

Video analytics system for cities
and business

VEZHA

VEZHA

User Guide for Heatmaps Plugin

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Description of VEZHA Heatmaps

What this module of the VEZHA system can do:

Build a heat map of traffic density in the selected video stream for certain period.

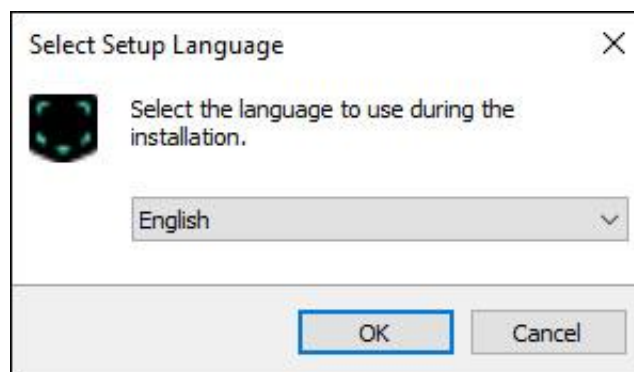
Heatmaps. Functionality:

Heatmaps module is intended for visual display of traffic density in selected video stream. The module provides statistics by hours, days, weeks, months.

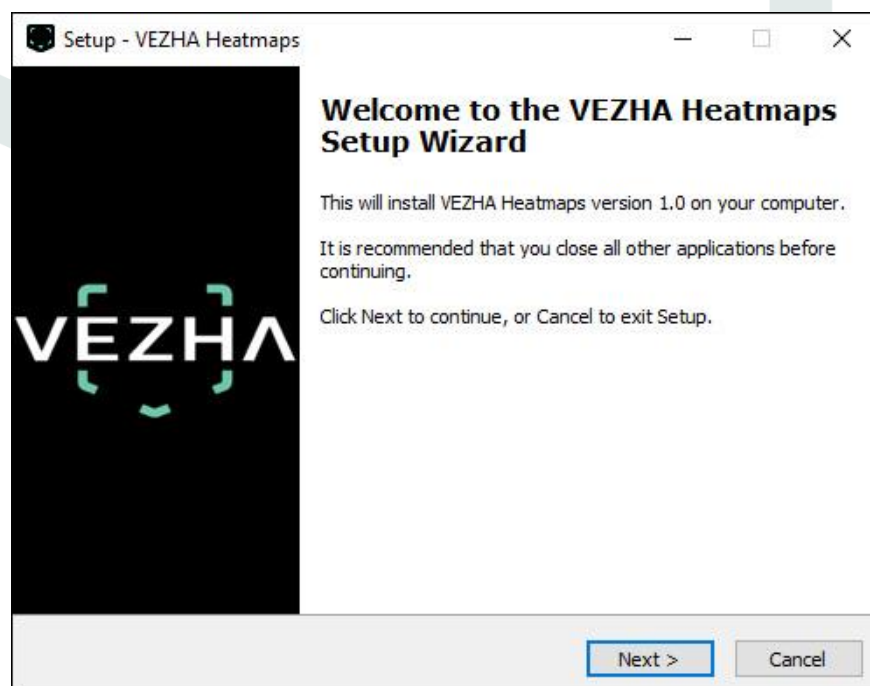
1. Installation

Before installation of VEZHA Heatmaps 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_HeatmapsPlugin_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**.

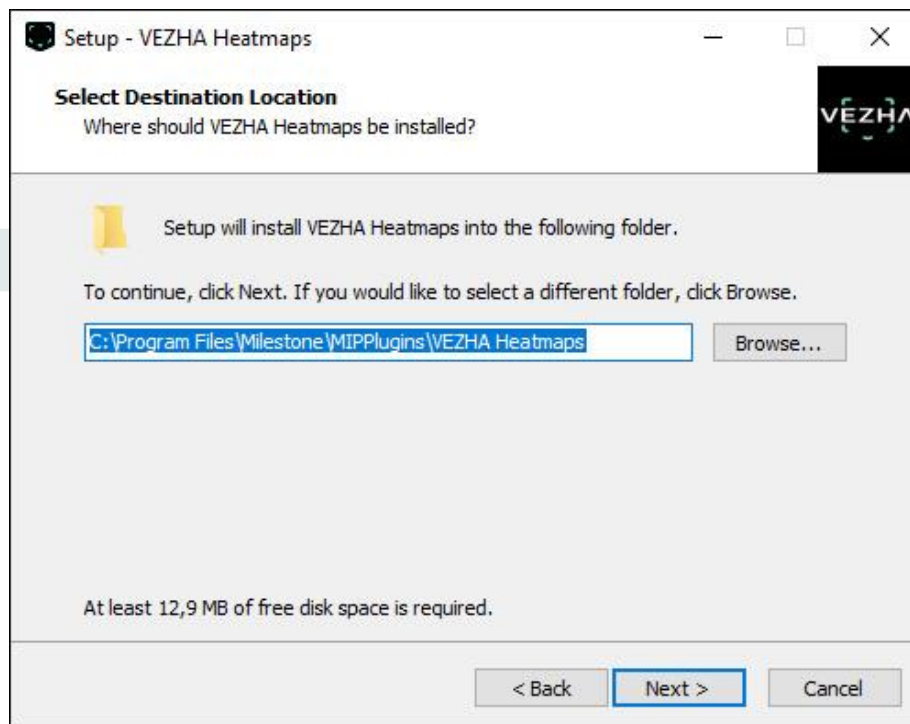


- 3) In a new window, read the installation recommendations and click **Next** to continue the installation, or the **Cancel** button to abort the installation.

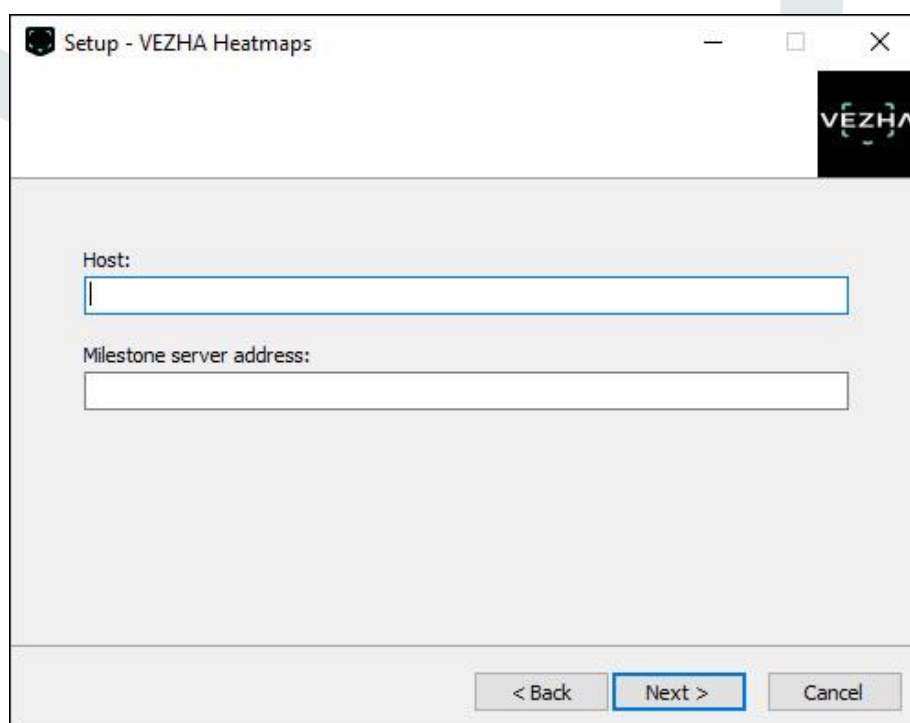




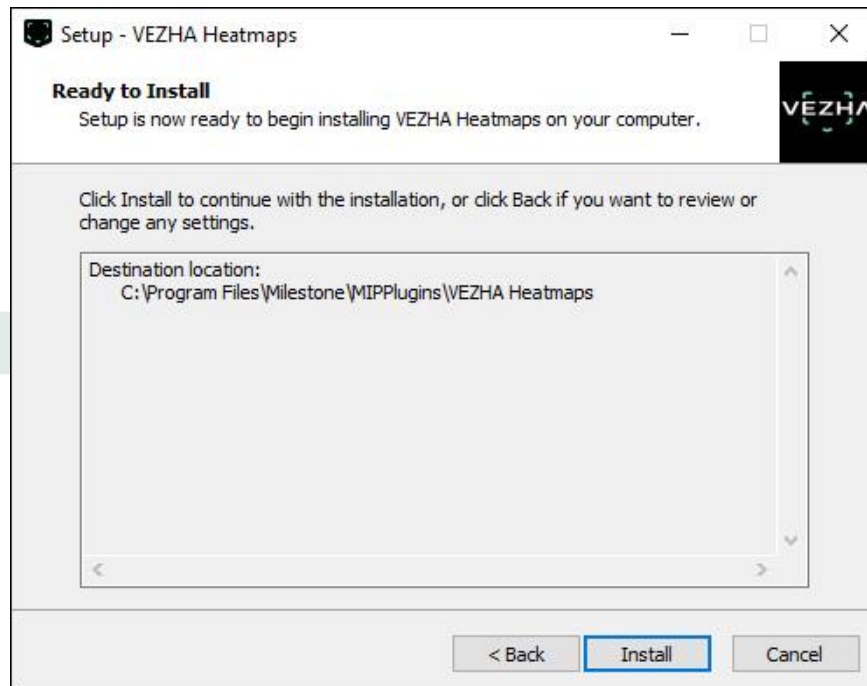
4) In the **Select Destination Location** window using the **Browse** button, specify the place where you want to install the plugin. The plugin must be installed in the **Milestone** folder with other plugins. After selecting the desired folder, click **Next** to continue the installation or **Cancel**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



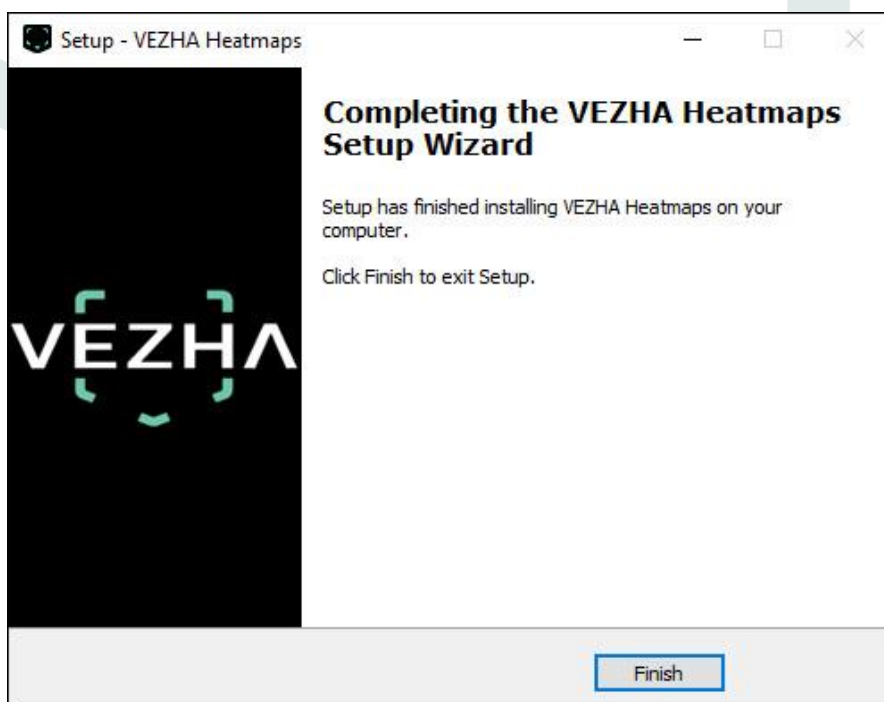
5) In this window, for correctly program work, you must correctly fill the fields and click **Next** to continue the installation or **Cancel** to abort the installation.



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

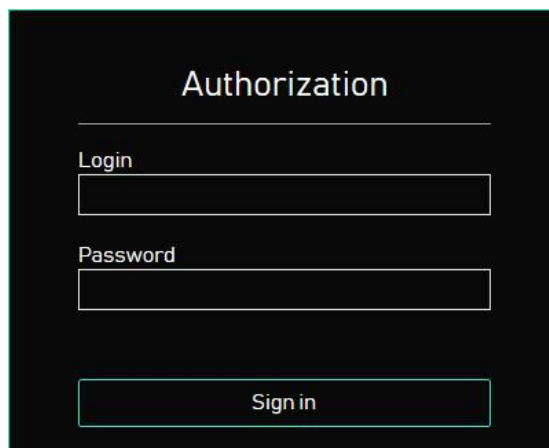


After the installation is completed, click **Finish**.



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**.

A dark-themed modal window titled "Authorization". It contains two input fields: "Login" and "Password". Below these fields is a "Sign in" button.


Authorization

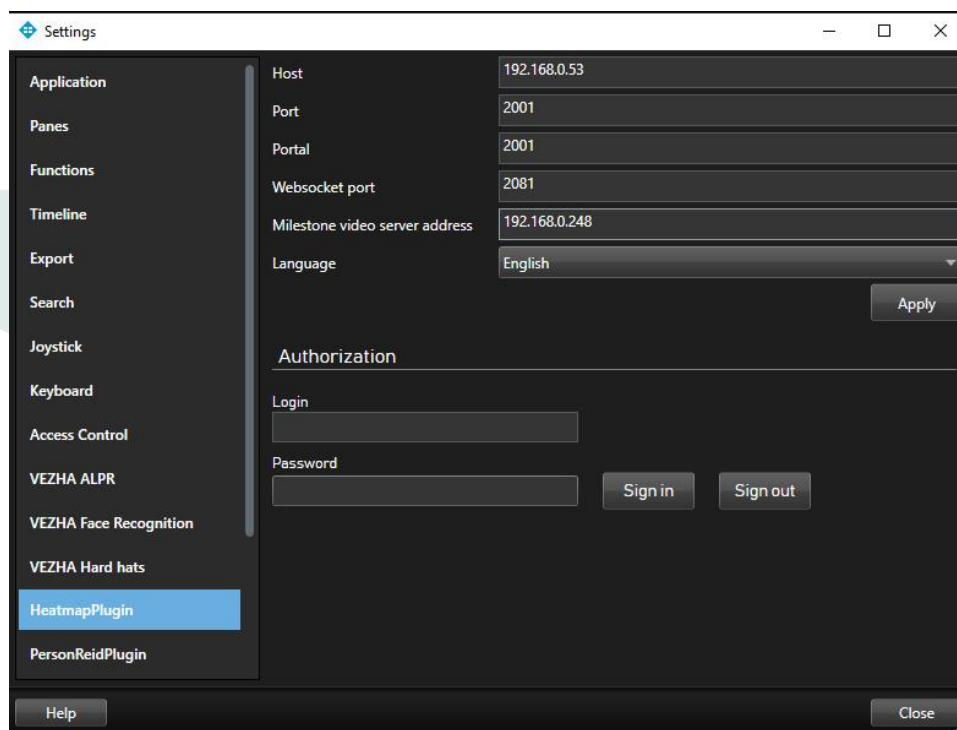
Login

Password

Sign in

3. Settings

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

A dark-themed settings window titled "Settings". On the left is a sidebar with a list of settings categories: Application, Panes, Functions, Timeline, Export, Search, Joystick, Keyboard, Access Control, VEZHA ALPR, VEZHA Face Recognition, VEZHA Hard hats, HeatmapPlugin (highlighted), and PersonReidPlugin. The main area shows settings for the selected category. Under "Application", there are fields for Host (192.168.0.53), Port (2001), Portal (2001), Websocket port (2081), Milestone video server address (192.168.0.248), and Language (English). An "Apply" button is at the bottom right of this section. Below this is an "Authorization" section with "Login" and "Password" fields, and "Sign in" and "Sign out" buttons. At the bottom of the window are "Help" and "Close" buttons.

Settings

Application

Panes

Functions

Timeline

Export

Search

Joystick

Keyboard

Access Control

VEZHA ALPR

VEZHA Face Recognition

VEZHA Hard hats

HeatmapPlugin

PersonReidPlugin

Host

192.168.0.53

Port

2001

Portal

2001

Websocket port

2081

Milestone video server address

192.168.0.248

Language

English

Apply

Authorization

Login

Password

Sign in

Sign out

Help

Close

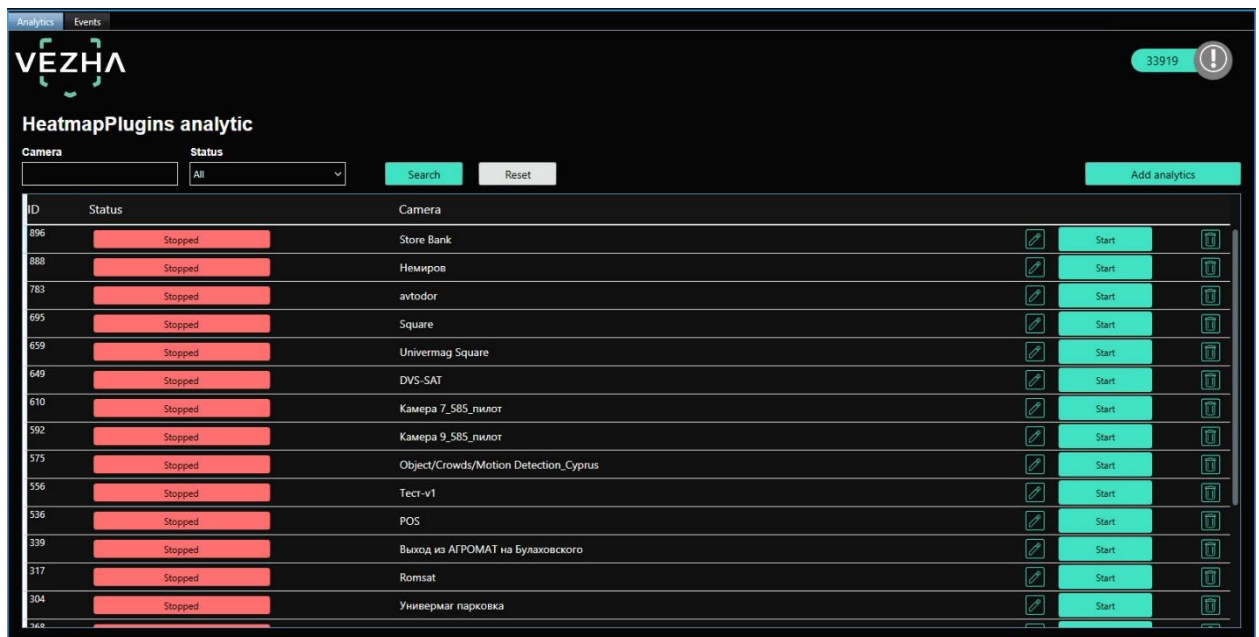
To change the server settings in the **VEZHA Heatmaps** tab, you can edit the following fields: **Host**, **Port**, **Portal**, **Websocket port**, **Milestone video server address**.

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.

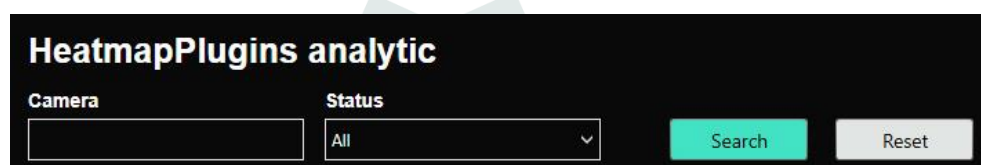


The screenshot shows the 'Analytics' tab in the VEZHA system. At the top, there's a 'HeatmapPlugins analytic' section with a search bar for 'Camera' and a dropdown for 'Status' (set to 'All'). There are 'Search' and 'Reset' buttons, and an 'Add analytics' button on the right. Below this is a table listing various analytics. Each row includes an ID, a status indicator (a red bar with 'Stopped' text), the camera name, and action buttons for editing, starting, and deleting.

ID	Status	Camera			
896	Stopped	Store Bank		Start	
868	Stopped	Немиков		Start	
783	Stopped	avtodor		Start	
695	Stopped	Square		Start	
659	Stopped	Univermag Square		Start	
649	Stopped	DVS-SAT		Start	
610	Stopped	Камера 7_585_пилот		Start	
592	Stopped	Камера 9_585_пилот		Start	
375	Stopped	Object/Crowds/Motion Detection_Cyprus		Start	
356	Stopped	Тест-v1		Start	
336	Stopped	POS		Start	
339	Stopped	Выход из АГРОМАТ на Булаховского		Start	
317	Stopped	Romsat		Start	
304	Stopped	Универмаг парковка		Start	

4.1. Analytics Search

At the top of the screen is a search field.



This image is a close-up of the search area at the top of the 'HeatmapPlugins analytic' section. It features a text input field for 'Camera', a dropdown menu for 'Status' with 'All' selected, and two buttons: 'Search' (in green) and 'Reset' (in grey).

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**.

The screenshot shows the VEZHA HeatmapPlugins analytic interface. At the top, there's a 'Camera' input field, a 'Status' dropdown menu set to 'All', and 'Search' and 'Reset' buttons. On the right, there's an 'Add analytics' button. Below this is a table listing various cameras with their IDs, status (all 'Stopped'), and names. Each row has a 'Start' button and a trash icon.

ID	Status	Camera	Start
896	Stopped	Store Bank	Start
888	Stopped	Немиров	Start
783	Stopped	avtodor	Start
695	Stopped	Square	Start
659	Stopped	Univermag Square	Start
649	Stopped	DVS-SAT	Start
610	Stopped	Камера 7_585_пилот	Start
592	Stopped	Камера 9_585_пилот	Start
575	Stopped	Object/Crowds/Motion Detection_Cyprus	Start
556	Stopped	Тест-v1	Start
536	Stopped	POS	Start
339	Stopped	Выход из АГРОМАТ на Булаховского	Start
317	Stopped	Romsat	Start
304	Stopped	Универмаг парковка	Start

New window will appear.

The screenshot shows the 'Adding analytics' dialog box. It has two tabs: 'Stream' and 'Recognition options'. The 'Stream' tab is active, showing a 'Stream' input field, an 'Add stream' button, and a checkbox for 'Send notifications if object is detected'. Below this is a large empty rectangular area. At the bottom of the 'Stream' tab are 'Update video stream' and 'Save' buttons. The 'Recognition options' tab is currently empty.

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 object is detected	Check the box Send notifications if object is detected to create your own event to send notifications.

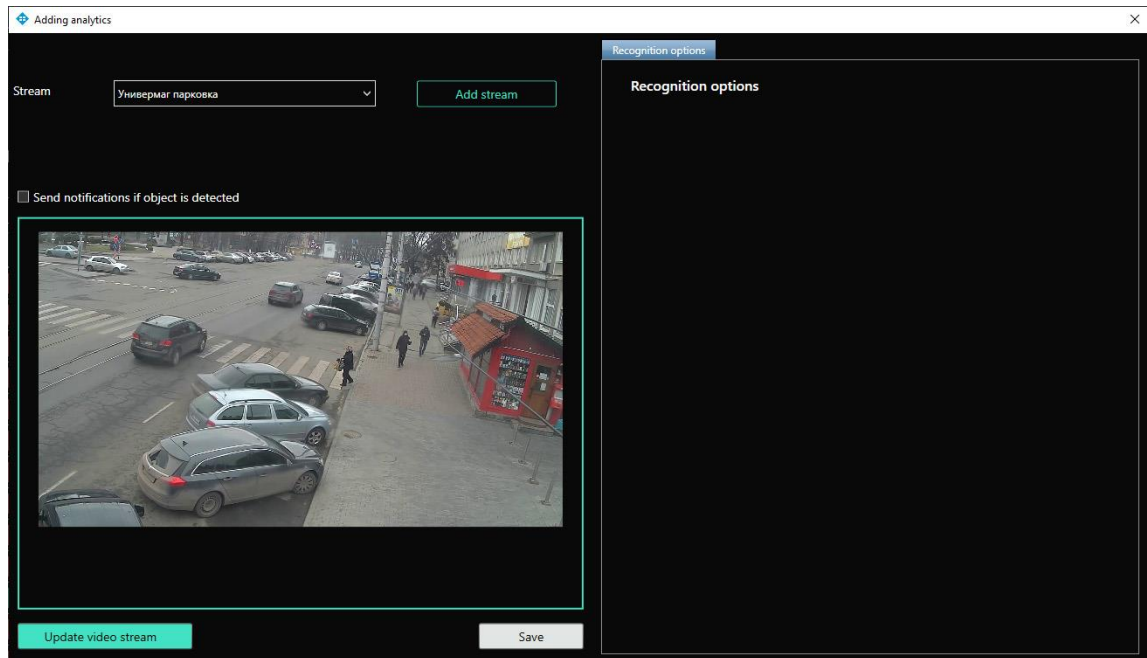
In order to create new analytics click **Add stream**.

Fill the fields:

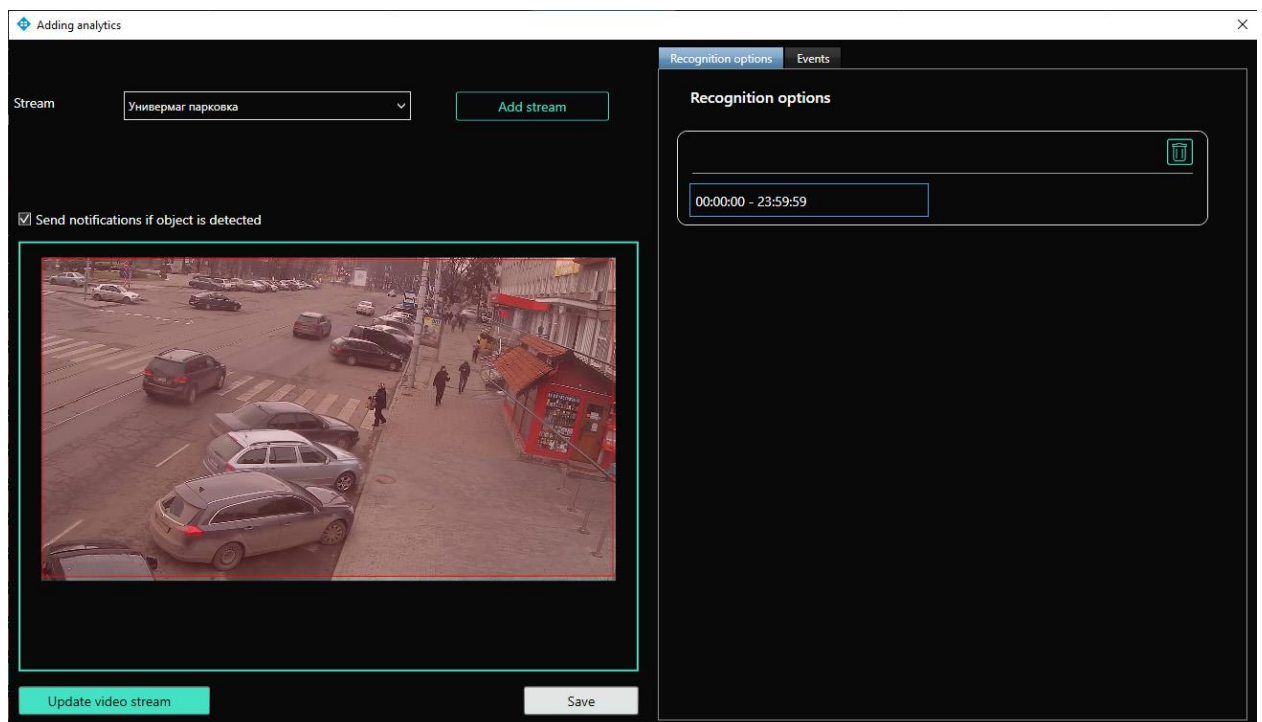
Field name	Description
Name	Enter the name of the video stream in the field. This field will be displayed in all components of the program that use video streams.
Login	Enter the name of the current user in the field.
Password	Enter password.
Camera	Select a camera from the drop-down list.
Camera address	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.



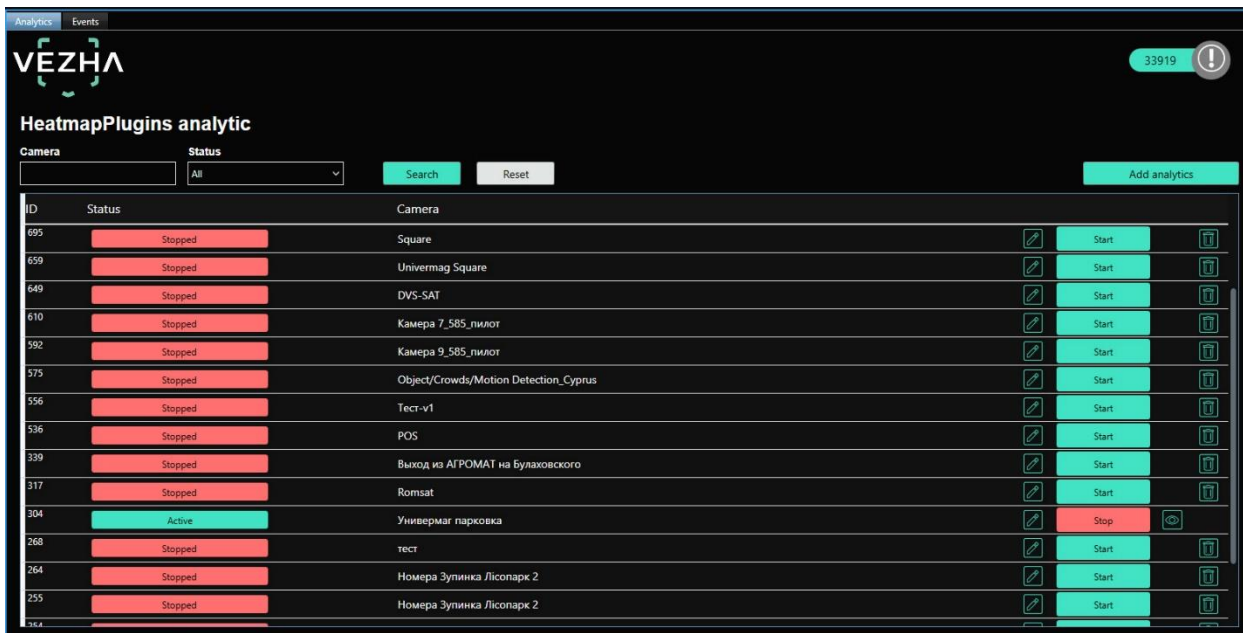
Then you may set the area you want be detected by drawing any shape you want, for example as a red rectangle on the picture. Also you may mark checkbox **Send notifications if object is detected**, and set analytics working time from the right side, but exactly in time format: 00:00:00 – 23:59:59


















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

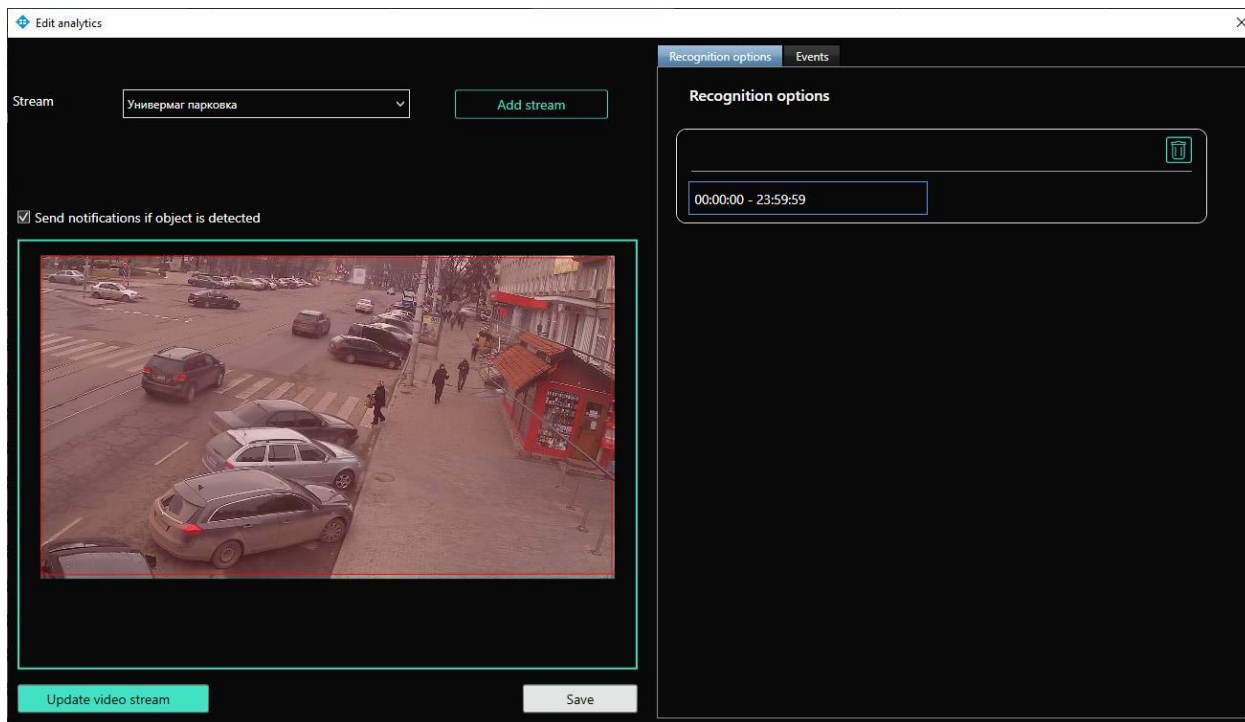
4.3. Edit analytics

Press  icon.






ID	Status	Camera		
695	Stopped	Square		Start
659	Stopped	Univermag Square		Start
649	Stopped	DVS-SAT		Start
610	Stopped	Камера 7_585_пилот		Start
592	Stopped	Камера 9_585_пилот		Start
575	Stopped	Object/Crowds/Motion Detection_Cyprus		Start
556	Stopped	Тест-v1		Start
536	Stopped	POS		Start
339	Stopped	Выход из АГРОМАТ на Булаковского		Start
317	Stopped	Romsat		Start
304	Active	Универмаг парковка		Stop
268	Stopped	тест		Start
264	Stopped	Номера Зупинка Лісопарк 2		Start
255	Stopped	Номера Зупинка Лісопарк 2		Start

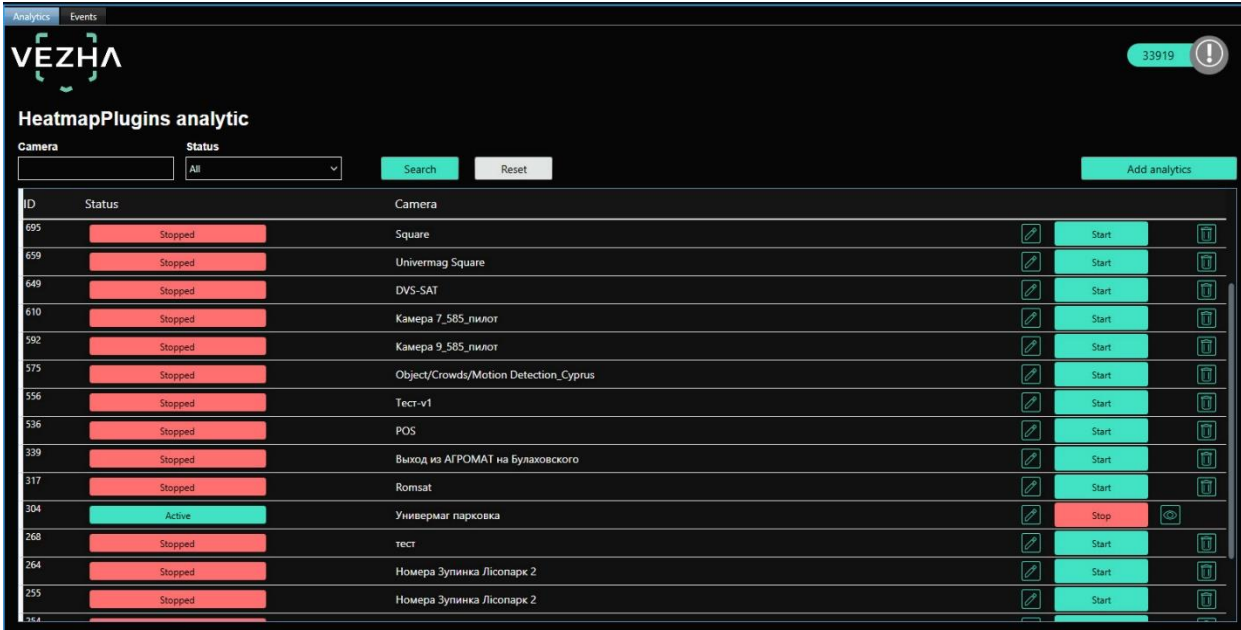
The window **Edit analytics** will appear with settings which was set when analytics were added. If you want edit detection area press  icon to delete it. Then you can set a new area.































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

4.4. Start, Stop, Watch Analytics

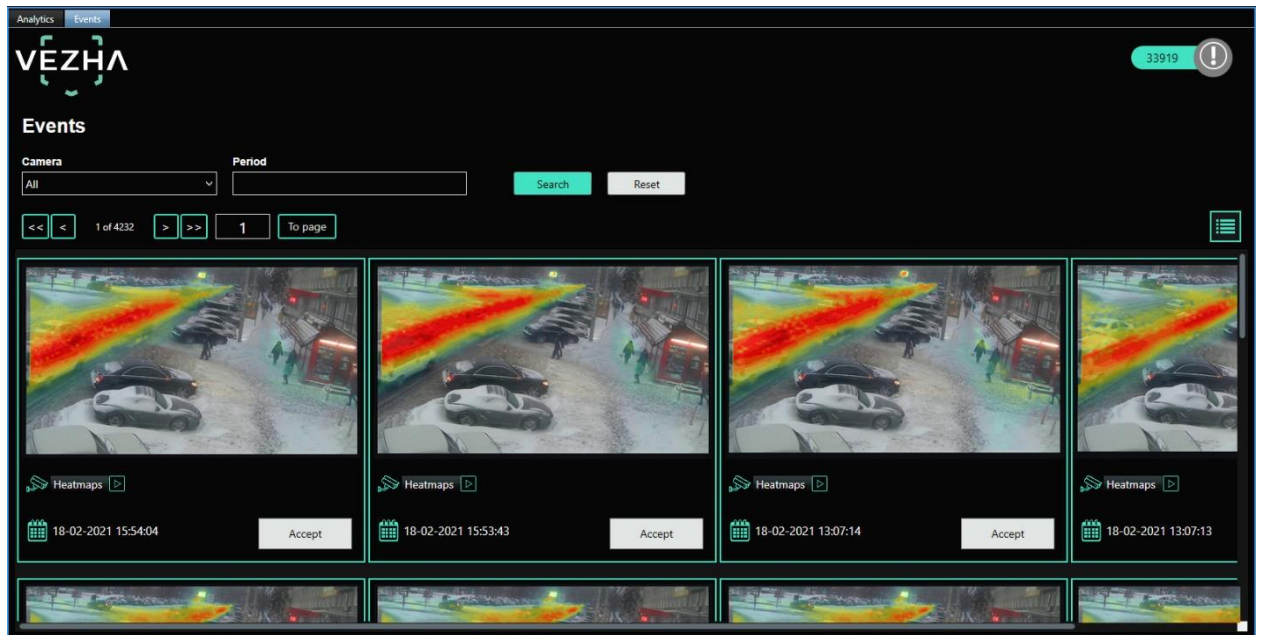
When your analytics are ready you may start any by pressing button . When it needs to be stopped you should press red button . Also you may watch running analytics by clicking corresponding  icon on picture below.



ID	Status	Camera			
695	Stopped	Square		Start	
659	Stopped	Univermag Square		Start	
649	Stopped	DVS-SAT		Start	
610	Stopped	Камера 7_585_пилот		Start	
592	Stopped	Камера 9_585_пилот		Start	
575	Stopped	Object/Crowds/Motion Detection_Cyprus		Start	
556	Stopped	Тест-v1		Start	
536	Stopped	POS		Start	
339	Stopped	Выход из АГРОМАТ на Булаховского		Start	
317	Stopped	Romsat		Start	
304	Active	Универмаг парковка		Stop	
268	Stopped	тест		Start	
264	Stopped	Номера Зулинка Лисонарк 2		Start	
255	Stopped	Номера Зулинка Лисонарк 2		Start	

5. Events

Next section in VEZHA Heatmaps 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

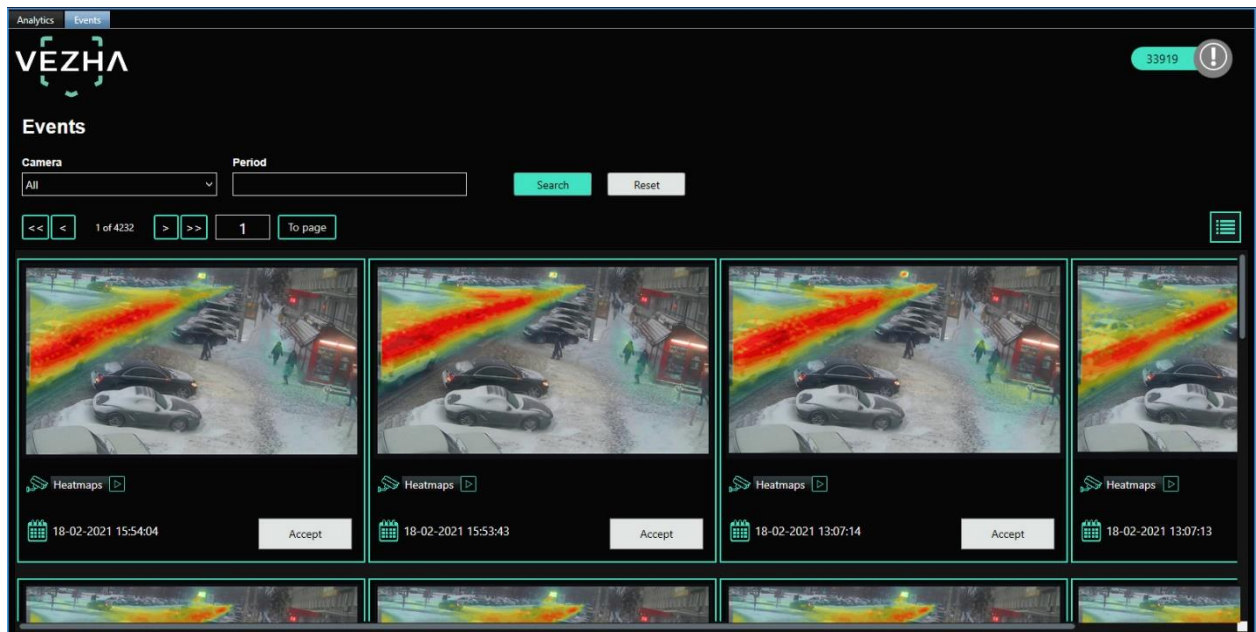
Period


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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