

**i-PRO Active
Guard
integration
with Luxriot EVO
Setup Guide**

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How to Set Up Active Guard with Luxriot EVO

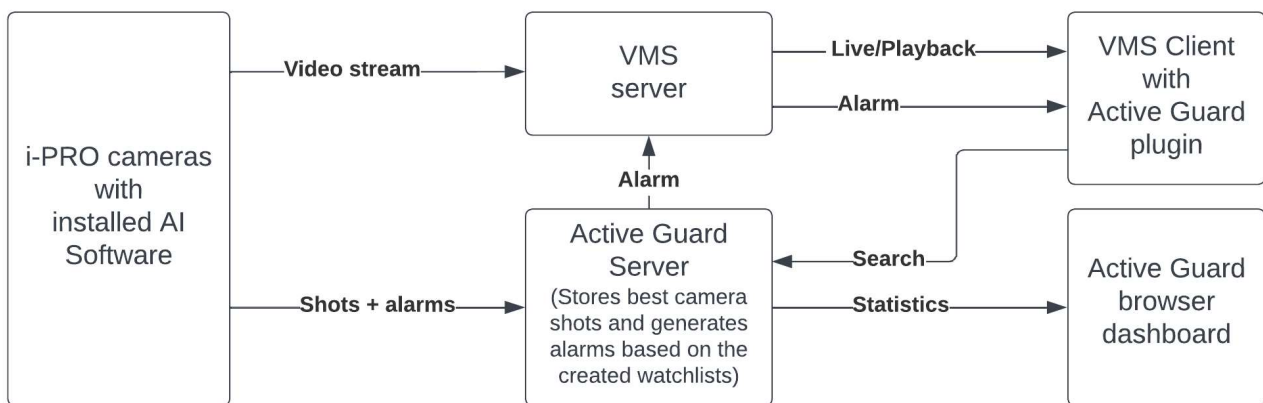
The **i-PRO Active Guard (AG)** is a specialized analytics software developed by i-PRO, designed for use only with **i-PRO cameras with built-in AI** capabilities. This tool is based on deep learning technology to allow quick and efficient image searching based on various attributes of people and vehicles.

The combination of **i-PRO Active Guard** and Luxriot EVO ensures that users can search through camera shots and receive alarms triggered by the specific watchlists. The diagram provided below describes interactions between the Luxriot EVO Monitor, Luxriot EVO server, and i-PRO cameras and Active Guard elements.

The primary goal of this integration is to embed the Active Guard functionalities directly into the Luxriot EVO Monitor and ensure that users have a common interface, eliminating the need to switch between various software platforms.

Additionally, the connection to the Luxriot EVO plays an important role in this integrated system. It allows users to get real-time notifications, create Luxriot EVO Monitor alarms, and formulate rules inside Luxriot EVO Console Events and Actions based on the AG software watchlists.

Although You can use i-PRO cameras with the Luxriot EVO without AG, additional search and watchlist functionality provided by the AG instance allows you to get the most out of the i-PRO devices and software infrastructure.



i-PRO Active Guard is an independent software and not a part of the Luxriot EVO suite. It requires a separate installation and license. To know more, contact i-PRO.

General

You can connect with third-party analytics providers like **i-PRO Active Guard** via HTTP/HTTPS. It will provide you with video analytics search options based on many parameters: persons' appearance, faces, etc. (the specific VA options depend on the video analytics configured on the camera side). The key benefit is a unified interface, removing the need to switch between multiple applications.

In this manual, you'll find step-by-step guidance on how to:

1. Install the Active Guard instance
2. Connect Active Guard to the Luxriot EVO server via Luxriot EVO Console
3. Add the Luxriot EVO server to Active Guard and configure user settings
4. Enable cameras in Active Guard
5. Activate video analytics connections in Luxriot EVO Monitor
6. Create and configure Active Guard analytics connections
7. Set up watchlists inside Luxriot EVO Monitor -> VA investigation tab
8. Create events based on Active Guard watchlists in the Luxriot EVO Console

Before installation:

We recommend installing an i-PRO Active Guard on a fresh Windows installation.

Supported Microsoft Windows versions:

- Microsoft Windows 10 Pro/Enterprise/Education/Pro Education

- Microsoft Windows 11 Pro/Enterprise/Education/Pro Education
- Microsoft Windows Server Standard 2016/2019/2022
- Microsoft Windows Server Datacenter 2016/2019/2022

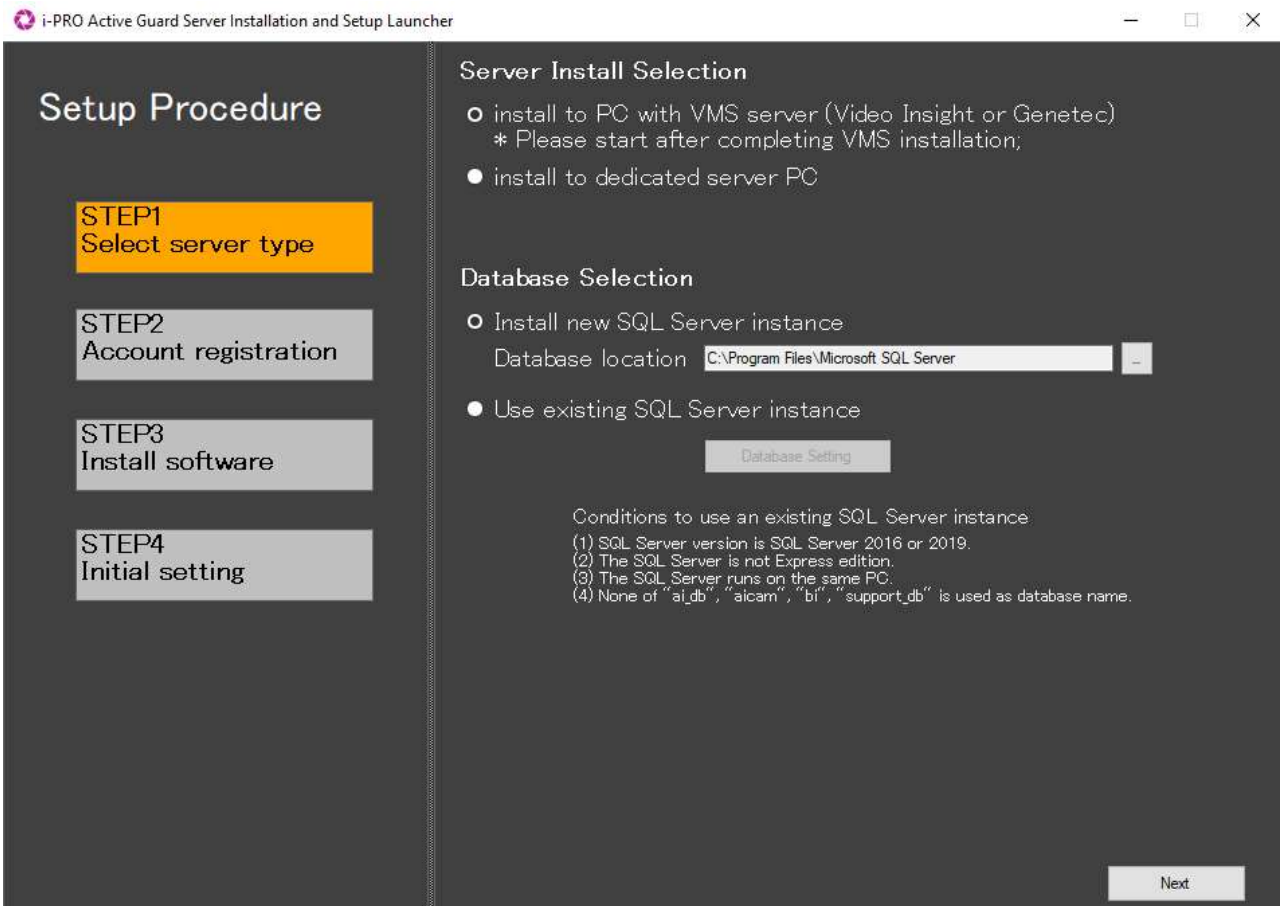
Installing Active Guard

⚠ N.B. Because the **Active Guard** is a third-party software, depending on the software version, the installation process may differ from the one described below. Example below is based on i-PRO Active Guard version 1.7.0.

1. Download the latest i-PRO Active Guard version from the developer webpage, unpack, and launch the **MultiAIStartup** installation application
2. Accept the license agreement to continue with the installation

Installation step 1:

1. **Server Install Selection:** Select install to PC with the VMS server
2. **Database Selection:** If you do not know about the SQL Server instance installed on your PC - Select **Install new SQL Server instance** and input where you want to install this instance (In most cases - the default installation path is recommended)
3. In the bottom-left corner, click on the *Next* button



i-PRO Active Guard installation, step 1 - Select server type example

Installation Step 2:

1. Register *Administrator Username and Password* (You will need this user to administer Active Guard Itself)
2. Register *Username and Password* for the **Plugin Connection** (You will need this user to connect your Active Guard instance to the Luxriot EVO Monitor and Luxriot EVO Console)
3. Click the *Next* button and wait until the installation process is over

The screenshot shows the 'i-PRO Active Guard Server Installation and Setup Launcher' window. On the left, a 'Setup Procedure' sidebar lists four steps: STEP1 Select server type, STEP2 Account registration (highlighted in orange), STEP3 Install software, and STEP4 Initial setting. The main area is titled 'Administrator registration' and contains two sections: 'Administrator registration' and 'User registration for plugin connection'. Each section has fields for Username, Password, and Confirm Password. The Administrator registration fields are filled with 'admin', a masked password, and a masked confirm password. The User registration fields are filled with 'ActivG', a masked password, and a masked confirm password. Below the registration fields, there are three numbered notes: (1) 2-byte characters, and 1-byte symbols "&;:¥' ^, < > = |" are not allowed for user name. (2) 2-byte characters, and 1-byte symbols "&;:¥' ^, < > = |" are not allowed for password. (3) For the password, use all types of characters from upper- and lowercase alphabetic characters, numbers, and symbols. A 'Next' button is located at the bottom right of the main area.

i-PRO Active Guard installation, step 2 - Account registration example

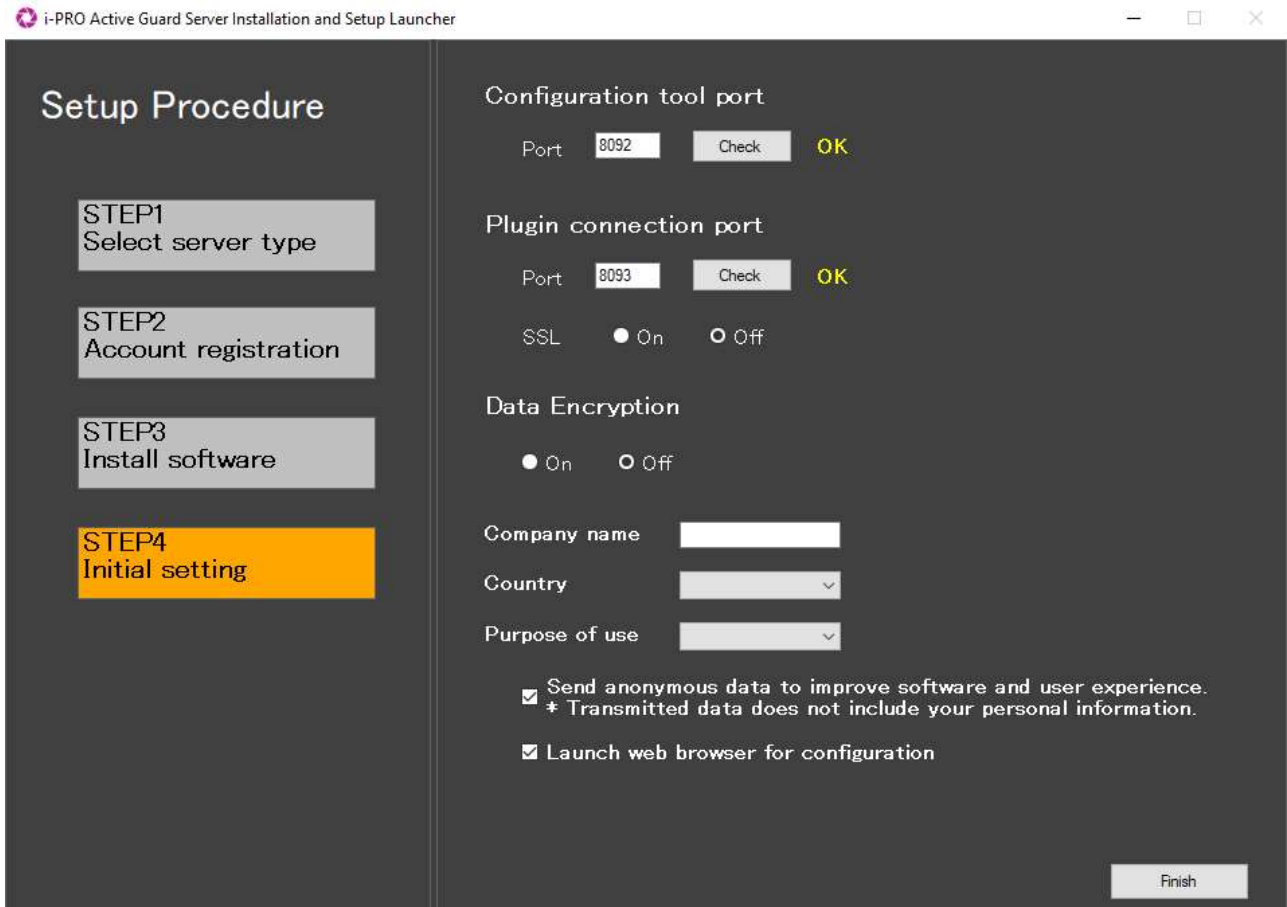
Installation step 3:

Wait until all the files are copied to their locations and press the *Next* button.

Installation step 4:

Configure your ports for the access Active Guard configuration via browser and connection with the Luxriot EVO server.

1. **Configuration tool port** is used for the Active Guard configuration interface access
2. **Plugin Connection port** - connects installed Active Guard instance with the Luxriot EVO server
3. Configure all other options to match your existing Luxriot EVO server settings
4. Click the *Finish* button



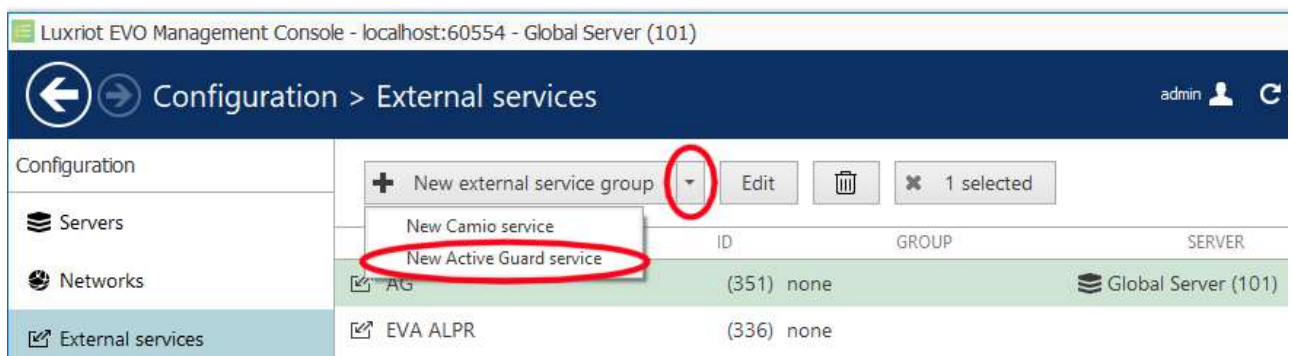
i-PRO Active Guard installation, step 4 - Initial setting example

After the Active Guard is installed on your PC, you can add it as an external service inside the Luxriot EVO Console.

Adding Active Guard as an external service

To add an Active Guard instance open Luxriot EVO Console, and go to:

1. *Configuration -> External service*, find the button *New external service group* at the top and expand additional options by clicking the *Arrow*. Click on the *New Active Guard service*



2. Add the *Title* to identify your Active Guard instance, and mark the *Enable* checkbox
3. Use your localhost in the *Host* field, and fill the *Port* field with the **Plugin Connection port** you configured in the Active Guard **installation step 4**. Mark or leave an empty *HTTPS* checkbox depending on the configuration of Active Guard installation step 4
4. Click the *Change...* button at the right side of the *Group* field to create a group for your AG instance
5. At the bottom of the pop-up window press the *+New external service group* button, then fill in the *Title* field and confirm with the *Apply* and *OK* buttons
6. Select a freshly created group and confirm your choice by pressing the *OK* button

7. Next, you will need the *Username* and *Password* from the Active Guard **installation step 2 - Username and Password** for the **Plugin Connection**
8. After filling in all the details - click the *Apply* and the *OK* buttons

External service AG instance*

External service

Details

Details*

Events

Related resources

Title

AG instance

External service title

Enable

Enable or disable the external service

Group

none

Change...

Group to which the external service belongs

Host

localhost

Host name or IP address

Port

8093

Port number

Use HTTPS

Secure connection

Username

ActivG

Username to access the access service

Set password

.....

Password to log into the server

Apply OK Cancel

External Service configuration window example

You are almost ready to set the **VMS connection** inside the Active Guard **Configuration tool**. After you add the Active Guard instance to the Luxriot EVO Console as an **External Service**, you can acquire the Active Guard Luxriot EVO Console **Object's ID**. You will need this Object's ID to edit the ActiveGuard **config file** to receive the Active Guard-generated Events.

If the Object's IDs are already turned on inside the Luxriot EVO Console, just find the ID of the freshly created Active Guard instance and save it for the next step.

If you can't find the Object's ID:

1. Find the *"Hamburger menu"* in the top-right corner of the Luxriot EVO Console and click on it -> select *Settings* from the dropdown menu
2. Inside the *Settings* window, mark the *Show object's IDs* checkbox and click the *OK* button

After this, all the Luxriot EVO Console inner object IDs will be visible under the *ID* column.

| TITLE | ID | GROUP | SERVER |
|-------|------------|-------|---------------------|
| AG | (351) none | | Global Server (101) |

Example of the Settings window. From top to bottom - points of interest are marked with red ellipses: "Hamburger menu"; Object's ID; Show object's IDs checkbox.

The next step is to configure the Active Guard VMS connection.



In current implementation the Active Guard can support connection only with one Luxriot EVO server.

Configure Active Guard

On the AG side, you need to create a VMS connection for it to retrieve the list of cameras from the Luxriot EVO server. The video streams will go directly to AG; this step is required to "teach" AG about the Luxriot EVO server configuration so that it can bind its camera list to the Luxriot EVO resources.

Create VMS Server Connection

To create a connection to your Luxriot EVO server:

1. Go to your AG configuration page (IP:8092 by default)
2. Add a new server
3. Set its type to *Other VMS*
4. Enter the IP address and HTTP/HTTPS port (Web API port should be the same as the notification port and equal to your Luxriot EVO server HTTP port)
5. Enter the user name and the password to connect (The user account should be either Luxriot EVO Console administrator, or the one with the permission to access live channels.)

Type: Other VMS

IP address: 192.168.1.62

Get camera list URL(*): /configurationInfo?type=devicesInfo2

WEB API Port: 8080

Notification URL(*): /api/v1/events

Notification port: 8080

*Need to change [config file](#) according to your VMS.

SSL: On Off

User Name: admin

Password:

Test

Succeeded

Save

VMS Server configuration example using a local IP and HTTP port 8080

Under the *Notification port* input field, you can find the link to the **Config file**. Click on the link to open the file, and find the line:

`notification_url = "api/v1/events"`

```
#Alarm notification URL. POST method only. Not allowed \ ' | ^ " < > ( ) { } [ ]
notification_url = "clientApi/externalServices/351/pushExternalServiceData"
#Get camera list URL. GET method only. Not allowed \ ' | ^ " < > ( ) { } [ ]
getcamera_url = "/configurationInfo?type=devicesInfo2"
```

Replace the text with the following:

`notification_url = "/clientApi/externalServices/YourAGID/pushExternalServiceData"`

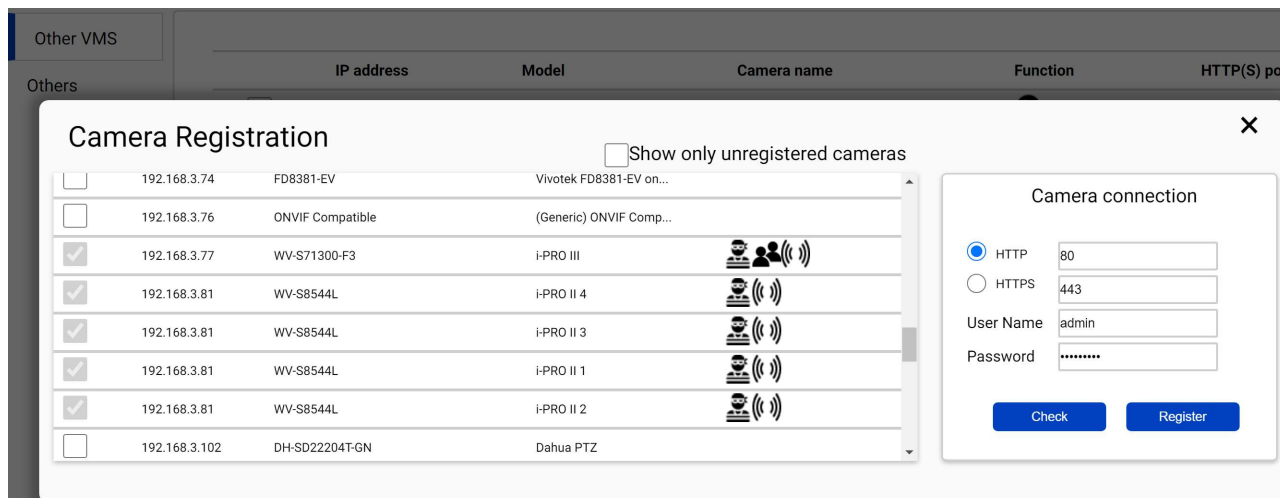
Replace **YourAGID** with the Active Guard external service inner Luxriot EVO Console **object's ID**.

Add Cameras

Next, to add your i-PRO cameras:

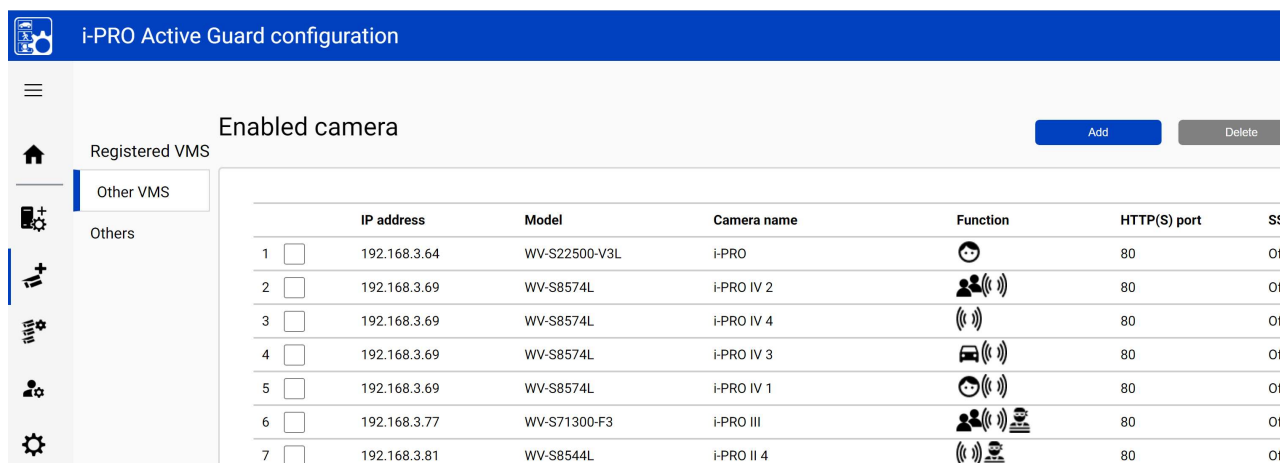
1. In the same interface, go to the *Cameras* tab
2. Select your VMS server connection (*Other VMS*)
3. Run camera autodiscovery using the *From VMS Server* option
4. Choose the desired cameras from the list
5. Enter camera password*
6. Click Register to add the cameras into the list

*The password should be the same for all cameras in the camera group; if the passwords are different, repeat the procedure for each group.



Scan for cameras and add the desired ones from VMS server

In the camera list, check the available analytics: the corresponding marks should be present (e.g., faces for facial recognition, multiple persons for people attributes).



Example of the camera list

Set up Luxriot EVO Monitor to use it with the Active Guard

To start using Active Guard (AG) from Luxriot EVO Monitor:

1. Unlock the analytics feature via Luxriot EVO Monitor Administration Tool
2. Restart Luxriot EVO Monitor
3. Create a new AG connection via Luxriot EVO Monitor main menu
4. Switch to the newly appeared AG tab
5. Enjoy!

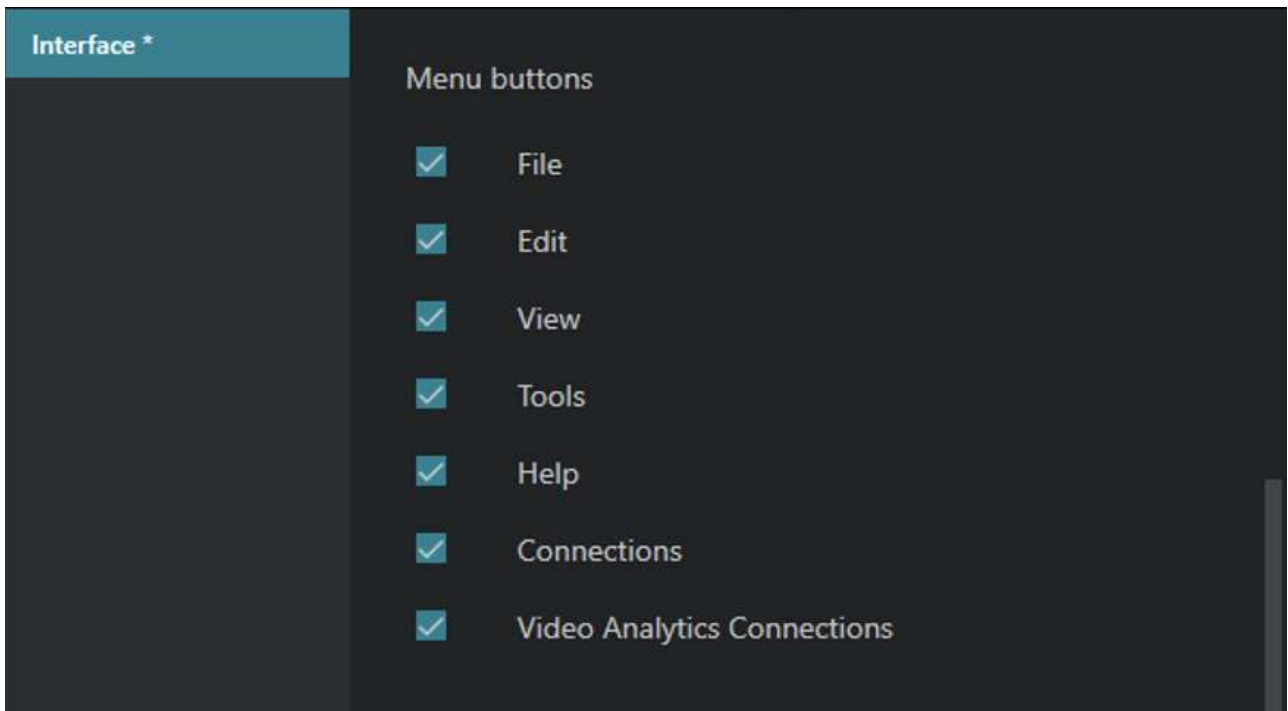
Below, you will find detailed guidelines for each step.

Enable Active Guard Connection

For security reasons, AG connection is hidden by default. To unhide it:

1. Run the Luxriot EVO Monitor Administration Tool (will require OS administrator privilege) either from Luxriot EVO Monitor or from the Windows Start Menu
2. Enable the *Video Analytics Connections* option by putting a checkmark next to it
3. Click *Save* and close the utility

4. Restart Luxriot EVO Monitor for the changes to take effect

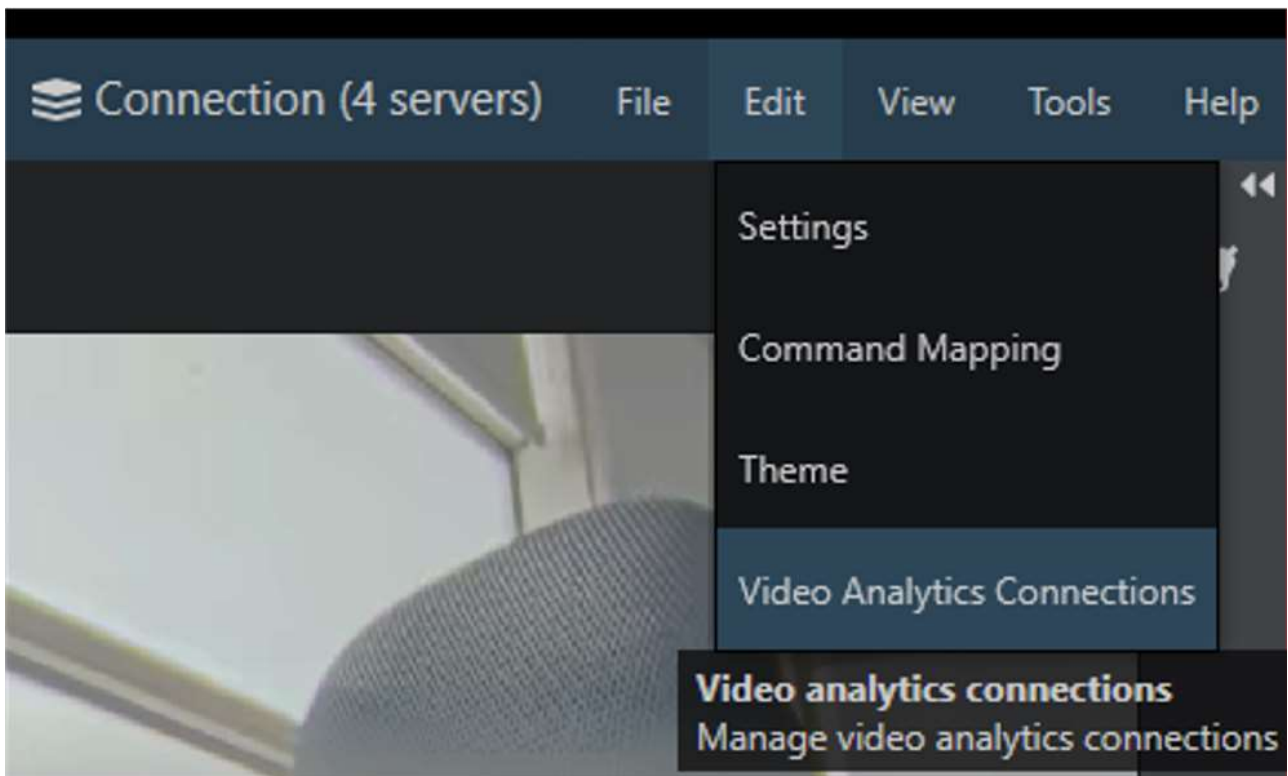


Enabling the Video Analytics Connections option will unhide the corresponding option in the Luxriot EVO Monitor main menu

If the required option has already been enabled, skip this step.

Create Active Guard Connection

Now, you need to create AG connection(s) similarly to Luxriot EVO server connections.

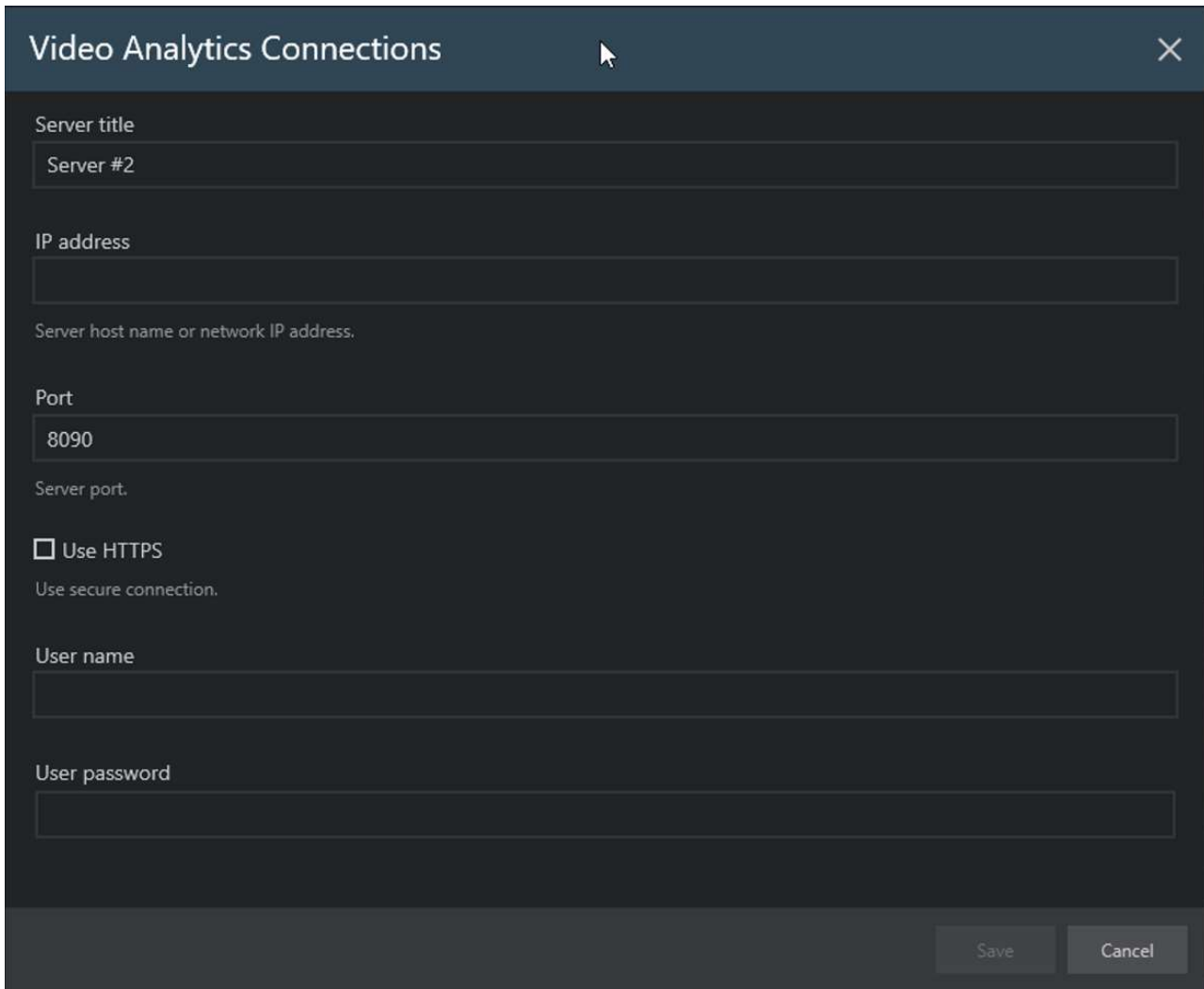


Access AG connection settings via Luxriot EVO Monitor main menu

To do this, go to the main Luxriot EVO Monitor menu and choose *Edit > Video Analytics Connections*, add a new

server, then fill in the connection settings:

- *Server title*: user-defined analytics instance name
- *IP address*: IP or hostname of the target AG instance
- *Port*: remote HTTP/HTTPS port to connect to (Use the **Plugin connection port** you specified during the AG installation)
- *Use HTTPS*: enable to use a secure connection
- *User name and password*: user account




The screenshot shows a dialog box titled "Video Analytics Connections". It contains the following fields and options:

- Server title**: Input field containing "Server #2".
- IP address**: Input field (empty). Below it is the text "Server host name or network IP address."
- Port**: Input field containing "8090". Below it is the text "Server port."
- Use HTTPS**: A checkbox that is currently unchecked. Below it is the text "Use secure connection."
- User name**: Input field (empty).
- User password**: Input field (empty).

At the bottom right of the dialog are two buttons: "Save" and "Cancel".

Add a new analytics server and enter its connection properties

All settings must match those on the AG side. Before entering the settings in Luxriot EVO Monitor, make sure that the target AG is accessible from the client machine (e.g., by running telnet command from the command line.).

 If the remote application is not running or the connection settings are incorrect, the tab may become unresponsive.

This connection is direct, meaning that it does not go through the Luxriot EVO server. If you want to share the configured VA connections with other Luxriot EVO Monitor workstations, use the export/import of the application settings via main menu *Tools > Export settings/Import settings*.

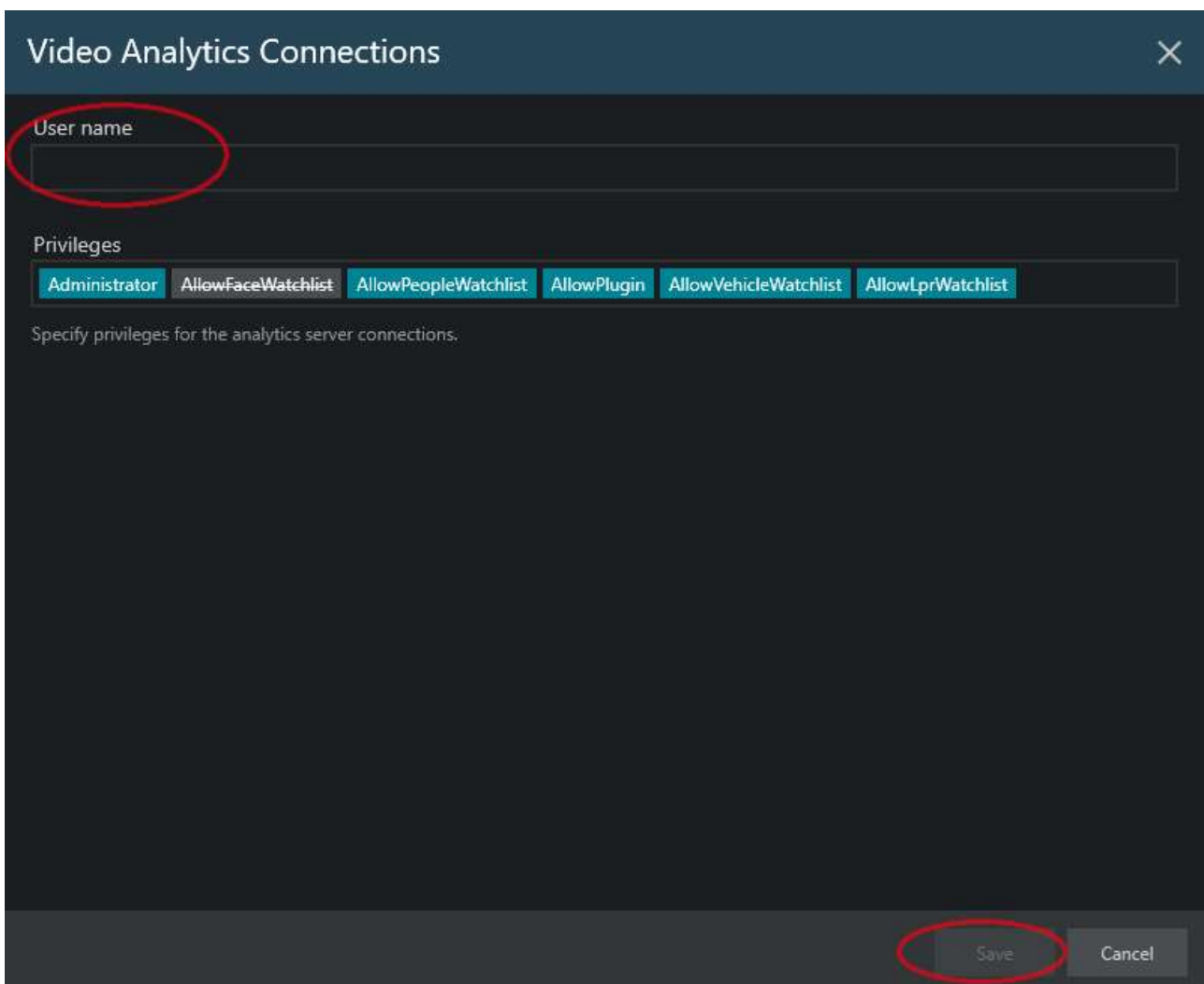
Managing permissions (privileges)

You may grant permissions or forbid access to the specific resource inside the *Video Analytics Connections -> Advanced settings*.



Video Connections Analytics, the Advanced button.

Clicking the Advanced button will open a window with the server analytics connections' Privileges. By default, all privileges are allowed. Privileges management allows forbidding particular watchlists, administrator rights, or the plugin itself.



Video Analytics Connections, Active guard advanced settings, user privileges window.

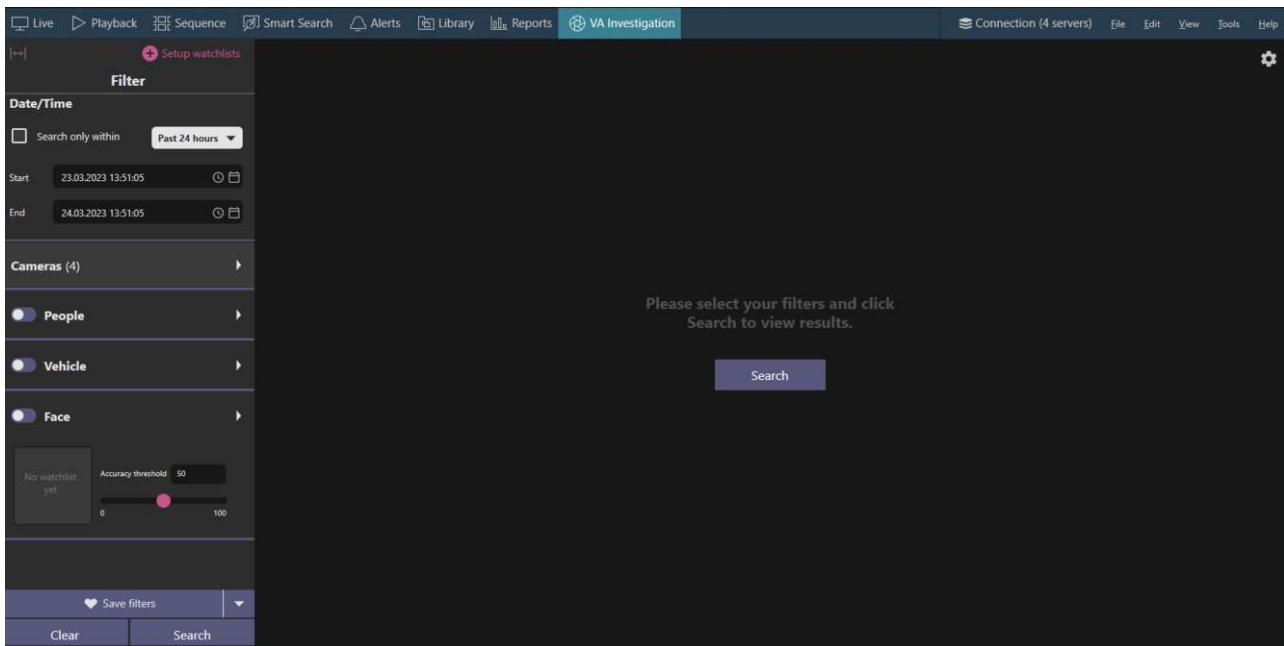
⚠ N.B. In the 1.27 version implementation, the *User name* **does not affect privileges**—all the changes will be applied to the Active Guard user connected to the monitor. Still, you must enter any username into the *User name* field to save the adjusted privileges configuration!

Access Active Guard in Luxriot EVO Monitor

Once you have successfully completed the steps above, a new *VA Investigation* tab will appear next to the *Reports* tab of

Luxriot EVO Monitor. Click it to start working with AG.


If the application freezes when you click the *VA Investigation* tab, it means the target AG server is not accessible. Double-check if AG is running and that you have entered the correct connection settings.

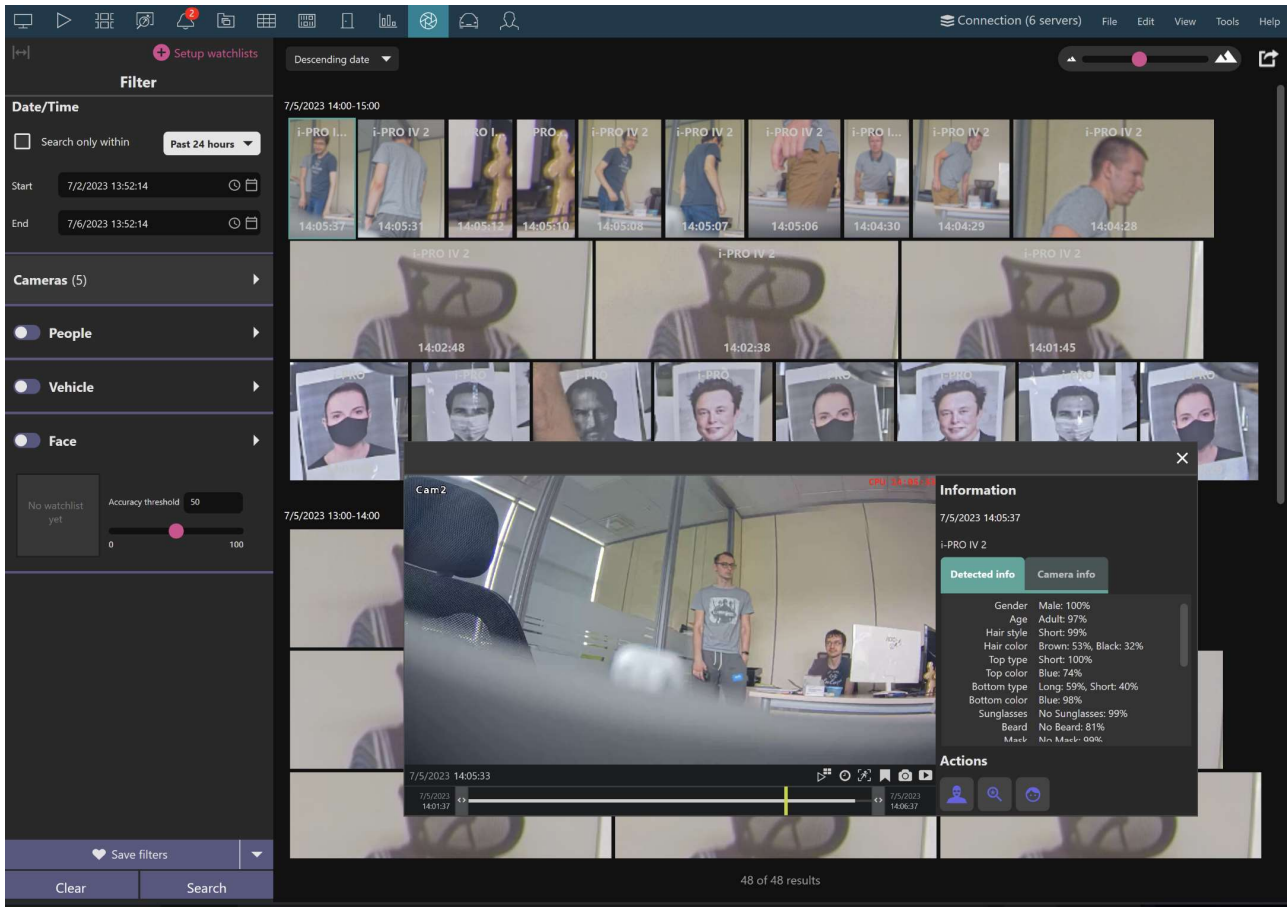


The contents of the VA Investigation tab containing AG

Here, you can use Active Guard analytics investigation as usual: choose filters and time range on the left, then investigate the results in the main area.

Double-click any event (search result) to open the instant archive playback in a popup window. This window is a regular instant playback player, so all the control elements are the same, including those that allow you to go to the normal playback mode. Additionally, this window contains details from the analytics server.

 If the event is not available in the archive (e.g., the footage has already been deleted), the playback will open the oldest available frame. Therefore, if you get a more recent footage when clicking on the search result, it means the video archive for that period is not available.

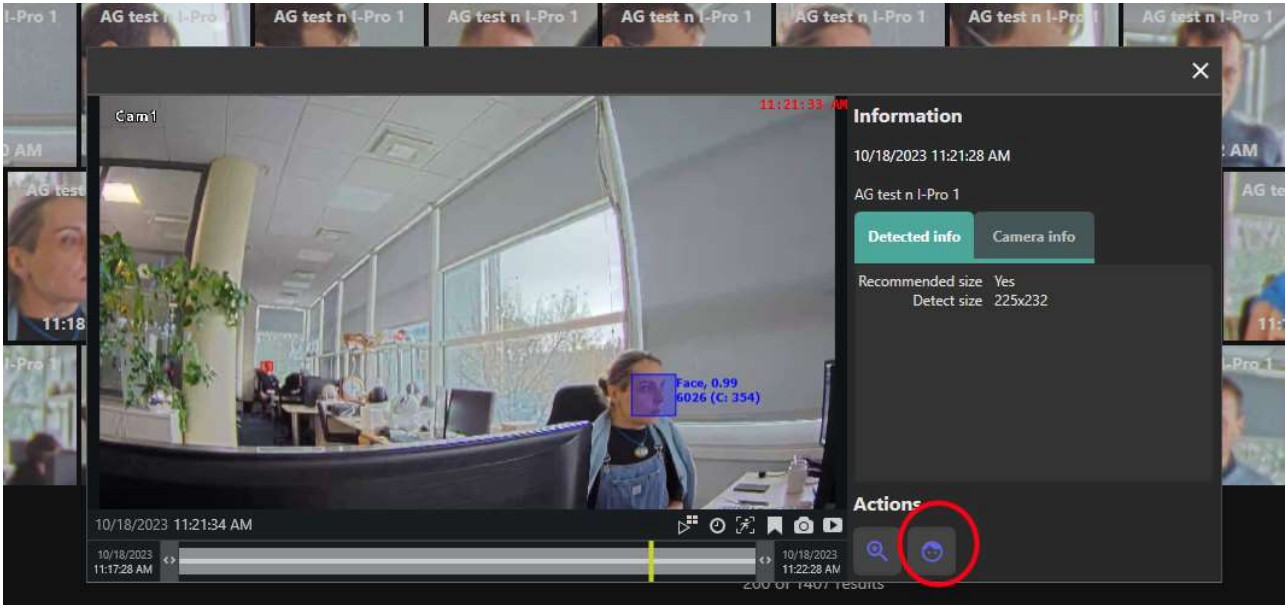


Search results and archive popup

Creating watchlists

After you connect Active Guard to the Luxriot EVO Monitor, you can create **Watchlists** and events based on that action. For more details about Active Guard functionality, it is worth using i-PRO active Guard provided manuals, yet here is a simple example:

1. Click on the detected face or people.
2. A pop-up window with the playback will appear. At the right side of the timeline, you will find the icon with the face - click on it to register the detection with the existing watch list or create a new one.



Active Guard playback detection window example

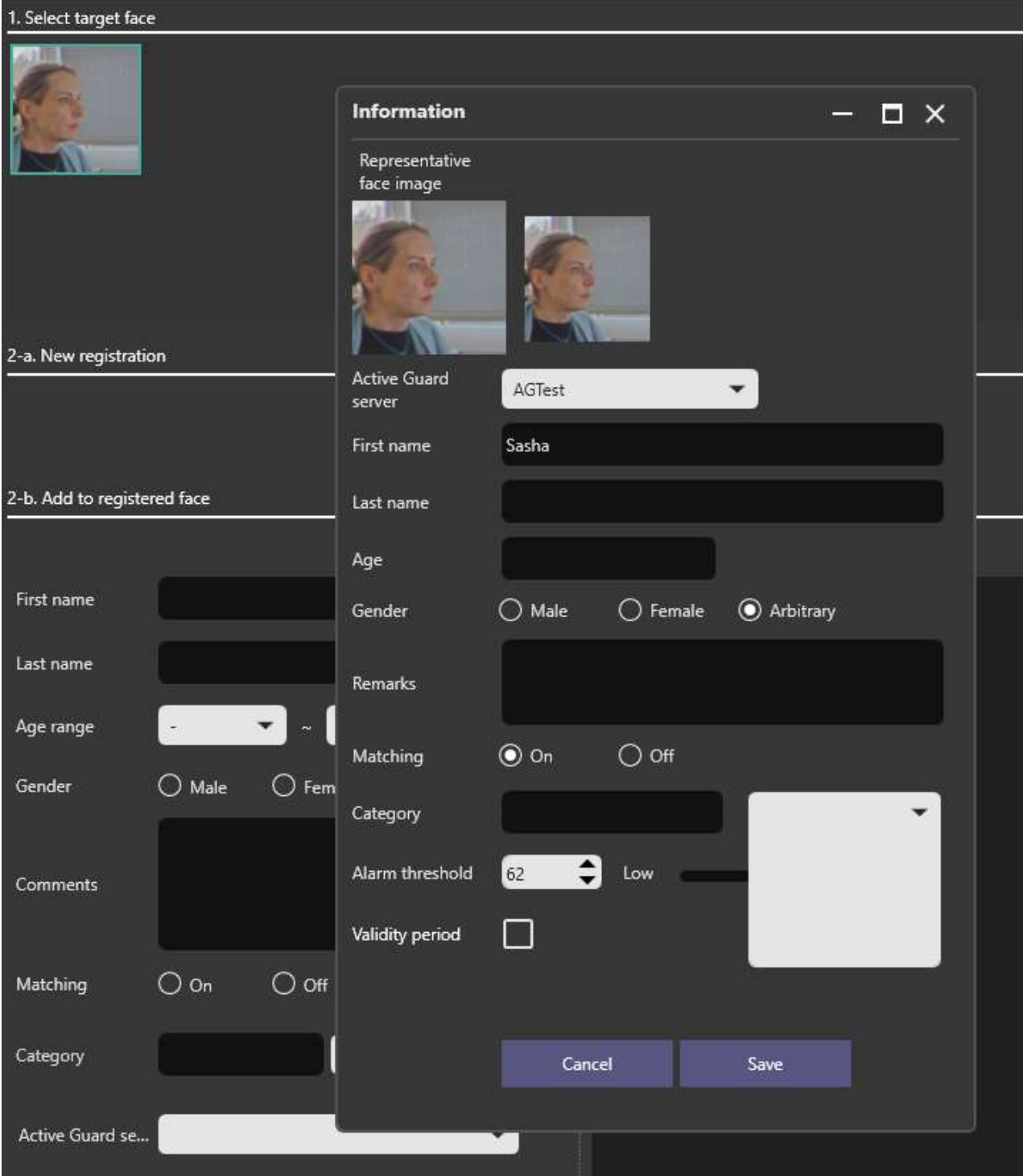
A new pop-up window will appear. Select the face once again and click the *New registration* button.



New recognition registration example

Select your *Active Guard* server and provide the necessary details, then click the *Save* button.

1. Select target face



2-a. New registration

2-b. Add to registered face

First name

Last name

Age range

Gender

Comments

Matching

Category

Active Guard se...

Information

Representative face image

Active Guard server

First name

Last name

Age

Gender

Remarks

Matching

Category

Alarm threshold

Validity period

Cancel Save

After you create a watchlist, new events will become accessible via configuration -> External Services -> Your AG instance -> Events.

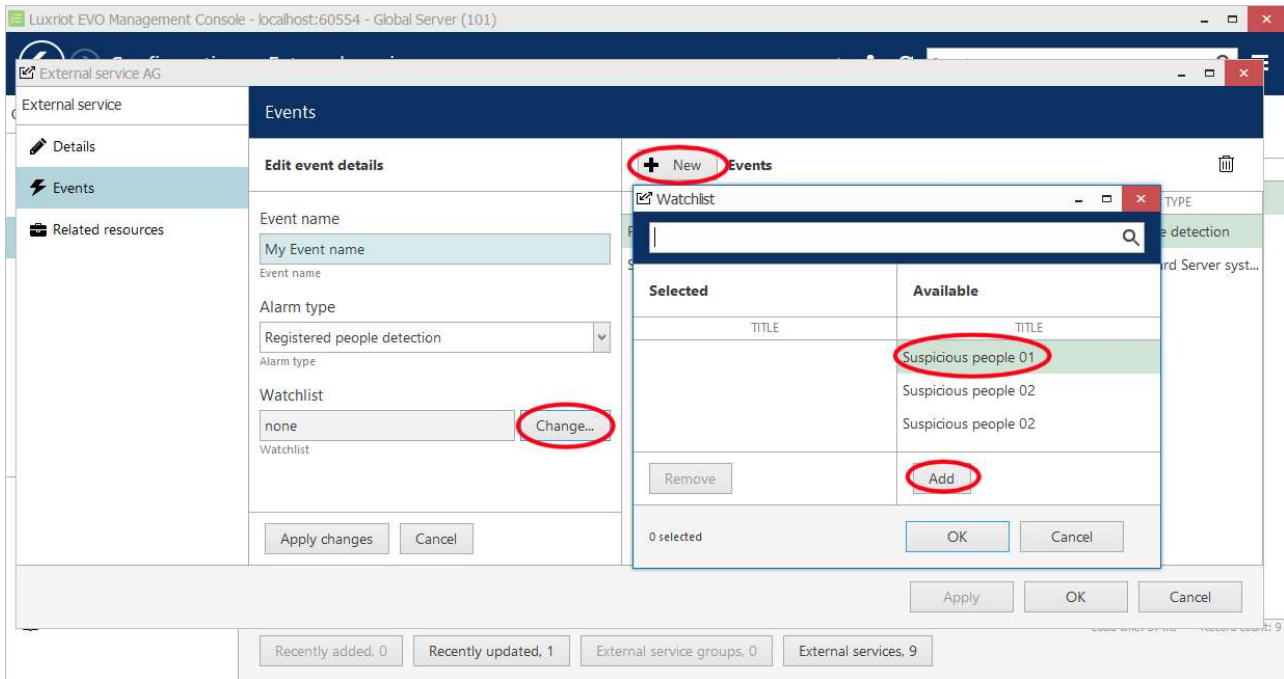
Enable Active Guard Events inside the Luxriot EVO Console

After you connect the Active Guard instance with the Luxriot EVO server, add the cameras, and create **watchlists** using Active Guard, you can set up *Events* inside the Luxriot EVO Console. Without this step, you will not receive notifications from Active Guard inside the Luxriot EVO Monitor or use Active Guard generated events with the Luxriot EVO Console *Events and Actions*.

1. Open Luxriot EVO Console -> *configuration* -> *External services* and double-click on your Active Guard instance.
2. The *External service* window will pop up. Select the *Events* tab and click on the *+New* button.

3. Add the *Event name*, select *Alarm type* from the dropdown, and click the *Apply changes* button inside the *Edit event details* section.
4. Click the *Change...* button to select the preferred watchlist.
5. Inside the new pop-up window - select the previously created watchlist and click the *Add* button. Add as many watchlists as you need and confirm your selection with the *OK* button.
6. Back inside the *External service* window -> *Edit event Details* section - click the *Apply changes* button. After that, confirm your choice once again with the *OK* button.

After creating events inside the external service window, you can use them as all the other *Events and Actions* and create *Rules* based on those *Events*.

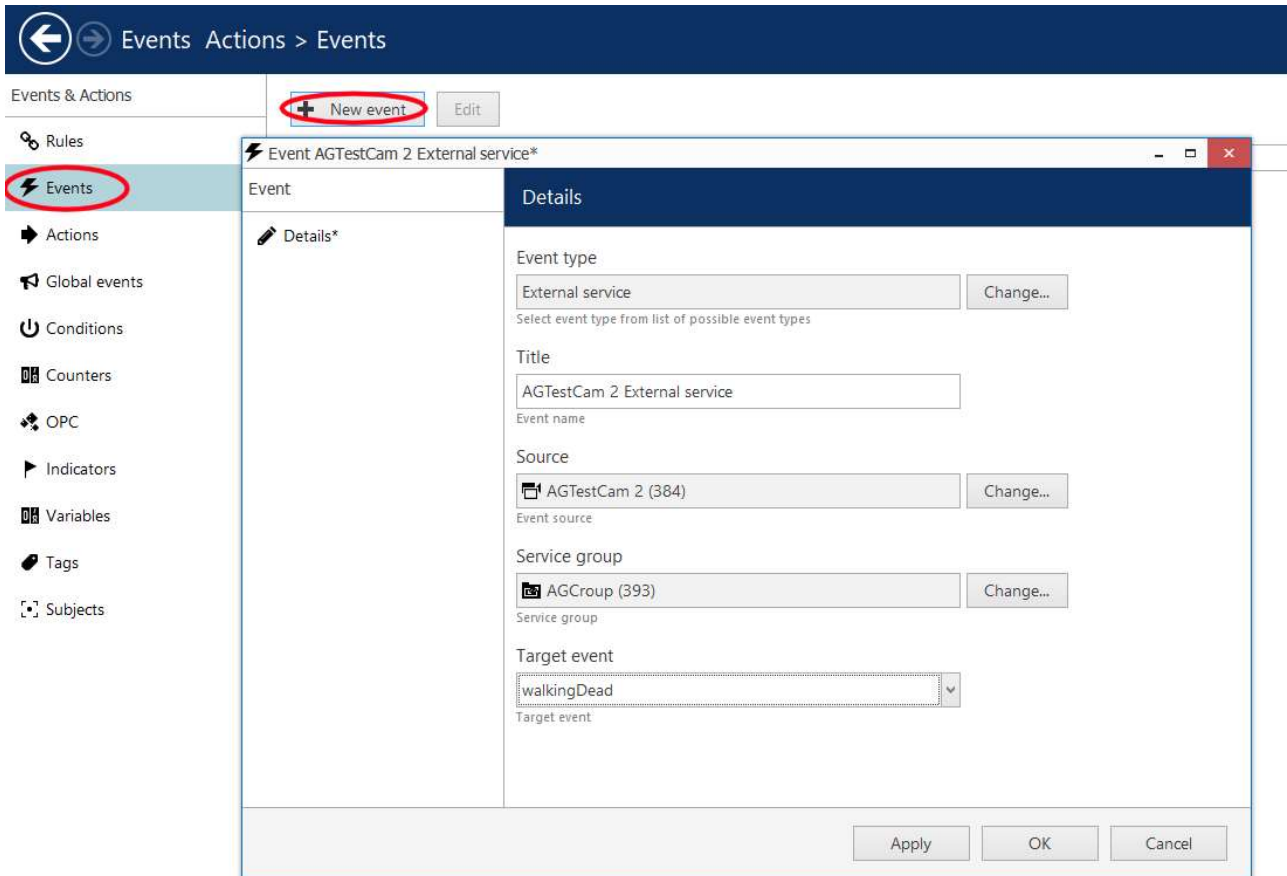


Creating events inside the External service window

Creating new External event

Create a new *External Event* inside the *Events & Actions* section to use Active Guard-generated alarms:

1. *Event & Actions* -> *Events* and press the + *New Event* button on the top-left corner of the *Event* section
2. Inside the *Select event type* pop-up window, find the *External events* -> *External service* and confirm the choice with the *OK* button
3. In the next pop-up window, fill in the *Title* field
4. Inside the *Source* field, select the **device with the attached Active Guard watchlists**
5. Select a previously created Group inside the *Service group* field
6. From the *Target event* dropdown menu, select the previously created event inside the *External Server* -> *Events* section.

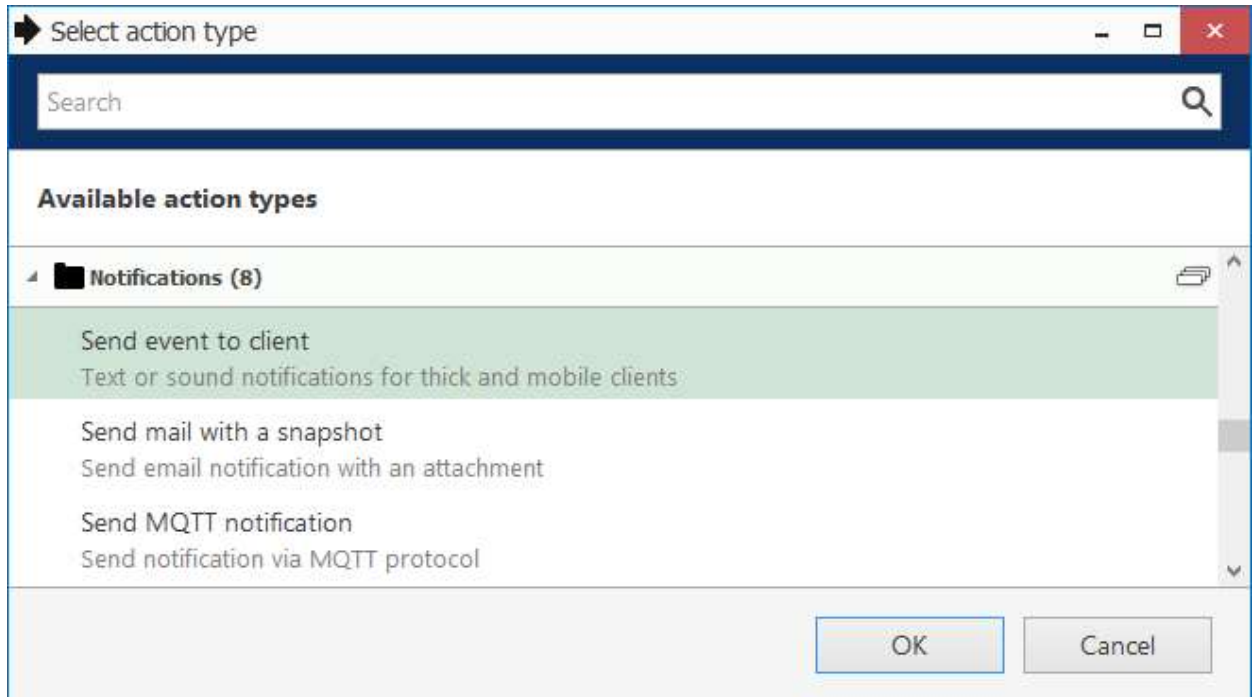


Example of the External Service event creation

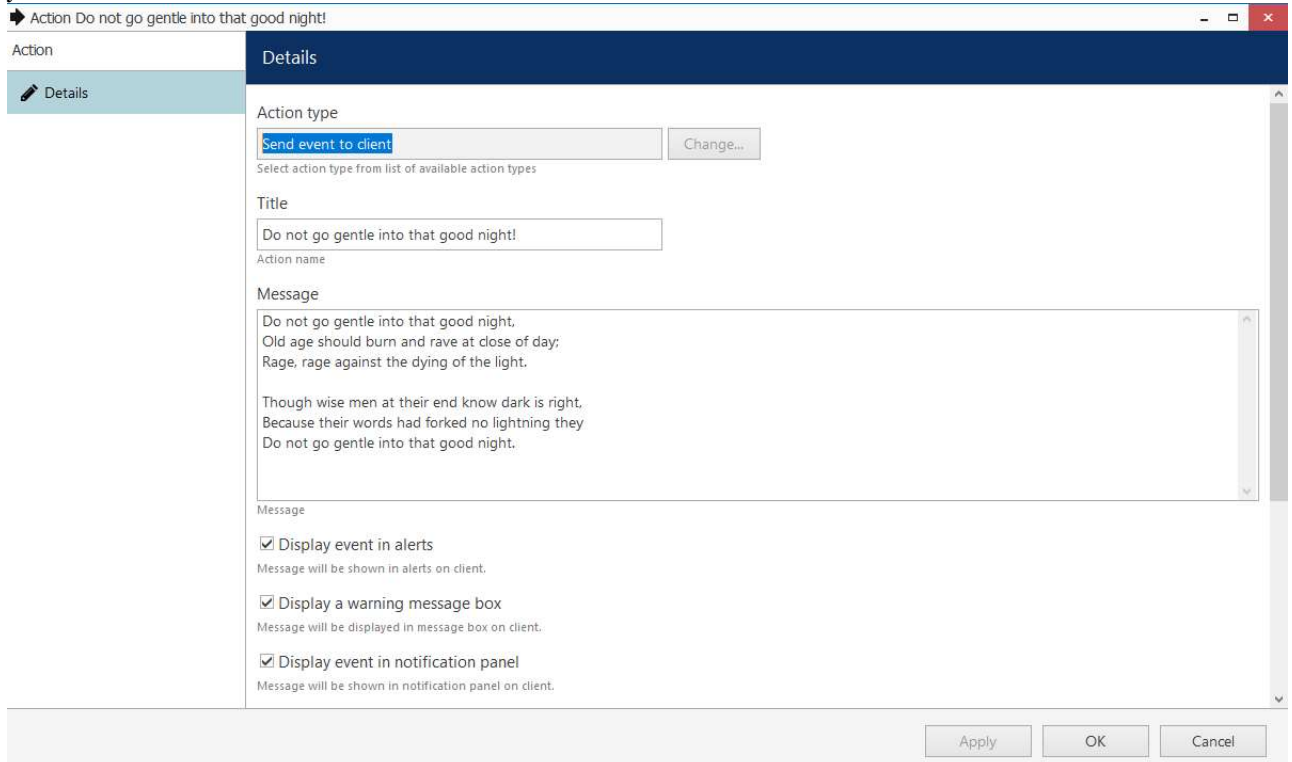
Configuring Rules

After creating the *External Service Event*, you can implement the *Rule* on its base. The best way to do this is to use *Events and Actions Configurator*. Go to:

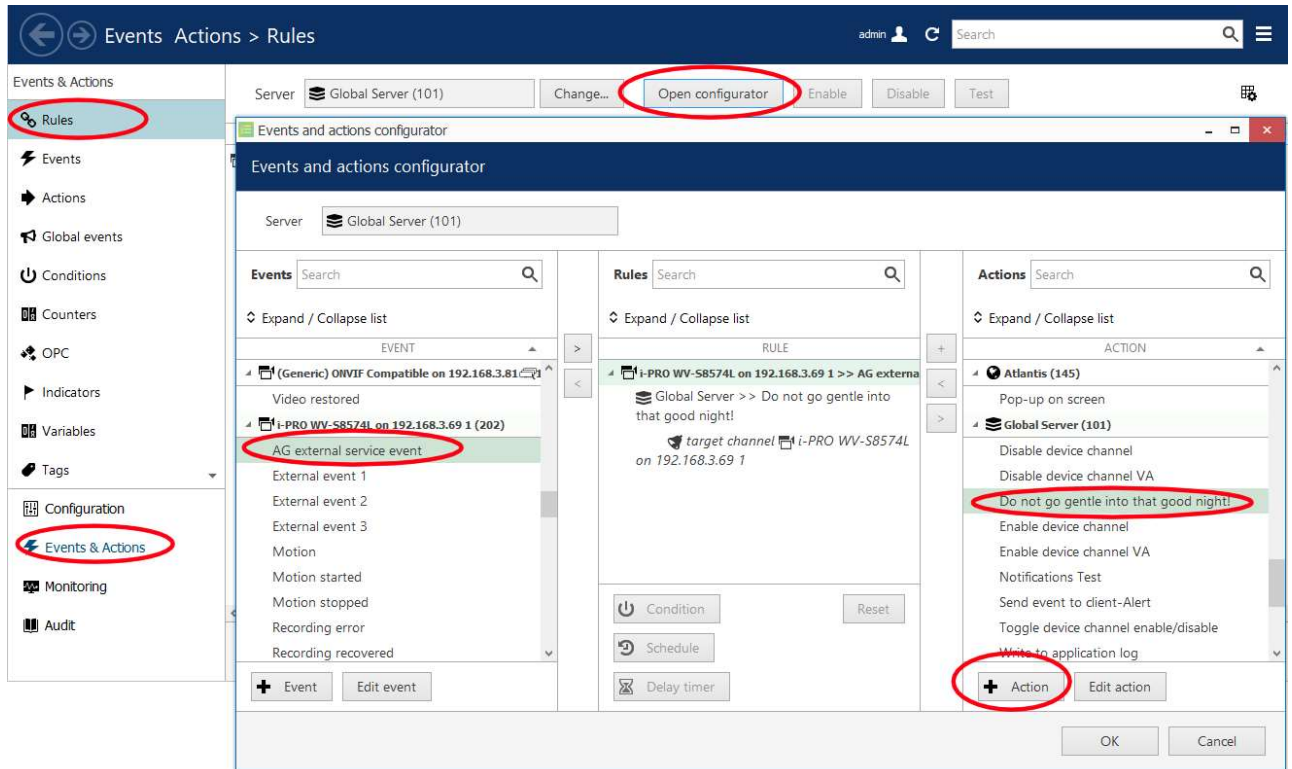
1. Go to *Events & Actions* -> *Rules* and find the *Open Configurator* button at the top of the section. This will bring up the *Events and Actions configurator* window.
2. You will see three subsections (from left to right): *Events*, *Rules*, and *Actions*. In the *Events* section, locate the *Channel* you used to create an *External event* (in the example below, this will be an **AG external service event**) and double-click it. This will bring your *Event* inside the *Rules* subsection.
3. To complete your *Rule*, you must add an *Action* you want to be triggered by the *Active Guard* generated *Event*. The example below shows how to activate an *Alert* and receive notifications inside the Luxriot EVO Monitor. Find the *+Action* button at the bottom of the *Actions* subsection and click it.
4. Inside the new pop-up window, find the *Notifications* section -> *Send Event to the client*, and confirm your choice.



5. Add a meaningful *Title* to your *Action* and fill the *Message* field with the notification message that will be shown inside the Luxriot EVO Monitor when the *Rule* is triggered. You can also configure where this notification should be displayed. Check the checkboxes correspondingly. In the example below, the notification will be shown in the *Alert* tab, the *Warning message box* will appear, and the message will be displayed inside the *Notification panel*. Confirm your choice with the *OK* button.



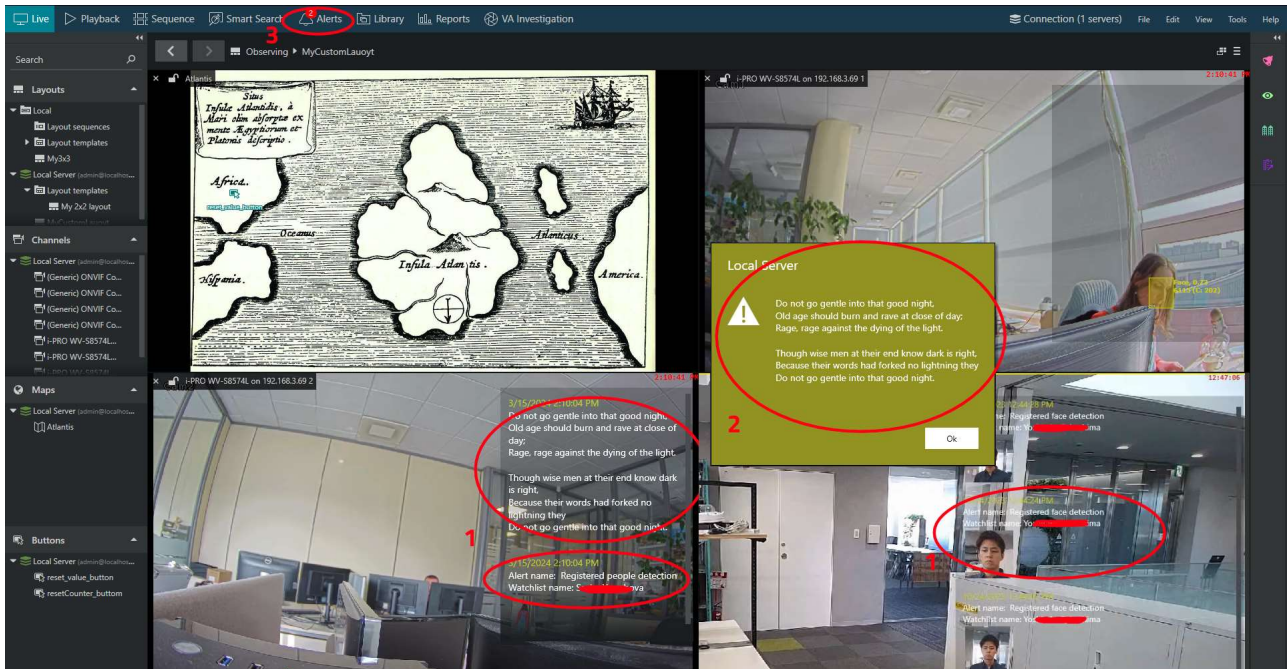
6. After the *Action* is created, select your *Event* inside the *Rules* section, locate the *Action* you created (in the example below, your *Action* is below the *Global Server* section of the *Actions* subsection), and double-click it. Then, confirm your configuration with the *OK* button.



⚠ For more detail, please refer to the Luxriot EVO Console administration guide to learn about all the available Actions.

As a result, when the Active Guard has a match on watchlists - this Rule will bring three types of alerts:

1. Message inside the *Notification panel* (Active Guard generated message + custom text message),
2. *Warning message box* (your message text),
3. *Alert warning* inside the *Alerts* tab.



Notification Action triggered by the Active Guard Event.