activate, go to Settings in your Smart Client and then to ”AXIS Dewarping Options”. See screen shot above.

Allow for a few seconds to let the FPS stabilize in XProtect.

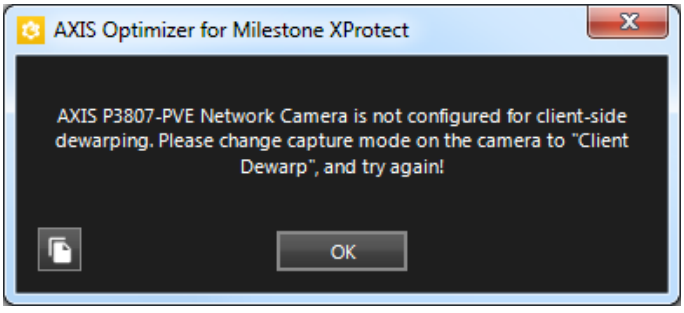


Related error messages

If you get the below error message, configure the role according to above, to allow “Driver Commands”.

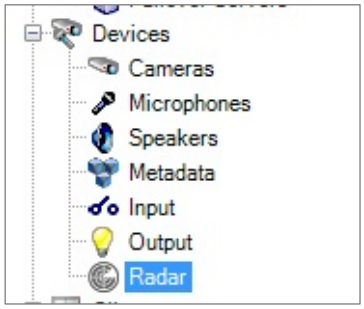


If you get the below error message, make sure to change capture mode to “Client Dewarp”.

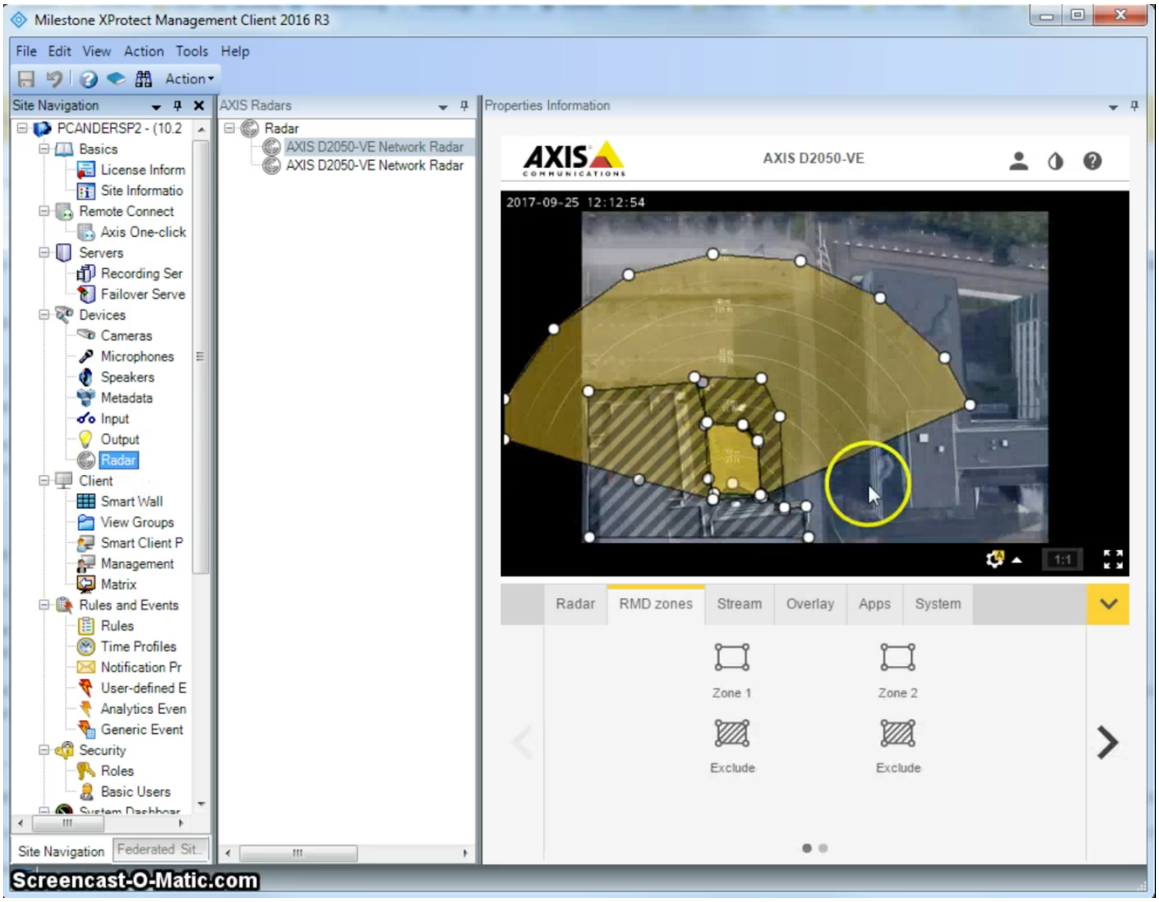


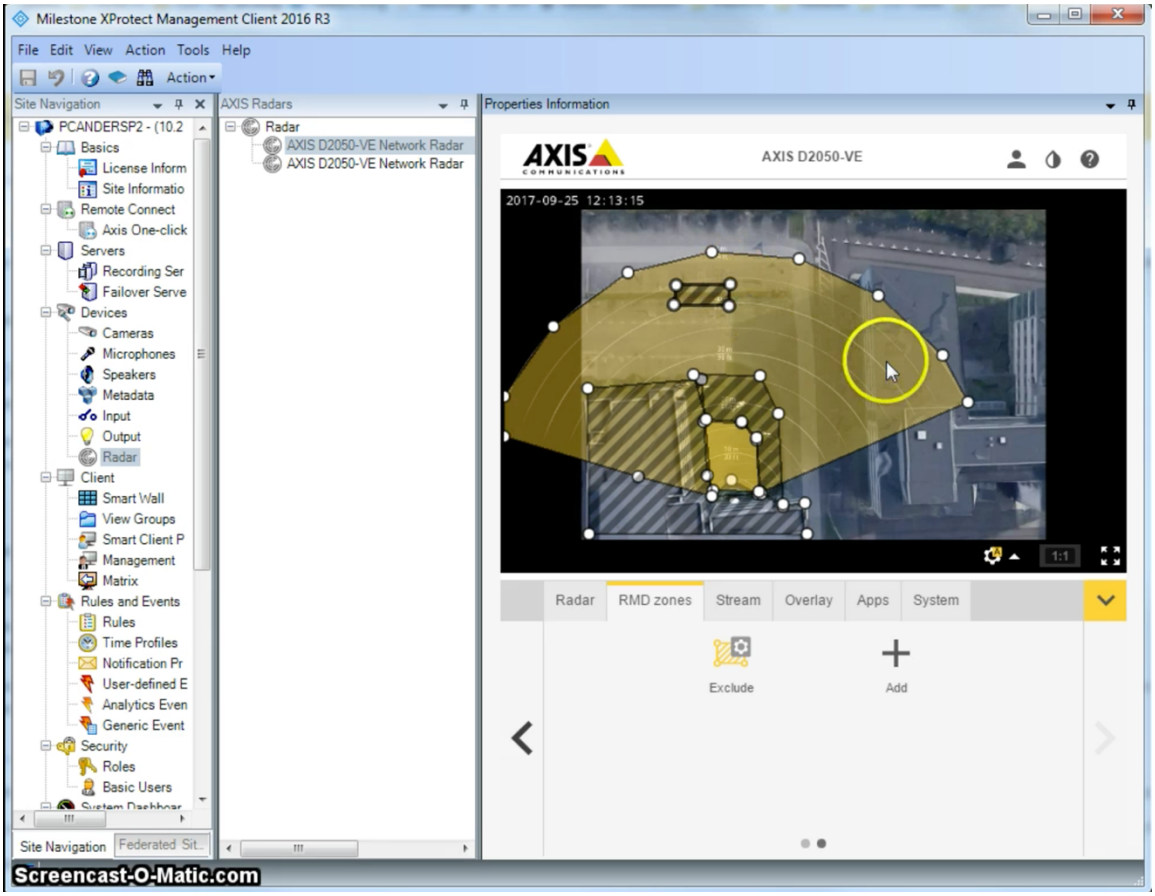
4.4 Radar configuration

Configure your radar exclusion zones and more from within the XProtect Management Client by finding the Radar menu option in the list of Devices (see screenshot below).



Select the radar device to configure and ACA will appear on the bottom part of the right frame of your window. See also screen shots below.





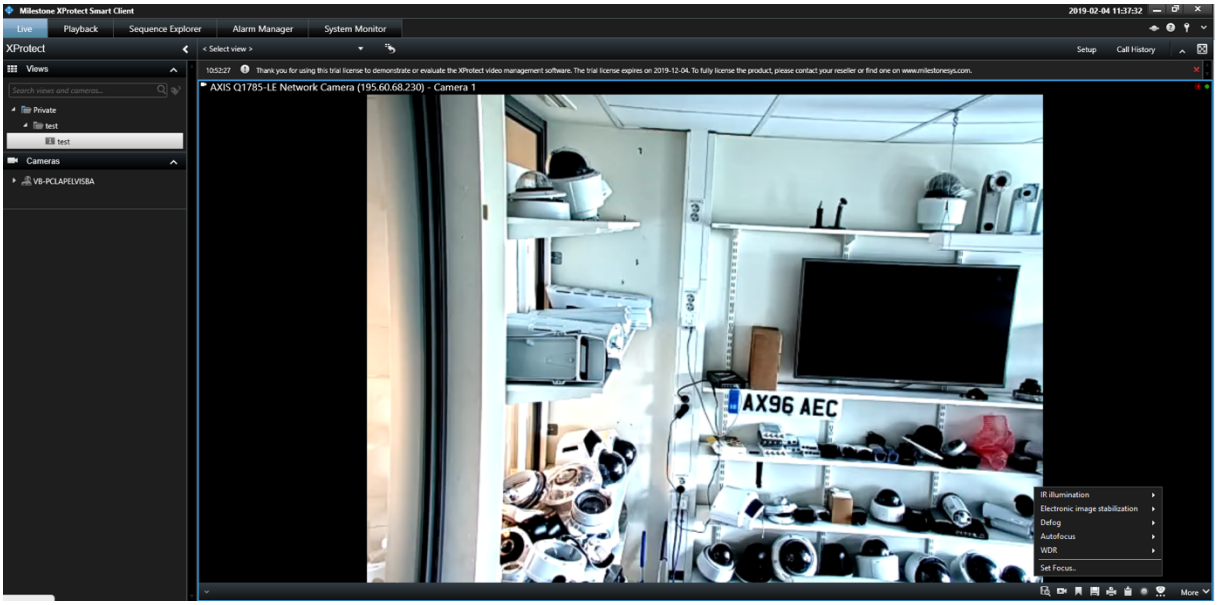
4.5 On-screen controls plugin

On-screen controls is a feature that lets XProtect users get access to Axis device specific functionality directly from within the VMS, without the VMS having to write any drivers for these features. This plugin makes Milestone XProtect® query devices for its features and present corresponding controls in the XProtect Smart Client.

A few examples of On-screen controls in XProtect:

- Turn wiper on/off (e.g. supported by AXIS Q8741-E & Q8742-E)
- Turn heater on/off (e.g. supported by AXIS Q8741-E & Q8742-E)
- Turn SpeedDry® on/off (e.g. supported by AXIS Q6155-E, Q6125))
- Turn IR on/off (e.g. supported by AXIS Q6125-LE)
- Focus recall (e.g. supported by AXIS P5424-E Mk II)
- Turn WDR on / off (Q1785/-6)
- Turn EIS on/off (Q1785/-6)
- Run autofocus (Q1785/-6)

On-screen controls are accessible via this icon: . See also screen shot below.



AXIS On-screen controls is supported by the following Firmware versions:

- 7.10
- 7.40+

Both AXIS Q8741-E and AXIS Q8742-E support On-screen controls from 6.50+.
Note: firmware versions 7.20 and 7.30 do not support On Screen Controls.

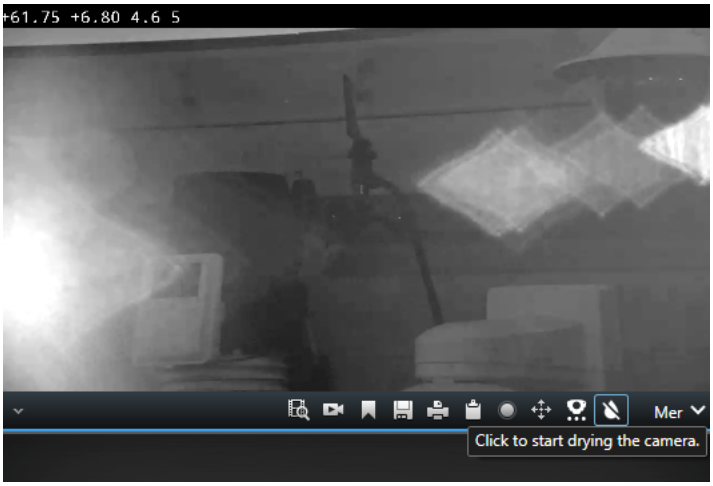
4.5.1 On-screen controls troubleshooting

Axis On-screen controls does not work if camera is set to HTTPS. This is something we are working on together with Milestone to ensure it is supported in a future version.

4.6 SpeedDry/Wiper plugin

This is a Milestone plugin to control SpeedDry or Wiper. It duplicates functionality from the On-screen controls plugin and is included in the Optimizer because it adds Wiper and SpeedDry functionality also for customers using versions earlier than Milestone XProtect® 2017 R3.

You can access the features of this plugin through its icon in the bottom right corner in the Management Client . See also screen shot below.



4.7 Focus Recall

Focus Recall is a feature that the Smart Client access from On-screen controls.
The Focus Recall feature lets a user save Focus Presets. If the Camera has trouble autofocusing on a specific area in the low light conditions, Focus Recall can be used.

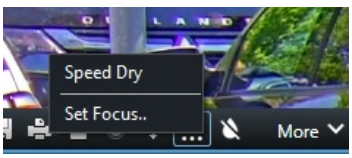
1. Move the camera during daytime to the trouble location
2. Focus the Camera,
3. Then when the focus is perfect select "Add Focus Recall Zone"
4. Next time the camera is pointed in this direction, the focus value for this zone will be used instead of Autofocus.

If a zone has been incorrectly configured, move the camera to that location and select "Remove Focus Recall Zone"

4.8 Autofocus

4.8.1 Autofocus for PTZ

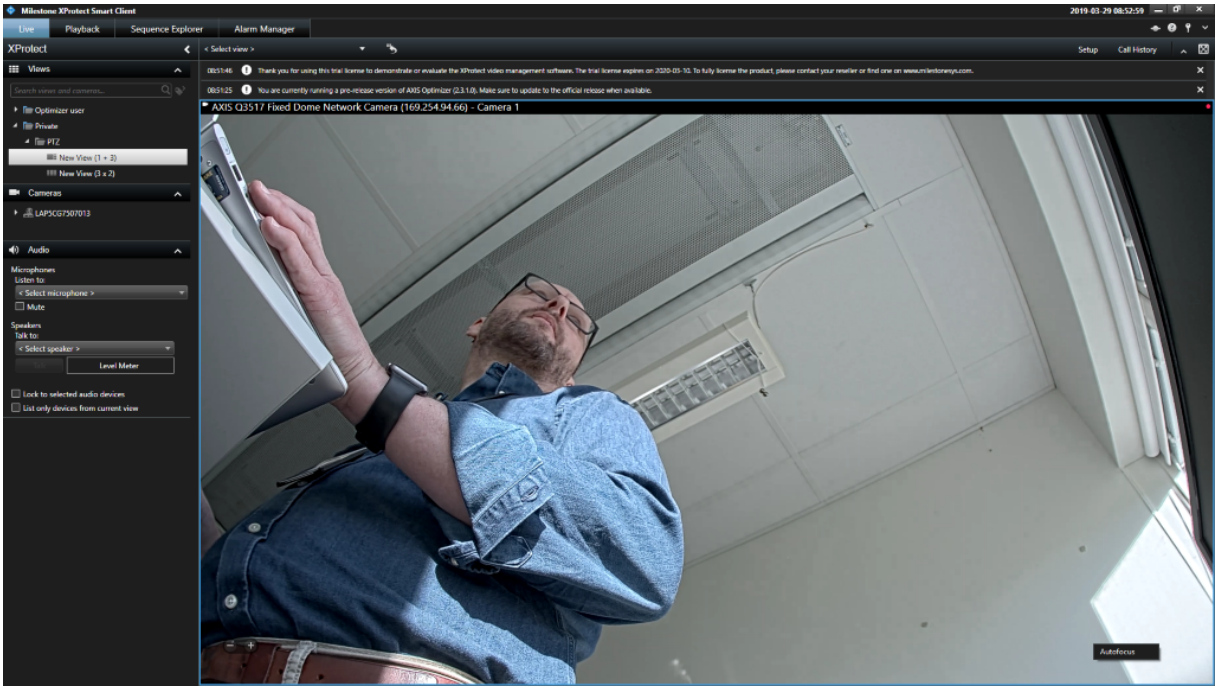
The Set Focus feature can be found by clicking on this icon: when using a PTZ camera.



The following pop-up allows you to move the focus point closer or further away. The big bars move the focus a large step and the small fine-tunes the focus. To move multiple times, you click multiple times. By clicking AF you perform an autofocus on the camera. See below:

4.8.2 Autofocus for fixed box and fixed dome cameras

The Autofocus feature can be found by clicking on this icon: when using a fixed box or fixed dome camera. By clicking, you perform autofocus on the camera.



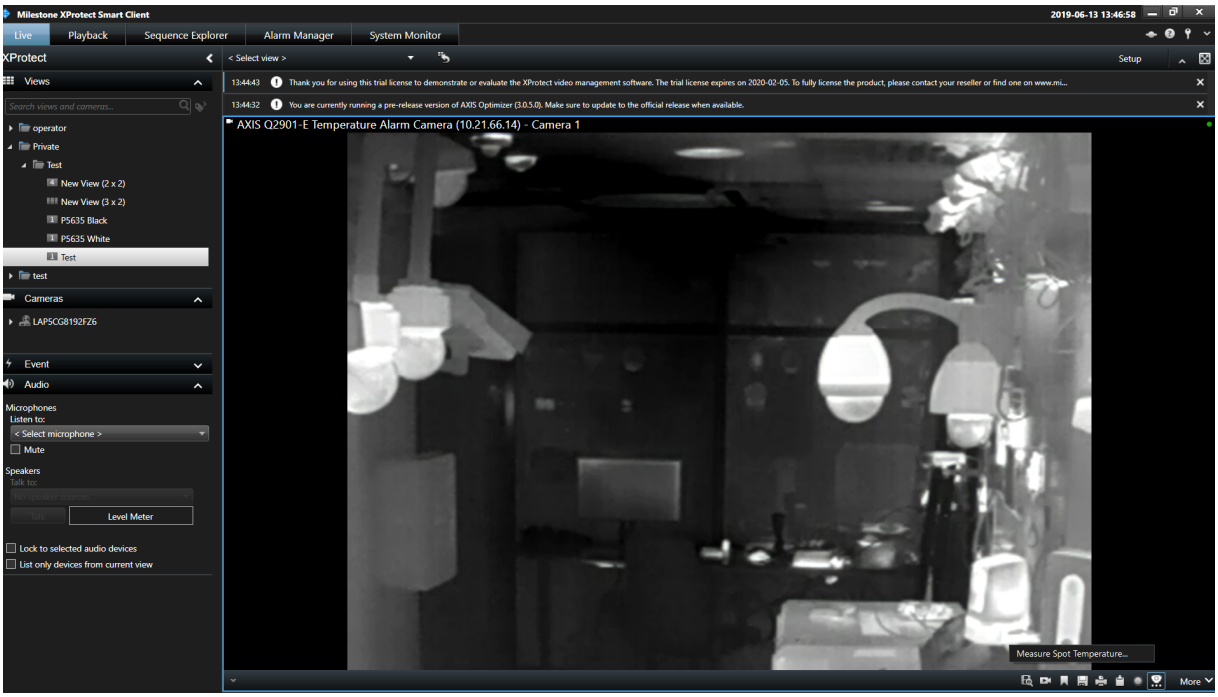
4.9 Temperature spot check for AXIS Q2901-E

If you use AXIS Q2901-E Temperature Alarm Camera, you are able to do spot checks of temperatures in the Smart Client. Temperature will be displayed in the top right corner of your camera's view area.

In order to use the spot check feature, click this icon:

You will get the option to “Measure Spot Temperature..”

Then you click at any area of the view of the Q2901 and get current temperature.



5 AXIS Door Station

With this plugin, we are making it easy to configure and use AXIS Door Stations together with Milestone XProtect to let you receive calls, open doors and much more.

5.1 Requirements

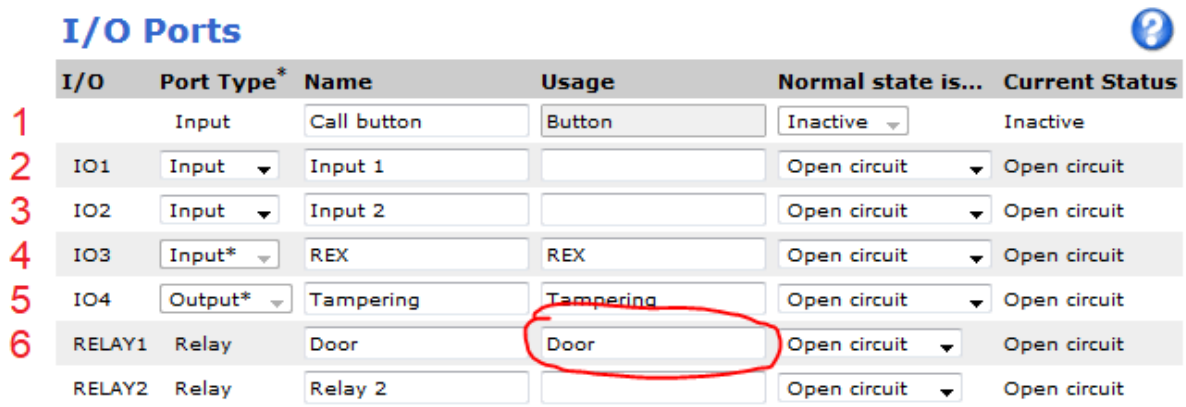
- Note that Milestone XProtect version 2017 R3 or later is required.
- On Smart Client versions before 2019 R1, Administrator role is required to receive calls and control the door (On XProtect Corporate only Hardware/Driver Commands privilege is required)
- Supported door stations: AXIS A8004-VE, AXIS A8105-E, A8207-VE
- AXIS Optimizer for Milestone XProtect (2.0 or higher) must be installed on each client that should be able to receive calls
- Smart Client must be running to receive calls
- A microphone must be installed on the PC that should receive calls
- Call History is limited to 39 calls* and 1000 access log records

* Due to a technical limitation the number may be lower when muting the conversation often.

5.2 Hardware

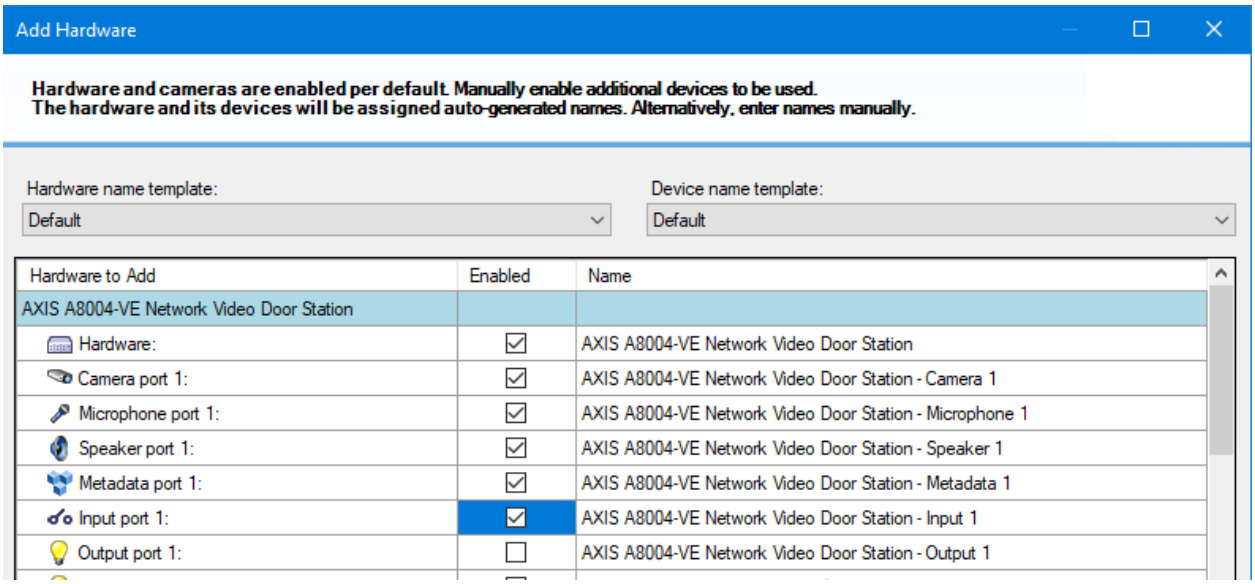
The door lock should typically be connected to the first relay on the door station. AXIS Optimizer determines which output port to use based on the "Usage" information. It will use the first port having Usage = "Door" (RELAY1 by default).

In the example below, you can see that RELAY 1 containing the "*Usage = Door*" is the 6th port. Then it's output 6 you should enable during setup, step f, below

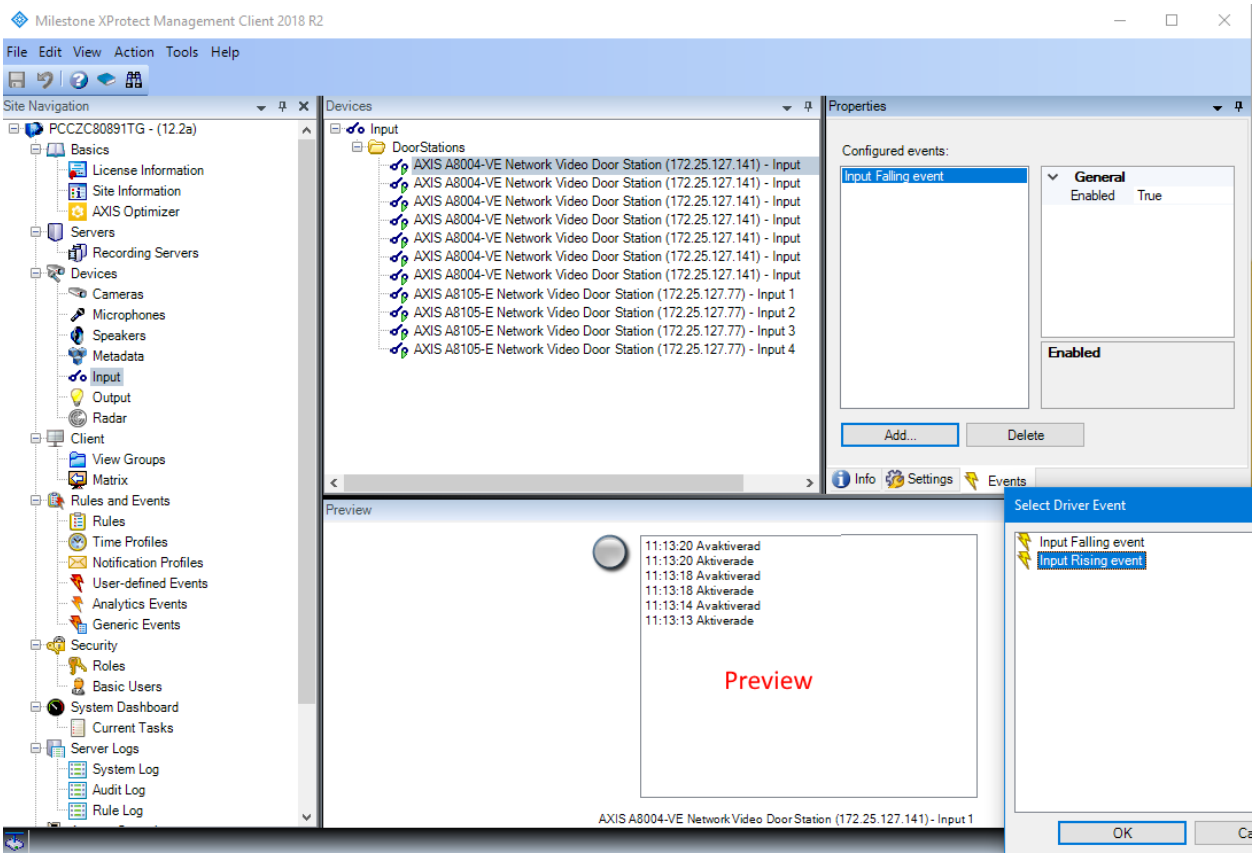


5.3 Setup

1. Logon to the Management Server and add the door station to the Recording Server.
2. Next, enable all device types you need. The following device types are required to be able to receive calls in the Smart Client:
    a. Camera 1
    b. Microphone
    c. Speaker
    d. Metadata
    e. Input 1
    f. Input 2 (optional if you have a physical door sensor connected to the door station on port 2)
    g. Output connected to the door (normally output 4 for A8105-E and output 6 for A8004-VE)



3. Select “Input” under Devices
4. Select Input 1 for the Door Station you’re installing
5. Click the Tab “Events” and click “Add…”
6. Select “Input Falling event” and add it to the enabled inputs
7. Repeat for the “Input Rising event” as well
8. If you've enabled Input 2 then repeat step 5-7 for Input 2 as well.



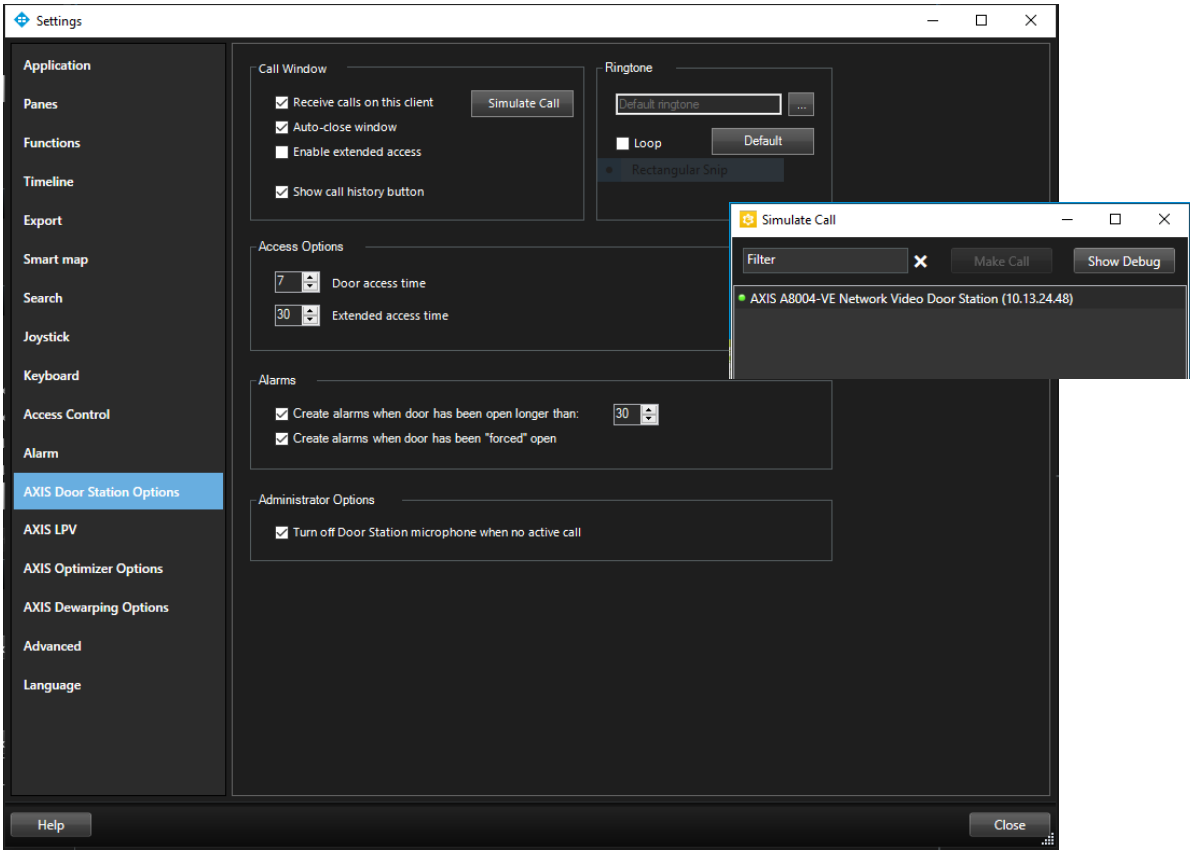
9. Click “Save”.
10. Test the event by clicking on the actual button on the AXIS Door Station. You should get a response in the preview.
11. Download and install the latest version of AXIS Optimizer for Milestone XProtect on each Smart Client where you want to receive calls and control the door from.

5.3.1 “Simulate call” functionality

As of version 3.5.6 of AXIS Optimizer, a new feature: “Simulate Door Station call” has been added. It’s quite useful if you would like to test behavior of an AXIS Door Station without having to send someone out to physically press the call button.

To access it, go to the Settings page in the Smart Client, then to the “AXIS Door Station Options” section. On the top of the page, click “Simulate Call”. Then select Door Station and “Make Call”.

See also screen shots below.



5.4 Permissions

The following permissions are required for an operator to handle a call:

- Management Server/Read (in Smart Client versions before 2019 R1 as mentioned above)
- Hardware/Driver Commands
- For Door Station device
    - Camera
        - Read
        - View Live
- Microphone
    - Read
    - Listen
- Speakers
    - Read
    - Speak
- Metadata/Live
- Input/Read

5.4.1 Permissions for receiving calls from selected Axis Door Station units

I want to select which operators should handle calls from which DoorStation units:

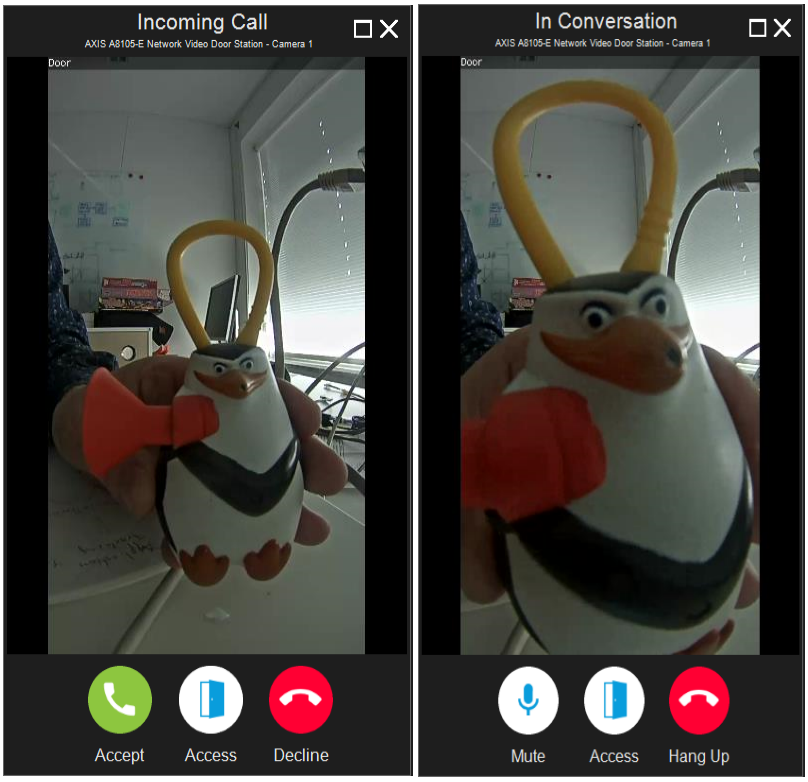
- To configure an operator (role) to receive calls, make sure the **"Read"** permission is selected for the **Input device 1** of the specific Door Stations.
- All other operators (roles) should have this permission unselected. No popups will be generated if the user doesn't have privileges to the input.

5.5 Operation

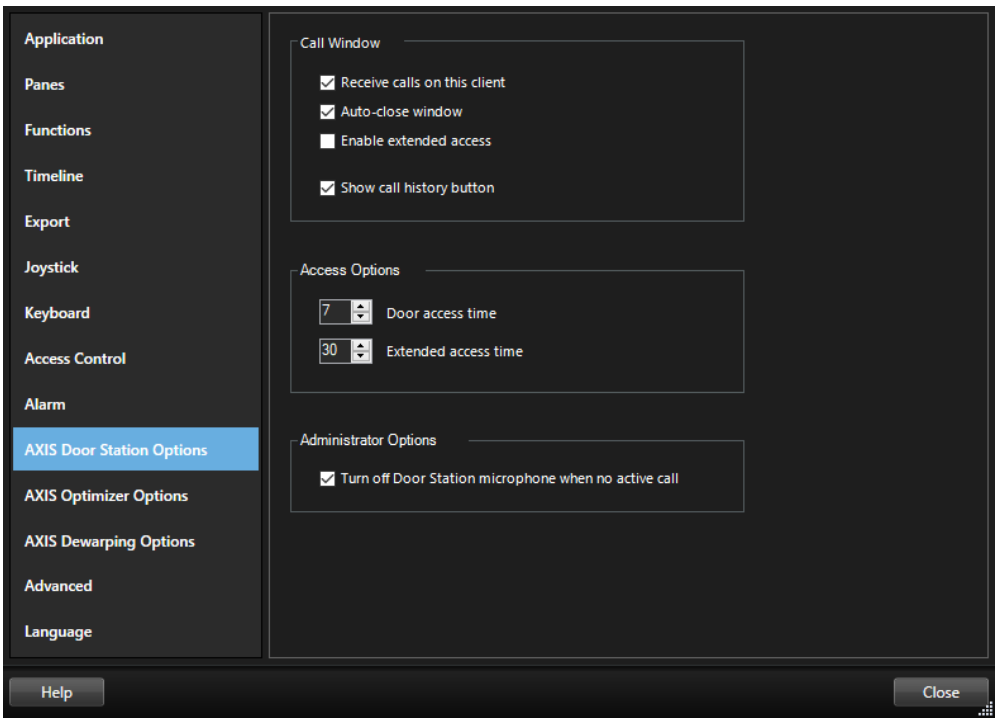
When a person presses the call button on the door station, a Call Window will appear on each running Smart Client (note that it is possible to disable this behavior in the AXIS Door Station Settings without having to uninstall the AXIS Optimizer).

From the call window, the operator will have the following choices:

- **Dismiss** the call by closing the window (using the X button). This will allow another operator to take the call instead.
- **Decline** the call.
- Open the door by clicking the **Access** button. The lock attached to the door station will be in open for 7 seconds (the duration can be configured).
- **Accept** the call. This will open a bidirectional audio channel between the operator and the person standing in front of the door station. In this state it is possible to press the Mute button to temporarily suspend audio from the operator to the door station.
- An accepted call can be terminated by clicking the **Hang Up** button.

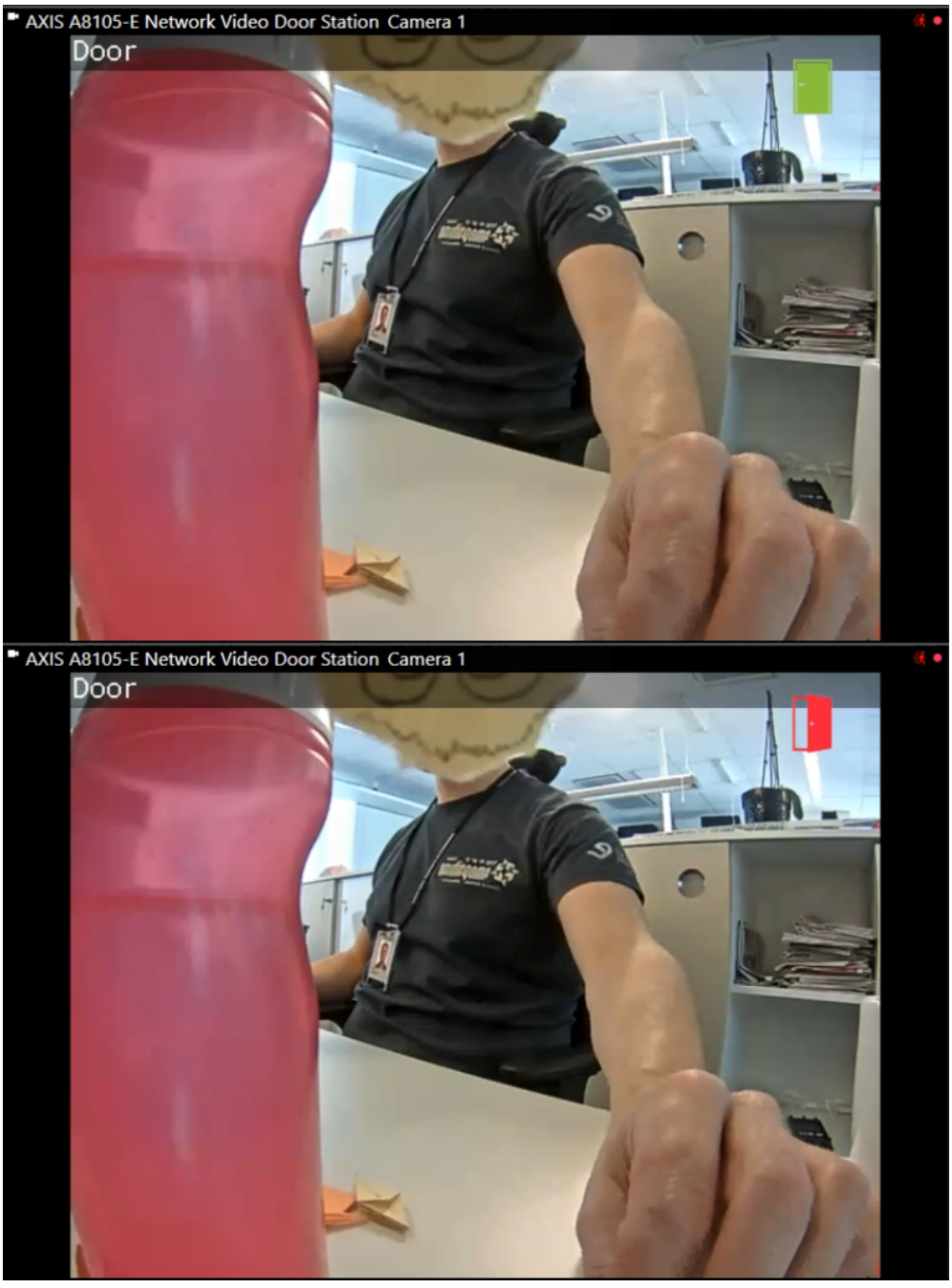


If the auto-close setting is enabled (default) the Call Window will automatically close when **Decline** or **Hang Up** is clicked. Go to the **AXIS Door Station Settings** to modify the default behaviors. These options can be found in the Milestone Smart Clients Settings.



5.6 Door Overlay

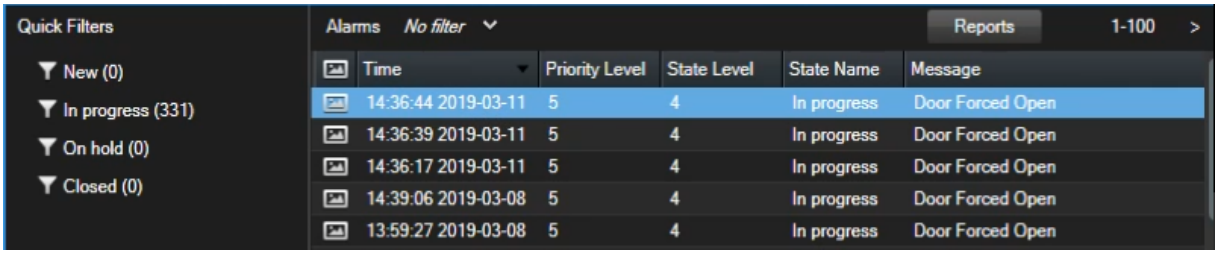
If the door has a physical door relay (Input 2) it will be able to trigger the door overlay, showing if the door is open or closed.



If you manage to open the door while the lock is still closed, it will create an alarm called **Door Forced Open**. This can be disabled in settings.

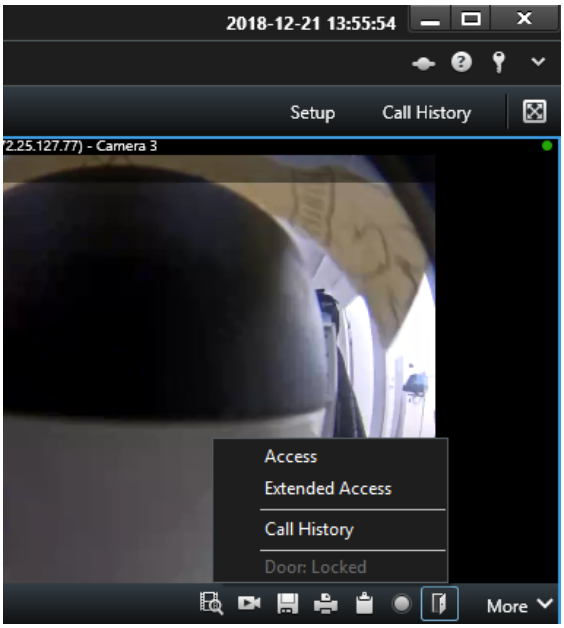
If the door is opened correctly (after the lock's been opened) but is open for too long (default 30 seconds), it will create an alarm called **Door Open Too Long**.
This can be changed and/or disabled in settings.

NB! Please note that at least one Smart Client must be running for alarms to be created!

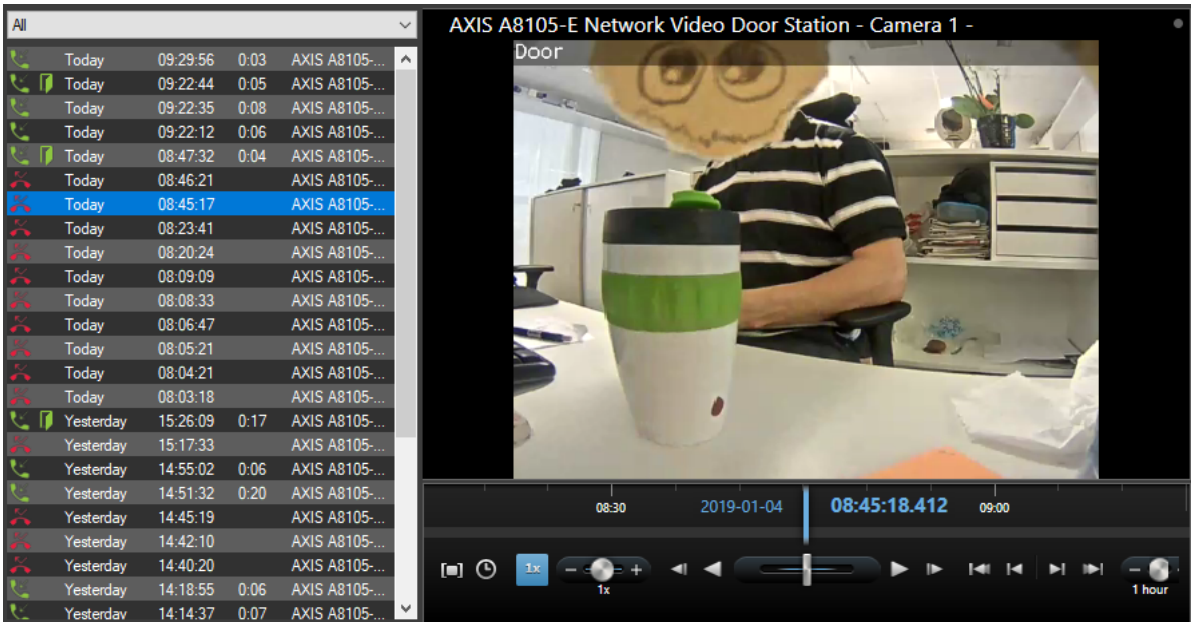


5.7 Call history

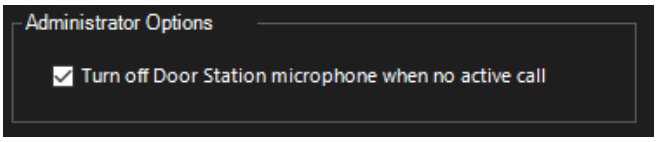
If you got a view in the Smart Client with a Door Station a new button will be shown.
When clicking this button, you can both open the door and access **Call History**, provided it's activated in **AXIS Door Station Settings** (on by default).
Call History will also be shown next to the Setup button where it can be accessed. To deactivate this, uncheck the option "Show call history button" in options.



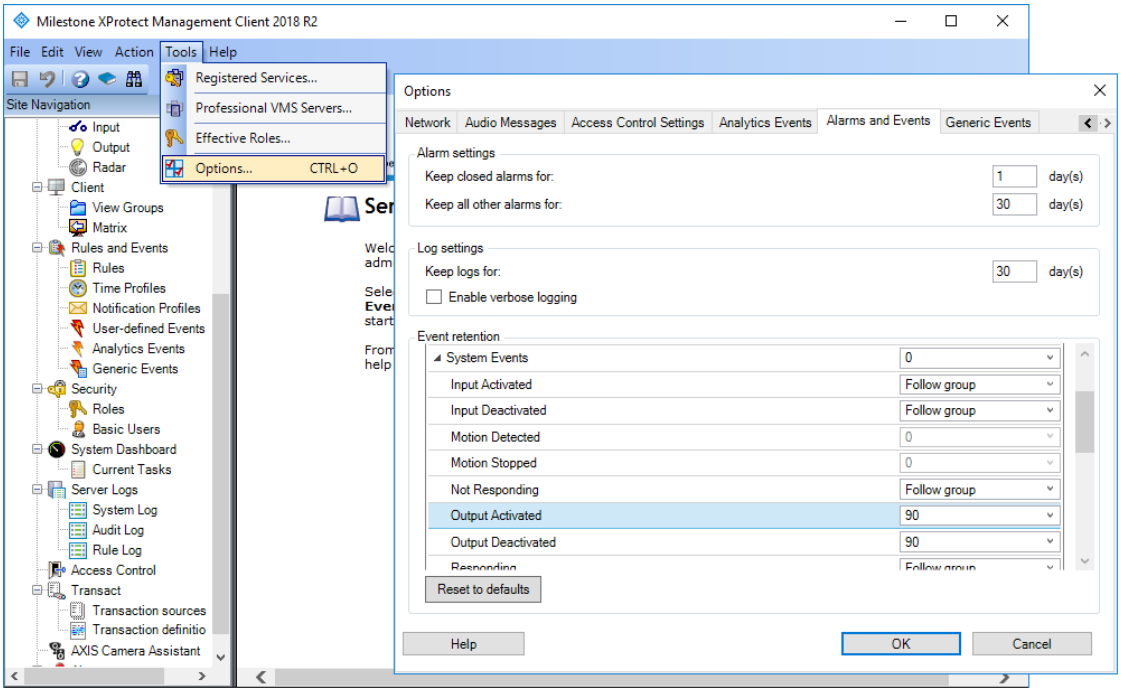
In **Call History**, you can view call statuses (answered and missed) and if the door has been unlocked. The calls are selectable, and you will be able to view the corresponding playback video if available.



As an XProtect administrator, you'll be able to set Turn off Door Station microphone when no active call in AXIS Door Station Settings. If this option is turned on, the Door Station's microphone will be turned off at all the times except when in a call.



To be able to register and show when the door's been unlocked you need to change the setting for Alarms and Events. In the Management Client, go to Options and then Alarms and Events.
In here, expand the System Events and increase the Retention time (days) for Output Activated and Output Deactivated.



6 License Plate Verifier plugin

This plugin requires AXIS License Plate Verifier (ALPV) automatic license plate recognition (ALPR) analytics, which is an easy and cost-effective way to control access of vehicles into areas such as parking lots. ALPV supports a use case with vehicle speeds of up to 30 km/h (19 mph). For more information on ALPV, please visit https://www.axis.com/products/axis-license-plate-verifier/.

Axis Optimizer enables the retrieval and storage of license plate data from ALPV since the release of version 2.3 as it both stores data and makes it searchable directly within the Milestone Smart Client.

6.1 Requirements

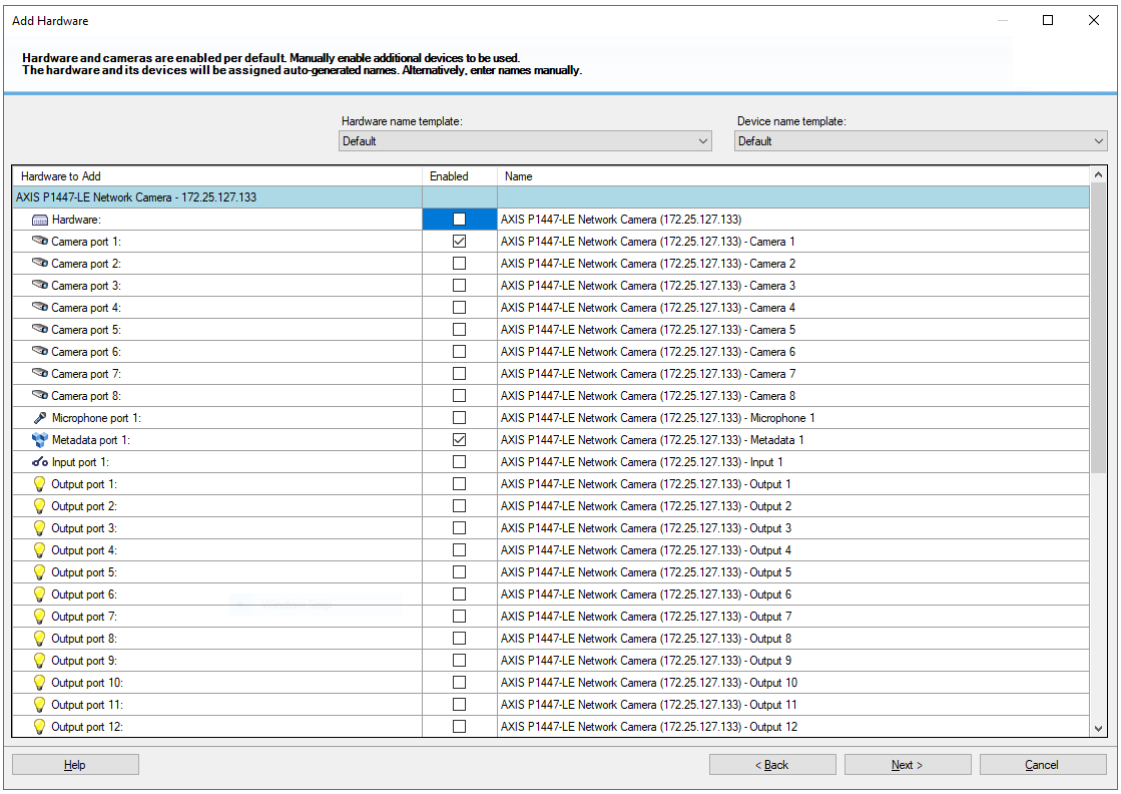
- ALPV needs to be installed and running on the camera.
- You need Milestone 2018 R3 or greater and Milestone Device Pack 10.1a or greater to be able to record event metadata using this plugin.
- AXIS Optimizer for Milestone XProtect (2.3 or higher) must be installed.

Note: If the camera was already installed in the Milestone XProtect system *before* upgrading the Device pack, you need to use the "replace hardware" (Management Client, Servers/Recoding servers…) function to get the new driver features.

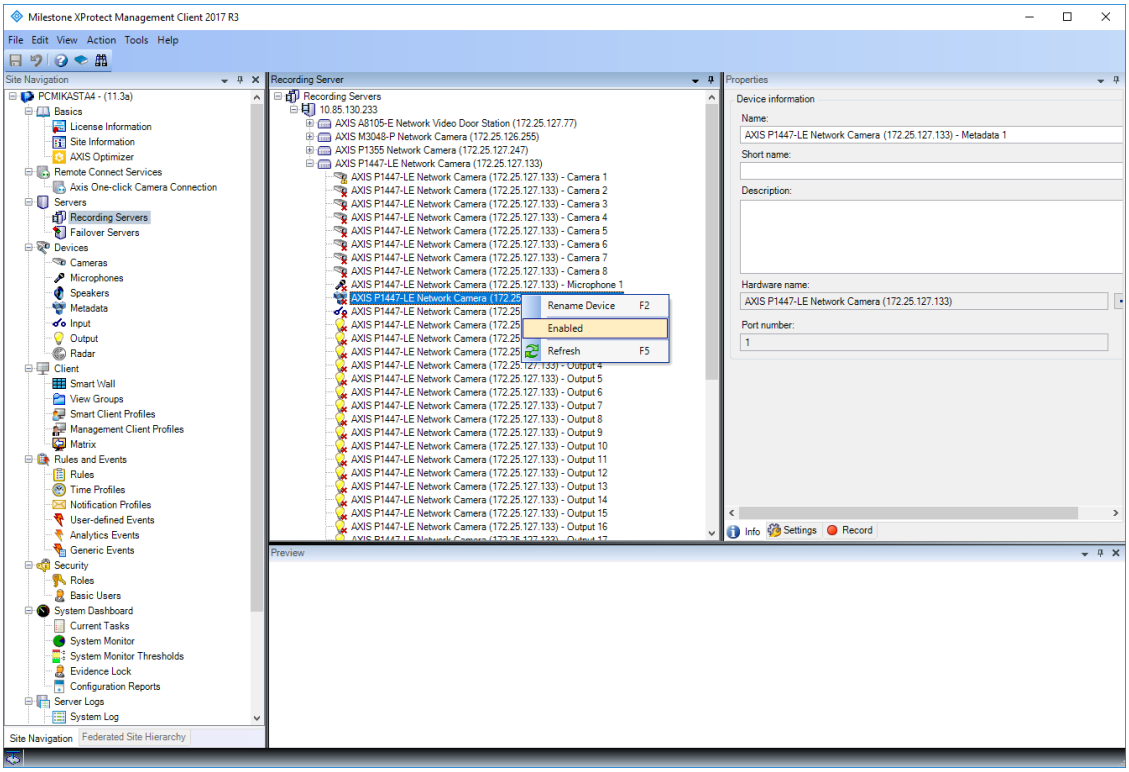
Removing and adding the camera again also works, but in this case all previous recordings are lost.

6.2 Setup

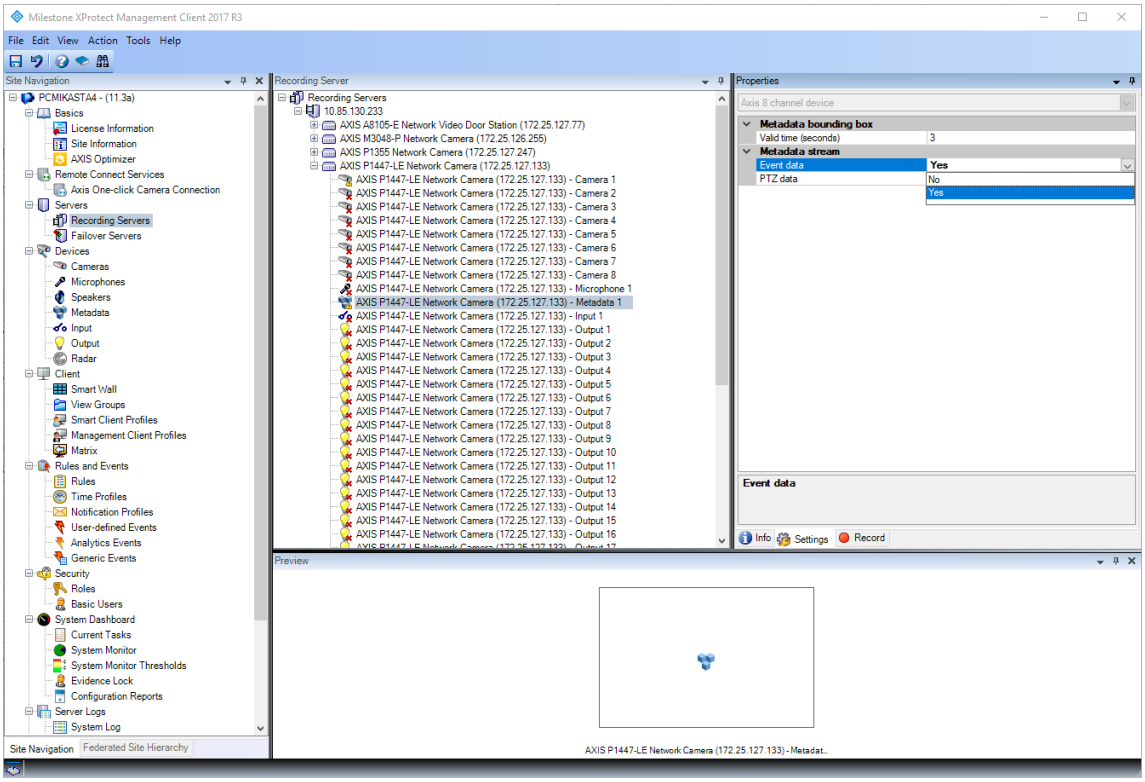
1. Log on to the Management Client and add the camera running "AXIS License Plate Verifier" (if it is not already added to your system).
2. Enable all device types you need. The following device types are required to be able to use ALPV:
    a. Camera 1
    b. Metadata 1



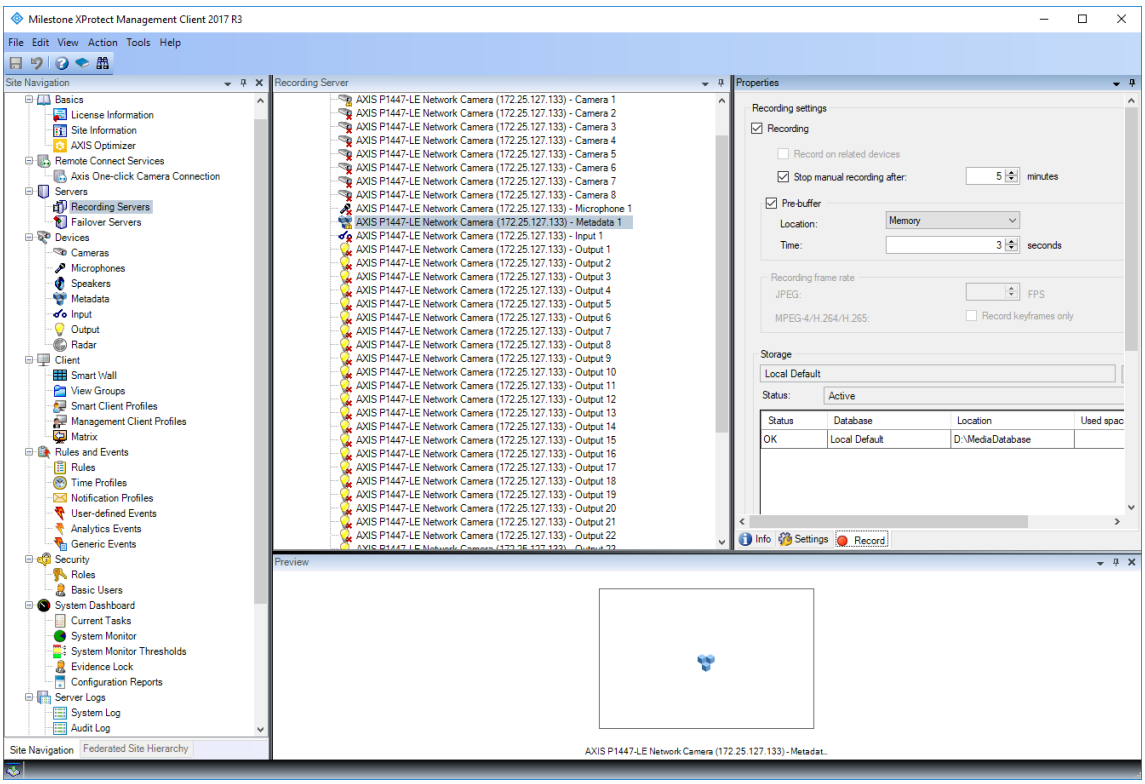
If the camera was already added to Milestone just enable the metadata on the device.



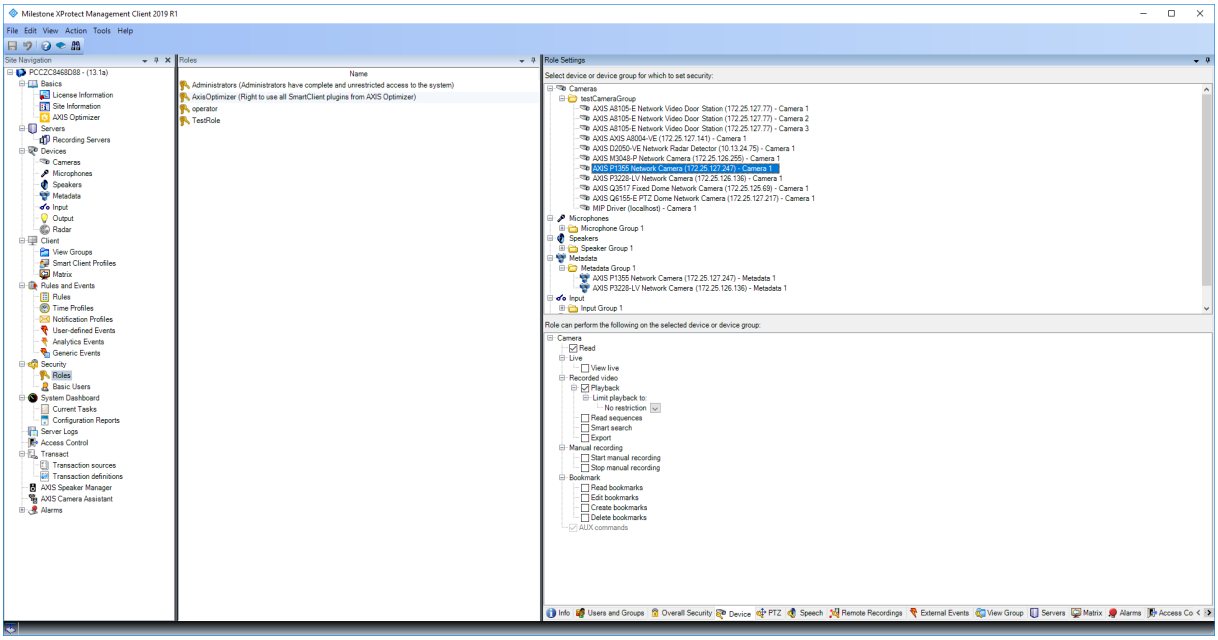
3. Configure metadata
    a. Select “*Metadata 1*” under on the device under “Recording Servers”.
    b. Select the Settings tab.
    c. Set “Metadata stream” Event data to “Yes”



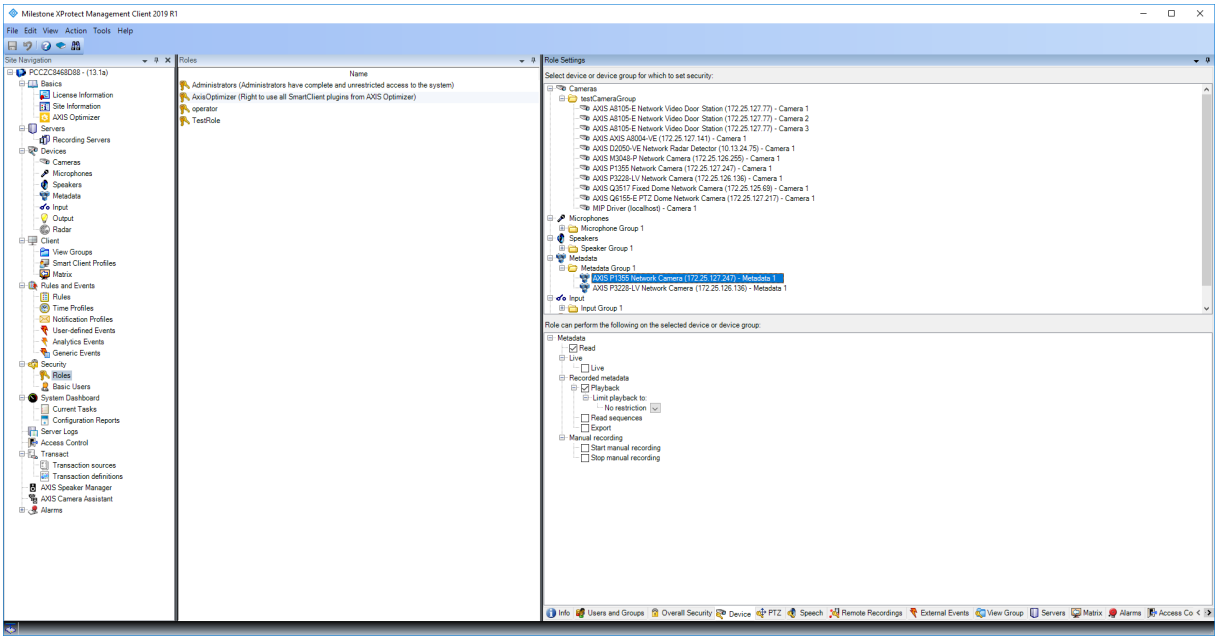
4. Select the Record tab and verify that recording is enabled for the metadata



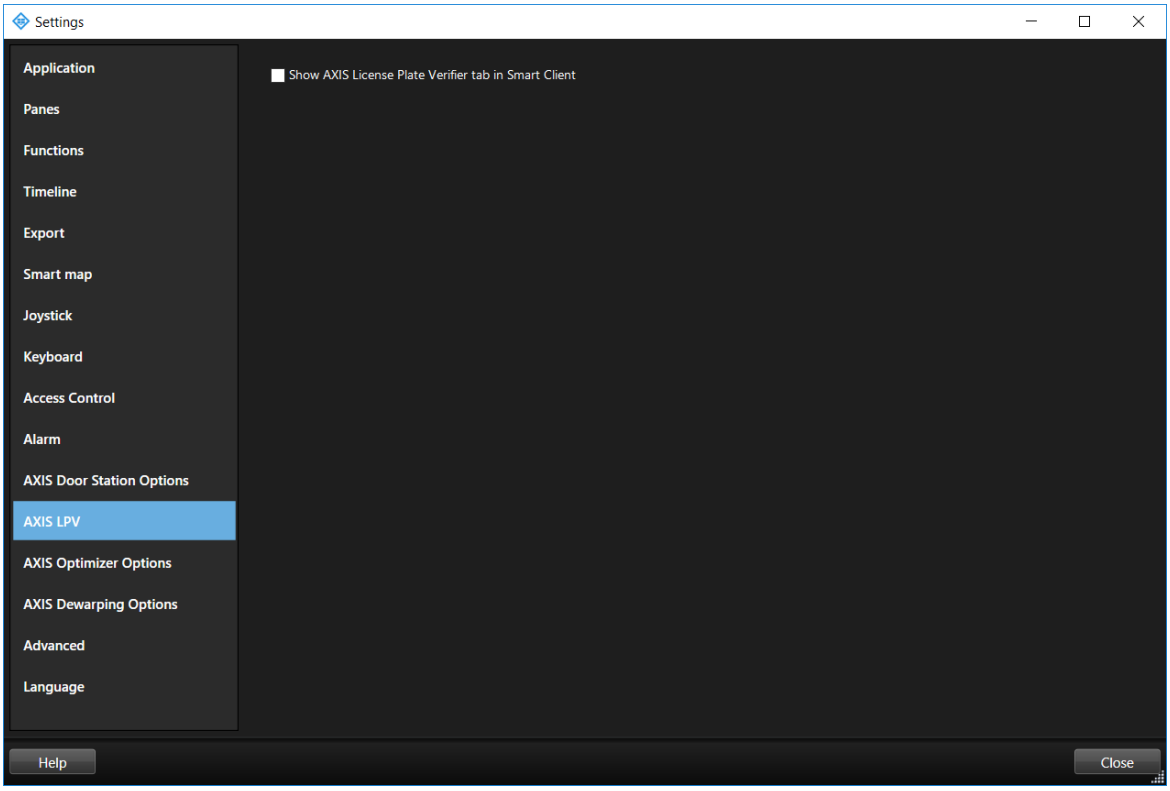
5. Click the “Save icon” in the top left
6. To make LPV work for a standard user you need to add Read and playback rights on the specific camera and user



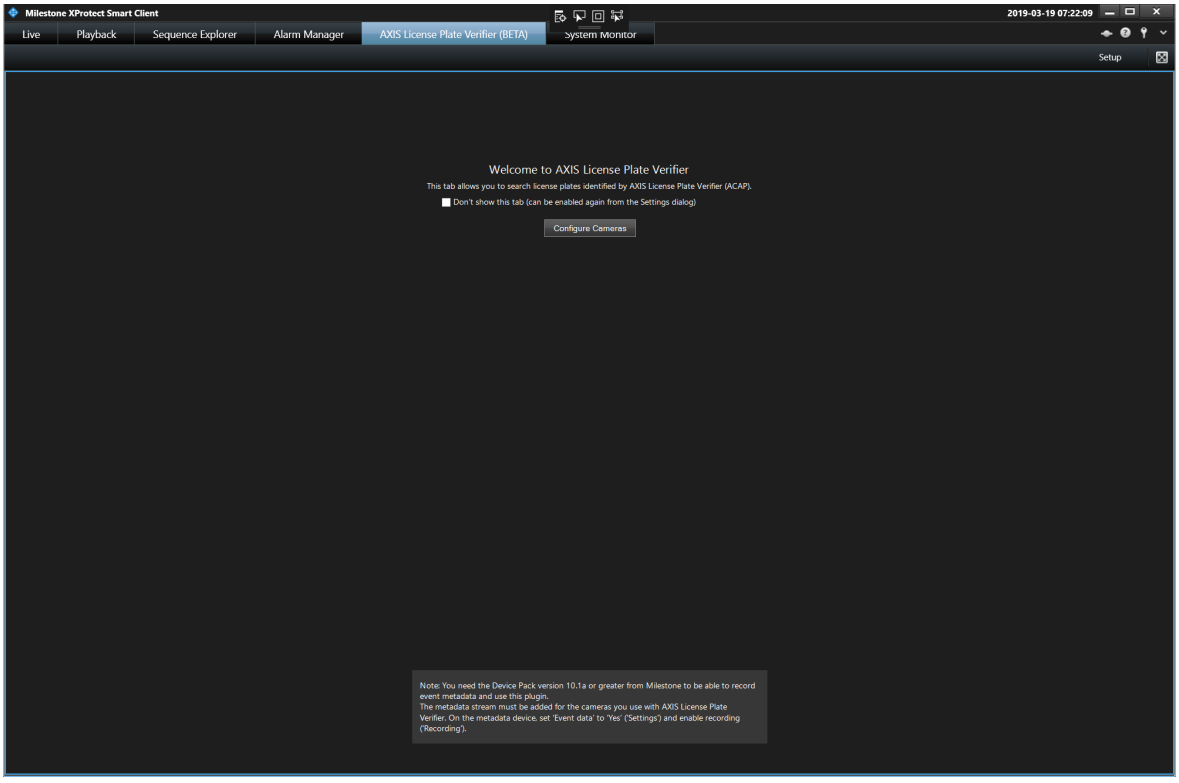
7. To make LPV work for a standard user you also need to add Read and playback rights on the metadata for the specific camera and user.



8. If you are using an Optimizer version earlier than 3.0 you will need to enable this plugin before using. To enable the ALPV plugin in the "Smart Client", select "settings" in the top right corner, go to "AXIS LPV" and enable it.



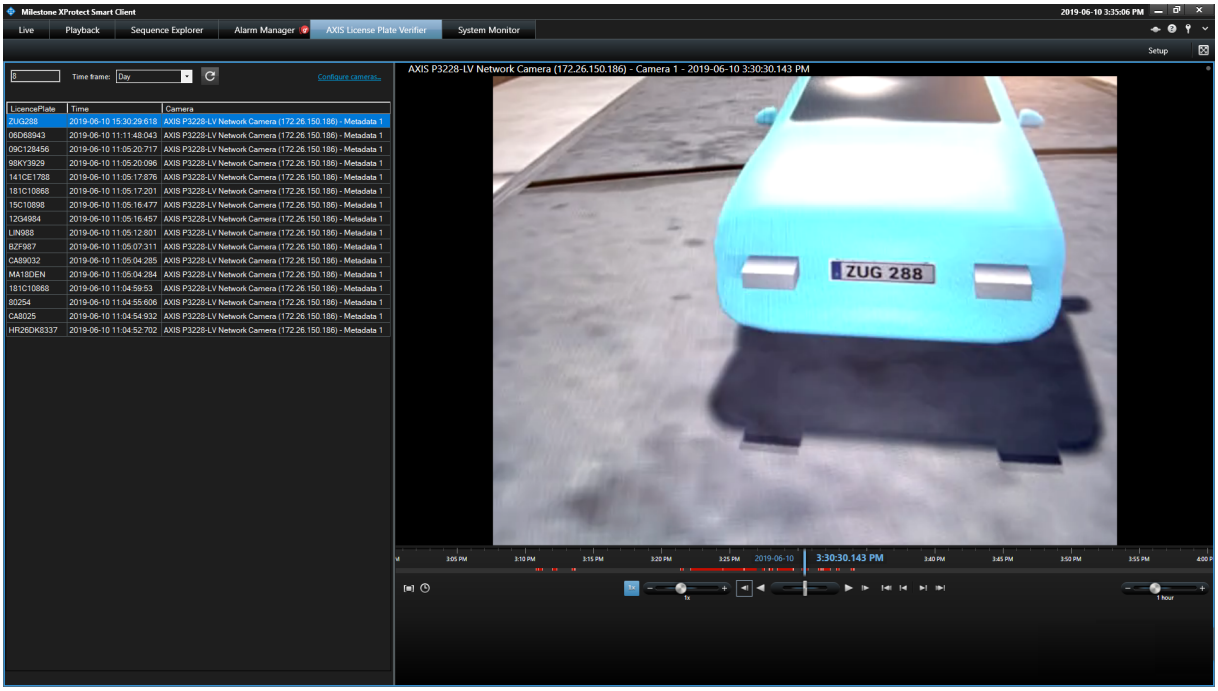
9. Restart the "Milestone XProtect Smart Client" and the AXIS License Plate Verifier tab should show up.



Click on *Configure cameras* and select the cameras you want to use.
After this you will be able to receive license plate information on this plugin tab.

NB! It is important to synchronize the camera with an NTP server so that the camera time is synchronized with the Milestone recording server. Otherwise the video will not be synchronized with the license plate time.

Also, the first time using the plugin it might take some time (10-15 minutes) before the plugin receives license plate information from Milestone XProtect.



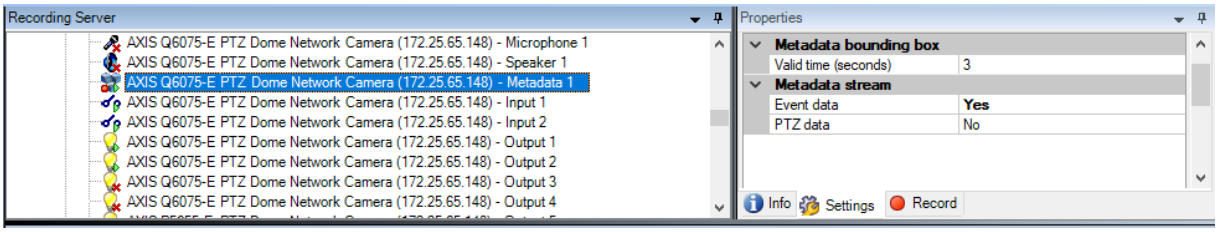
7 PTZ autotracking 2

7.1 Requirements

- *AXIS Q6075 PTZ Dome Network Camera* or another camera supporting *Autotracking 2*
- Metadata enabled in Management Client and Events enabled in Metadata stream (see picture below)
- XProtect 2017 R3 or higher (C-code license is required)

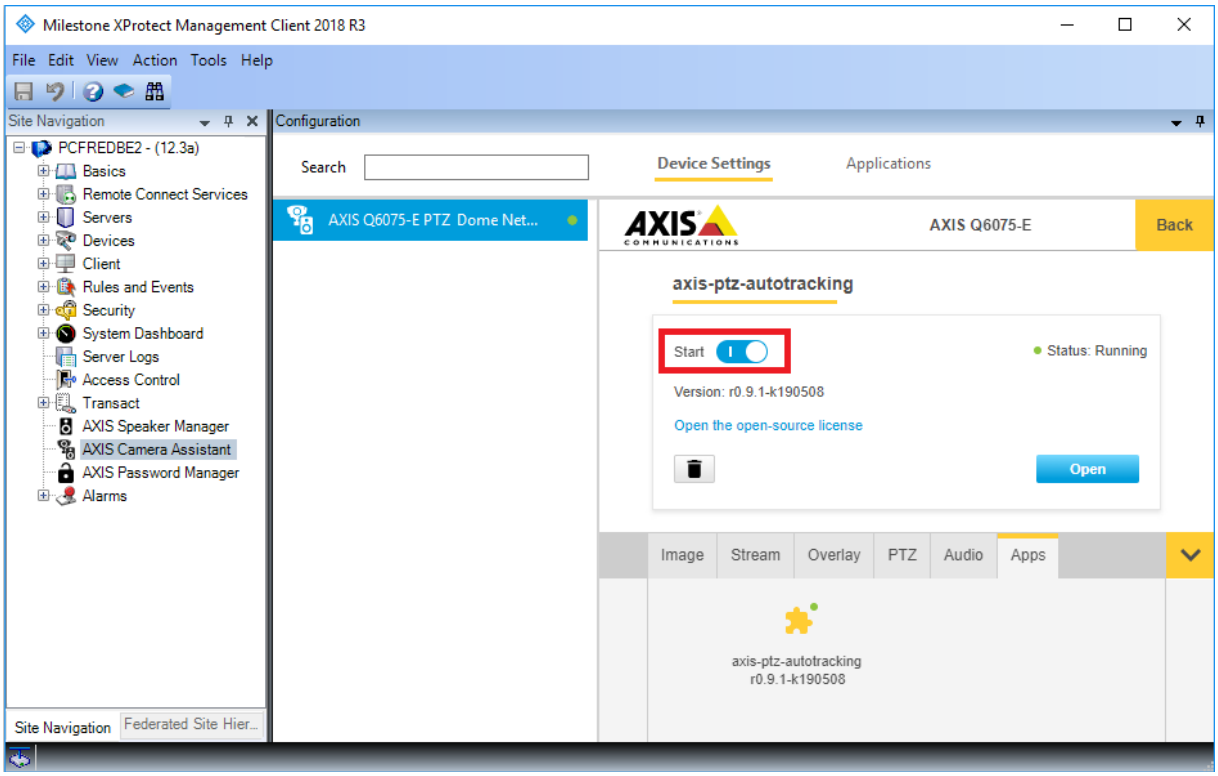
7.2 Setup

1. Logon to the Management Server and add the camera you want to use to the Recording Server.
2. Make sure the camera and metadata devices are enabled.
3. Select Metadata for your camera and click **Settings.** See image below.
4. Change the property "Event data" to **Yes**.
5. Click the **Save icon** in the top left.



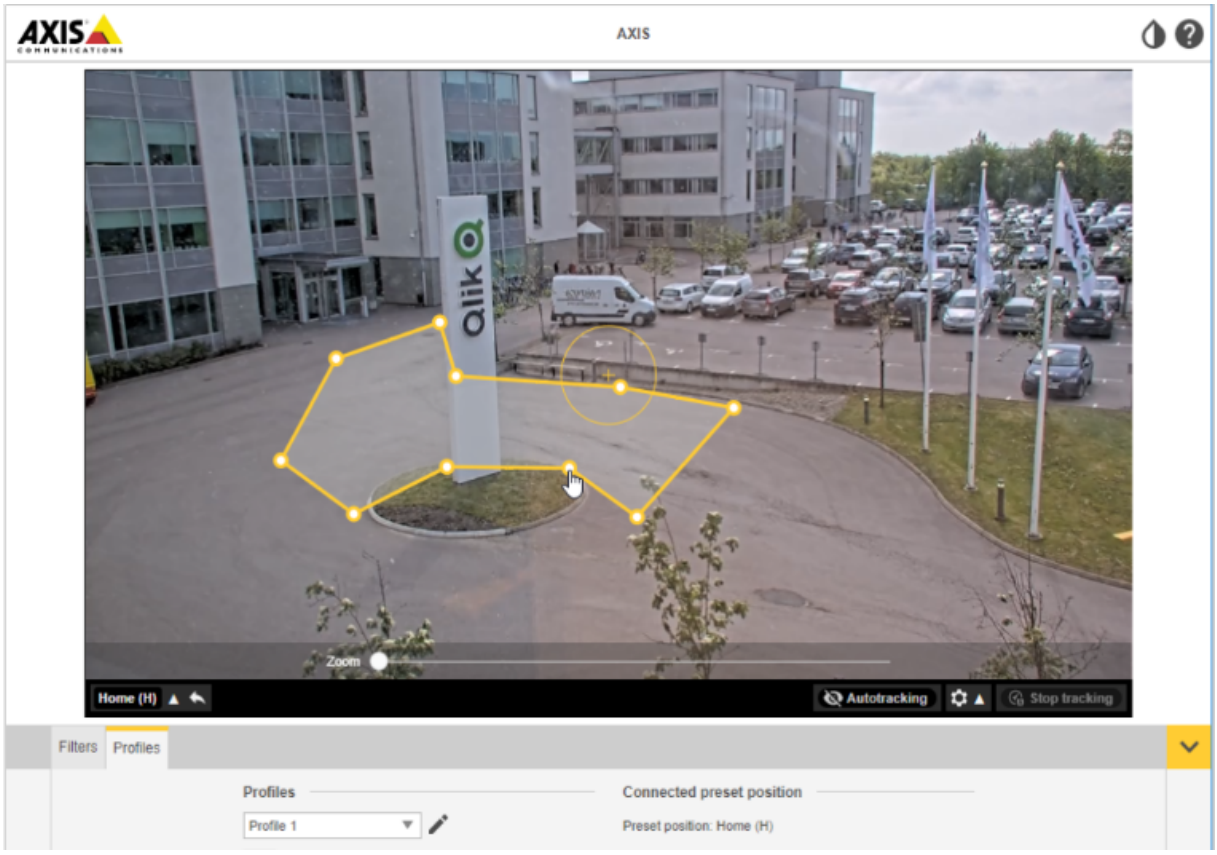
Make sure the *Autotracking 2* application is started.

1. Go to **AXIS Camera Assistant** in the Management Client.
2. Select your camera.
3. Go to the Apps tab and click the *axis-ptz-autotracking* application.
4. If the status is stopped click the Start button and wait for the plugin to start.



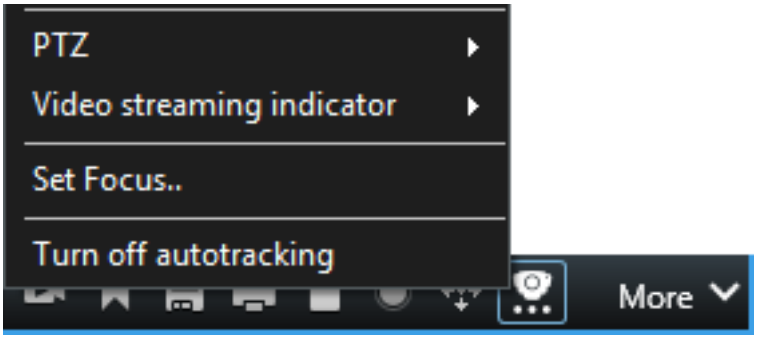
Setup zones (Profiles)

1. In the **Camera Assistant** select the camera you want to create zones for.
2. Open Settings and go to the "Profiles" tab.
3. Click the "+" sign and enter a name and select a preset position.
4. A yellow square will appear which you can move around and adjust with the round nodes.
   Dragging the smaller nodes will spawn further nodes allowing for more complex shapes. This is limited to 10 nodes.



7.3 Operation (Smart Client)

To turn tracking on or off, click the camera features toolbar button. There you will find "Turn off autotracking" or "Turn on autotracking".



- In the Smart Client camera view you can see the profiles you created as yellow zones. Note that they are only editable in the Management Client view.
- Blue squares will be shown over objects perceived as moving or non-static.
- An object being tracked will have a red square.
- NEW Joystick support for Autotracking 2 has been added in v. 3.1

7.4 Automatic tracking

When autotracking is turned on, objects entering the yellow profile zone will be tracked. The camera will automatically follow the object and zoom in trying to keep the whole object in view. Change between different tracking zones by manually control the camera or use a predefined preset position. All PTZ presets that has been defined on the camera will be shown in the camera features menu.
If the tracked object is lost or moves out of picture the camera will reset to its original preset position after five seconds.

7.5 Manual tracking

If you hover the mouse over or very near an object the overlay will be filled. Right clicking when hovering an object will set that object as a target, and the camera will start to track the targeted object. Just like the automatic tracking, the camera will reset after five seconds if the object can't be tracked anymore.

To stop autotracking use the toolbar button and click "Turn off autotracking".

As seen below the indicator to the top right has three states.

- Grey and with an A when it's turned on but not active.
- Grey and with OFF when it's turned off.
- Yellow with an A when it's turned on and currently tracking an object.

Smart Client camera view.

8 Speaker Manager plugin

The Speaker Manager plugin integrates Axis audio products into Milestone XProtect. It allows you to configure speakers and zones directly from within the Management Client and play audio clips or make announcements using the Smart Client.

Visit https://www.axis.com/products/audio for more information about Axis' audio products.

8.1 Speaker manager node in Management Client

Once the Optimizer 3.0 or newer has been installed, there's a new node in the Management Client called AXIS Speaker Manager. The tree structure in Axis Speaker Manager is a reflection of the device groups in the Speakers node under Devices, see Figure 1.

NB! Any modifications to the tree structure, e.g. creating device groups or add/remove speakers from device groups, should be done under the Devices-Speakers node (rather than under the AXIS Speaker Manager node).

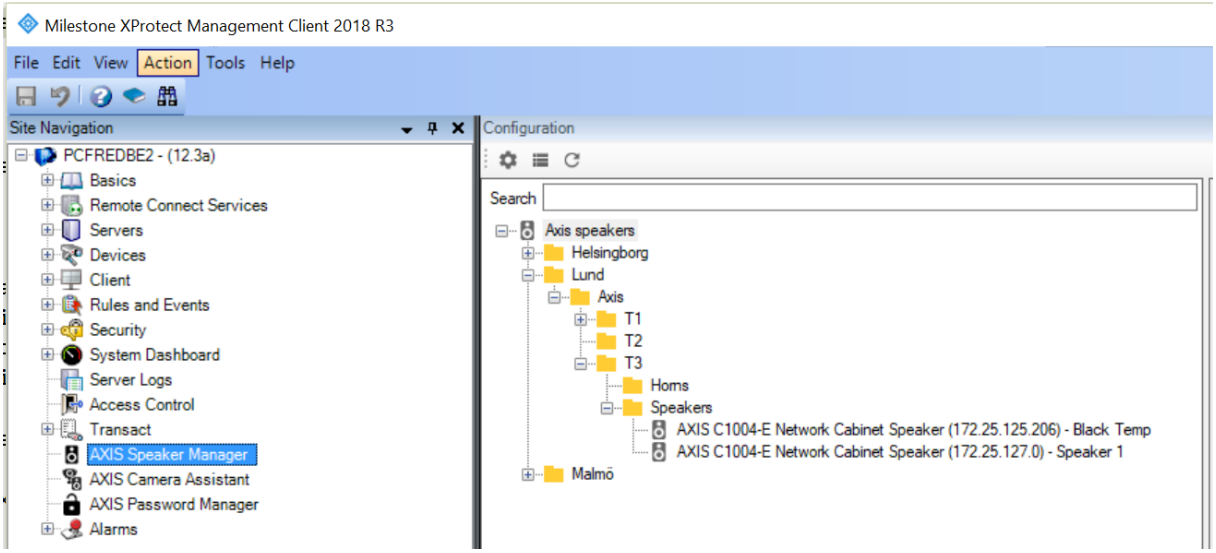


Figure 1

8.2 Manage side panel

Click "Select speakers to show in Smart Client side panel" to open the manage side panel dialog. The speakers/groups/zones in the right pane will be visible in the Smart Client side panel for all users that have access to the speaker. Groups that contains no speaker will not be visible in the Smart Client.

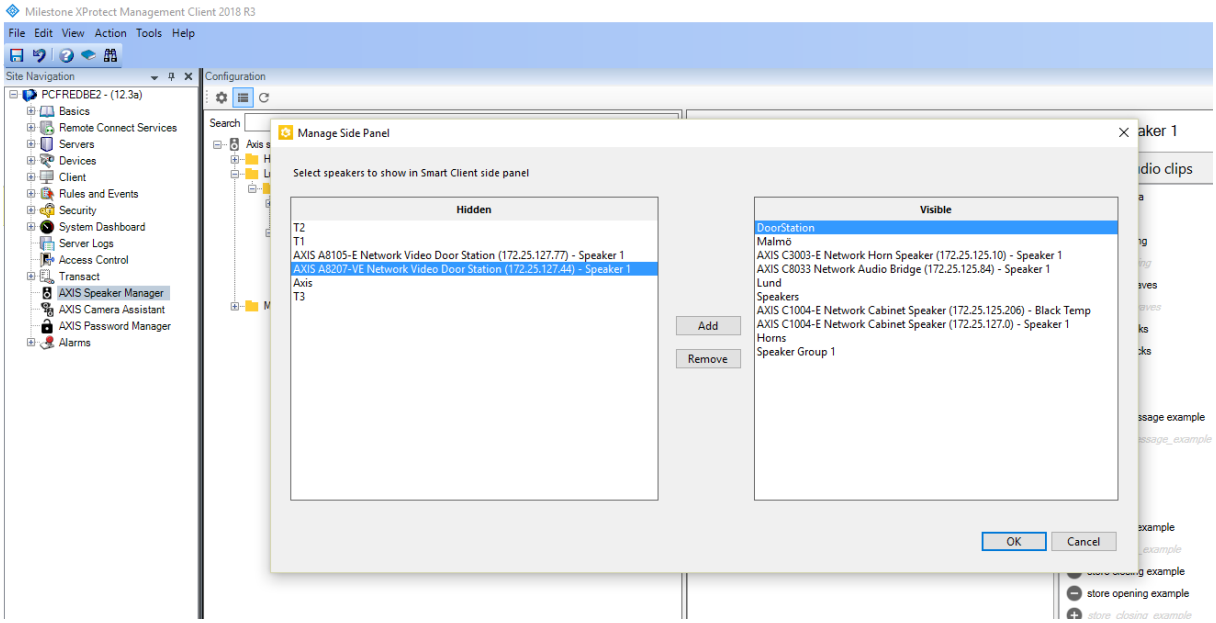


Figure 2

8.3 Associate camera to speaker/group

A group or speakers can be associated with a camera. See *Figure 3*. That makes it possible to address a specific speaker/group from a camera view in the Smart Client. See chapter below about “Push to talk and play media clip on an associated speaker”.

Press the plus button (see *Figure 3* below) to associate a speaker with one or several cameras.

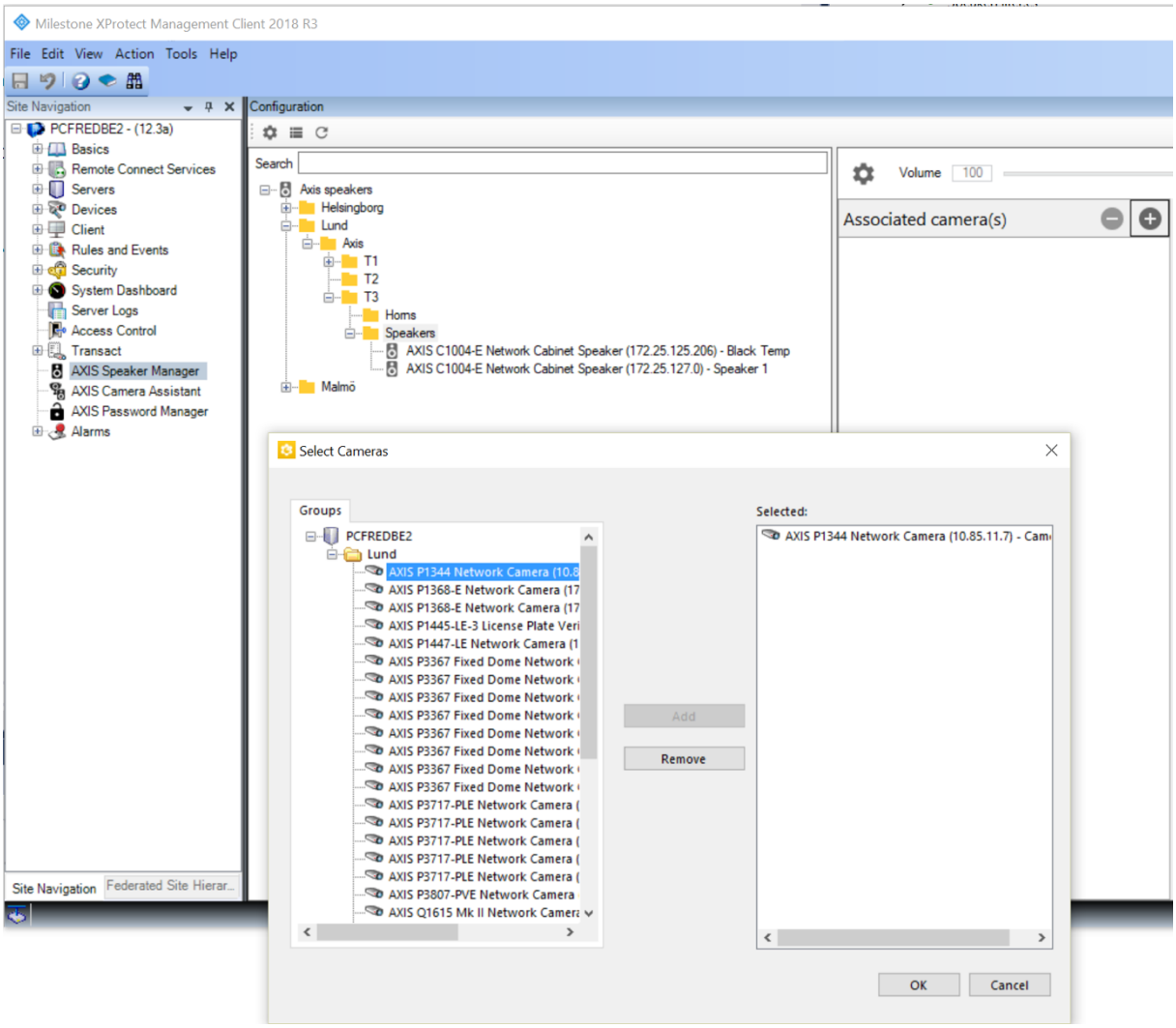


Figure 3

8.4 Audio clips

Audio Clips located on the speaker can be played from the XProtect Smart Client. See chapter below about “Push to talk and play media clip on speaker/group/zone”.

To upload specific audio clips to the speaker or speaker group, the audio clip should be placed in the Audio clips folder, default location: C:\Users\Public\Documents\AXIS Optimizer for Milestone XProtect - Audio Clips\
Press the + button before the audio clip name to upload the specific clip to the speaker/group, see *Figure 4*.

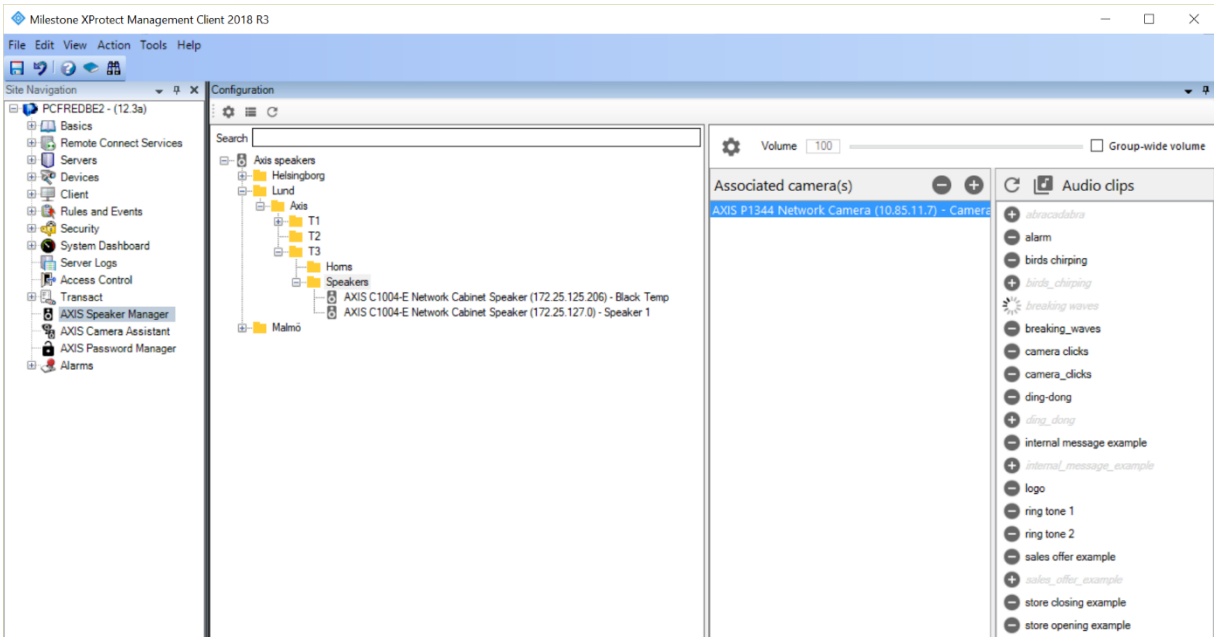


Figure 4

8.5 Synchronization zones

Right click on a group to create a Zone. Any audio you send to a zone will be synchronized. Speakers included in a zone will automatically be selected to be hidden in the Smart Client side panel. That is to prevent users from sending audio to speakers which is part of a zone, instead audio should be sent to the zone.

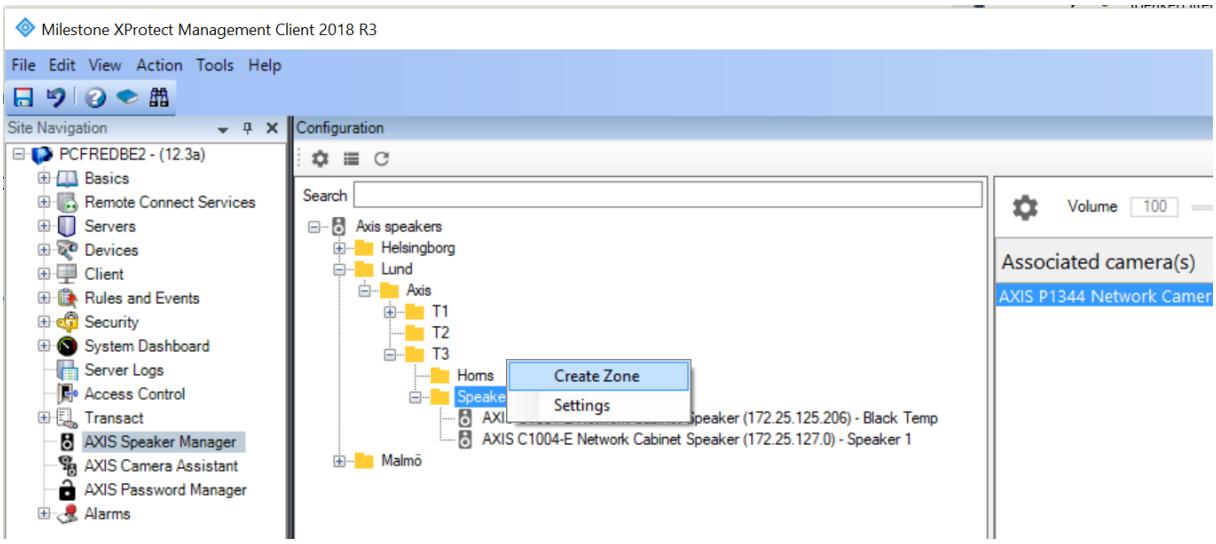


Figure 5

8.6 Speaker plugin in Smart Client

8.6.1 Push to talk and play media clip on a speaker/group/zone

In the left side pane under MIP Plugin-ins, Axis Speaker Control can be used to Play audio clips and talk to any speaker configured in Axis Speaker Manager.

Select a speaker or group in the drop-down list shown in *Figure 6*. Push the microphone button and talk to your microphone to send audio to the speaker/group/zone.

In the Media Clips drop down list you can select any of the media clips located on the selected speaker/group/zone. Press the play-button to start playing the media clip on the selected speaker/group/zone.

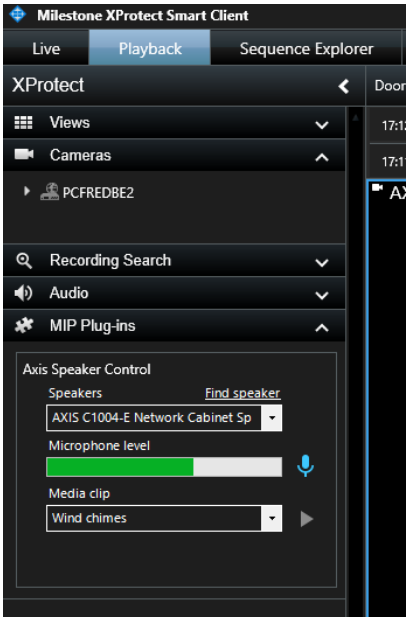


Figure 6

8.6.2 Push to talk and play media clip on an associated speaker

If a camera has been associated to a speaker, see chapter 1.3, there will be a microphone icon in the toolbar, see *Figure* . Press that icon to open the Axis Speaker Control Window. In that window you can talk to or play a media clip on the Speakers/groups/zones that have been associated with the camera.

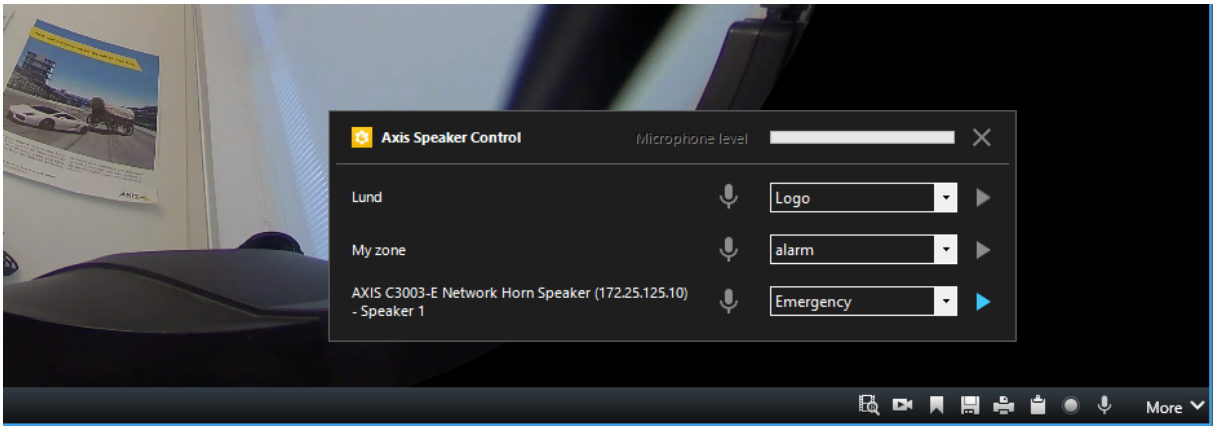


Figure 7

8.6.3 Alarm manager

When an alarm is selected in the alarm manager, the speaker controls will be shown in the right window if the alarm is triggered by a camera that has an associated speaker. See figure 8.

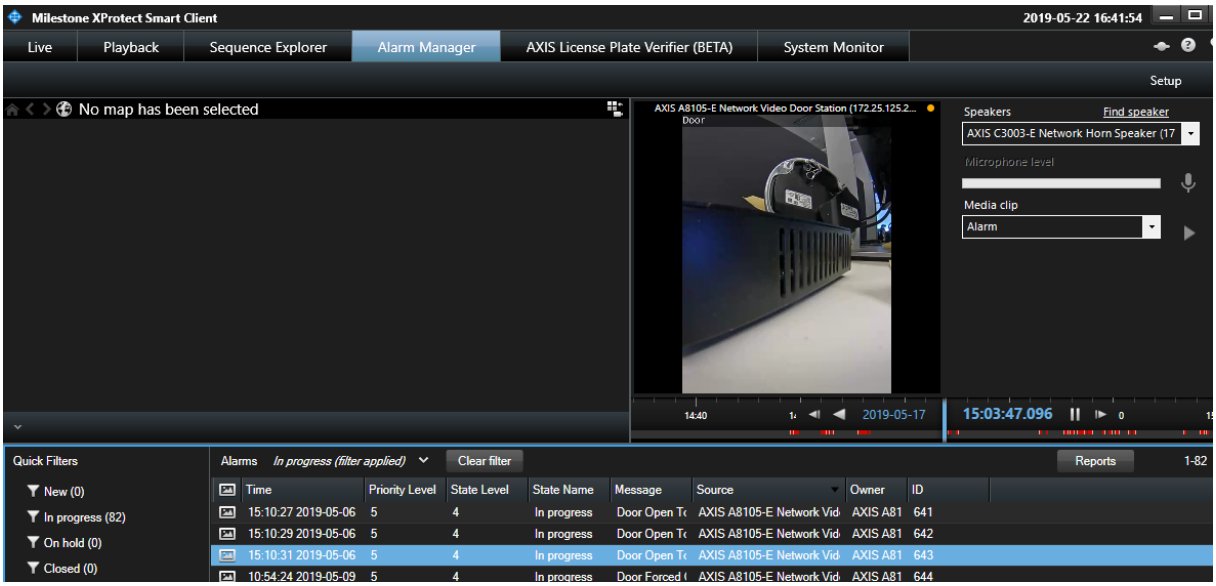


Figure 8

8.7 Limitations

Managing audio clips, playback of audio clips and volume adjustments, is only supported if the speakers can be reached directly from the client computer. On XProtect Version 2019 R2 and later, only managing of audio clips will still have this limitation.

9 Search plugin

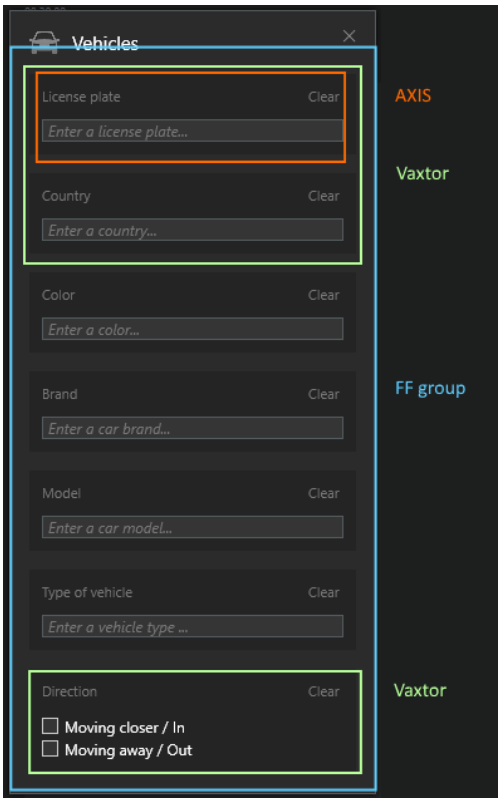
During 2019, Milestone released a centralized Search feature that makes finding a specific incident easy by aggregating all data types registered on the XProtect VMS.

With the new Search plugin, built on top of the Search SDK, we introduce a smarter way to search for, recover, identify and share video evidence about vehicles. It integrates Axis network video cameras with several license plate recognition applications as well as Milestone XProtect video management system (VMS). Watch the video to see how you get results using Milestone Centralized Search with the new forensic search plug-in included in AXIS Optimizer from version 3.5.6.

The plugin currently supports license plate data (according to below) from these ACAPs:

- Axis License Plate Verifier by Axis Communications
- TraFFic CaMMRa by FF Group (version 1.3.1 + recommended)
- VaxALPR On Camera by Vaxtor Recognition Technologies

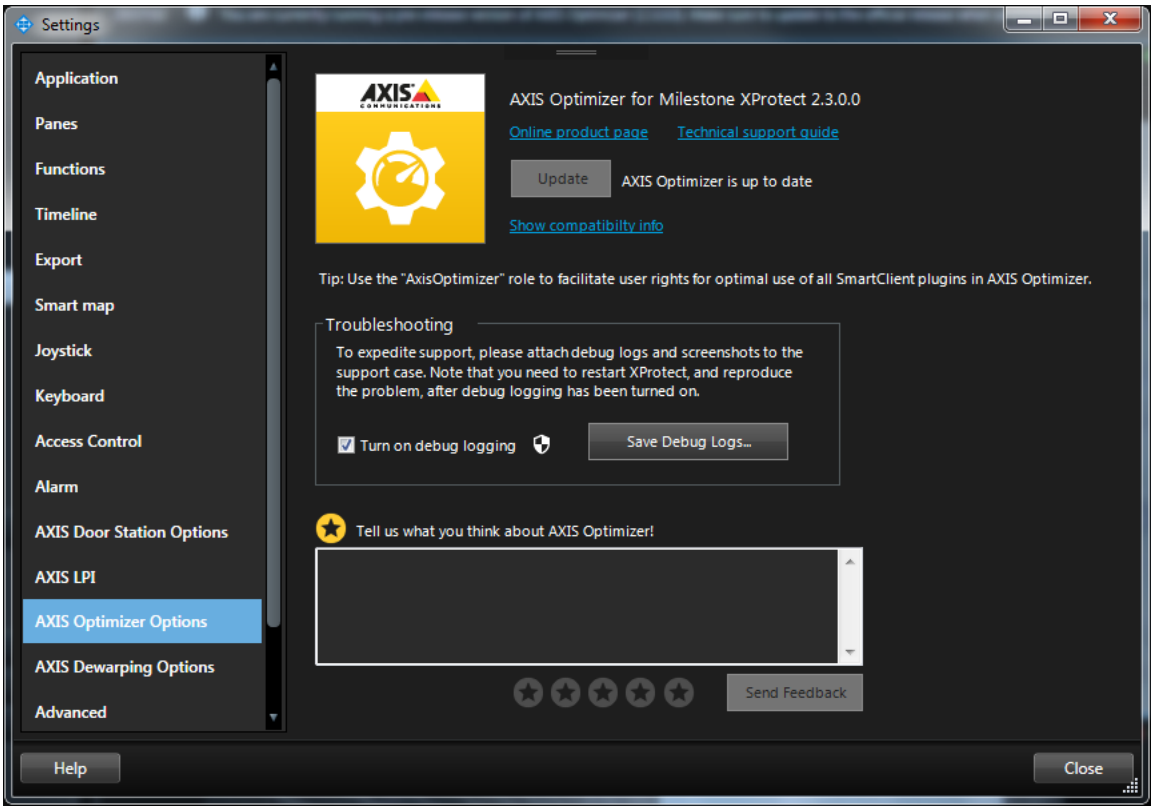
NB! Milestone requires XProtect 2019 R3+ Expert or Corporate Editions in order to use third party search plugins.



10 Troubleshooting

As part of the 2.3 release, Axis Optimizer debug logs have been made available through the Smart Client settings page. See screen shot below. If you have issues, please turn on debug logging and share these logs with your Axis support representative through your or your partner's Axis support account.

Also, please use the Compatibility information report (*Show compatibility info* in screen shot below) to verify what features and capabilities of the Optimizer that your XProtect clients support. If you have further questions or experience any issues with AXIS Optimizer for Milestone XProtect®, please contact AXIS support according to below.



10.1 Known limitations

- AXIS Camera Assistant: The device needs to be accessible directly from the computer where the XProtect Management Client is running.
- On-screen controls: Only supports cameras with built-in On-screen controls support.
- On-screen controls: Requires "Hardware"/"Driver Commands" rights for role.
- On-screen controls: Temperature measurements may give incorrect result if digital zoom is used.
- SpeedDry/Wiper: Only supports camera models Q86XX and Q61XX, as well as Q6215.
- SpeedDry/Wiper: Requires "Management Server"/"Read" and "Camera"/"AUX Commands" rights for role.
- Dewarp: On XProtect 2017 R3 and earlier: Live view/Playback may need to be refreshed after the Dewarp plugin has been added in Setup.

- Dewarp: If a different DPI setting than 100% is used in windows the dewarp windows may only be partially visible. Follow the instructions in the following articles to solve this problem:

https://supportcommunity.milestonesys.com/s/article/XProtect-issues-on-highres-displays-4K-and-higher?language=en_US

https://supportcommunity.milestonesys.com/s/article/Client-GUI-scaling-on-high-DPI-displays

When running XProtect Professional+ 2019 R3 as non-admin, please consider the following:

- The CamDry plugin does not work if camera model name (e.g. P3245-LE) is not found in the Name field
- Dewarping: Cannot get optimal lens profile if model name is not found in the Name field

11 Contact AXIS support

If you have further questions or experience any issues with AXIS Optimizer for Milestone XProtect®, please contact AXIS support via the link below:

https://www.axis.com/learning-and-support