



# 3 ways to use Axis analytics metadata in Milestone XProtect®

AXIS OPTIMIZER FOR MILESTONE XPROTECT

Enter >

**AXIS**<sup>®</sup>  
COMMUNICATIONS

# What is analytics metadata?

In addition to video and audio, Axis devices also generate and deliver event and scene metadata streams. This metadata gives greater meaning to video and audio.

## Axis devices deliver event and scene metadata

Analytics metadata is made up of event and scene metadata. **AXIS Scene Metadata** provides a separate camera stream containing important details in the scene – scene metadata – that can add value in many ways.

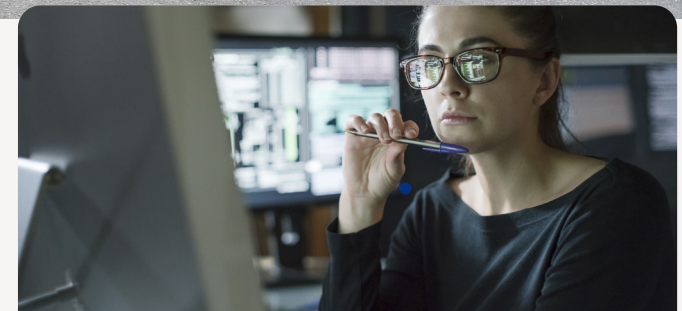
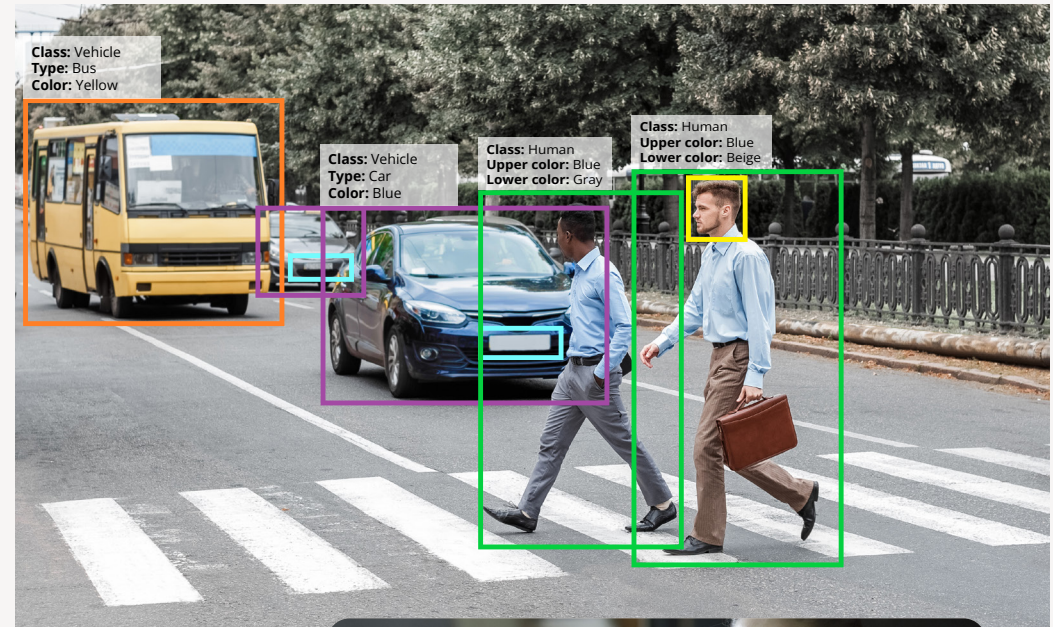
Event metadata enables triggering logical rules based on what has occurred in a scene. Two of the many examples include triggering:

- > Operator notifications when a person or vehicle enters a restricted area
- > Pre-recorded audio announcements when an object stays in a defined area too long

Scene metadata describes details about the objects in a scene such as:

- > WHAT type of objects (human or vehicle) are present
- > WHAT attributes (color) an object has
- > WHAT speed an object travelled through the scene
- > WHEN objects are detected (timestamps)
- > WHERE objects are located (geocoordinate locations and position)
- > HOW objects move in the scene (geocoordinate locations and position)

So, in a video surveillance context, scene metadata gives greater meaning to each video frame.

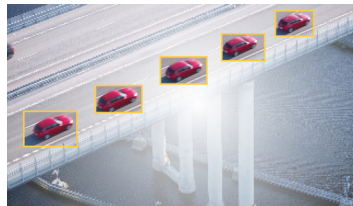


Analytics metadata has become increasingly important for gaining scene understanding while ensuring timely, accurate actions in security, safety, and business operations.

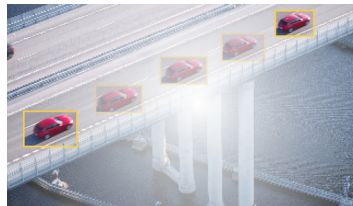
# Three ways of using metadata

AXIS Optimizer for Milestone XProtect® now provides our customers with three ways to use event and scene metadata from Axis devices for free. These let you:

## 1 Use metadata to manage real-time events

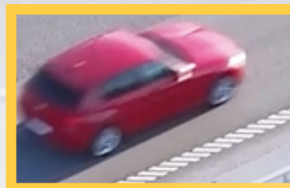
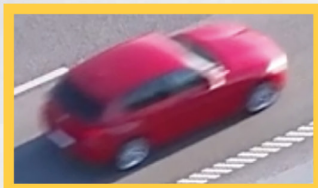
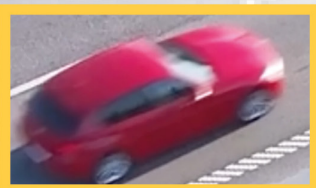


## 2 Use metadata to accelerate forensic search



## 3 Use metadata dashboards to gain insights





# Use metadata for real-time events

## Live insights when every second matters

Real-time, frame-by-frame streaming is the traditional metadata approach to deliver scene metadata from Axis devices. With this method, data is constantly gathered and streamed to a database in real-time. It works with applications that consume the data and together with the Milestone Rules and Events engine, it generates actions as responses to real-time events. So, you get all the real-time details about what is happening in a scene – all the time.

This makes it ideal for triggering real-time events based on scenarios such as line crossing, occupancy, dwell time, etc. As well as responding to the flow of people or traffic in real-time. And ensures timely and accurate actions can be taken – either through automated actions or manually by the operator.

# Use metadata for real-time events

AXIS Optimizer offers three main integrations to efficiently ensure triggering logical events based on what has occurred in a scene in real-time. These are:

**Events server plugin** streamlines working with Milestone XProtect Rules and Events. It lets you create and execute rules for automated actions or as manual responses to real-time events.

**Events control panel** acts as centralized hub to display all available and subscribed events associated with Axis devices in the system. See more on page 10.

**Metadata and search control panel** allows users to control all metadata and forensic search capabilities. See more details on page 11.

## Recommended use

Real-time events requiring immediate actions



Real-time statistical analyses



Real-time business intelligence



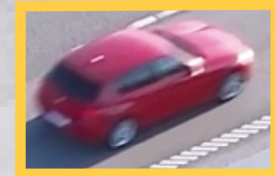
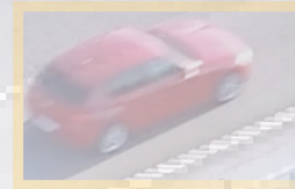
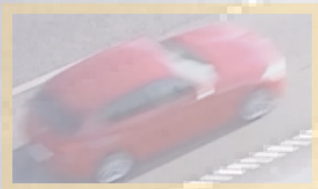
## Examples

Using frame-by-frame metadata, it's possible to send triggers and alarms for operators to be notified in real-time; two examples: when a person who crosses a virtual line is counted, or responding to the flow of people or traffic in real-time. This ensures timely and accurate actions can be taken, either through automated actions or manually by the operator.



Trigger on time in area

Live insights when every second matters.  
**Watch video here.**



# Use metadata for forensic search

## Up to 50 times faster forensic search

Consolidated metadata is our latest means of managing scene metadata. It's ideal for forensic search and historical statistical analyses. Instead of constantly streaming metadata in real-time, consolidated metadata is only generated when an object enters and leaves a scene. It provides the same detailed descriptions as frame-by-frame metadata. However, with consolidated metadata, data is gathered in chunks, then summarized before being sent to a database.

The result? A significant reduction in the amount of data transmitted and sent for storage, which allows forensic searches to be performed up to 50 times faster, compared to frame-by-frame metadata.

# Use metadata for forensic search

## Recommended use

Post-event forensic search investigations

Historical statistical analyses

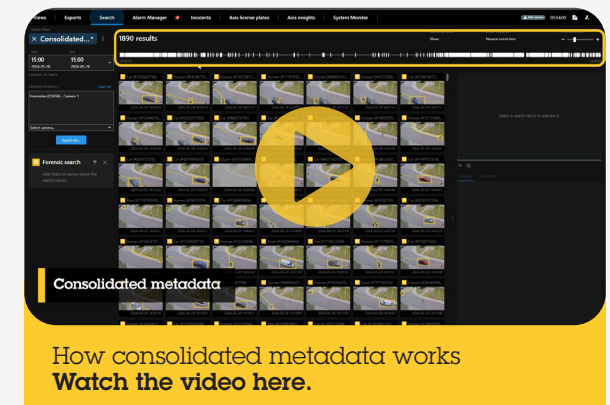
Business intelligence



## Examples

Scene metadata makes it possible to search for objects such as humans and vehicles as well as incidents that have occurred in a scene.

Details	What is detected	Examples
What it is	Object class	Humans, vehicles (car, bus, truck, bicycle, motorcycle)
What it looks like	Object attributes	Color, shape, etc.
When something has occurred	Time	Day of week / time of day
Where something is detected	Geo-coordinate location	Place
How something moves	Motion	Moving humans or vehicles in a scene



# Use metadata dashboards to gain insights

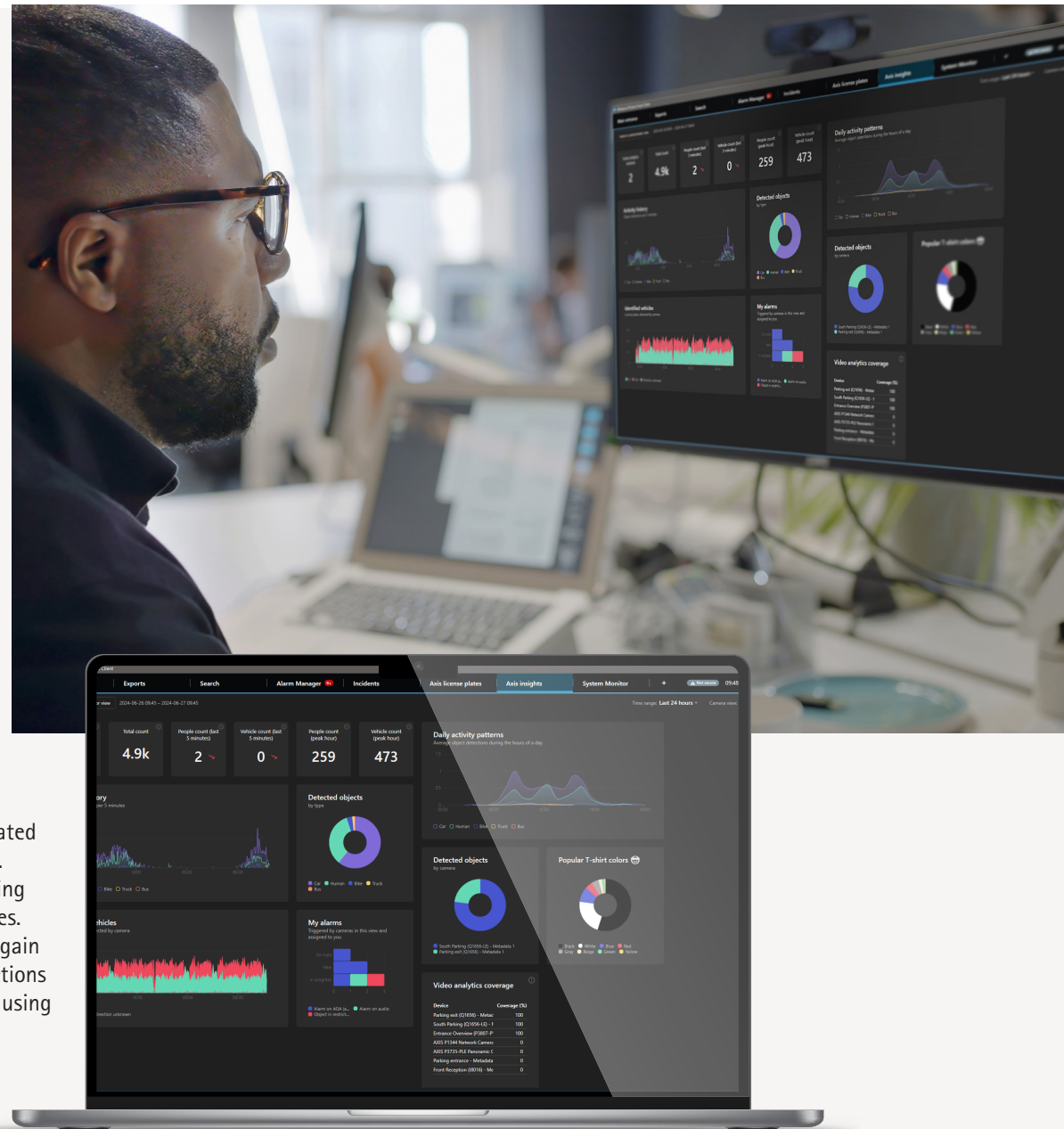
## AXIS Optimizer data insights dashboard for operators

AXIS Optimizer Data Insights dashboard turns your data into actionable insights about your site in the form of graphs showing statistics, trends, and anomalies. It also shows the health status of your installations and connected devices, so you can ensure everything is running as expected.

Separate SmartClient dashboards are available for both administrator and operator roles.

### Operator dashboard

Operator roles gain visualized, aggregated data from their existing camera views. This data is presented as graphs showing alarms, statistics, trends, and anomalies. So, operators can easily analyze data, gain deeper insights, and take necessary actions like responding to real-time events or using statistics to help optimize operations.





# Use metadata dashboards to gain insights

AXIS Optimizer data insights dashboard for administrators



## Administrator dashboard

System administrator roles gain a system-wide overview of their device's online/offline status, as well as all active system alarms and events. This helps administrators improve their situational awareness, so they can ensure everything is up and running. For instance, they'll be notified if cameras in the system require attention.



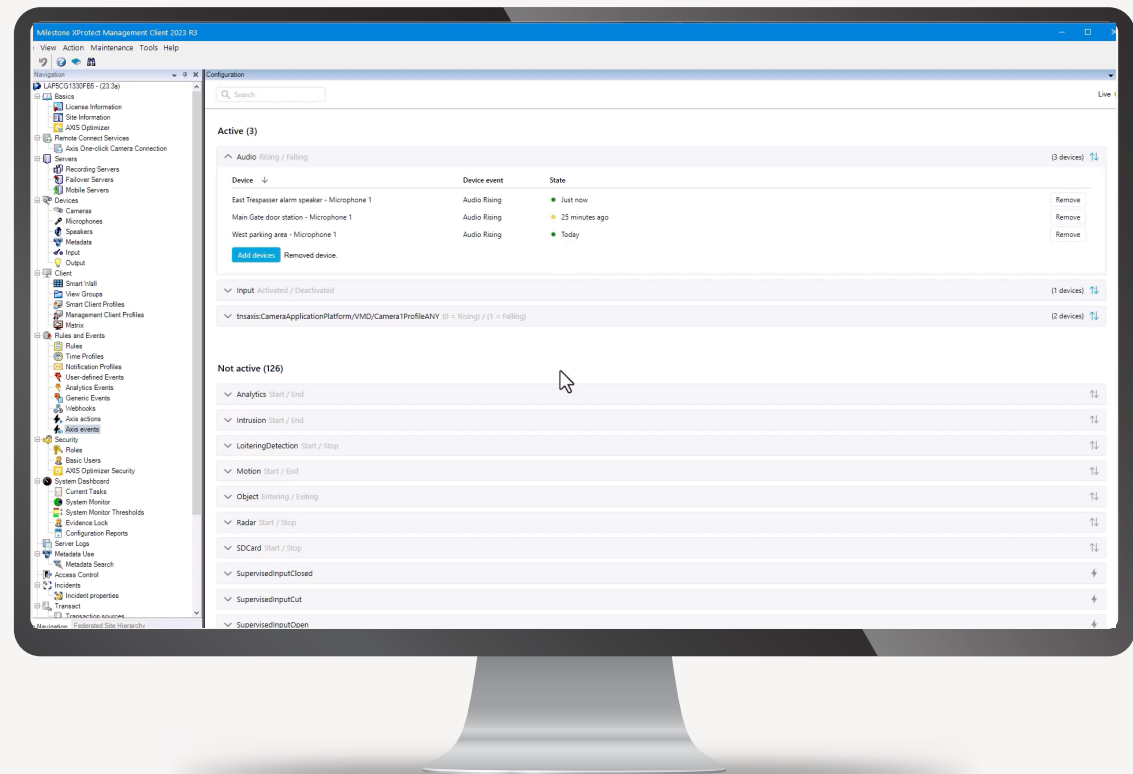
Gain insights from metadata with dashboards. **Watch the video here.**

# AXIS Optimizer events control panel

The total number of events possible for Axis devices continues to dramatically increase with AI-powered cameras. Meanwhile, setting up events for Axis devices in XProtect is cumbersome and prone to human error. Traditionally, users need to go to each device to see associated events.

AXIS Optimizer events control panel makes it easy for admin roles to manage events for all Axis devices in the system. It acts as centralized hub to display all available and subscribed events associated with Axis devices in the system. Users can quickly:

- > Search for events for all connected devices
- > See when an event was last triggered and its current state
- > Add or remove events from devices
- > Setup events for multiple devices in batch



# AXIS Optimizer metadata and search control panel

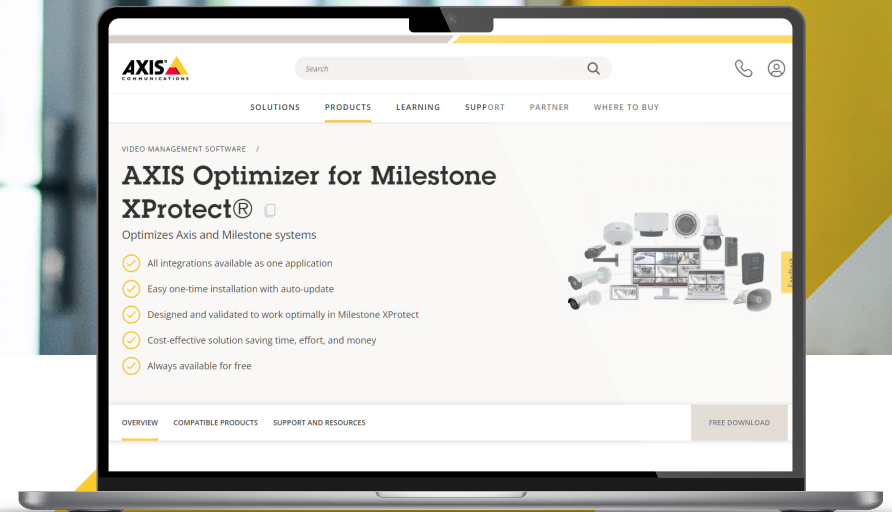
AXIS Optimizer includes a dedicated control panel for metadata and search which visualizes event data, analytics data, analytics features, and consolidated metadata for each camera in the system. Fully customizable, settings can be turned on or off for event data, analytics data, and consolidated metadata, and all three streams can run simultaneously. It's also possible to view the video analytics features that the device currently supports such as object class (humans, cars) and object color. Upgrading the device software may enable more analytics functionality.

## The metadata and search control panel lets you customize:

- > **Event metadata:** turn on to allow the VMS to retrieve event metadata from the device.
- > **Analytics metadata:** turn on to use the forensic search feature and show bounding boxes in live view and playback
- > **Analytics features:** view the video analytics features supported by each of your devices
- > **Consolidated metadata:** turn on to accelerate forensic search investigations

This control panel also allows admin roles to grant or deny operators access to the different filters available in the range of forensic search alternatives including objects, vehicles, freight containers, and zone speed infractions.





## Three ways to use metadata – always available for free!

AXIS Optimizer is our constantly growing suite of plugins and integrations.

Learn more about how it optimizes daily workflows for users at [www.axis.com/products/axis-optimizer-for-milestone-xprotect/savings](http://www.axis.com/products/axis-optimizer-for-milestone-xprotect/savings)