IncoreSoft

Video analytics system for cities
and business

VEZHA

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# VEZHA

ALPR Gates Plugin User Guide

# Content

**VEZHA ALPR  Gates Plugin User Guide**

VEZHA ALPR Gates Plugin is developed to work with shopping centers, large logistics centers, parking lots to create a system of access to the territory.
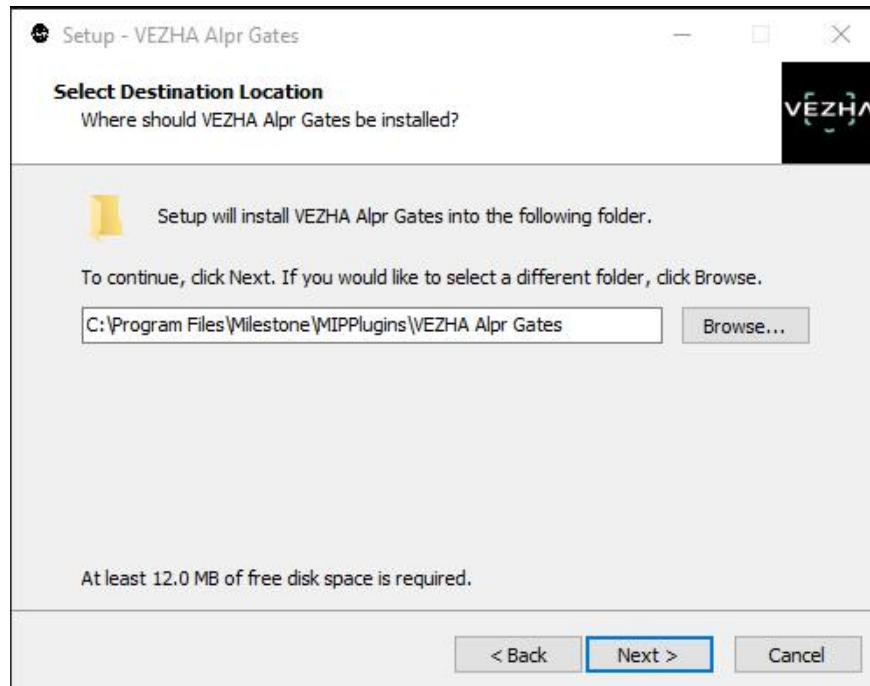
## 1. Installation

1.      Lounch the installer by double clicking on the file **"ALPR_Gates_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 installation click **"Cancel".**
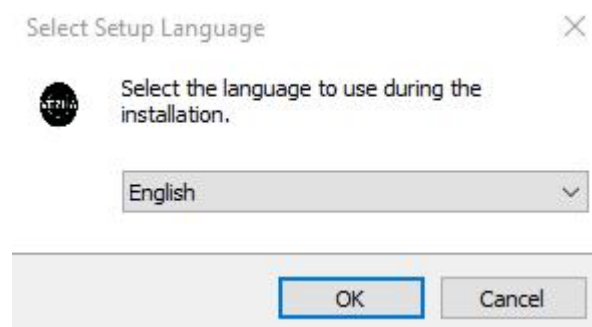


3.  In the new window, read the installation recommendations and click the **"Next"** button to continue the installation, or the **"Cancel"** button to abort the installation.
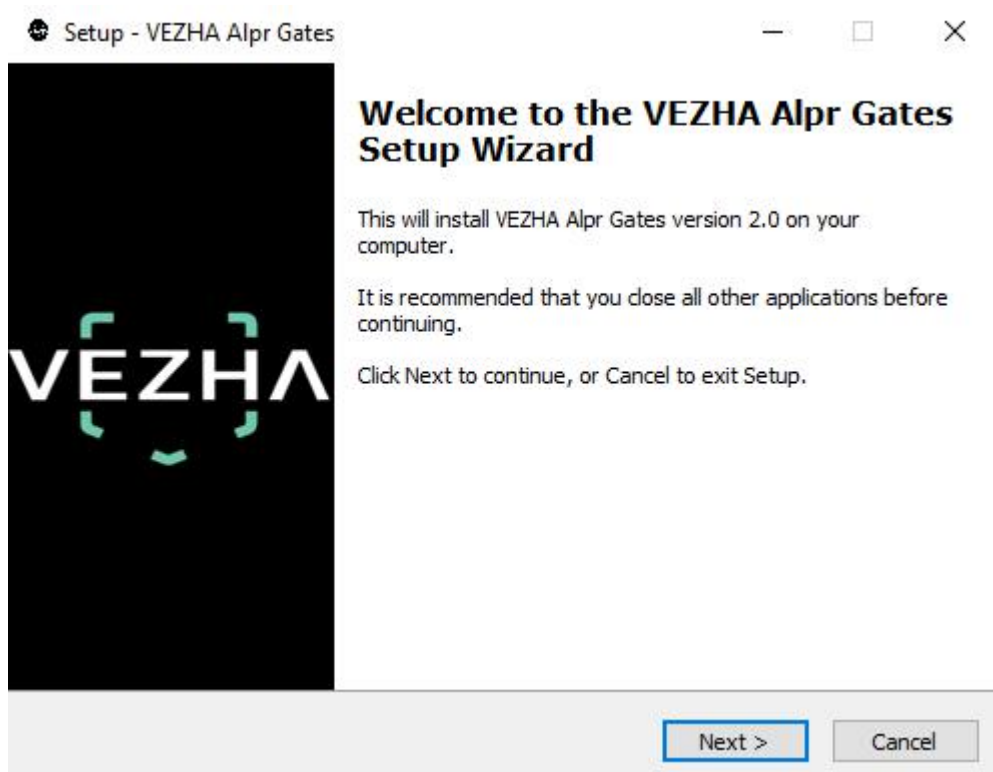
4. In the "Select installation folder" window using the "Browse" button, specify the location where you want to install the plug-in. The plugin must be installed in the "Milestone" folder with other plugins. After selecting the desired folder, click "Next" to continue the installation or "Cancel" to abort the installation.
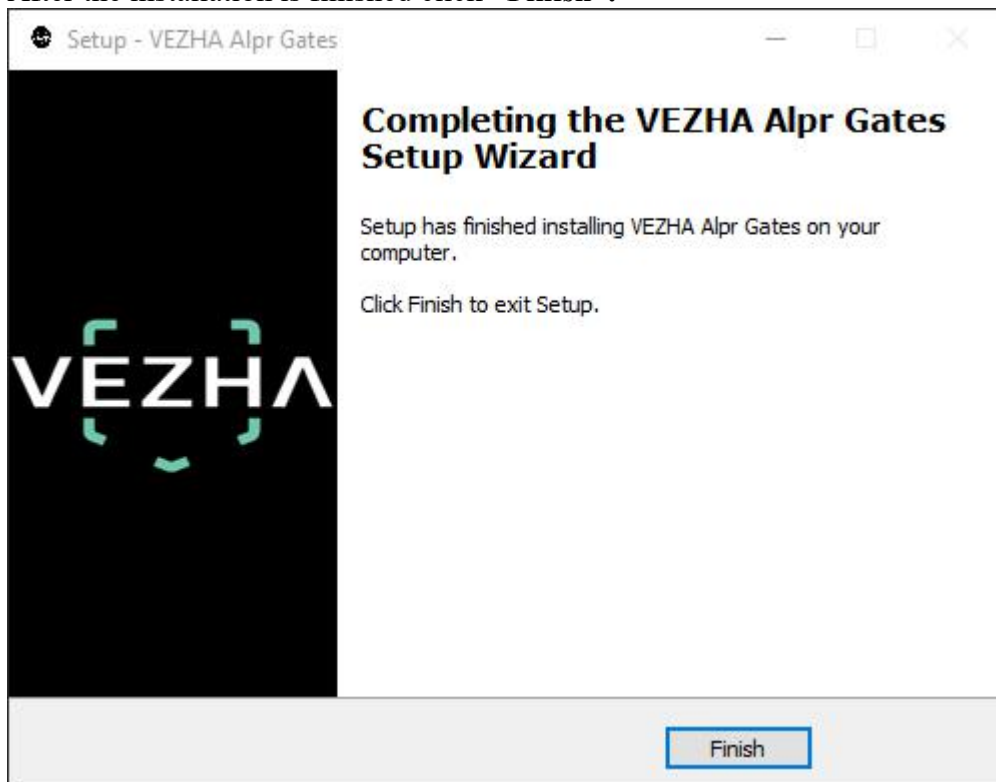


5. In this window, for the program to work correctly, you need to fill in all the fields correctly and click "**Next**" to continue the installation or **"Cancel"** to abort the installation.
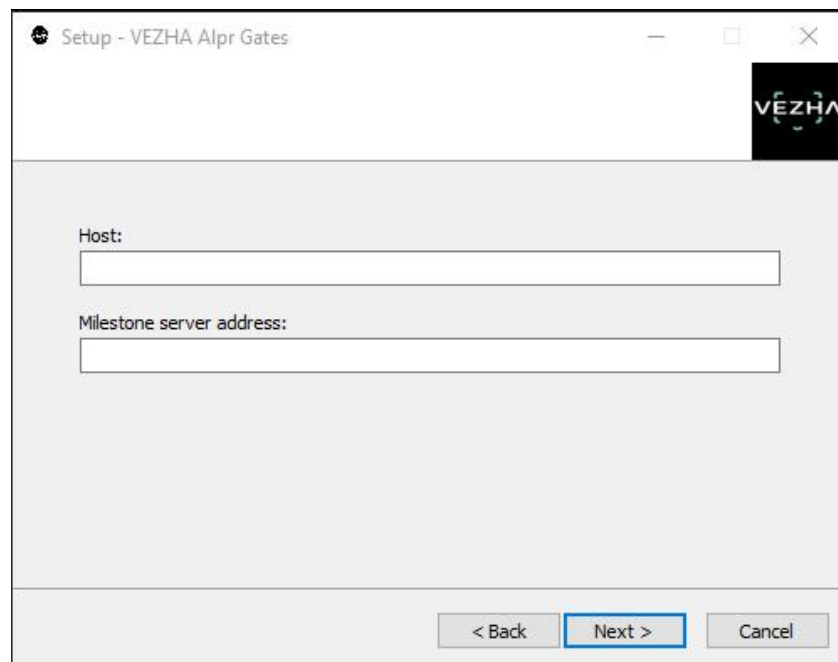
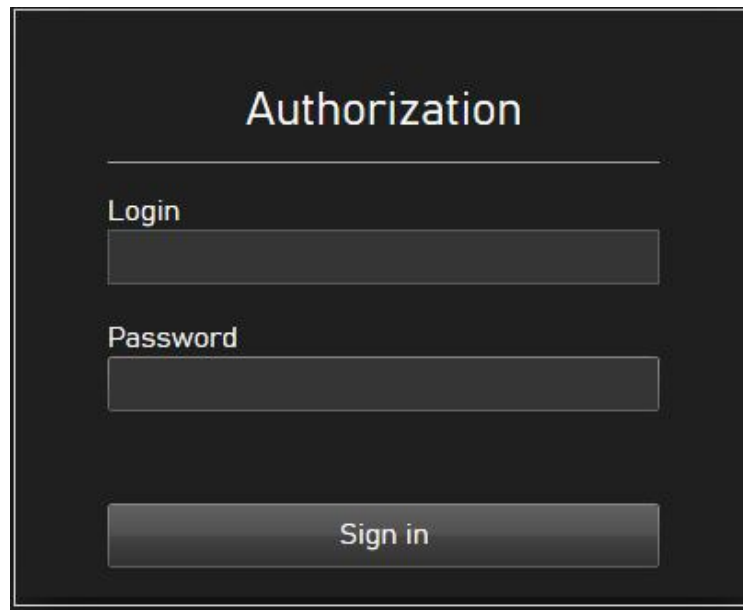6.       Click **"Install"** to start the installation.
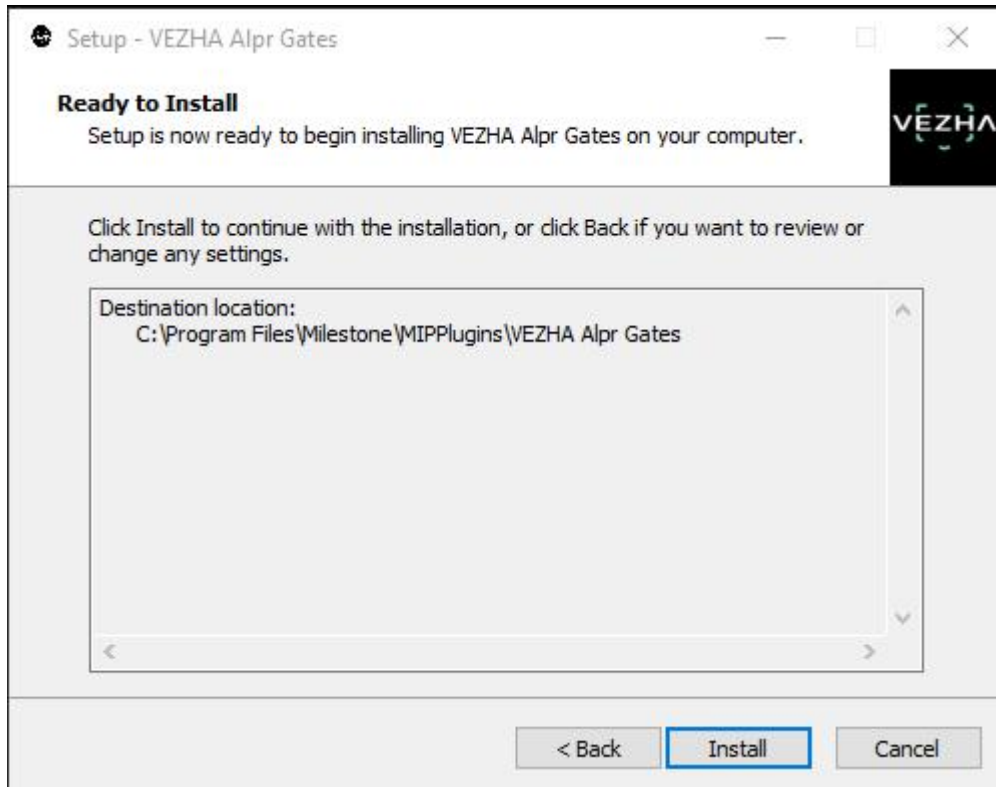


7.       After the installation is finished click **"Finish".**

**2. Log In**

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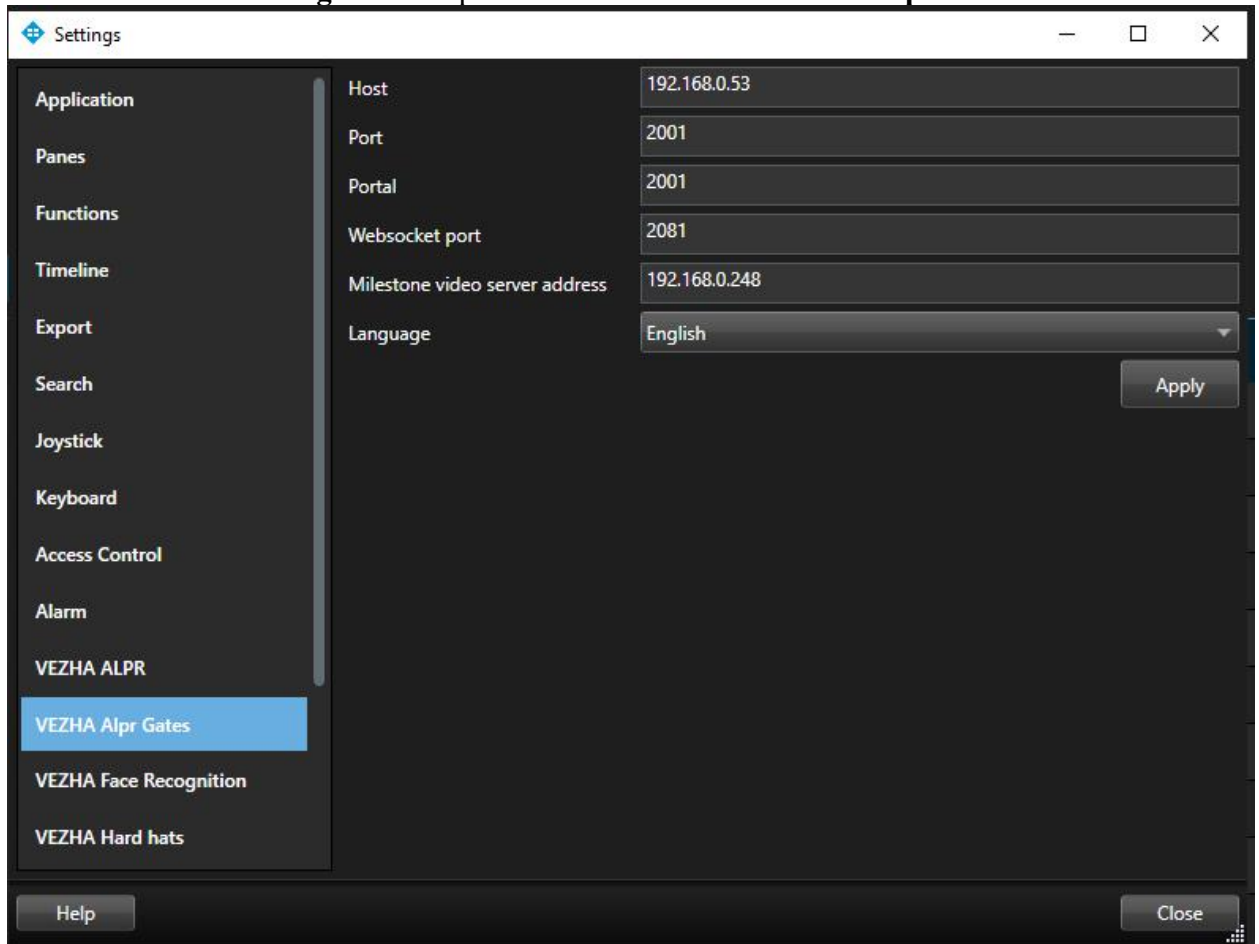
## 3. Settings

In way to find **VEZHA settings** click the icon  in the upper right corner of the screen. Choose and click **Settings**. In the opened window choose **VEZHA Alpr Gates**.
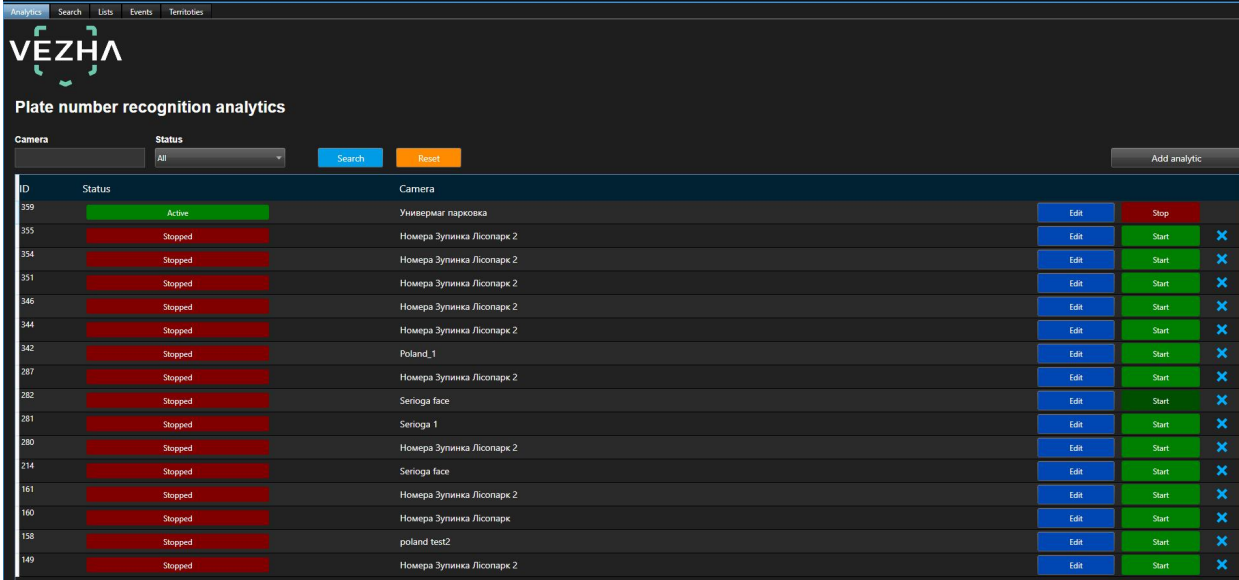


To change the server settings in the VEZHA Alpr Gates tab, you can edit the following fields: **Host, Port, Portal, Websocket port, Milestone video server address**.

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

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

## 4. Analytics

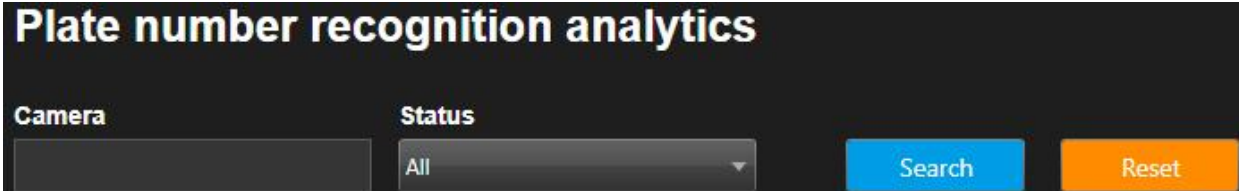This tab is intended for adding, editing, viewing, deleting and changing the status of analysts.



## 4.1. Analytics Search

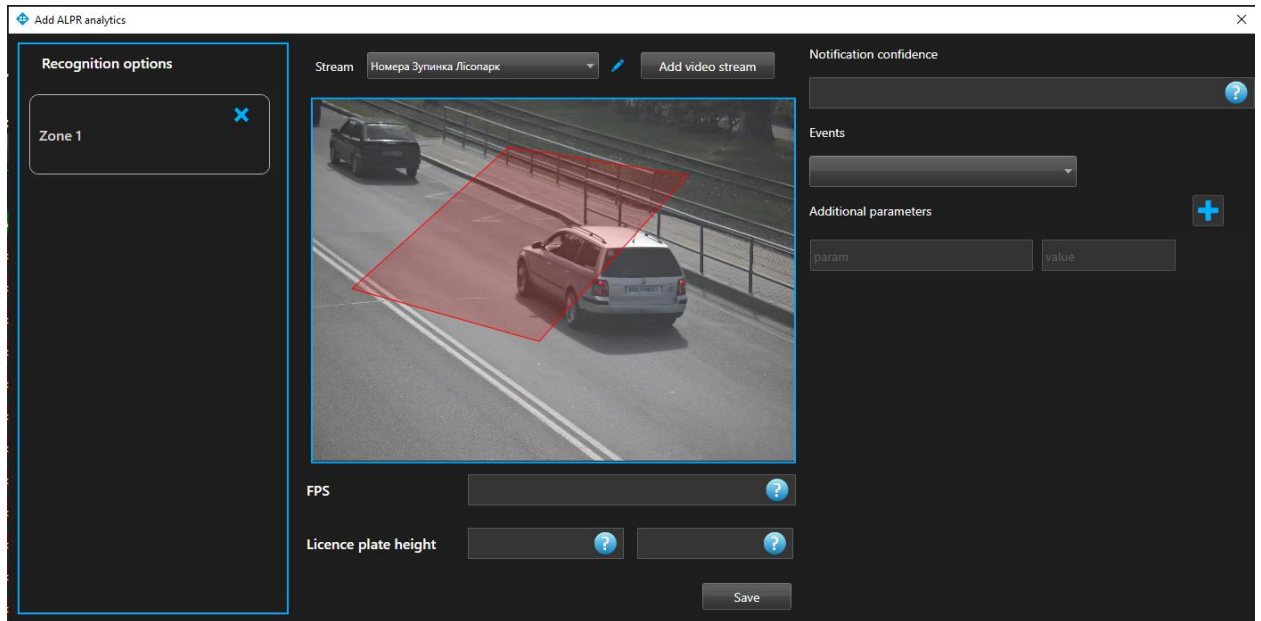At the top of the screen is located search field.



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

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

## 4.2. Adding of analytics

To add new analytics, click **Add analytics** in the upper right corner of the screen.

In the window that opens, fill in the fields:

| Field name | Recommended value |
|---|---|
| **Videostream** | Click on the field and select a video stream from the drop-down list. The selected video stream will display the area in which license plate recognition will be performed. |
| **FPS** | Enter the required number of frames per second for detection in the field. The recommended value is 5. |
| **License plate height** | Enter the minimum and maximum number heights in the fields. The recommended minimum height is 15. The recommended maximum height is 70. |
| **Notification confidence** | Enter the percentage of recognition quality in the field. Sending an event occurs only upon recognition with a quality not lower than the set percentage. Possible values are from 0 to 100% |
| **Events** | From the drop-down list, select the event, according to the parameters of which notifications will come. |
| **Additional parameters** | If necessary, you can add additional parameters for their further use when creating an event. Fill in the parameter fields. To add parameters, click the "+" button. To remove the parameters press "-". |

**Adding an area of interest**

- Add a camera into the field **Videostream.**

- Lower the field **Videostream** will apear video from camera.

- Add zone of interest.

Click on the frame from the added video with the left mouse button. By clicking three or more times in different places of the frame with the left mouse button you will outline the area. In order for the region to be created, left-click. In this area, numbering will be carried out.
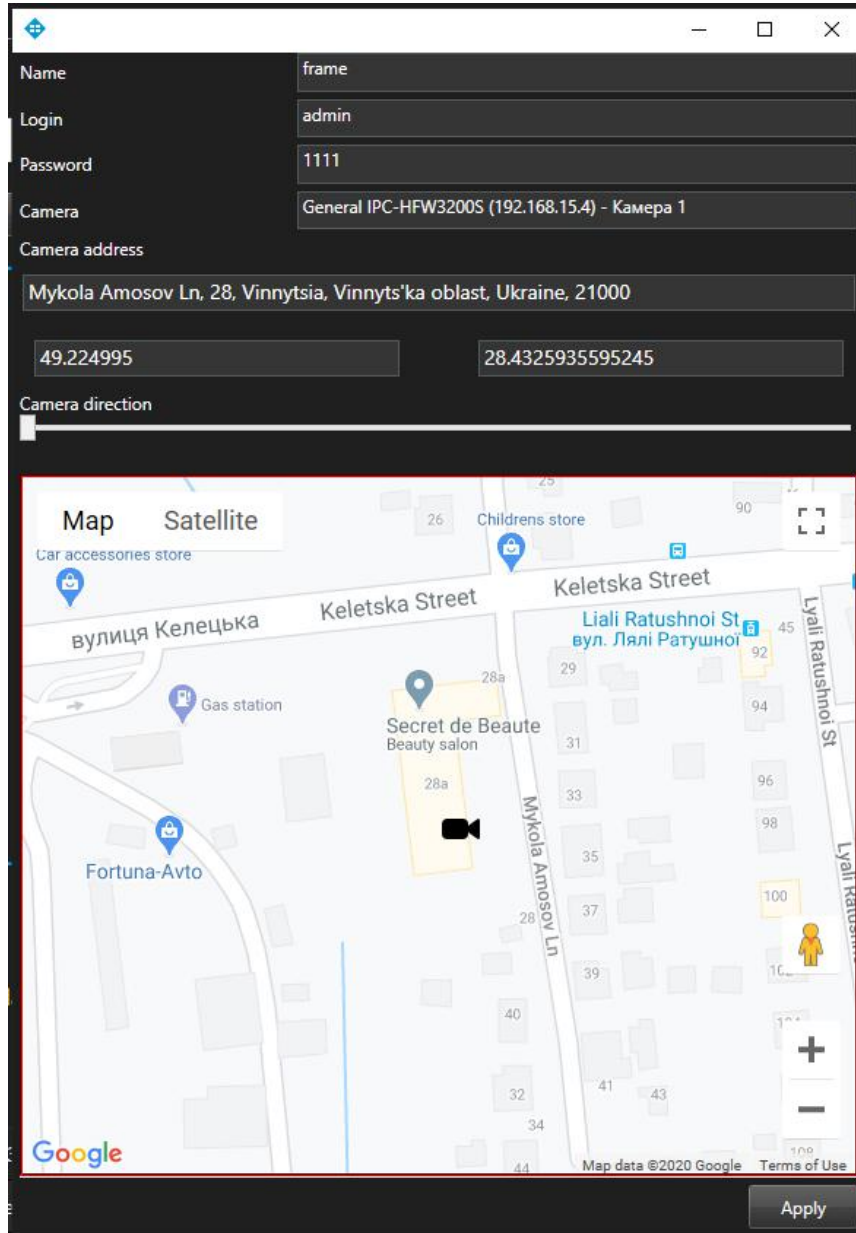
Recognition will take place in the exposed area.

To create another area, repeat the steps.

To edit the videostream click ![pencil icon] right from the field Videostream.
In way to create new videostream click **Add videostream**.



In the window that opens, fill in the following fields:

a.      **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.

b.      **Username** - enter the name of the current Milestone user in the field.

c.      **Password-** enter the password of the current Milestone user.

d.      **Camera** - select a camera from the drop-down list.

e. **Camera address** - enter the address in the field, or select on the map below the location of the camera (drag the camera icon). The system will automatically determine the location coordinates.

f. **Camera direction** - drag the slider to change the camera direction. Indication of camera rotation helps in determining the direction of movement of a person.
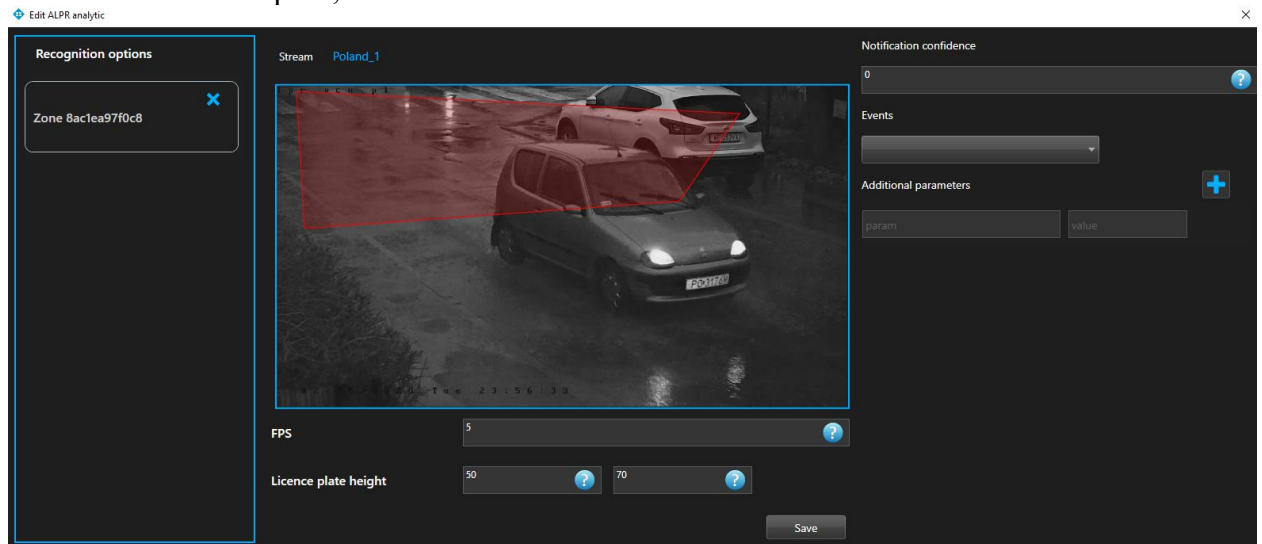
To save the changes, click **Apply**.

For analytics to be created, click **Save**.

**4.3. Editing, changing status, deleting analytics**

To edit analytics, click the **Edit** button on the right side of the entry.

In the window that opens, fill in the fields:



| Field name | Recommended value |
|---|---|
| **FPS** | Enter the required number of frames per second for detection in the field. Recommended value - 5. |
| **License plate hight** | Enter the minimum and maximum number heights in the fields. The recommended minimum height is 15. The recommended maximum height is 70. |
| **Notification confidence** | Enter the percentage of recognition quality in the field. Sending an event occurs only upon recognition with a quality not lower than the set percentage. Possible values are from 0 to 100% |
| **Events** | Select an event from the drop-down list, according to the parameters of which notifications will come). |
| **Additional parameters** | If necessary, you can add additional parameters for their further use when creating an event. Fill in the parameter fields. To add parameters, click the "+" button. To remove the parameters press "-". |

**Add an area of interest**

• Add a camera to the Video Stream field.

• Video from the added camera will appear below the Video Stream field.

• Add a zone of interest.

Click on the frame from the added video with the left mouse button. By clicking three or more times in different places on the frame with the left mouse button, you will outline the area. In order for the region to be created, right-click. In this area, numbering will be carried out.

Recognition will take place in the exposed area.

To create another area, repeat the steps.

Click Save to save your changes.

To start / stop analytics, click the **Start / Stop** button.

To remove the analytics click .

## 5. Search



In order to find the right vehicle, fill in the fields.

1. **Number** - enter the vehicle number in the field.

2. **Period** - select the time period for which you want to search.

3. **Camera** - mark the cameras on which the search should take place.

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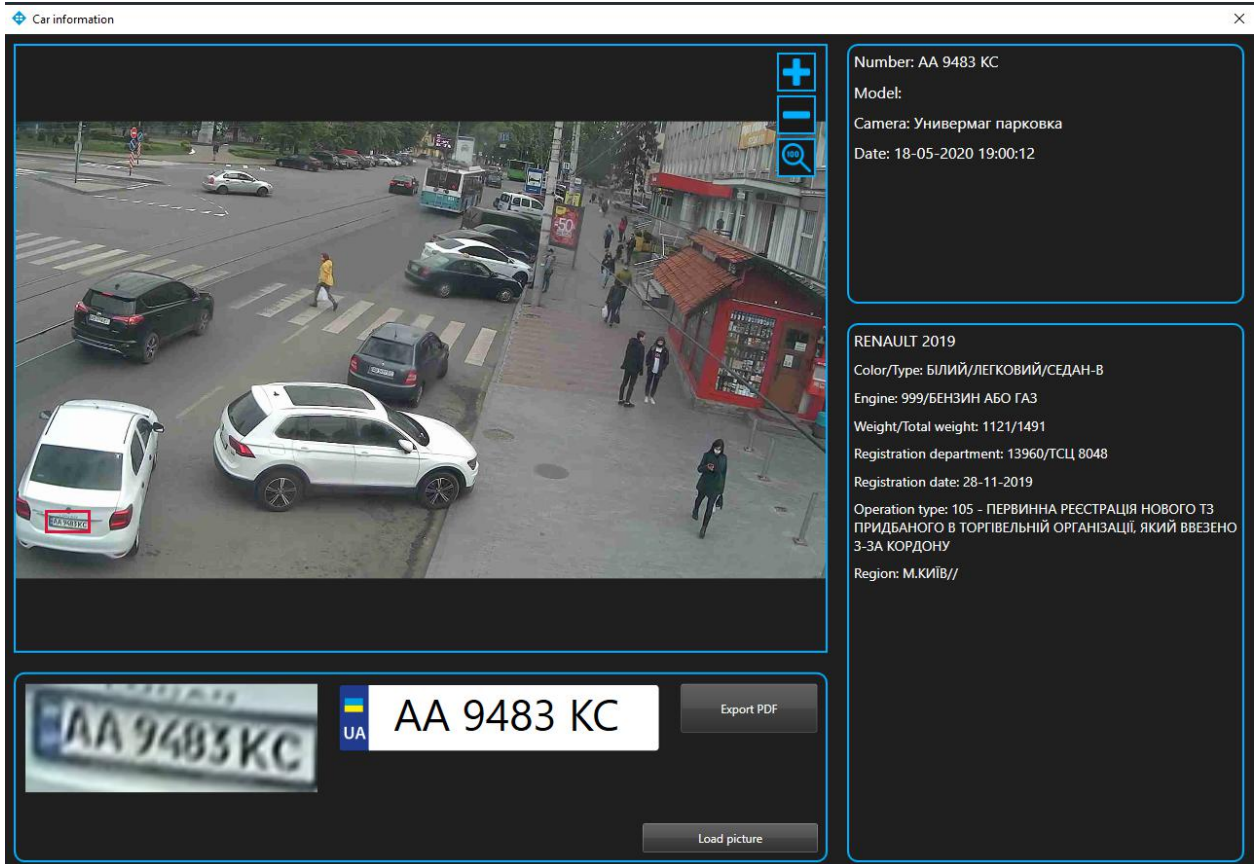


## 5.1 Work with vehicle recognition records

The list of vehicle records consists of the following fields: number, make, recognition accuracy, date. When you click on the vehicle's record, a screenshot of the vehicle from the camera and information about the vehicle are displayed on the right side of the screen.
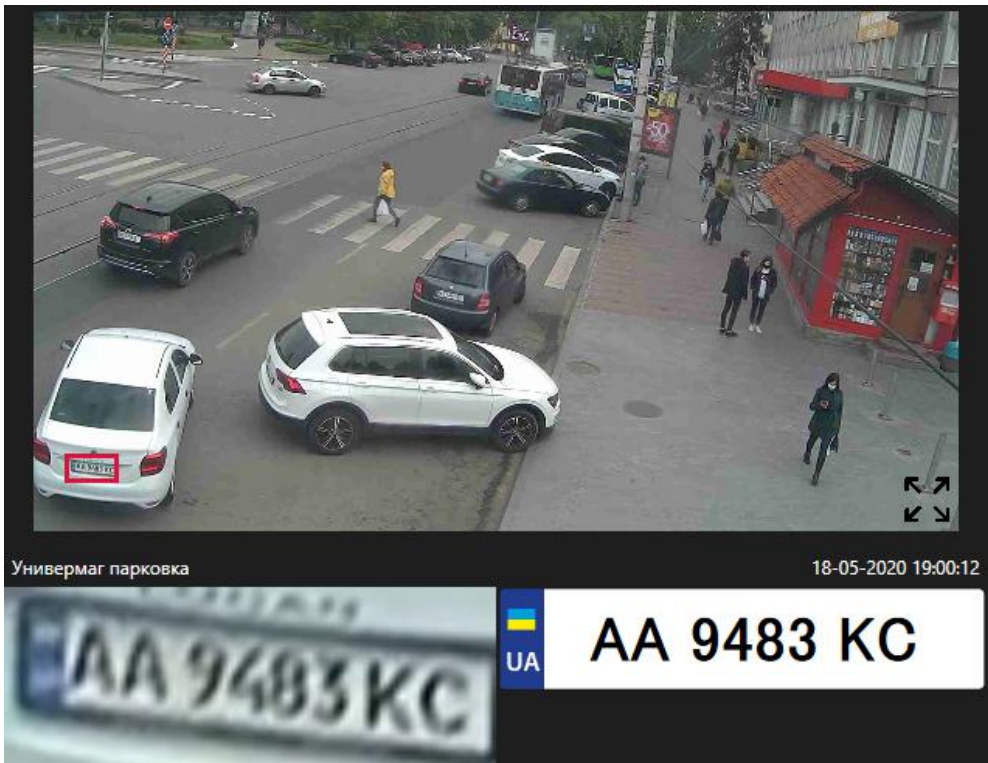
The list of found records can be exported in **JSON** or **Excel** format. To select a specific period, click the **Search** button and click **JSON** or **Excel**.

Click the **Export PDF** button to download the vehicle information file in PDF format.

Click **Download Image** to download the image of the recognized vehicle.

## 6.Lists

This section is intended to create a database of registration plates of vehicles for their subsequent recognition.

## 6.1 Lists search

At the top of the screen is a search field.

In order to find the desired list, enter its name in the search field.
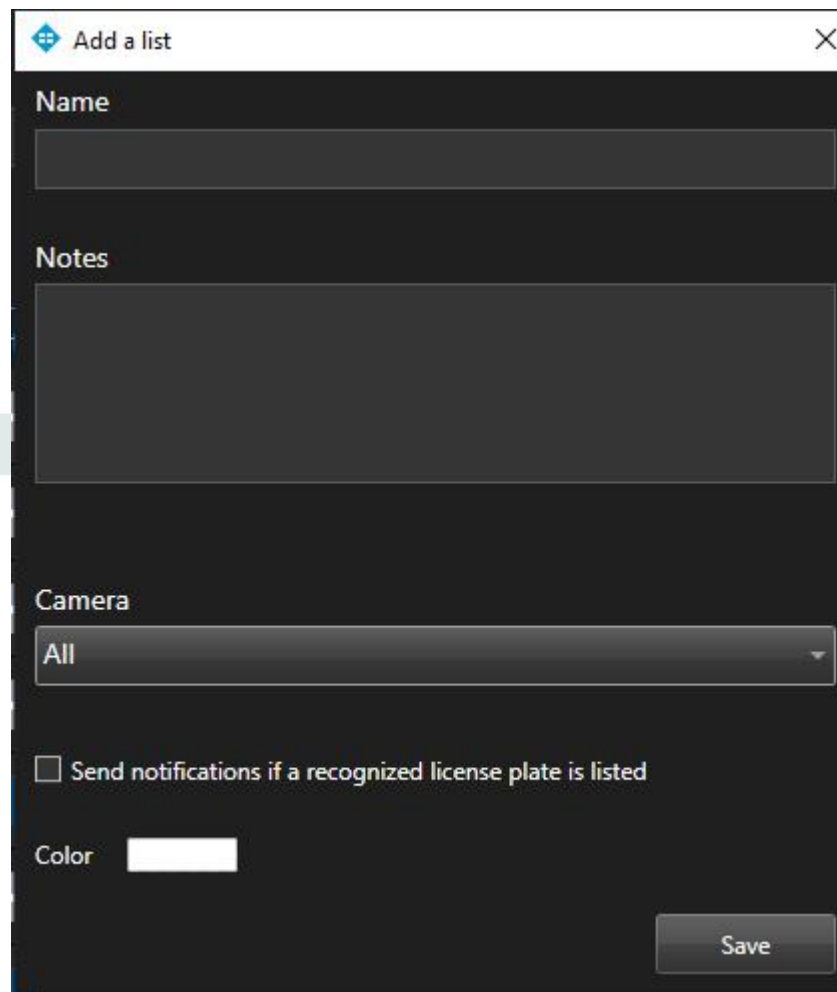


Click **Search** to display the results. Click **Reset** to clear the input fields.

To search by number, enter the vehicle number in the **Number** field and click the **Search** button.
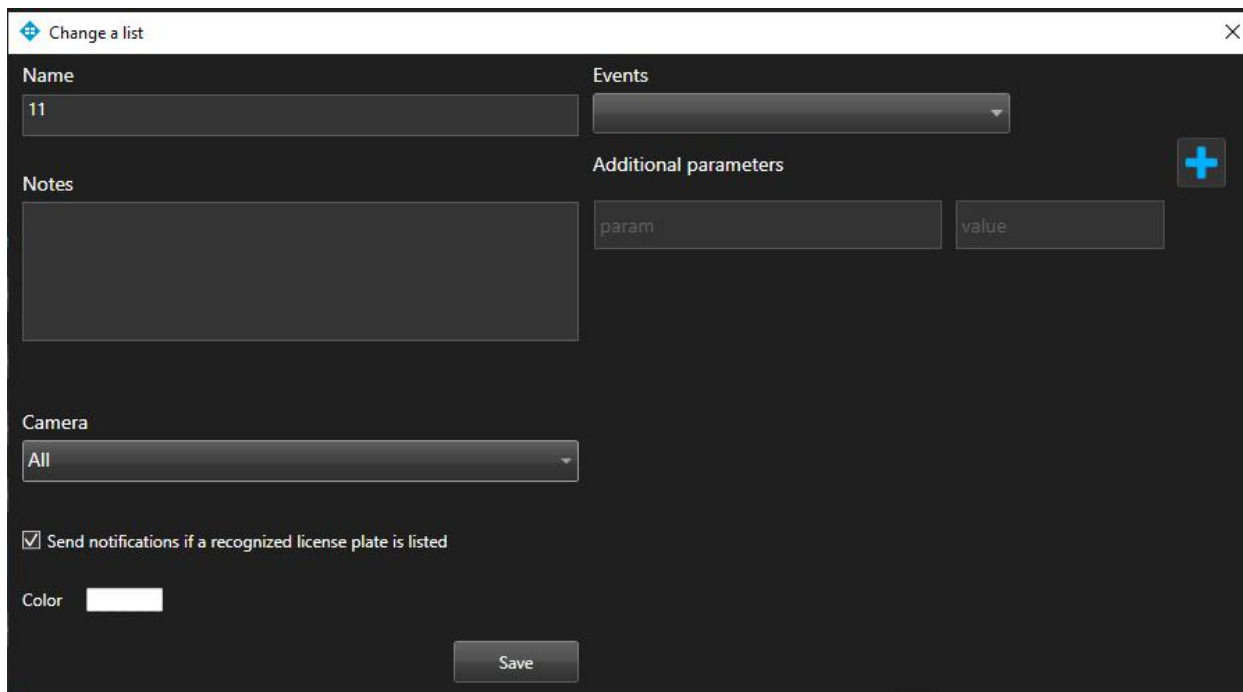
## 6.2 Adding and editng of lists
To add a new entry, click **Add List** in the upper right corner of the screen.

| Field name | Recommended value |
|---|---|
| **Name** | Enter a name for the entry in the field. This field will be displayed in all components of the program that use this entry. |
| **Notes** | This field is intended to describe the purpose of the created record. Enter a description for the entry in the Note box. |
| **Color** | Click on the field, indicate the color of the list. |
| **Send notifications if a recognized license plate is listed** | To send notifications of found vehicle numbers to external resources, check the box. |
| **Events** | Select an event from the drop-down list, according to the parameters of which notifications will be received. |
| **Adittional parameters** | If necessary, you can add additional parameters for their further use when creating an event. Fill in the parameter fields. To add parameters, click . To remove parameters click . |

In order for the record to be created, click **Save.**

To edit click  right from the record.



| Field name | Recommended value |
|---|---|
| **Name** | Enter a name for the entry in the field. This field will be displayed in all components of the program that use this entry. |
| **Notes** | This field is intended to describe the purpose of the created record. Enter a description for the entry in the Note box. |
| **Color** | Click on the field, indicate the color of the list. |
| **Send notifications if a recognized license plate is listed** | To send notifications of found vehicle numbers to external resources, check the box. |
| **Events** | Select an event from the drop-down list, according to the parameters of which notifications will be received. |
| **Adittional parameters** | If necessary, you can add additional parameters for their further use when creating an event. Fill in the parameter fields. To add parameters, click . To remove parameters click . |

In order for the changes to be accepted, click **Save.**
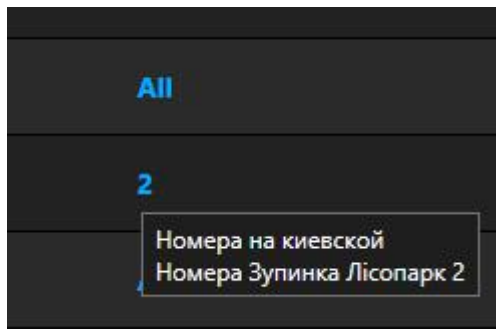
To remove the record  click to the right part of the record.

To stop or activate a notification, set the status slider to the appropriate position:
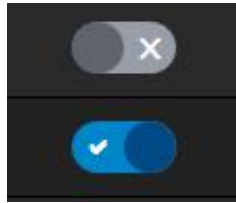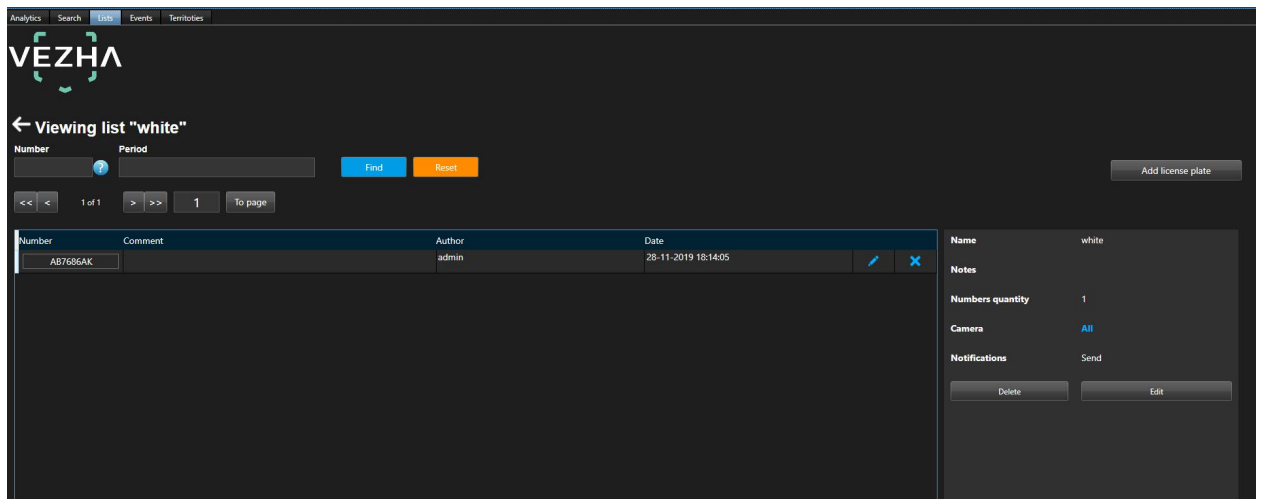


## 6.3      Viewing of the lists

To view the information about the cameras that are being monitored in the list, move the mouse over the number of cameras in the list entry.



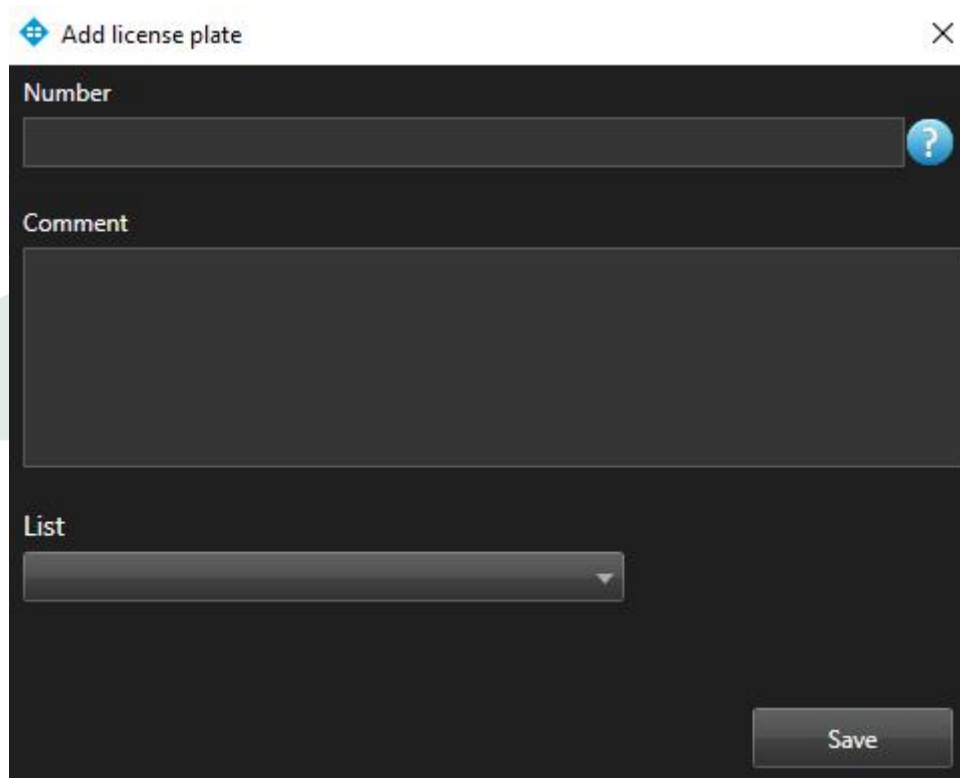To view information about the list, click on its name.

When clicked, you will go to the list view tab. To go back, click  left from the tab.



## 6.3.1    Adding and editing the license plate

To add a new entry, click **Add number** in the upper right corner of the screen.

In the window that opens, fill in the fields:



| Field name | Recommended value |
|---|---|
| **Number** | Enter the number of the vehicle you want to add in the field. The search will take place on the cameras that were selected when creating the list. |
| **Message** | Enter the text of the notification that will be received when a vehicle is detected. |
| **List** | Choose the list to add a record |

In order for the record to be created, click **Save**.

To edit a record, click  right from the record.

In the window that opens, fill in the fields:

| Field name | Recommended value |
|---|---|
| **Number** | Enter the number of the vehicle you want to add in the field. The search will take place on the cameras that were selected when creating the list. |
| **Message** | Enter the text of the notification that will be received when a vehicle is detected. |
| **List** | Choose the list to add a record |

In order for the changes to be accepted, click **Save.**

To delete the list, click **Delete**.

To delete a record, click  at the right part of the record.

### 6.3.2   Viewing of the notifications

To view the notification, click on the vehicle number.

Click on **Edit** to change wanted notifications.

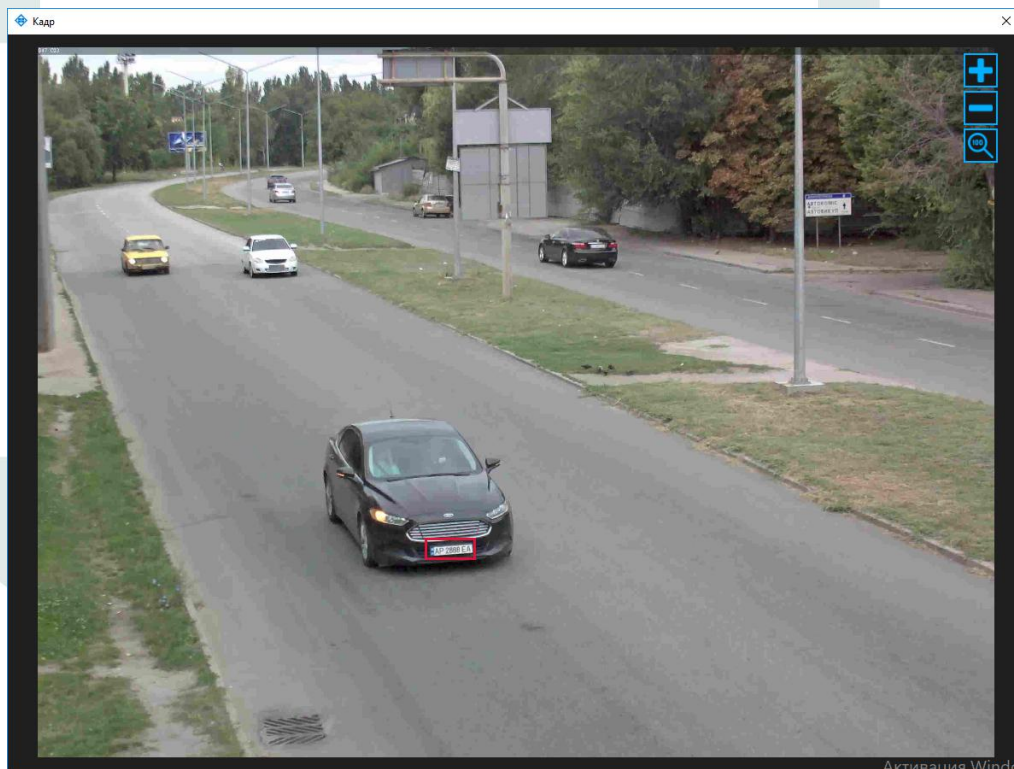In the window that opens, you can change the following fields:

| Field name | Recommended value |
| --- | --- |
| Number | Enter the number of the vehicle you want to add in the field. The search will take place on the cameras that were selected when creating the list. |
| Message | Enter the text of the notification that will be received when a vehicle is detected. |
| List | Choose the list to add a record |

In order for the changes to be accepted, click **Save**.

In order to export the card of this vehicle number in PDF format, click on **Export PDF**.

To view a frame from a recording, click on the **Frame** in the right part of the recording.



To accept the notification on yourself, click **Accept** on the right side of the entry.

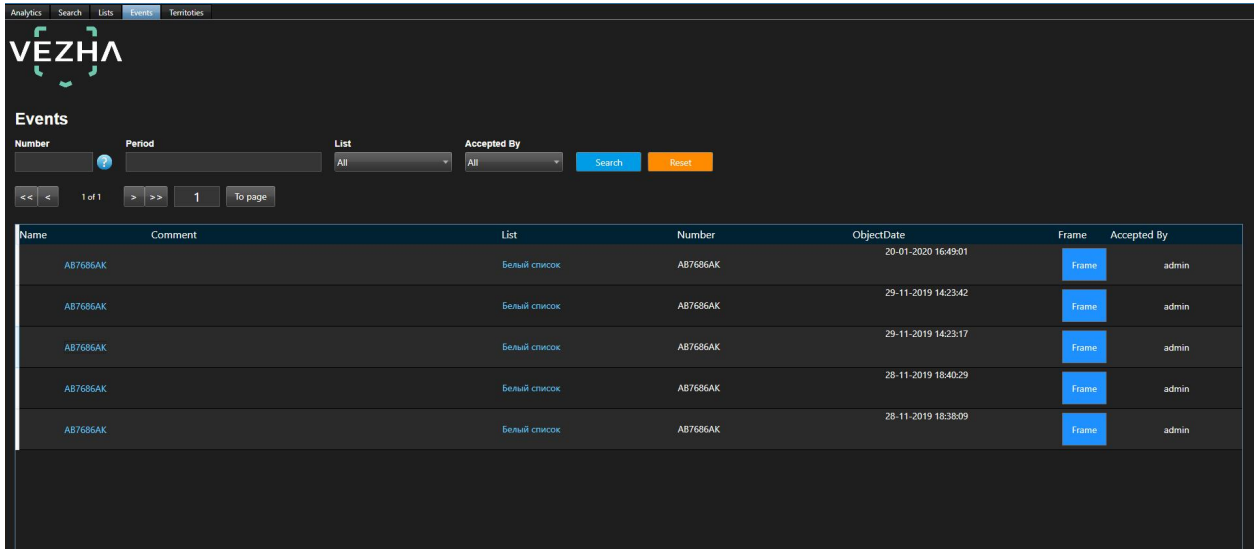Click on the icon  you can view the recording of vehicle movement from the camera.

Click on the icon  a window will appear showing the location of the camera.

Click on the enlargement icon to view a larger image.

## 7.Events

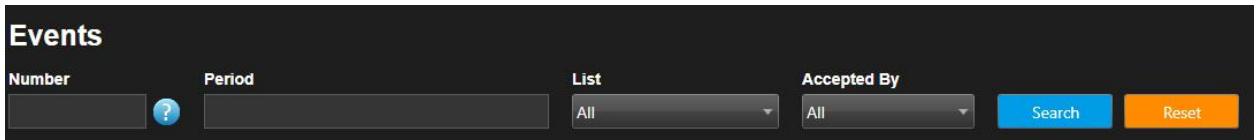This section is intended for viewing the history of notifications about vehicles



### 7.1 Search of the events

At the top of the screen is a search field



In order to find the necessary notifications you can use the following fields:

1) **Number**

Enter the vehicle number in the field.

2) **Period**

Click on the field and select the desired time period.

3) **List**

Click on the field and select the desired list.

4) **Accepted**

Click on the field and select the user who received the notifications.

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

## 7.2. Work with vehicle notification records

The list of notification entries consists of the following fields: name, message, list, number, object, video, frame, received.

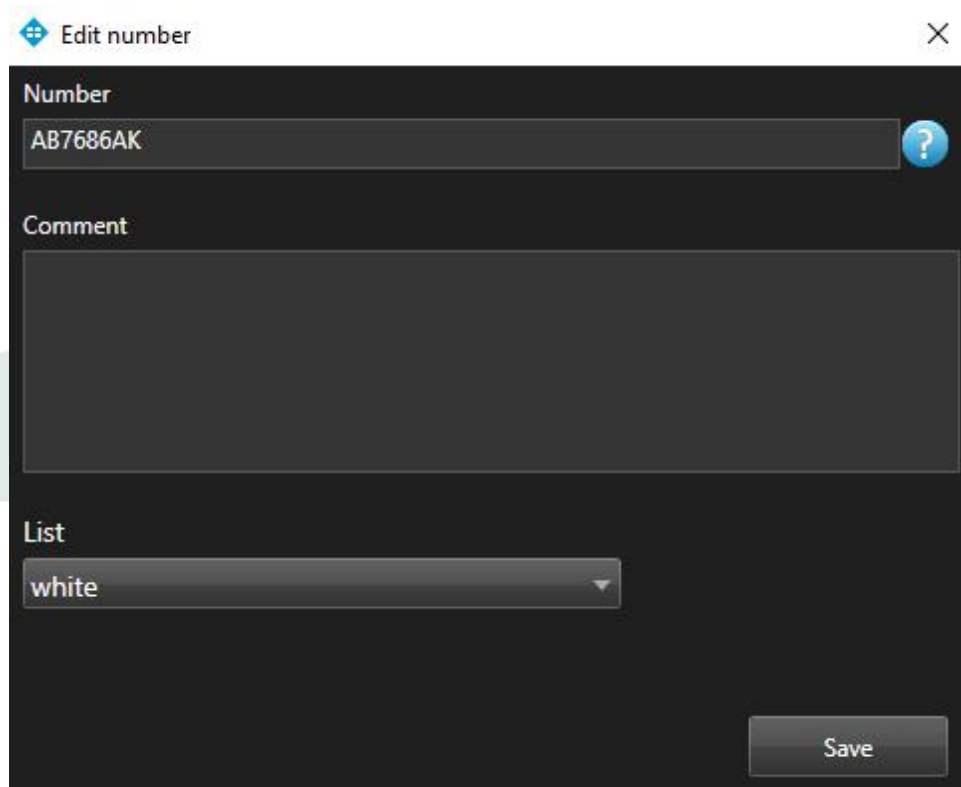When you click **Frame**, a window with a snapshot of the found vehicle will open.
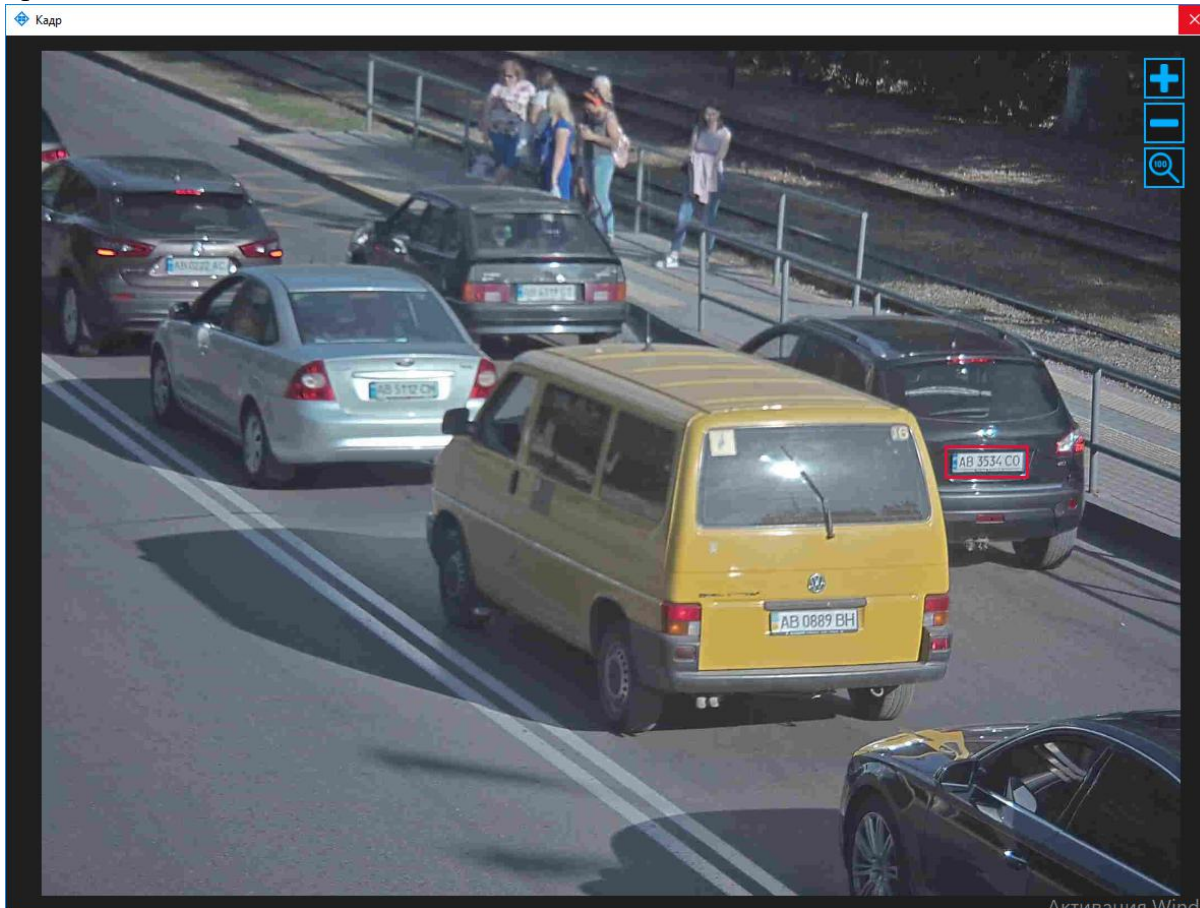


To accet the notification click **Accept**.

When you click on a number in the title of the notification record, you will be taken to a section to view information about this number.

Click on **Edit** to modify the vehicle entry.

In the window that opens, you can change the following fields:



| Field name | Recommended value |
|---|---|
| **Number** | Enter the number of the vehicle you want to find in the field. The search will take place on the cameras that were selected when creating the list. |
| **Message** | Enter the text of the notification that will be received when a vehicle is detected**.** |
| **List** | To change the list in which the number is located, select another list. |

In order for the changes to be accepted, click **Save**.

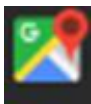In order to export the card of this vehicle number in PDF format, click on **Export PDF**.

To view a frame from a recording, click on the Frame in the right part of the recording.
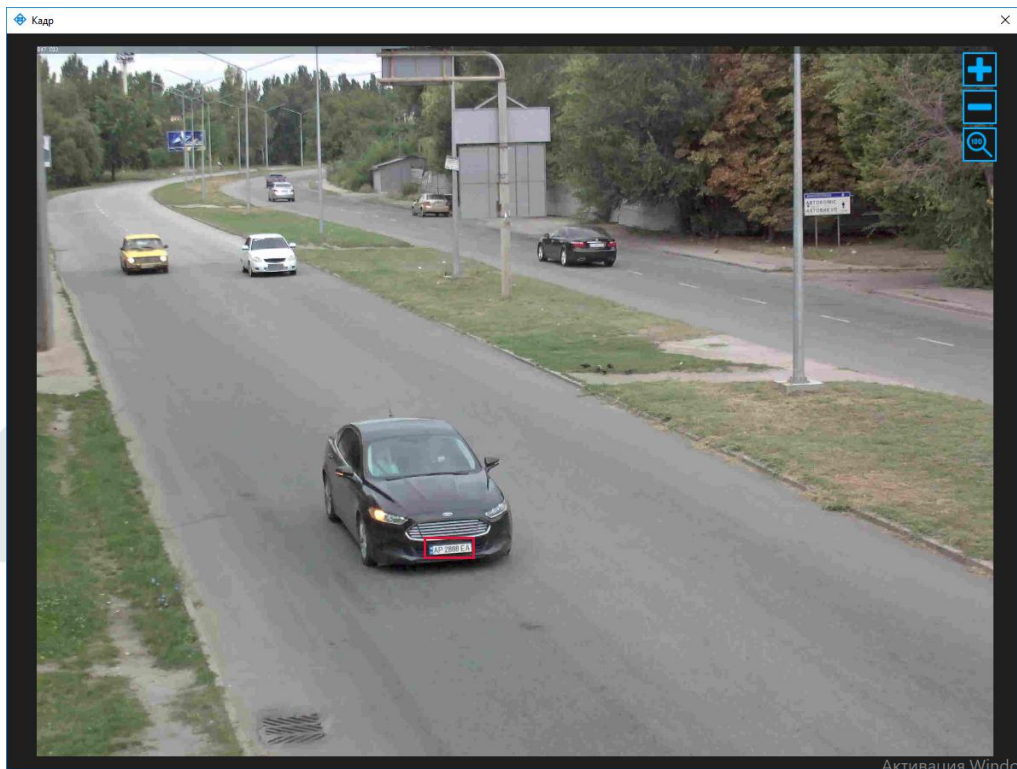
To accept the notification on yourself, click **Accept** on the right side of the entry.

Click on the  you can view the recording of vehicle movement from the camera.
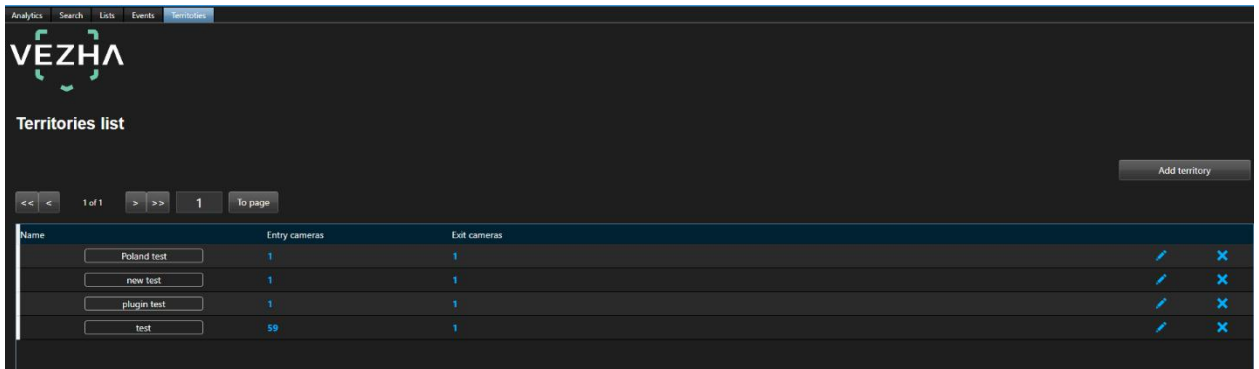
Click the  a window will appear showing the location of the camera.

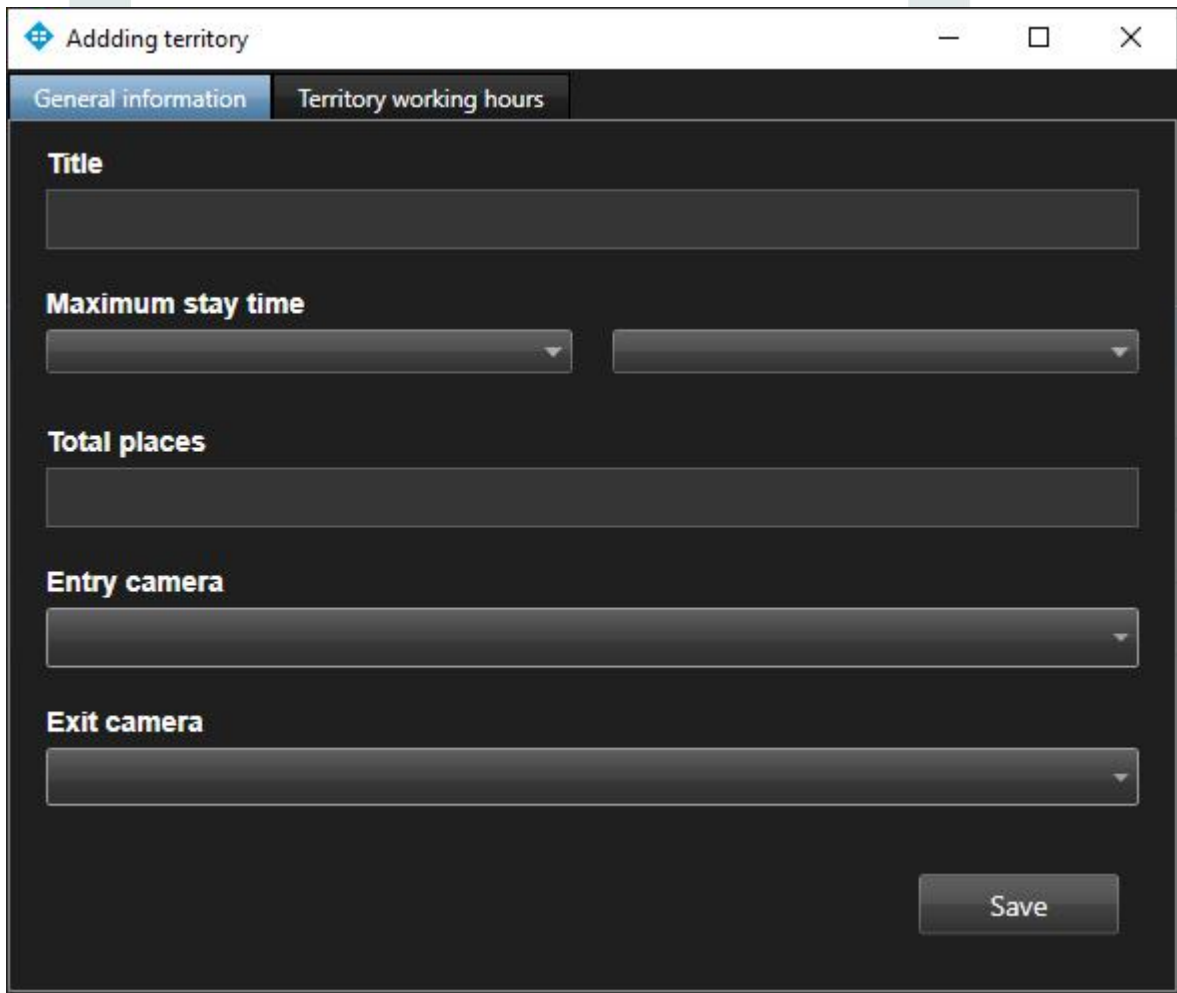Click on the enlargement icon to view a larger image.

# 8.     Territories

To control the entry and exit for any of the territories, select the **Territories** menu item.

## 8.1 Adding of territory

To add a new territory, click the **Add Territory** button on the territories page.

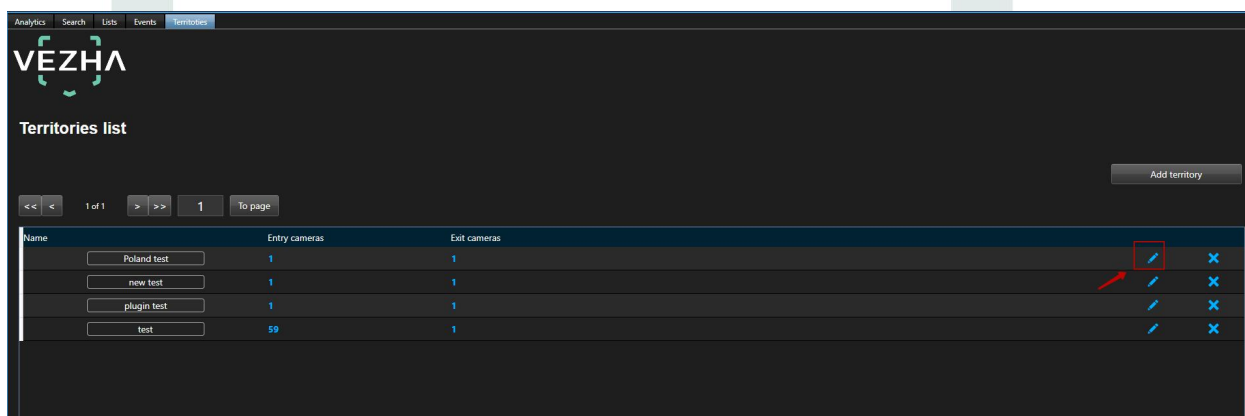| Field name | Recommended Value |
|---|---|
| **Title** | Enter a name for the entry in the field. This field will be displayed in all components of the program that use this entry.. |
| **Maximum stay time** | Indicate what time the vehicle has the right to stay in this territory. |
| **Total places** | Indicate the maximum number of vehicles that can simultaneously be in the territory |
| **Entry camera** | Click on the field and select the cameras from the drop-down list that will record the entry of vehicles into the territory. |
| **Exit camera** | Click on the field and select the cameras from the drop-down list that will record the exit of vehicles from the territory. |

To set the working hours of the territory, click on the appropriate tab in the territory creation window.

Indicate the hours of operation of the territory for each day of the week in the format: hour of work start, minute of work start, hour of work end, minute of work end. To do this, select the values in the appropriate fields. In cases where the territory does not work for certain days, uncheck the box next to the corresponding day in the right part of the window.
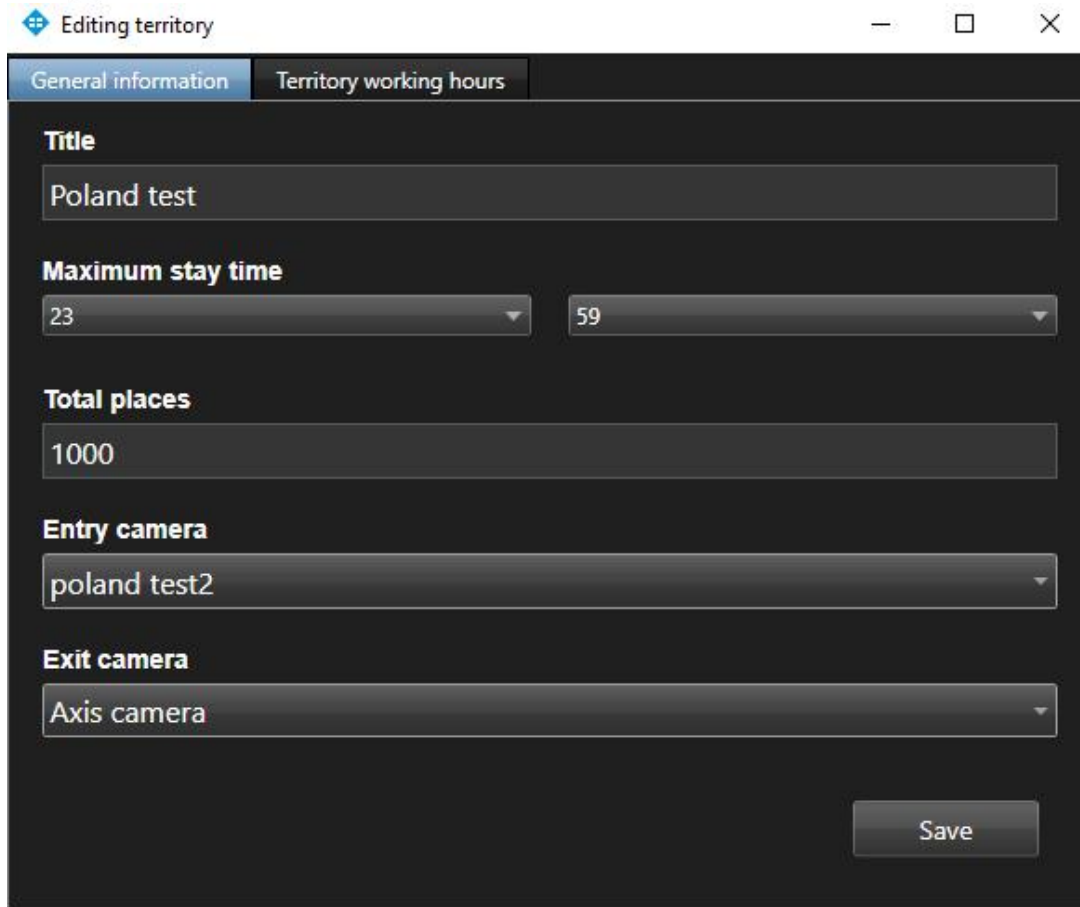
To create a territory, click the **Save** button.

### 8.2 Editing of territory
To edit the territory, click the edit icon.



In the window that opens, fill in the fields:

| Field name | Recommended Value |
|---|---|
| **Title** | Enter a name for the entry in the field. This field will be displayed in all components of the program that use this entry.. |
| **Maximum stay time** | Indicate what time the vehicle has the right to stay in this territory. |
| **Total places** | Indicate the maximum number of vehicles that can simultaneously be in the territory |
| **Entry camera** | Click on the field and select the cameras from the drop-down list that will record the entry of vehicles into the territory. |
| **Exit camera** | Click on the field and select the cameras from the drop-down list that will record the exit of vehicles from the territory. |

Indicate the hours of operation of the territory for each day of the week in the format: hour of work start, minute of work start, hour of work end, minute of work end.

 To do this, select the values in the appropriate fields. In cases where the territory does not work for certain days, uncheck the box next to the corresponding day in the right part of the window.

To change the territory, click the **Save** button.**.**
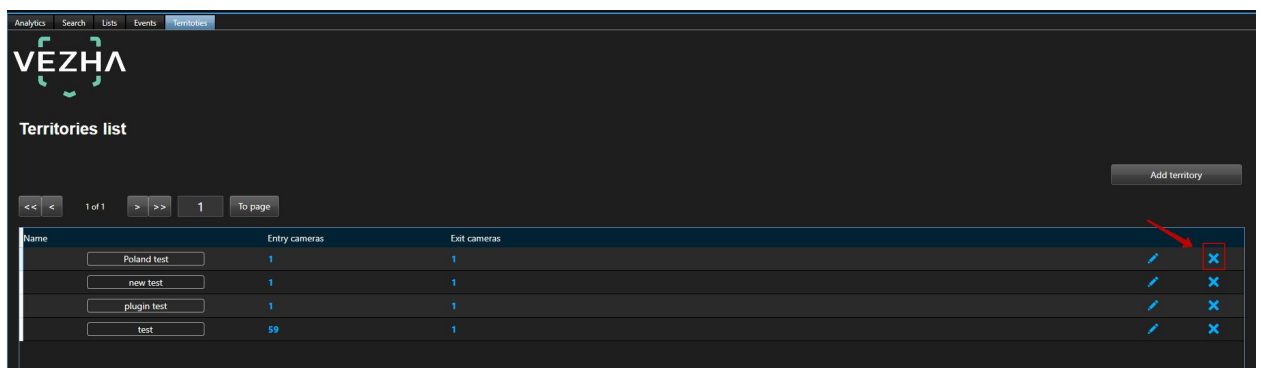


8.3. **Working with records of territories**

Records of lists of territories consist of the following fields: name, camera entry, camera exit.

To delete a territory, click the delete icon.
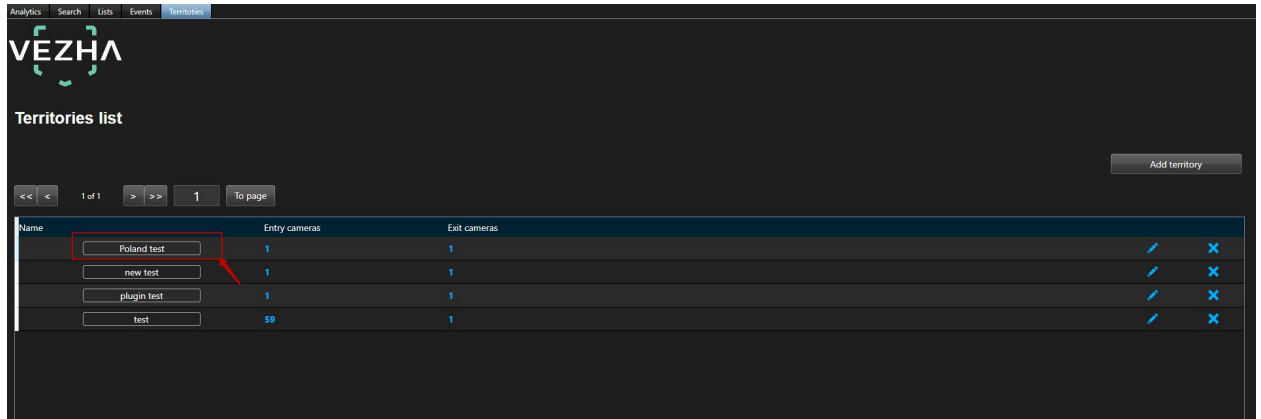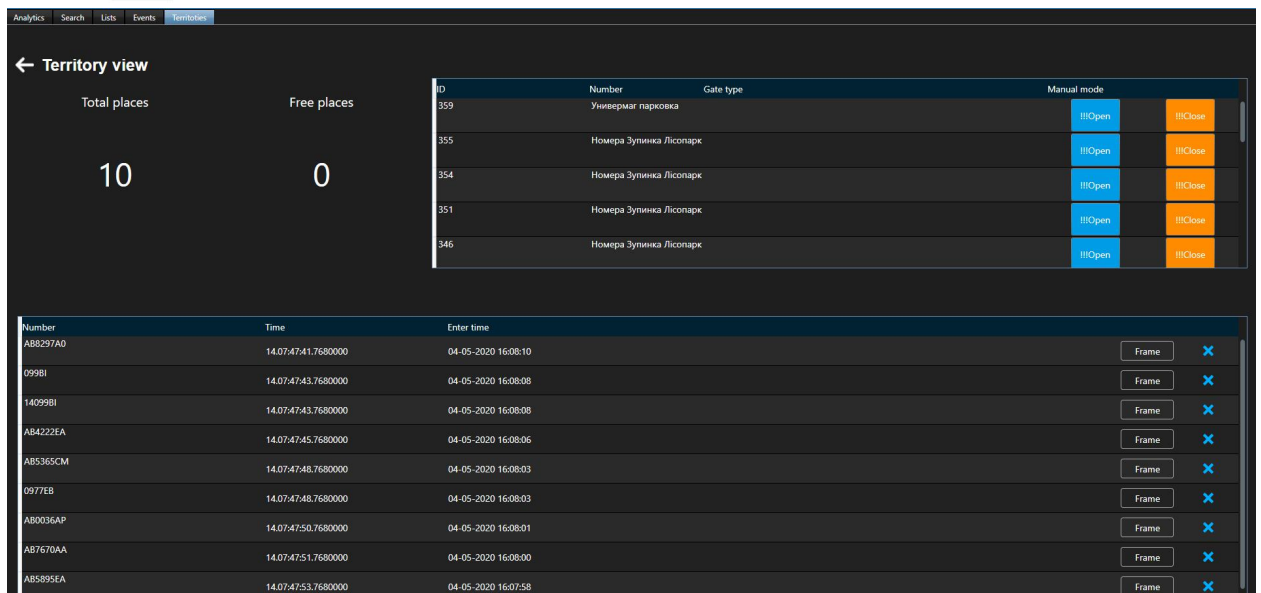
To view the territory, click on the name of the territory.



Will open the page of viewing the territory:



For manual closing / opening of barriers, use the corresponding buttons.

To view a frame with a vehicle, click on the **"Frame"** button. To remove a vehicle from the territory, click on the delete icon.



| Number | Time | Enter time | | |
|---|---|---|---|---|
| AB8297A0 | 14.07:47:41.7680000 | 04-05-2020 16:08:10 | Frame | ✖ |
| 099BI | 14.07:47:43.7680000 | 04-05-2020 16:08:08 | Frame | ✖ |
| 14099BI | 14.07:47:43.7680000 | 04-05-2020 16:08:08 | Frame | ✖ |

## 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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