

AXIS Forensic Search for Genetec

User manual

AXIS Forensic Search for Genetec

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AXIS Forensic Search for Genetec

About AXIS Forensic Search for Genetec

About AXIS Forensic Search for Genetec

AXIS Forensic Search for Genetec adds forensic search possibilities for Axis devices to Genetec Security Center. Investigators working with Axis devices can use the plugin to get an overview of all activity in the scene or quickly find a specific object or event of interest.

Axis cameras with firmware 10.6 or higher generate metadata that describes all currently moving objects in a camera's field-of-view. Genetec Security Center can record this data together with the corresponding video and audio. AXIS Forensic Search for Genetec allows you to analyze and search this data. The plugin supports up to 150 cameras.

AXIS Forensic Search for Genetec

Before you start

Before you start

1. Make sure that the camera has the latest firmware version.
2. To filter by object types **Human, Face, Vehicle, Bike, Bus, Car, Truck, or License plate**:
 - 2.1 Use an Axis device with support for AXIS Object Analytics. See the Analytics filter in the *Product selector*
 - 2.2 Go to **System > Analytics metadata** and enable **Analytics Scene Description** in the camera's web page.
3. To filter by **Vehicle color, Upper body clothing color, or Lower body clothing color**:
 - 3.1 Use an Axis device with support for AXIS Object Analytics. See the Analytics filter in the *Product selector*.
 - 3.2 Use an Axis device with ARTPEC-8 or CV25. See the System-on-chip filter in the *Product selector*.

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Get started

Get started

Workflow

To install and configure AXIS Forensic Search for Genetec, follow this workflow:

1. *Verify camera settings in Config Tool on page 5*
2. *Install the plugin on a server on page 5*
3. *Configure the plugin on page 5*
4. *Install the plugin on a client on page 6*

Note

You must install the plugin both on server and client machines. If you have a system with multiple servers, only install the plugin on one of them.

Verify camera settings in Config Tool

Make sure that the cameras you want to use forensic search on have the correct settings:

1. If the cameras are not already added, go to Config Tool and add them.
2. Update the cameras' recording settings as you need. To use the forensic search plugin, you must record both video and metadata. Forensic search only searches recorded data. If no recording has been done, forensic search will not find any data.
3. Set the recording frame rate to **All frames**, or at least 10.

Install the plugin on a server

1. Locate the installation file.
2. On the Genetec Server, run `Axis forensic search for Genetec.exe`. The installation file will restart the Security Center Server.

Configure the plugin



To watch this video, go to the web version of this document.

help.axis.com/?&pid=77677&tsection=configure-plugin

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Get started

Note

Each registered object in the camera uses about 500 bytes of disk space on the server. Use this to estimate how much storage space you need to reserve on the server per camera added to Forensic search.

Object rates for different scene types:

- Low activity scene 2500 objects/day (loading dock)
- High activity scene 25000 objects/day (parking lot)
- Busy scene 250000 objects/day (intersection)

To configure the plugin on the server:

1. Add AXIS Forensic Search for Genetec:
 - 1.1 In Config Tool, go to **Tasks > Plugins**.
 - 1.2 Click **Add an entity** and select **Plugin**.
 - 1.3 Select **AXIS Forensic Search for Genetec**, click **Next** and follow the onscreen instructions.
2. Select which cameras you allow operators to perform forensic search on. The operator can then select among these cameras when creating a forensic search report in Security Desk.
 - 2.1 Click the plugin name.
 - 2.2 Go to **Camera selection** and click **Add camera**.

You'll see a list of Axis cameras which have metadata enabled in Security Center.
 - 2.3 Select relevant cameras and click **OK**, then **Apply**.
3. Choose how long the data from the plugin should be stored. Click **Resources** and then **Cleanup**. Set the number of days to keep the data.
4. Wait at least 20 min to let the system record video and metadata. After that, you can start searching, see *Perform a search on page 7*

Install the plugin on a client

1. On the client computer, run `Axis forensic search for Genetec.exe`.

Now you can start searching, see *Perform a search on page 7*

Note

Client setup tips

These settings are general and effect the whole Security Desk, not only AXIS Forensic Search for Genetec.

- To make the experience when playing a video from the report better:

Go to **Options > Video > Seek time** and set **Playback offset** to 0. Now the video will start at the actual time of the event.

AXIS Forensic Search for Genetec

Perform a search

Perform a search


Forensic search works in the same way as any other report that you generate in Security Desk. Before you can use this search function, you need to configure it in the Config Tool. To learn how to do this, see *Get started on page 5*.



To watch this video, go to the web version of this document.

help.axis.com/?&pid=77677&tsection=perform-search

Note

- If you are updating from an older version to 2.0, the **Color** column in the search result might not be visible. It must be added manually again in the report.
1. In Security Desk, go to **Tasks > AXIS Forensic Search for Genetec**.
 2. Select one or several cameras.
 3. Select one or several object types. Depending on your system, you can search for the object types:
 - **Human**
 - Choose to search for object attributes:
 - **Upper body clothing color**
 - **Lower body clothing color**
 - **Vehicle**
 - Choose to search for subclasses of object types: **Bike, Bus, Car, or Truck**.
 - Choose to search for object attributes: **Vehicle color**.
 - **License plate**
 - **Face**
 4. Select a time of day (h) to filter your search.
 5. Select **Regions of interest**.
 - 5.1 Select a camera.
 - 5.2 To refresh a thumbnail or generate a new thumbnail from the current time, click .
 - 5.3 Select one or several regions of interest.
 - Only objects that have been in these areas will be shown in the search results.
 - The same search can contain multiple regions of interest in multiple cameras.

AXIS Forensic Search for Genetec

Perform a search

- To remove all regions from all cameras, click **Clear All**.
- 6. To decrease search time, go to **Options** and deselect **Include snapshots in result**.
- 7. Click **Generate report**.

For more information about the report, see *Learn more about the report on page 9*

- 8. For each search result, you'll see the object in the snapshot.
 - The snapshot shows the video frame when the object was the most visible.
 - To see the complete video sequence for a search result, select it and click **Play forward** in the preview panel.

Note

Analytics applications that run on the camera, for example AXIS Object Analytics and AXIS Loitering Guard, might also burn in overlays in the video. To remove these overlays, go to the application's web configuration page.

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Learn more about the report

Learn more about the report

Forensic search works in the same way as any other report that you generate in Security Desk. The report contains the following columns:

- **Time**
The camera's time when the system detected the object.
- **Camera**
The camera which detected the object.
- **Snapshot**
A zoomed in image of the detected object.
- **Type**
Type of objects: human, vehicle, bike, bus, car, truck or object if no type is detected.
- **Travel distance (%)**
Same as Travel distance but shown as an integer.
- **Relative speed (%/s)**
Same as Relative speed but shown as an integer.
- **Duration (s)**
The time the object was tracked by the camera in seconds. Sometimes tracking could be lost if the object is far away or temporarily obscured by another object.
- **Color**
The detected color of the object. The result will register as "Unknown" if no color was detected.

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Limitations

Limitations

- To get the correct video footage for the search results, it's important to have the correct clock synchronization.
- The data analyzed by the forensic search plugin doesn't take the scene's perspective into consideration. This means that an object's size and speed differ depending on how close to the camera the object is.
- Weather conditions such as heavy rain or snow may affect the detection accuracy.
- If there's a good contrast of the object in low light scenes, the analytic will become more accurate.
- A single object can, under some circumstances, generate multiple results. For example when tracking is lost when an object is temporary obscured by another object.
- For forensic search to work on video streams that have been rotated 180 degrees, you must use firmware 10.6 or later on the cameras.
- Forensic search doesn't work if you use a resolution with a different aspect-ratio than the native camera resolution.
- It takes up to 20 mins for an object that's visible in the scene to become searchable.
- The white balance setting in the camera should be accurate in order to get good color detection.
- For forensic search with more than 150 cameras, we recommend that you add cameras in small batches to evaluate system performance.

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Troubleshooting

Troubleshooting

The report is empty

- It can take some time before data is received. Wait around 20 min and make sure events take place in the scene.
- Make sure that the latest firmware is installed on the camera.
- Make sure that the latest driver pack is installed on the Security Center Server.
- Make sure that the camera is correctly configured for metadata:
 1. In the Config Tool go to **Tasks > Video**.
 2. Select the camera you want to use and go to the **Recording** tab.
 3. Click **Show advanced settings**.
 4. Turn on **Record metadata**. If you can't see **Record metadata**, verify that the Latest Genetec Driver pack is installed.
- In Security Desk, verify that metadata is saved:
 1. Click **Tasks > Maintenance > Archive storage details**.
 2. Select the camera and click **Generate report**. The saved data should include both metadata and video. If no metadata is stored, forensic search won't work.
- Make sure that metadata is working:
 1. Go to live view for the specific camera.
 2. Make sure that there are red bounding boxes surrounding the objects. If this is the case, then metadata is correctly configured.

The bounding box is not in sync with the objects in playback

- Check that the Security Center Server and the camera are synchronized with a NTP server.
- Check that the recorded video resolution has the same aspect ratio as the default stream or sensor resolution.

I can't see playback video in the report

To playback video in the search report, the operator must have the user rights "View Playback". Without this, the operator will only see the camera's live view.

Save logs

1. Go to `C:\ProgramData\Axis Communications\Components\DebugLogs`.
2. Save the file `AXIS Security Center.log`.

No snapshots

To get snapshots for the images, you must set the recording frame rate to **All frames**, or at least 10.

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Troubleshooting

How do I uninstall the plugin?

1. Uninstall the plugin from the server:
 - 1.1 In Config Tool, go to **Tasks > Plugins**.
 - 1.2 Select **AXIS Forensic Search for Genetec** and click **Delete**.
This removes the database and all saved information.
 - 1.3 Go to **Windows Settings** and open **Add or remove programs**.
 - 1.4 Uninstall the plugin from the server.
2. Uninstall the plugin from all clients:
 - 2.1 Go to **Windows Settings** and open **Add or remove programs**.
 - 2.2 Uninstall the plugin from the client.

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Need more help?

Need more help?

Contact support

If you need more help, go to axis.com/support.

