

Video analytics system for cities
and business

VEZHA

VEZHA

User Guide for Smoking Detection Plugin

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Description of VEZHA Smoking Detection

What this module of the VEZHA system can do:

- Recognition and notification about people who are smoking in controlled area.
- Storage and data transmission of smoking events.

Smoking Detection can be used for:

- Prevention of smoking in places not intended for this.
- Monitoring compliance with labor discipline rules.
- Control of fire safety in places of storage of flammable and explosive substances.

Smoking Detection module. How it works:

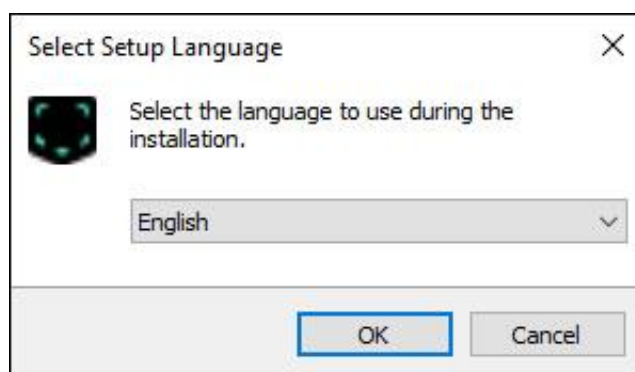
When a smoking person is detected in the frame, the system instantly sends a notification and records information about the violation event: frame, time and camera.

1. Installation

Before installation of VEZHA Smoking Detection PlugIn – Milestone Xprotect Management Client 2020 and Milestone Xprotect Smart Client 2020 R2 need to be installed on Your system.

1) Launch the installer by double-clicking the downloaded file with the left mouse button VEZHA_SmokingDetection_Setup.

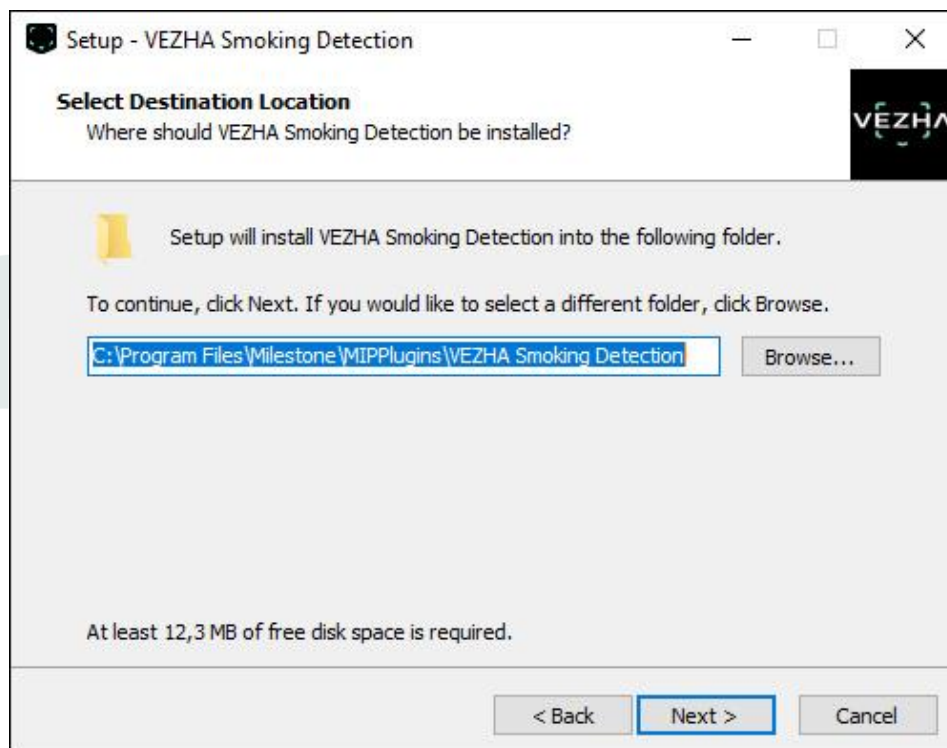
2) In the window that opens, select the language that will be used during the installation process. To go further, click **OK**. To abort the installation, click **Cancel**.



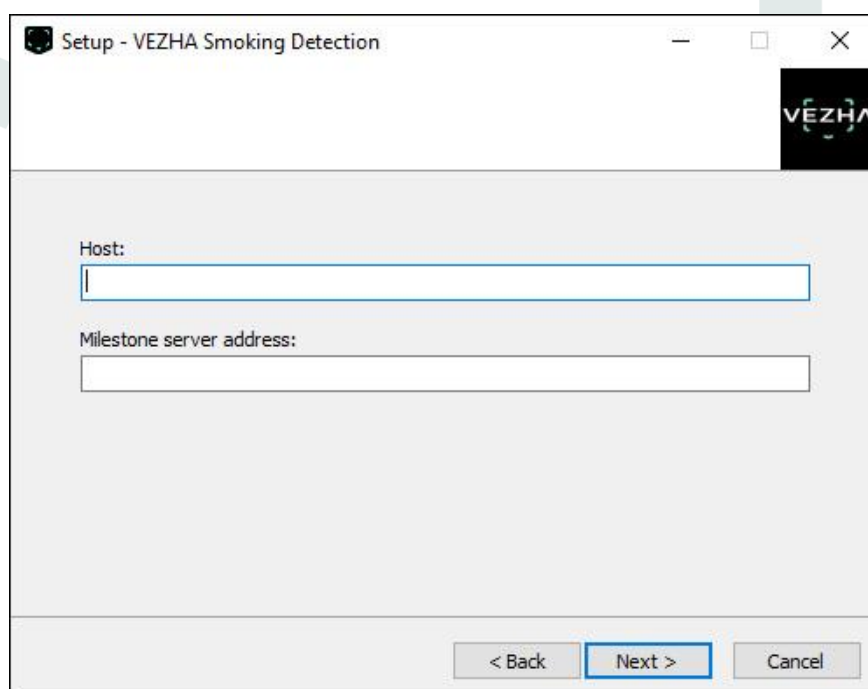
3) In a new window, read the installation recommendations and click **Next** to continue the installation, or the **Cancel** button to abort the installation.



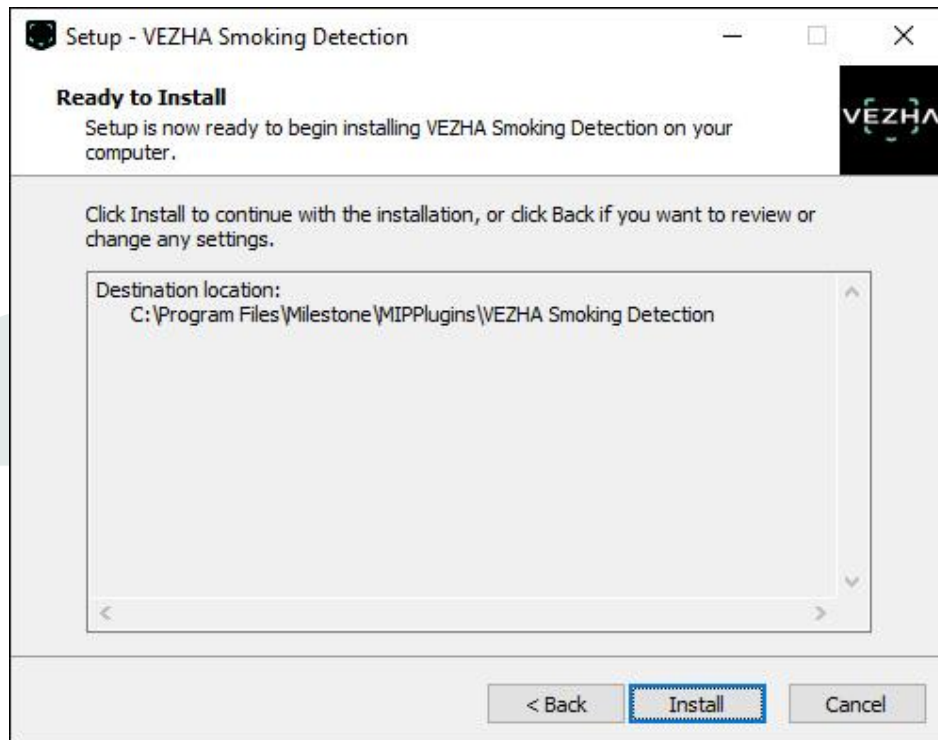
4) In the **Select Destination Location** window using the **Browse** button, specify the place where you want to install the plugin. The plugin must be installed in the **Milestone** folder with other plugins. After selecting the desired folder, click **Next** to continue the installation or **Cancel** to abort the installation.



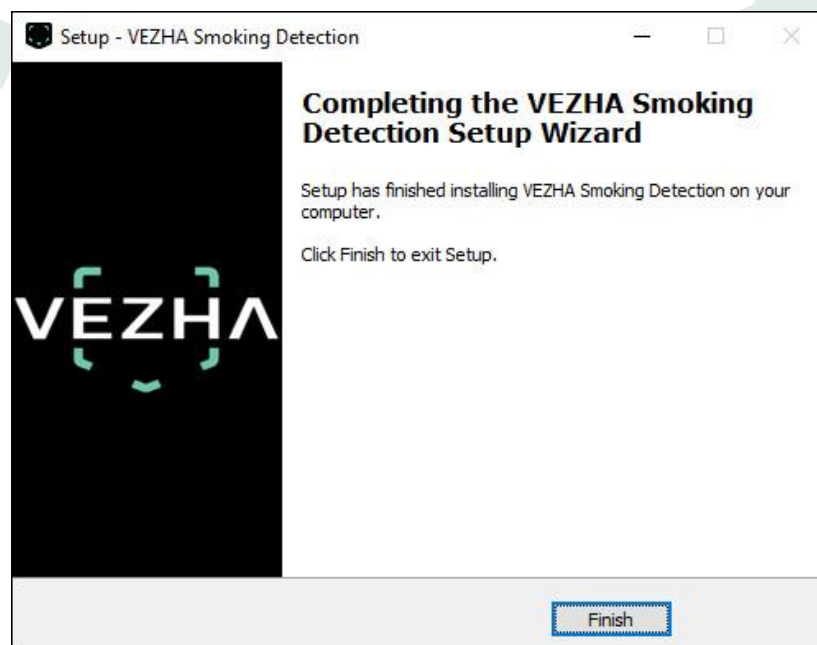
5) In this window, for correctly program work, you must correctly fill the fields and click **Next** to continue the installation or **Cancel** to abort the installation.



6) Click **Install** to start installation.

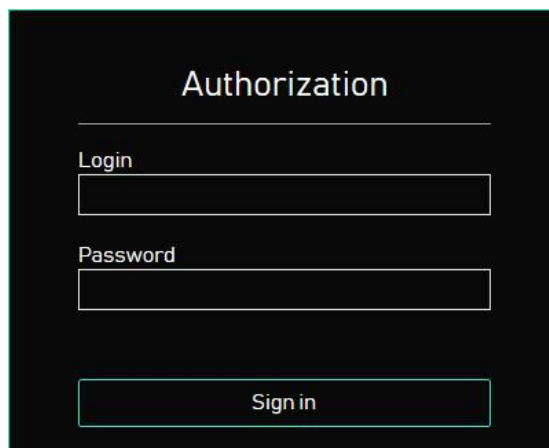


After the installation is completed, click **Finish**.



2. Log In

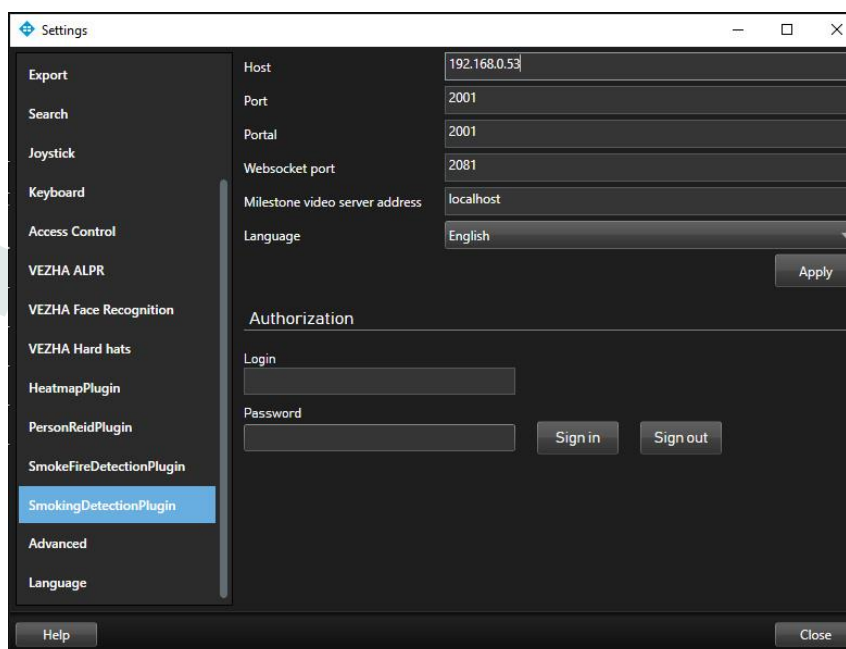
To enter the system you need to go through authorization. To do this, enter the **Login** and **Password** in the appropriate fields of the modal window and click **Sign in**.



The image shows a dark-themed modal window titled "Authorization". It contains two input fields: "Login" and "Password". Below these fields is a "Sign in" button. The modal is centered on the screen with light gray curved arrows pointing towards it from the left and right sides.

3. Settings

In order to open the **VEZHA Smoking Detection** settings, click the icon in the upper right corner of the screen. Select ▼ and click **Settings**. In the window that opens, select the **VEZHA Smoking Detection** tab.



The image shows a "Settings" window with a dark theme. On the left is a sidebar menu with the following items: Export, Search, Joystick, Keyboard, Access Control, VEZHA ALPR, VEZHA Face Recognition, VEZHA Hard hats, HeatmapPlugin, PersonReidPlugin, SmokeFireDetectionPlugin, SmokingDetectionPlugin (highlighted in blue), Advanced, and Language. The main area of the window is divided into two sections. The top section contains configuration fields: Host (192.168.0.53), Port (2001), Portal (2001), Websocket port (2081), Milestone video server address (localhost), and Language (English). An "Apply" button is at the bottom right of this section. The bottom section is titled "Authorization" and contains "Login" and "Password" input fields, along with "Sign in" and "Sign out" buttons. A "Help" button is at the bottom left and a "Close" button is at the bottom right of the window.

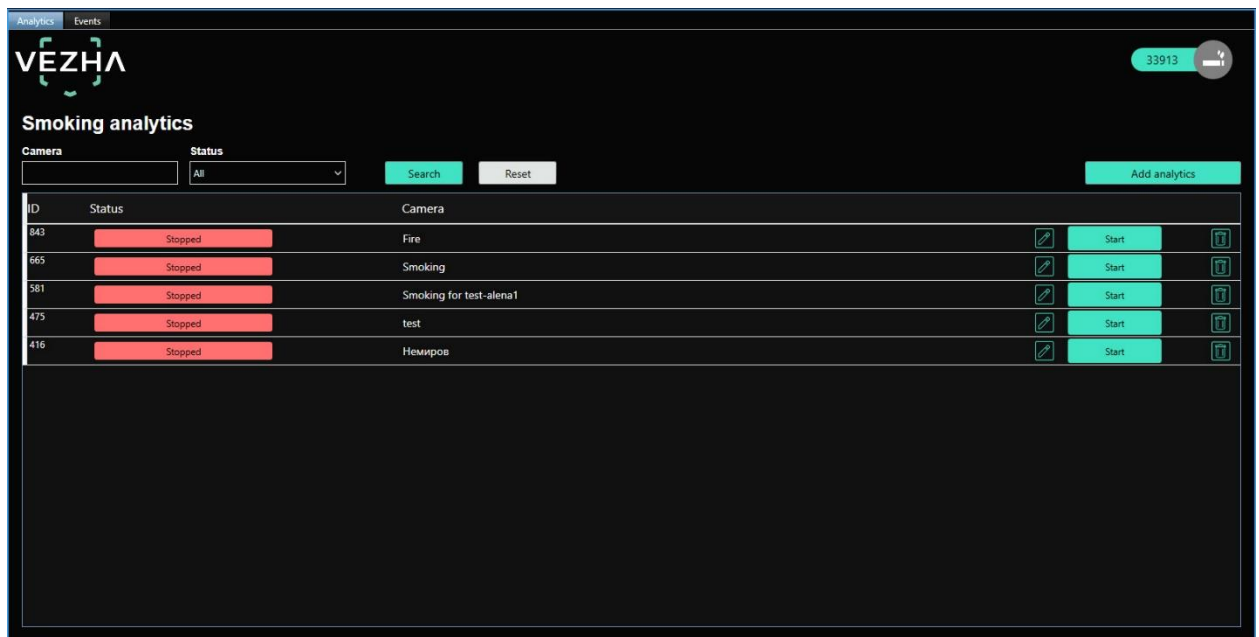
To change the server settings in the VEZHA Smoking Detection tab, you can edit the following fields: **Host**, **Port**, **Portal**, **Websocket port**, **Milestone video server address**.

To change the language, use the **Language** field and select most convenient for you.

To make changes, click **Apply** and reload the plugin.

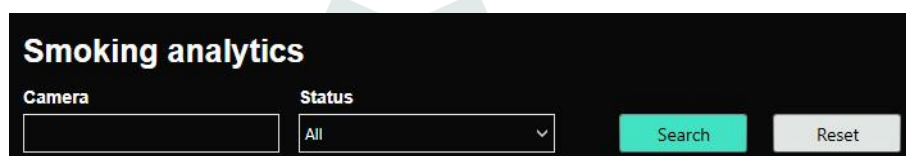
4. Analytics

This tab is developed to view the list of analytics with the ability to add, edit, delete analytics, view video from active analytics in real time.



4.1. Analytics Search

At the top of the screen is a search field.

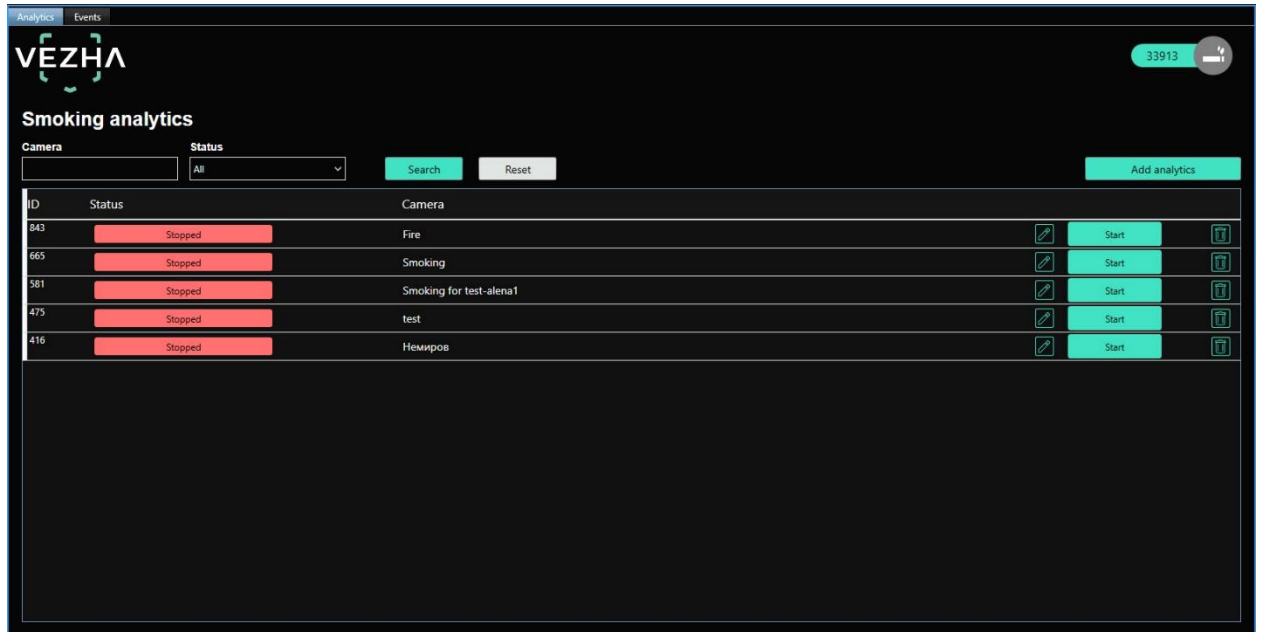


To find the analytics you need, enter the name of the camera or select the analytics status.

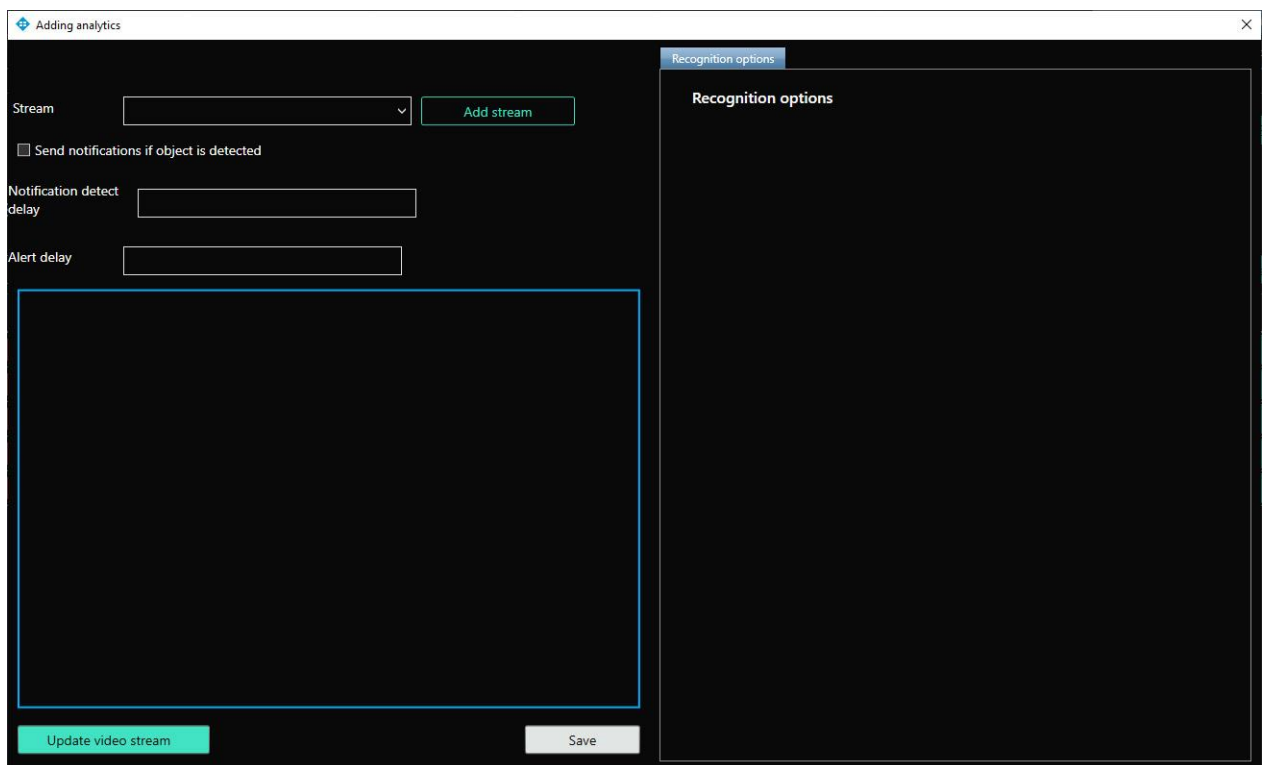
To start the search, click the **Search** button.

4.2. Add analytics

To add analytics, push button **Add analytics**.

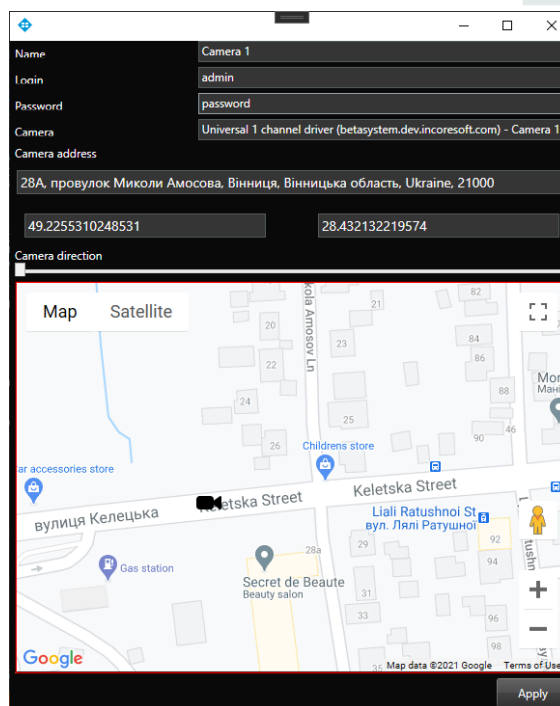


New window will appear.



Field name	Description
Stream	Click on the field and select a name from the drop-down list cameras. The video stream will be used to create analytics.
Send notification if smoker is detected	Check the box Send notifications if smoker is detected to create your own event to send notifications.
Notification detect delay, seconds	The time after which the system will send notifications about detection. The recommended time is 5-10 seconds.
Alert Delay	Smokers checking frequency. Possible range from 1 to 60 sec. The recommended value is 1 sec.

In order to create new analytics click **Add stream**.



The screenshot shows a web interface for adding a new video stream. The form has the following fields:

- Name:** Camera 1
- Login:** admin
- Password:** password
- Camera:** Universal 1 channel driver (betasystem.dev.incoresoft.com) - Camera 1
- Camera address:** 28А, провулок Миколи Амосова, Вінниця, Вінницька область, Ukraine, 21000
- Coordinates:** 49.2255310248531, 28.432132219574
- Camera direction:** A slider control.

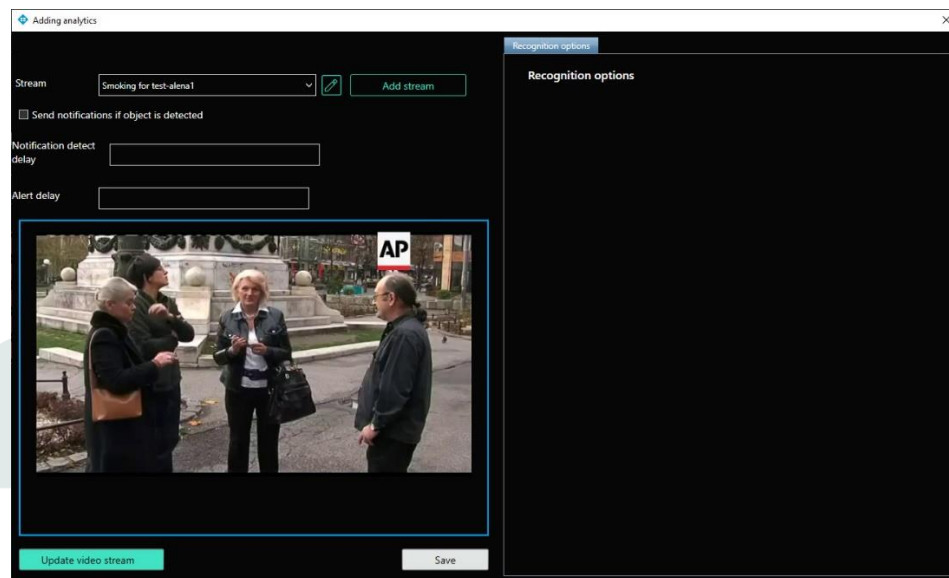
Below the form is a map showing the location of the camera. The map includes labels for 'вулиця Келецька' (Keletska Street), 'вул. Ляли Ратушної' (Lali Ratushnoi St), and 'Secret de Beaute Beauty salon'. The map also shows a gas station and a children's store.

Fill the fields:

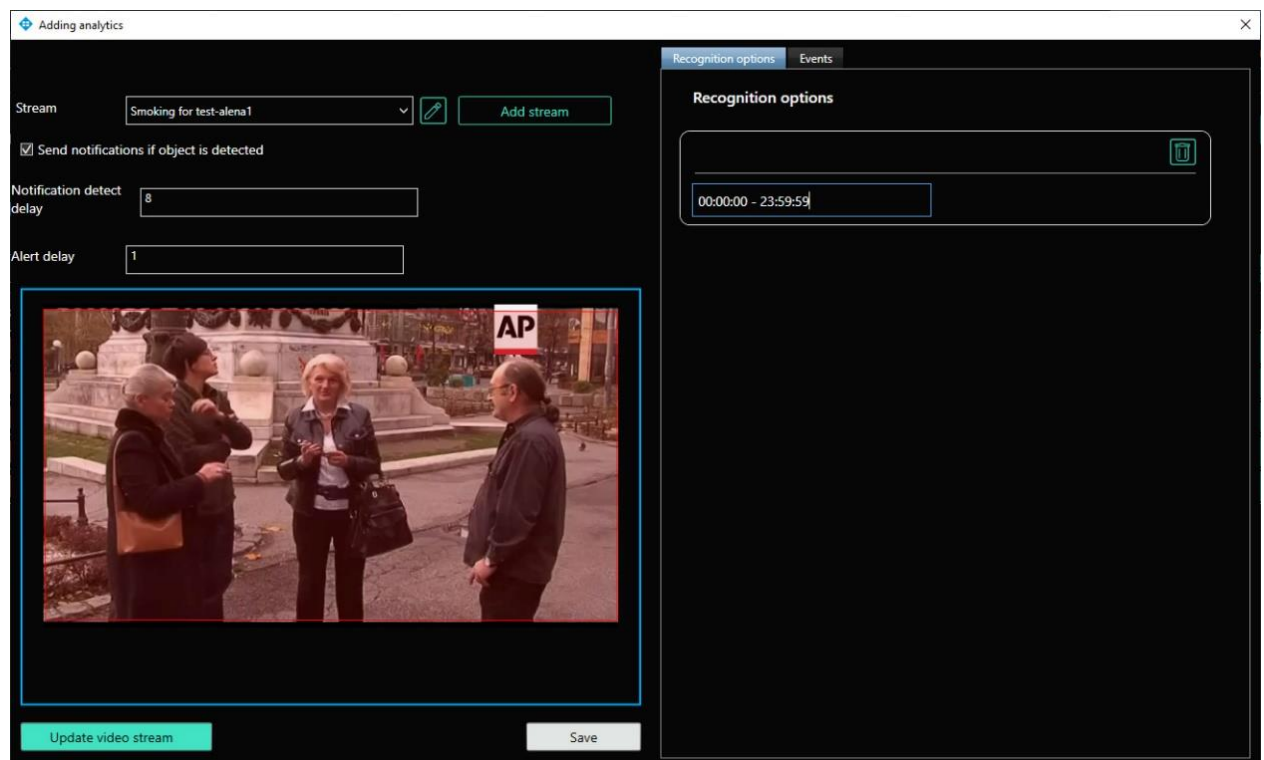
Field name	Description
Name	Enter the name of the video stream in the field. This field will be displayed in all components of the program that use video streams.
Login	Enter the name of the current user in the field.
Password	Enter password.
Camera	Select a camera from the drop-down list.
Camera address	Enter the address in the field, or select on the map below the location of the camera. The system will automatically determine the location coordinates.
Camera direction	drag the slider to change the direction of the camera. Indication of camera rotation helps in determining the direction of the vehicle.

To save changes, click **Apply**.

Example: Press **Stream** in selector and choose your stream. Related to this stream picture will appear below.




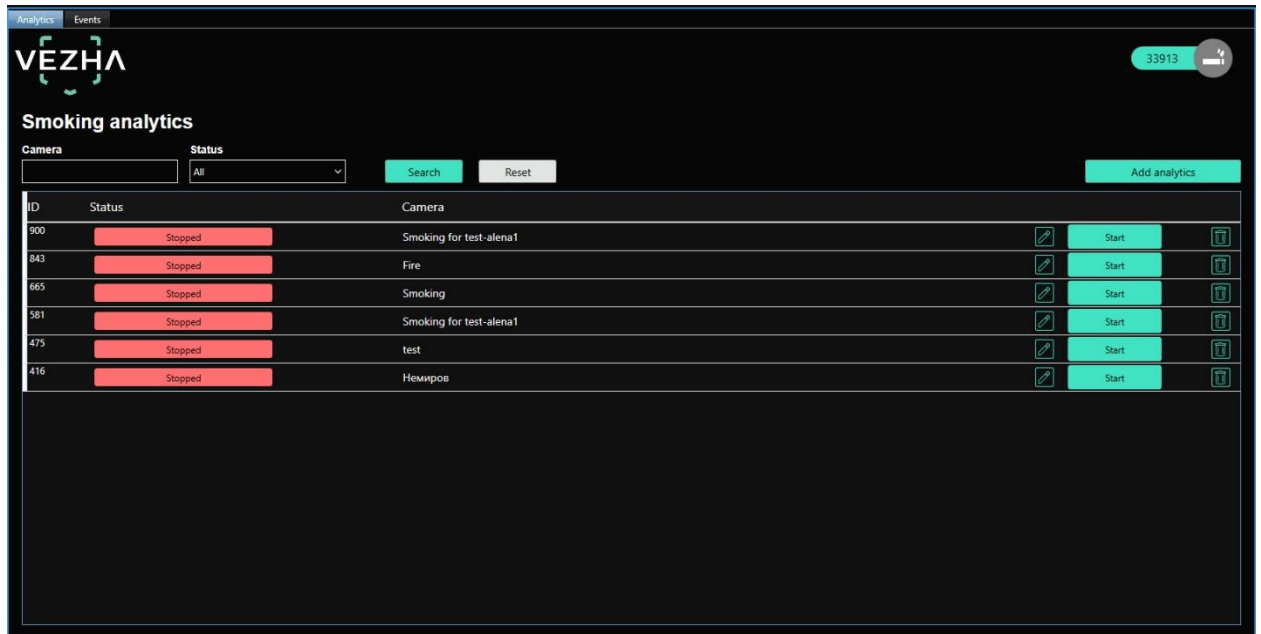
Then you may set the area you want be detected by drawing any shape you want, for example as a red rectangle on the picture. Also you may mark checkbox **Send notifications if smoker is detected**, set time in seconds in **Notification detect delay** (recommended 5-10 seconds), **Alert delay** (recommended 1 second) and set analytics working time from the right side, but exactly in time format: 00:00:00 – 23:59:59




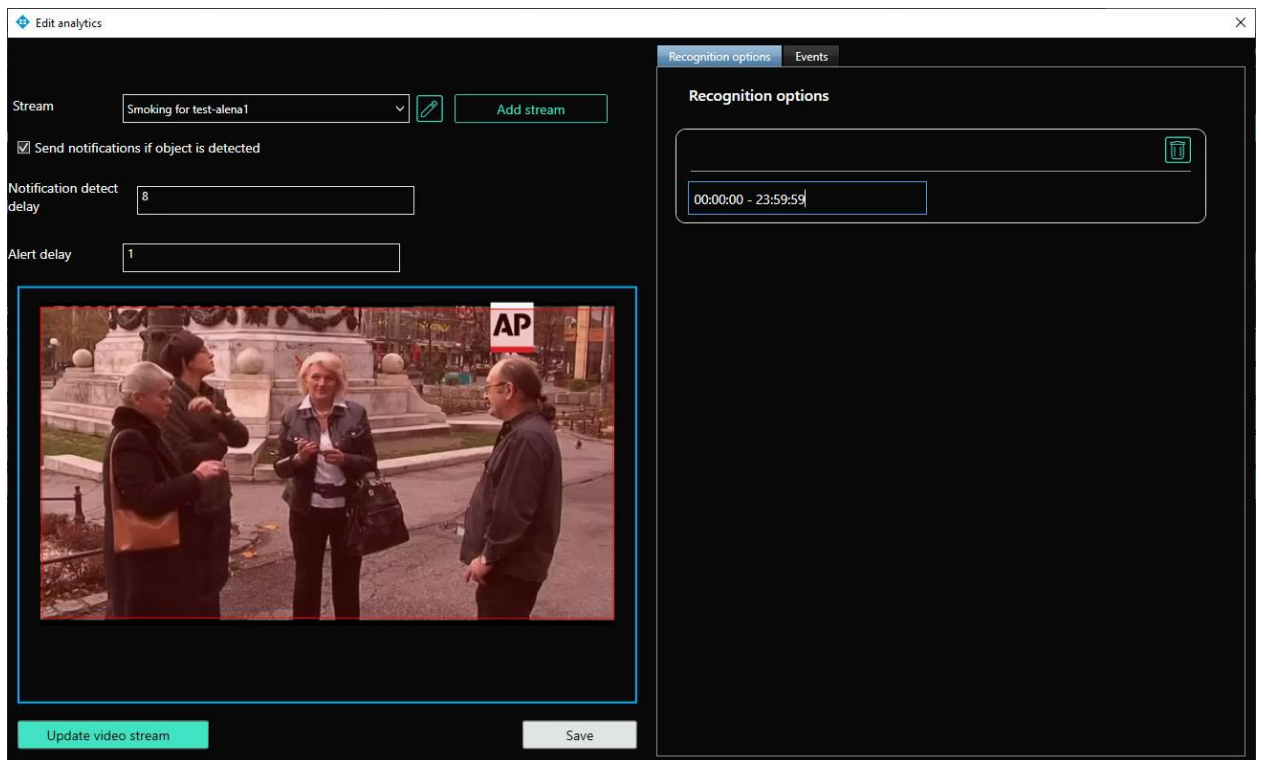
At the end click button **Save** and wait analytics to be added.

4.3. Edit analytics

Press  icon.






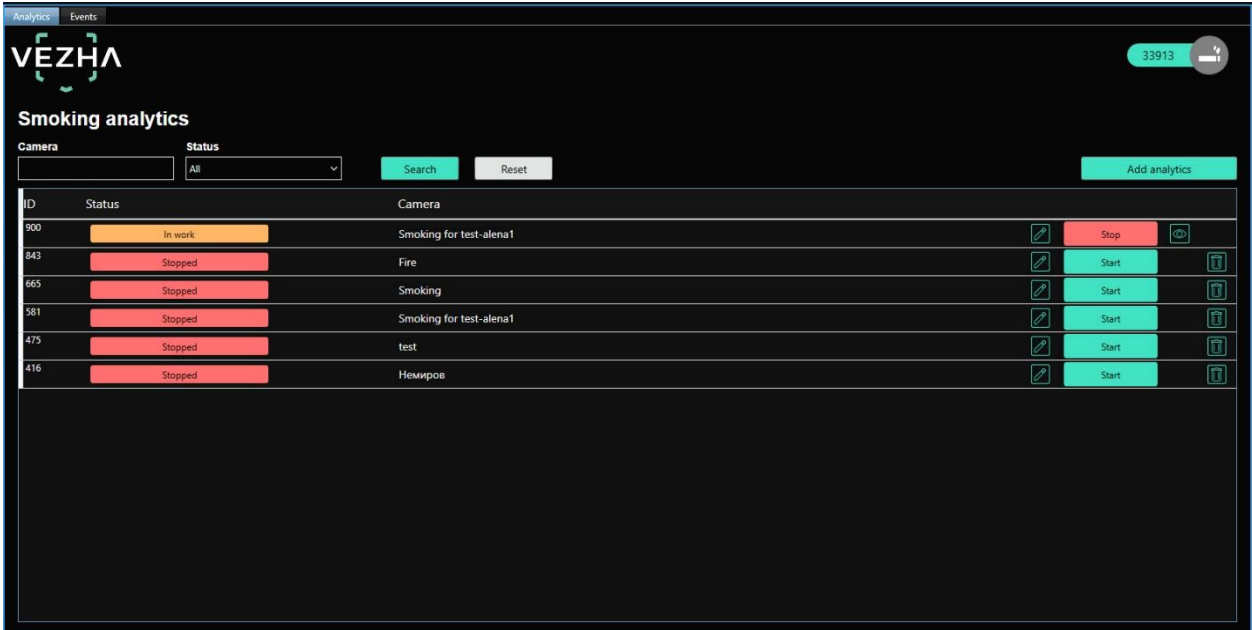
The window **Edit analytics** will appear with settings which was set when analytics were added. If you want edit detection area press  icon to delete it. Then you can set a new area.





















When all changes are done you should press button **Save** and wait until all changes are saved.

4.4. Start, Stop, Watch Analytics

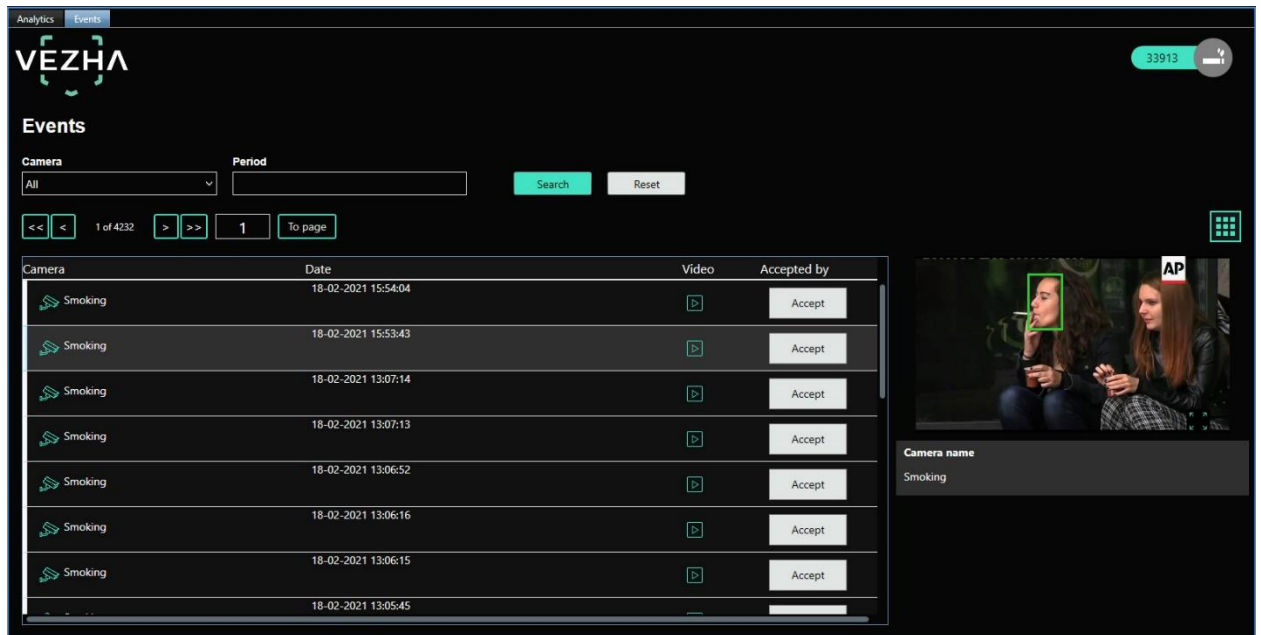
When your analytics are ready you may start any by pressing button . When it needs to be stopped you should press red button . Also you may watch running analytics by clicking corresponding  icon on picture below.



ID	Status	Camera			
900	In work	Smoking for test-alena1			
843	Stopped	Fire			
665	Stopped	Smoking			
581	Stopped	Smoking for test-alena1			
475	Stopped	test			
416	Stopped	Немиров			

5. Events

Next section in VEZHA Smoking Detection Plugin menu is **Events**.



You may review all pictures one by one and if accept it click button **Accept**.

Click **Search** to display the search results. Click **Reset** to clear the input fields.

Events

Camera



All

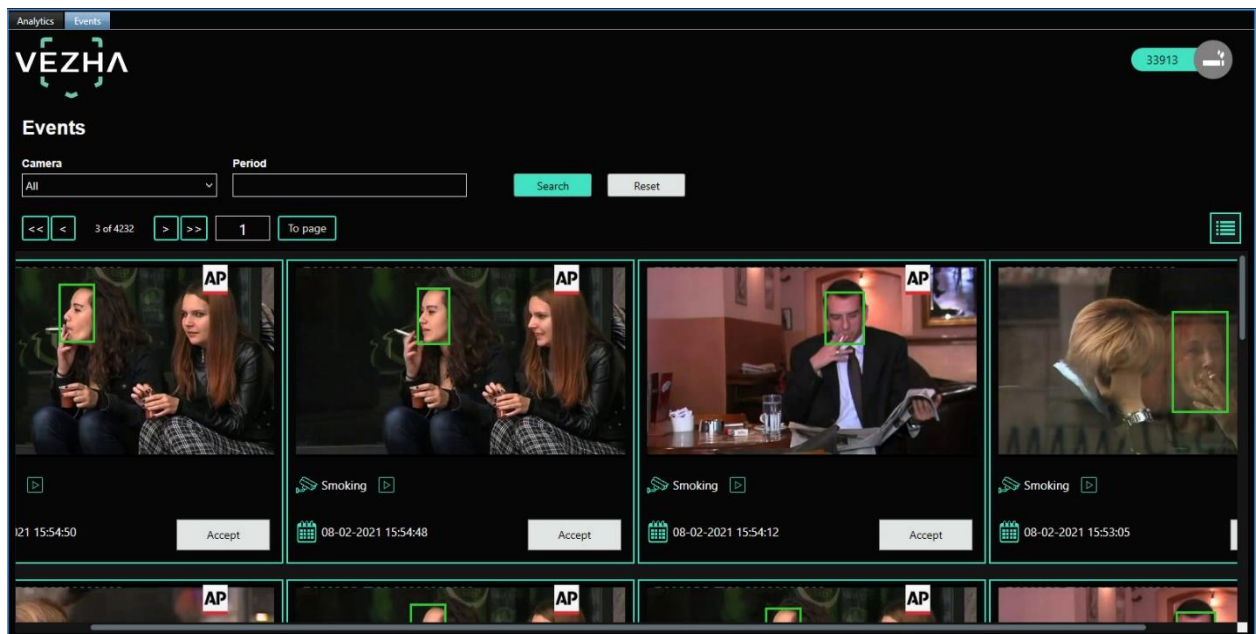
Period


Search

Reset

Field name	Description
Period	Select period of time for which the search will be performed.
Camera	Select the cameras by which search will be performed.

Click  icon to open events as a grid. Click  to see it as a list.



In order to enlarge the frame click on the photo of interest (when using the grid view) or click on the enlargement icon  when using the list view.



Then you may save image by clicking button **Save image**.

About VEZHA:

Our mission is to create a safe environment
for residents of cities of all sizes
and to help Ukrainian businesses optimize their security
and safety management processes.

For more information visit: <https://vezha.io/>



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