

OBJECT DETECTION PLUGIN

Incoresoft VEZHA Milestone

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Object Detection Plugin is developed to detect an object in a zone (person, animal, vehicle, thing). If the object is in the zone beyond the permissible time, the system sends a notification.

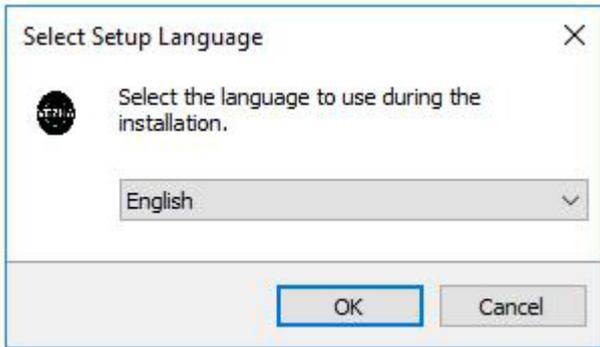
Plugin Features

- Create your own rules for any situation (presence or absence) of the object by period intervals and the selected area.
- Tracking and classification of over 50 objects. Previous analytics classified objects only when they were moving, now objects are additionally classified if they remain stationary.
- Expanded Object Classification: Our video analytics go beyond people and vehicles to include cars, trucks, buses, motorcycles, and bicycles.

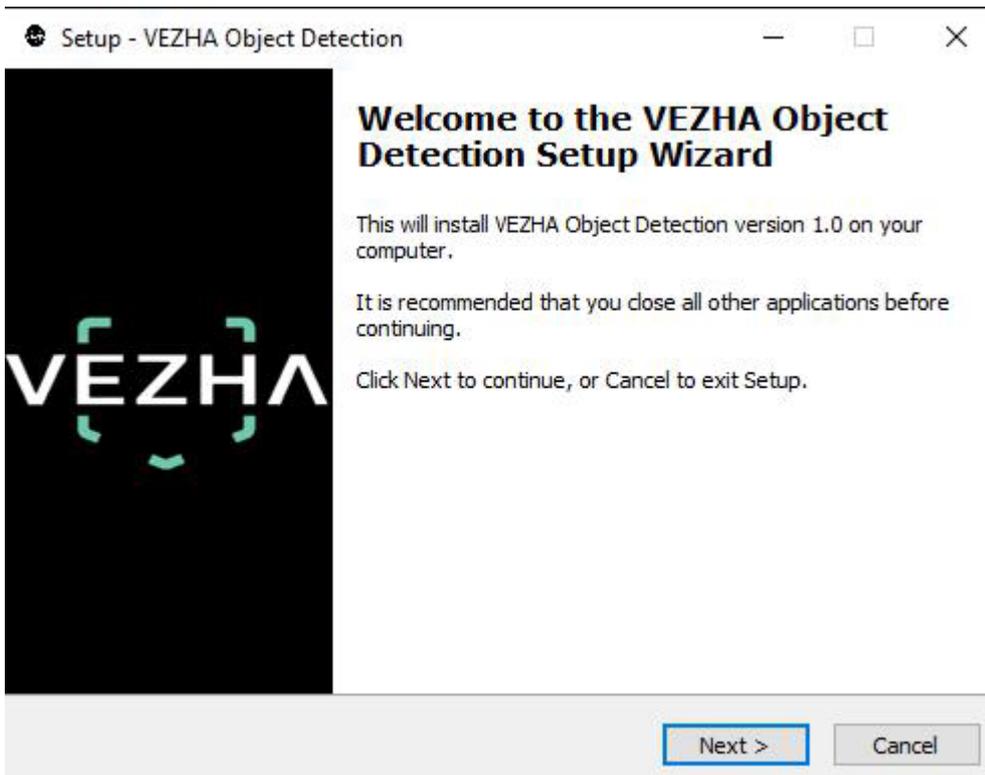
Installation

Launch the installer by double-clicking on the downloaded file **VEZHA_Object_Detection_Setup**.

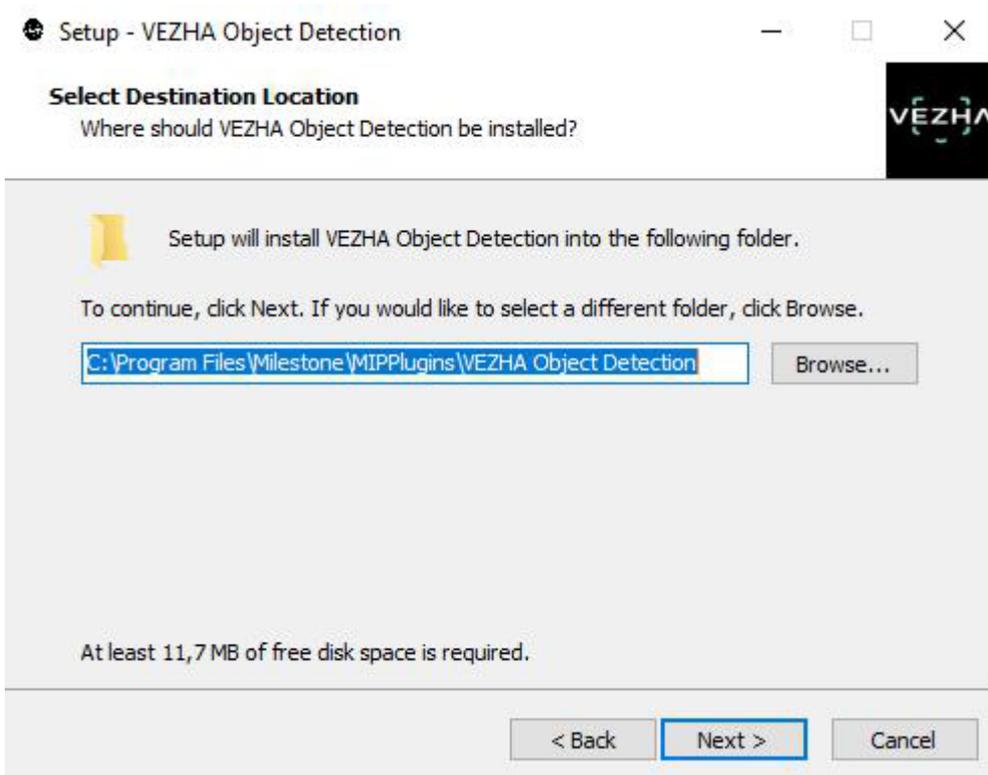
In the window that opens, select the language that will be used during the installation process. To go further, click **OK**. To abort the installation, click **Cancel**.



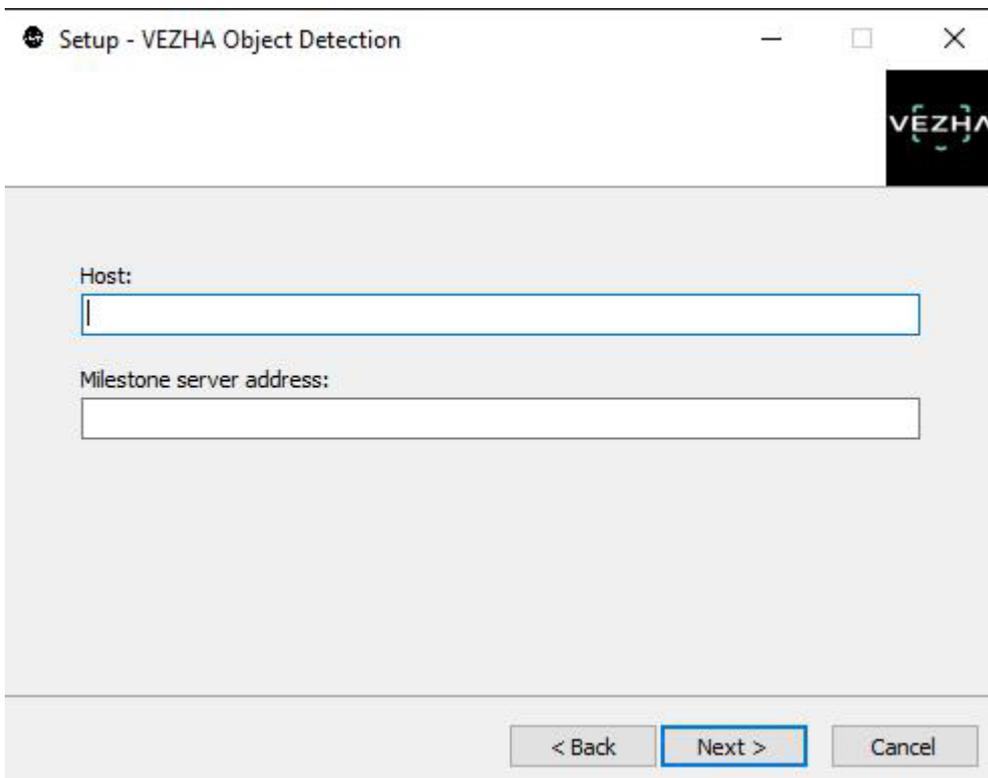
In the new window, read the installation recommendations and click **Next** to continue the installation, or the **Cancel** button to abort the installation.



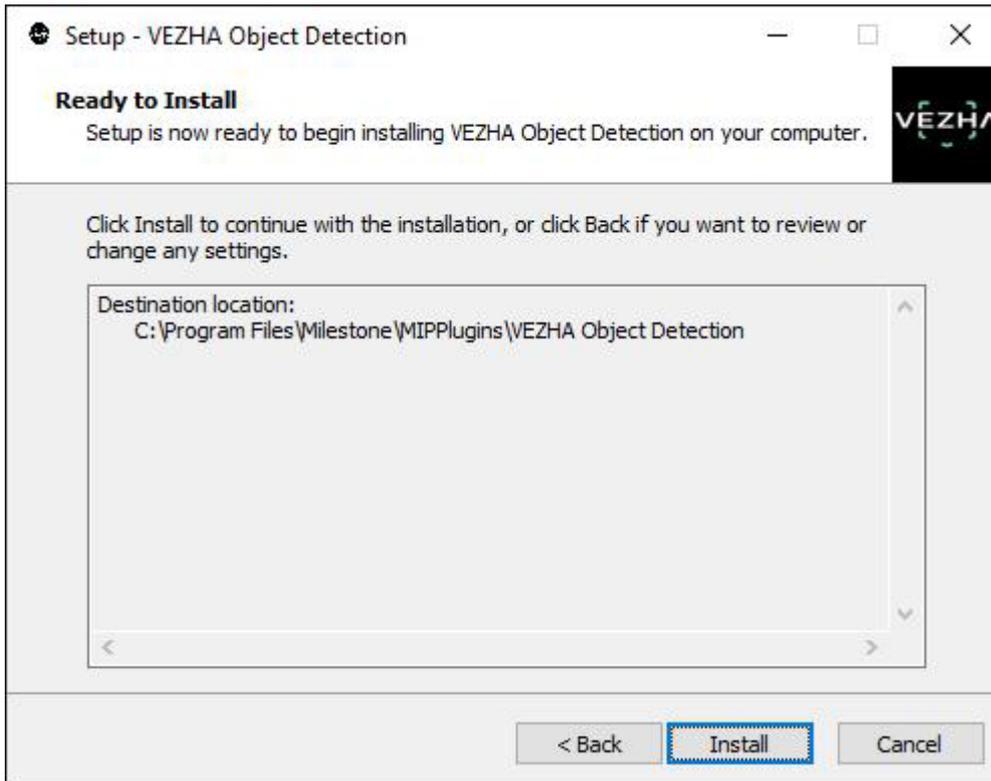
In the **Select Destination Location** window using the **Browse** button, specify the location where you want to install the plugin. The plugin must be installed in the **Milestone** folder with other plugins. After selecting the desired folder, click **Next** to continue the installation or **Cancel**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



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.



Click **Install** to start the installation.

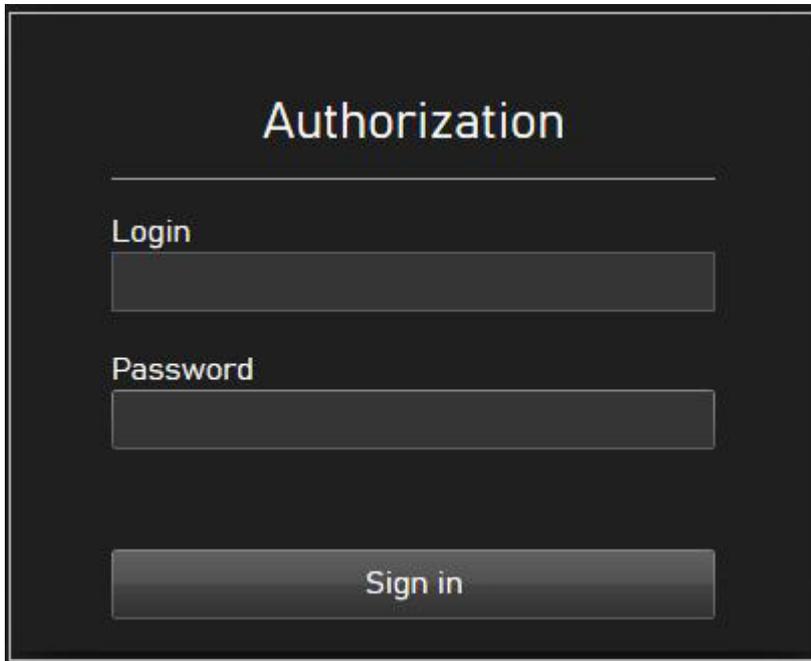


After the installation is completed, click **Finish**.



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 **Login**.

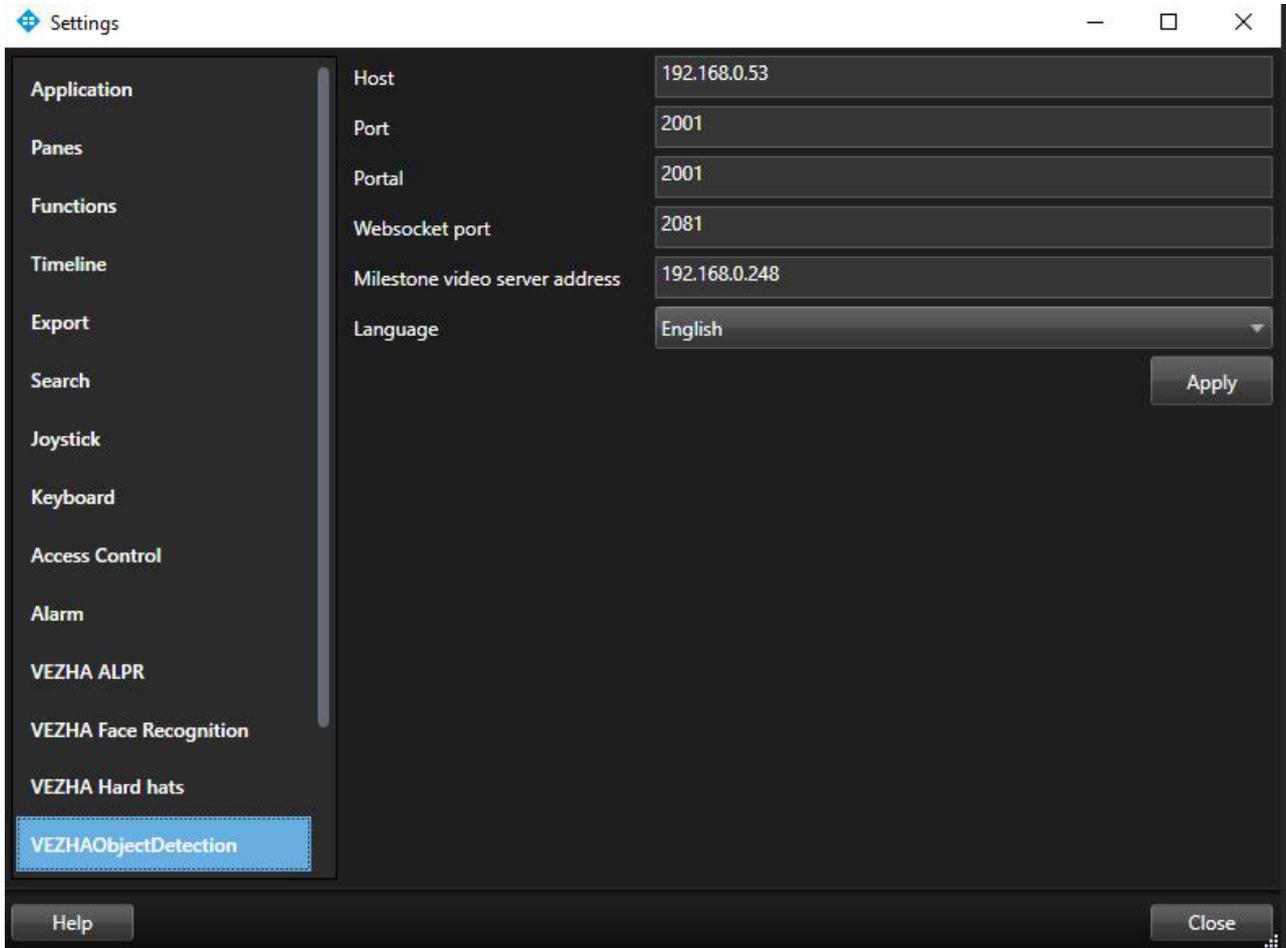


The image shows a dark-themed modal window titled "Authorization". It contains two input fields: "Login" and "Password", each with a corresponding text box. Below these fields is a "Sign in" button.

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 Object Detection**.



To change the server settings in the **VEZHA Object 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 from the list the most convenient for you.

To save the changes, click **Apply** and restart the plugin.

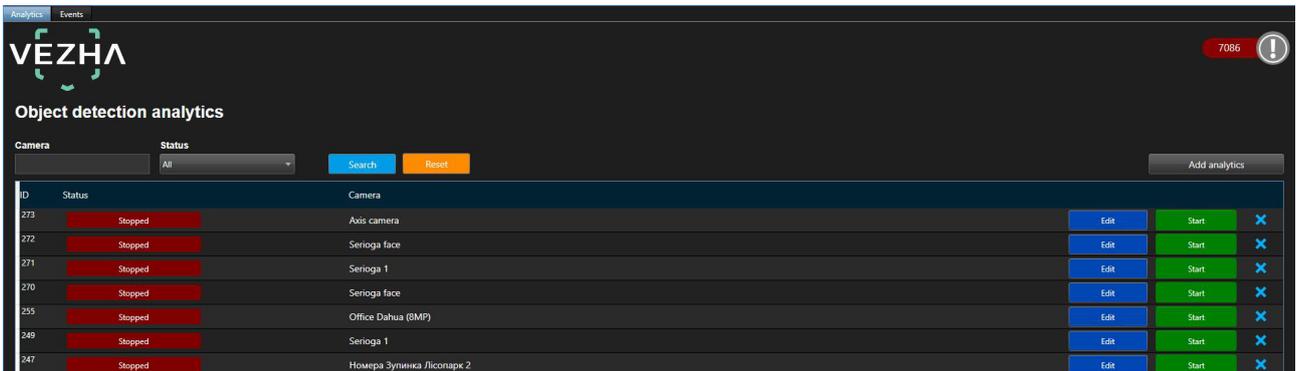
User Guide Contents:

- [Object Detection - Analytics](#) (see page 10)
- [Object Detection - Events](#) (see page 17)

- [Plugin Features](#) (see page 4)
- [Installation](#) (see page 5)
- [Log In](#) (see page 8)
- [Settings](#) (see page 9)

Object Detection - Analytics

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



Analytics Search

At the top of the **Analytics** page are located search fields.



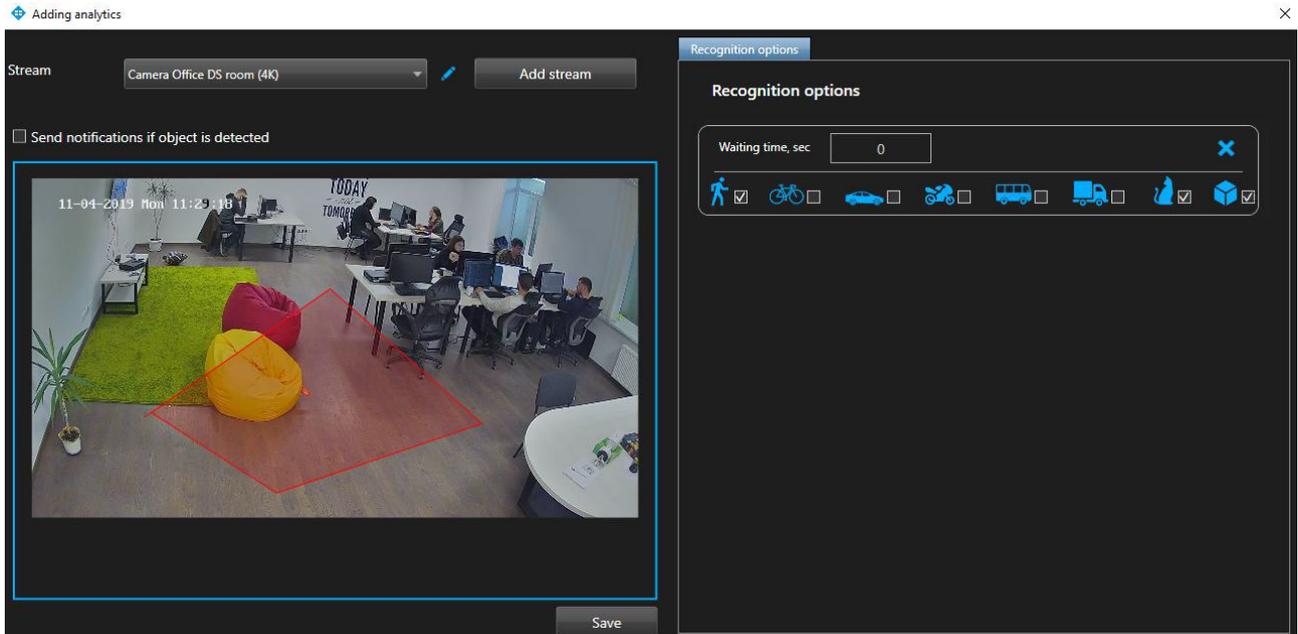
To find the analytics you need, enter the name of the camera or select the analytics status.

To start the search, click the **Search** button. Click **Reset** to return to the initial list.

Analytics Adding

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

In the opened window, fill the fields:



FIELD NAME	RECOMMENDED VALUE
Stream	Click on the field and select a camera name from the drop-down list. The video stream will be used to create analytics.
Send notifications if object is detected	Fill out the Send notifications checkbox if an object is found to create your own event for sending notifications.
Events	The event tab is available when the checkbox for sending notifications in the add analytics window is checked. Select an event from the dropdown list. This event will receive notifications for the services indicated in the event.
Extra 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 "-".

To edit the video stream click the **Editor** icon right of the name of a video stream. In a way, to create a new video stream click **Add video stream**.

Editing video stream
— □ ×

Name

Login

Password

Camera

Camera address

Camera direction

In the opened window fill the next fields:

FIELD NAME	DESCRIPTION
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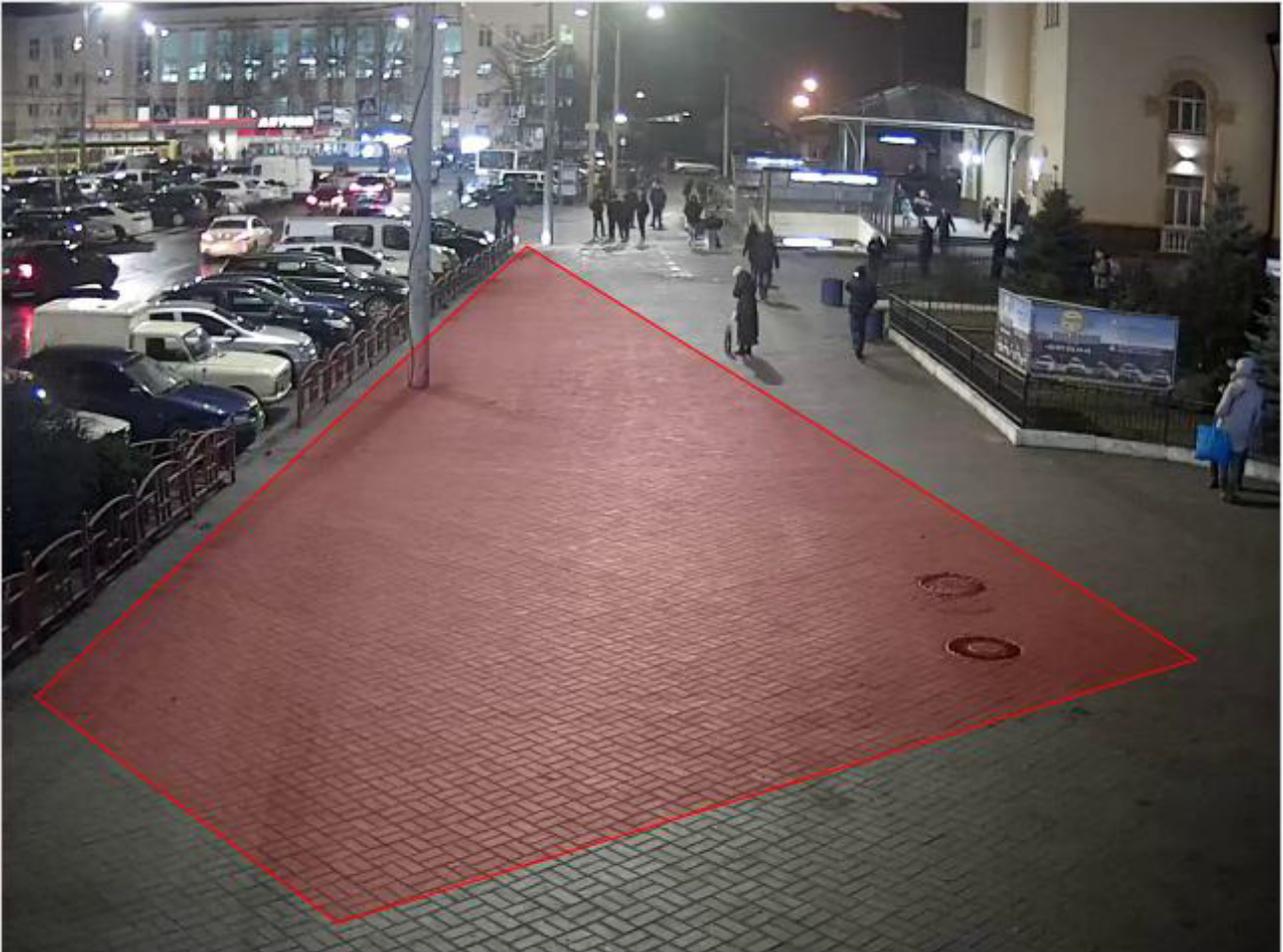
Name	Enter the name of the video stream in the field. This field will be displayed in all components of the program that use video streams
Username	Enter the name of the current Milestone user in the field
Password	Enter the password of the current Milestone user
Camera	Select a camera from the drop-down list
Camera Address	Enter the address in the field, or select on the map below the location of the camera (drag the camera icon). The system will automatically determine the location coordinates
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 apply changes click **Apply**.

Adding an Area of Interest

- Add a camera into a field Stream.
- A frame from the added camera will appear below the Video Stream field.
- Add an object definition area.

a) Click on the frame from the added video with the left mouse button. By clicking more than two times in different places on the frame, click the right mouse button. Thus, you will create an area in which the definition of objects will be carried out. You can create an area of any shape by clicking in different places on the frame, any number of times with the left mouse button and, if necessary, pressing the right button.



b) A form will appear on the right side of the screen with the Waiting time, sec field, and images of objects. In the field, specify the number of seconds how many objects are allowed to be in the created object definition area. Check the checkboxes of those objects that should be defined in the specified area.

Recognition options

Waiting time, sec ✕

















You can create more areas for object detection by repeating steps a) and b).

In the way to create analytics click **Save**.

Analytics Editing, Changing Status, and Deletion

To edit the video stream, click the **Editor** button on the right side of the recording.

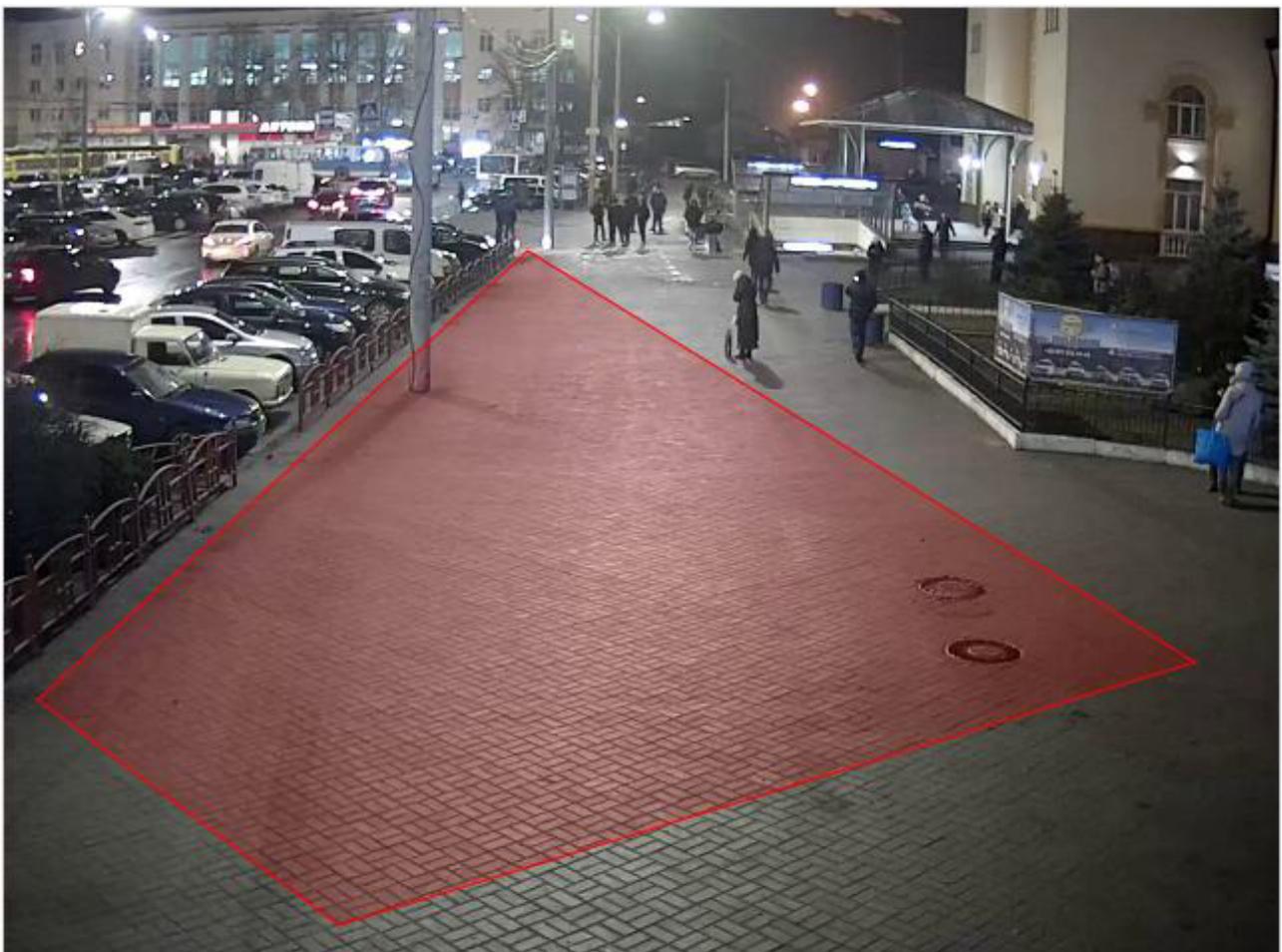
In the opened window, fill the fields:

FIELD NAME	RECOMMENDED VALUE
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Send notifications if object is detected	Fill out the Send notifications checkbox if an object is found to create your own event for sending notifications.
Events	The event tab is available when the checkbox for sending notifications in the add analytics window is checked. Select an event from the dropdown list. This event will receive notifications for the services indicated in the event.
Extra 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 "-".

Editing an Area of Interest

a) Click on the frame from the added video with the left mouse button. By clicking more than two times in different places on the frame, click the right mouse button. Thus, you will create an area in which the definition of objects will be carried out. You can create an area of any shape by clicking in different places on the frame, any number of times with the left mouse button and, if necessary, pressing the right button.



b) A form will appear on the right side of the screen with the Waiting time, sec field, and images of objects. In the field, specify the number of seconds how many objects are allowed to be in the created object definition area. Fill in the checkboxes of those objects that should be defined in the

specified area.



You can create more areas for defining objects by repeating steps a) and b).

In the way to create analytics click **Save**.

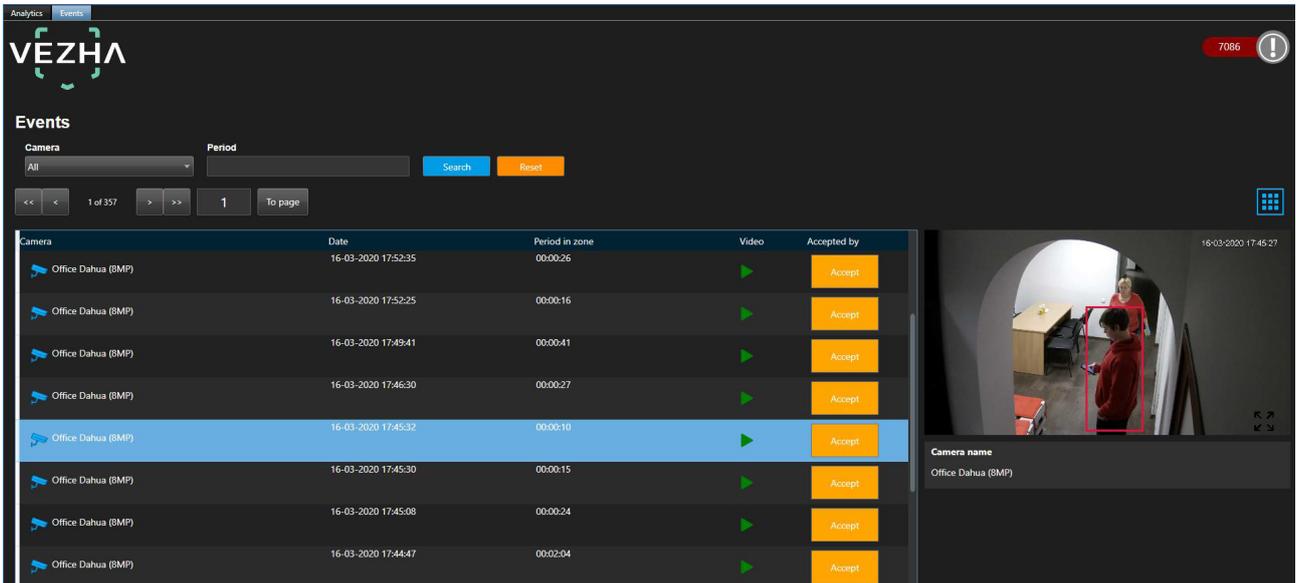
To start/stop analytics click **Start/Stop**.

To remove analytics, click  .

- [Analytics Search](#) (see page 10)
- [Analytics Adding](#) (see page 10)
- [Analytics Editing, Changing Status, and Deletion](#) (see page 14)

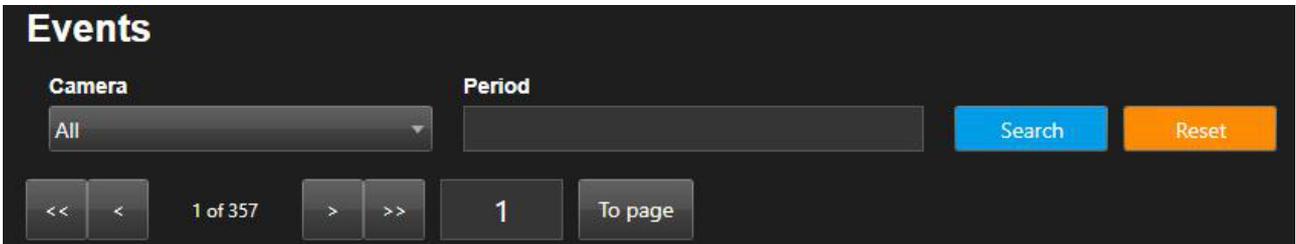
Object Detection - Events

This section is intended for viewing the history of notifications about detected objects (person, animal, transport, things).



Event Search

At the top of the screen is located search field.



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

FIELD NAME	DESCRIPTION
Camera	Click on the field and select the desired camera
Period	Click on the field and select the desired time period

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

Work with Records

To change the records format click  ..

The list of notification records consists of the fields: **Camera, Date, Time in the Zone, Video, Accepted By.**

Click on the button , in a way to receive a video with the detected object.

To accept changes click **Accept**.

- [Event Search](#) (see page 17)
- [Work with Records](#) (see page 17)

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