



VisionLabs
MACHINES CAN SEE

VisionLabs LUNA PLATFORM 5

User interface manual

v.5.95.0

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1 Glossary

Term	Description
Age category (group)	A group of people that is within a specified range of ages. In accordance with the age periodization of the World Health Organization, groups 18–44 (young adults), 45–60 (middle-aged adults), 61–75 (older adults) are distinguished
Attributes	Age, gender, automatically determined by the system
Authorization	A security mechanism to determine access levels or user privileges related to system resources
Avatar	A visual representation of the face that can be used in the user interface
Best shot	A frame of the video stream, in which the face is captured in the optimal angle for further use in the face recognition system
Biometric sample (sample)	Analog or digital representation of biometric characteristics prior to biometric feature extraction and descriptor generation
Body	A LUNA PLATFORM 5 mutable object containing information about the human body
Candidate	Applicant for similarity with the reference
Cross-matching	Many-to-many comparison (M:N). In the context of this document, comparing multiple lists
Descriptor	A binary data set prepared by the system based on analyzed characteristic. It is a composite vector of person's face attributes
Event card	Information block displaying data about an event
External ID	External face identifier
Face card	Information block displaying data about a face
Face ID	A face identifier that is created in the LUNA PLATFORM 5 system as a result of a detection event and attribute extraction
Task	A task that is created by a user and runs in the background
Department	An entity that grants specific users access to selected event sources
Detection	FaceStream entity that contains the coordinates of face or body and the estimated value of the object that determines the best shot
Event	Detection recorded by the system with the extraction of attributes by the handler

Term	Description
Exchangeable image file format (EXIF)	A standard for embedding technical metadata in image files that many camera manufacturers use and many image-processing programs support
Extraction	A descriptor extraction procedure
Face recognition	A set of methods for collecting, processing, and storing data of person's face images for identity recognition or identity confirmation using mathematical methods
Faces	Changeable LUNA PLATFORM 5 objects that contain information about one person
Handler	Image processing entry points that characterize the image processing procedure and define the LUNA PLATFORM 5 algorithms used for this
Handling policy	A set of rules (policies) for image processing
Identification	Search for the most suitable descriptor by comparing the vectors of face features with a list of similar descriptors in the database (one to many)
List	A set of faces in the LUNA PLATFORM 5 system, combined automatically or manually according to a certain criterion
Liveness	A software method to confirm the vitality of a person by one or several images in order to prevent spoofing attacks
LUNA PLATFORM 5 (LP5)	VisionLabs automated facial recognition system designed to process, collect, analyze, store, and compare biometric data obtained from facial images
Matching	A procedure of matching descriptors for the purpose of comparison
Physical access control system (PACS)	A set of hardware and software tools aimed at controlling the entrance and exit in order to ensure safety and regulate visits to a particular facility
Reference	Object (attribute, face, body, face and event external IDs, event track ID, descriptor) that is compared/verified with the candidate.
Software	A program or set of programs used to control a computer
Similarity	Probability characteristic in the range from 0 to 1, characterizing the level of similarity of subjects of biometric data
Spoofing attack	Substitution of a real person for a fake image (for example, a photograph) to deceive the system

Term	Description
Track	Information about object's position (face or body of a person) in a sequence of frames

2 Introduction

This document describes the purpose and functions of the LUNA PLATFORM 5 UI user interface (hereinafter referred to as Interface) version v.5.95.0.

All information provided in the documentation is for informational purposes only. The use of the product may vary significantly depending on various factors (case, legality of use, compliance with the law and regulatory requirements, etc.) and depends on individual circumstances.

3 Overview

LUNA PLATFORM 5 UI is a user interface that provides user interaction with LUNA PLATFORM 5 for operating with events and lists.

LUNA PLATFORM 5 UI allows the user to capture and view events according to a customized policy. For example, when identifying persons using control lists, user can search among events for a certain period of time by various attributes and photographic image of a person.

The main functions of LUNA PLATFORM 5 UI are presented below:

- show detection and object recognition events (faces, bodies);
- show information about the temperature of a person, filter events by temperature;
- search through the archive of events;
- create, view and edit face cards containing information about a person's face;
- create, view and edit lists;
- identify faces, bodies and uploaded photo images by lists;
- face and body verification;
- verify person's identity;
- create and configure handling policies;
- verification of compliance of the photo with the requirements of biometric standards;
- create tasks (cross-matching of lists, export of faces, bodies and events, batch processing of photo images, batch import of photo images, batch identification of photo images, batch deleting faces from the list);
- show static data about events;
- evaluate uploaded photo images for Liveness, DeepFake, compliance with the requirements of the ISO/IEC 19794-5:2011 standard, ICAO standard, biometric standards;
- show information about user accounts;
- show information about the status of connected components and systems;
- show information information about available licenses;
- show information information about plugins imported into LUNA PLATFORM 5.

4 System requirements

4.1 Hardware requirements

To get started with LUNA PLATFORM 5 UI, make sure you can meet the following hardware requirements.

Resource	Minimum	Recommended
CPU	Intel Core i3, 2nd Generation / AMD Athlon X4 860K	Intel Core i3, 4th Generation and above / AMD Ryzen 3 and above
RAM	2 GB	4 GB and above
Display resolution	1024 px (for example, 1024x768), 1920px (for example, 1920x1080)	-

4.2 Software requirements

To get started with LUNA PLATFORM 5 UI, make sure you can meet the following software and Internet connection requirements.

Resource	Recommended
Supported web browser	Google Chrome (version 109.0 and above); Microsoft Edge (version 109.0 and above); Mozilla Firefox (version 109.0 and above). It is recommended to update your browser to the latest version. Check browser updates: <ul style="list-style-type: none">• Google Chrome: chrome://settings/help;• Microsoft Edge: edge://settings/help;• Mozilla Firefox: Go to the browser menu Menu → Help → About Firefox.


Installing and configuring the above software is beyond the scope of this document.

5 Working with interface

5.1 Authorization in interface

Create account using a POST request [“create account” to the API service](#), or using the [Admin service](#). When creating the account, you must specify the following data: login (email), password and account type.

The Interface is accessed by logging in to the website at <host:5000/ui> in a web browser. Authorization form is launched when you log first time into LUNA PLATFORM 5 UI (Figure 1). For authorization in the Interface, enter your credentials (email and password) in the appropriate fields and click the “Login” button.



Email

Password

Sign in

Figure 1: Authorization form

When logged in, the user is taken to the “Last events” section (Figure 2).

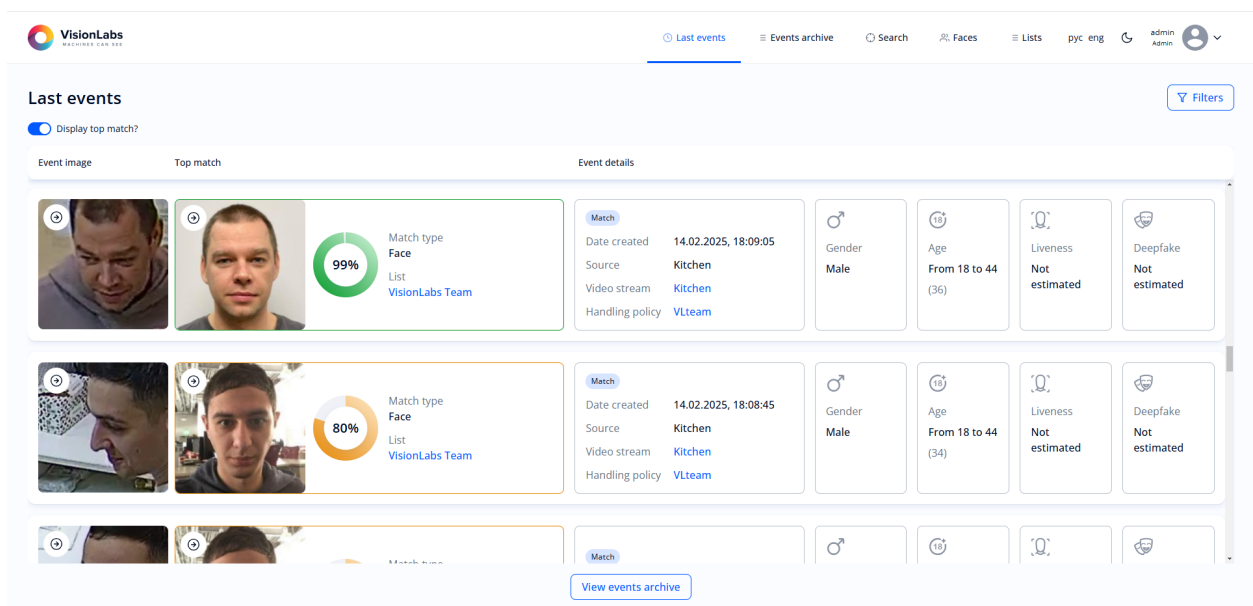





Figure 2: Interface screen after successful authorization (“Last events” section)

5.2 Switching the interface theme

The Interface allows you to customize the color theme. For this, click on the icon in the top main menu:

-  to activate night mode or dark theme;
-  to activate day mode or light theme.

5.3 Sign out of account

To log out of your account, click the arrow  on the right of the user’s name. Click the “Exit” button (Figure 3).

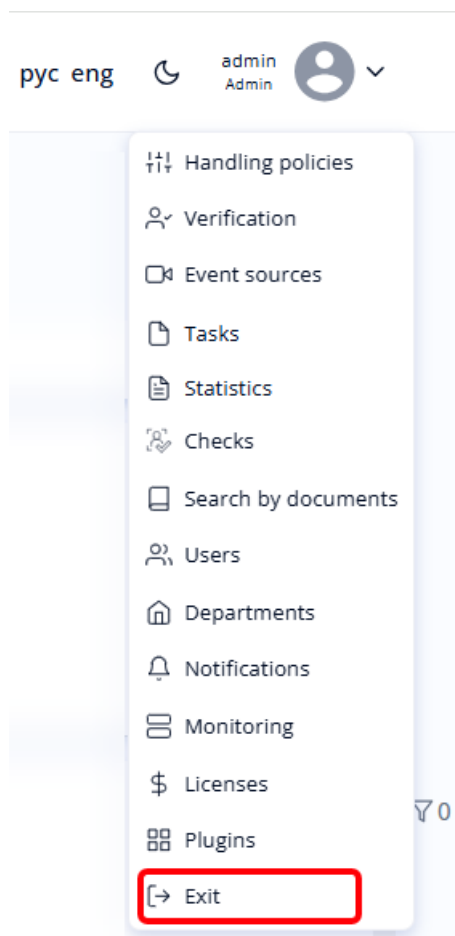


Figure 3: Logout

After clicking on the “Exit” button, the user is moved to the authorization form.

6 Interface sections

Switching between which is carried out in the main menu bar and in the drop-down menu (Figure 4).

The main menu consists of the “Last events”, “Events archive”, “Search”, “Faces” and “Lists” sections.

The drop-down menu consists of the following sections: “Handling policies”, “Verification”, “Tasks”, “Checks”, “Users”, “Monitoring”, “Licenses” and “Plugins”.

To expand the drop-down menu, click the arrow ▼ on the right of the user’s avatar.

Purpose of the sections of the main menu:

- “Last events” displays the last 30 events, and it is possible to filter events by various parameters.
- “Events archive” displays all events recorded by the Interface and it is possible to filter events by various parameters.
- “Search” allows user to search faces, bodies and events by the following parameters:
 - by external face ID;
 - by face image;
 - by body image;
 - by Face ID from LP5;
 - by event ID from LP5.
- “Faces” allows users to create, edit, and delete a faces.
- “Lists” allows users to create, edit, and delete lists.

Purpose of the sections of the drop-down menu:

- “Handling policies” allows user to create, delete, and edit policies (handlers);
- “Verification” allows user to create, delete, edit, and test verifiers. Verifiers are used to quickly compare two faces: by face photo and face ID, external ID, attribute, event, and display the test result;
- “Tasks” allows user to create, delete, and view tasks: cross-matching (comparison of two lists of faces), export of faces or events, batch processing of a photo archive according to a specific policy, batch import of an archive with photo images of faces into the list, and batch identification of an archive with photo images by faces or events.
- “Check” allows to check uploaded photo images for Liveness, DeepFake, compliance with the requirements of the ISO/IEC 19794-5:2011 standard, ICAO standard, biometric standards;
- “Users” shows the list of user accounts created in LUNA PLATFORM 5.
- “Monitoring” shows status of the connected services, modules, components, and systems.
- “Licenses” shows status of the available licenses;
- “Plugins” shows status of plugins imported into LUNA PLATFORM 5.

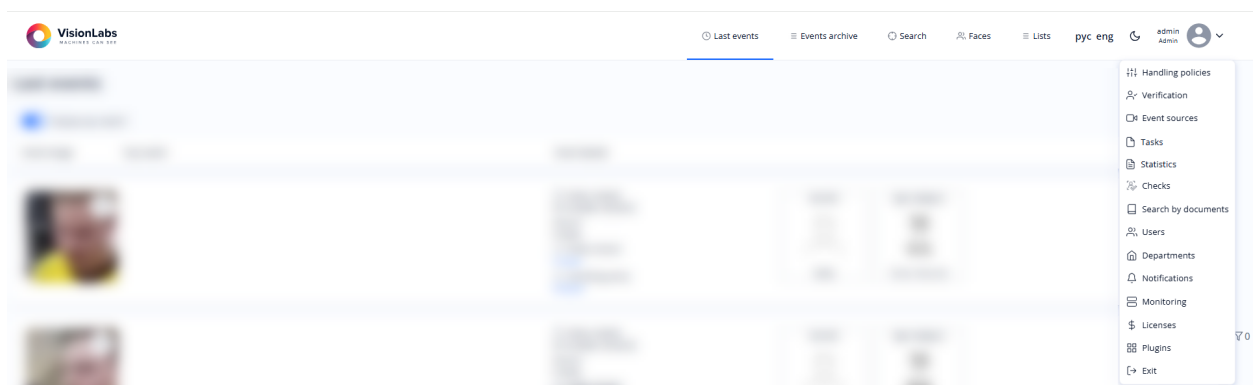


Figure 4: Sections of the Interface

7 Last events section

The “Last events” section displays detection and object (faces, bodies) recognition events, and records identification events using lists (Figure 5).

The section displays the last 30 events within the settings of handling policy for processing incoming images of the video stream, terminals, REST requests, etc. Receiving and displaying events is performed with minimal delays in near real time.

At the bottom of the screen, there is a “View events archive” button which leads to [“Events archive” section](#)

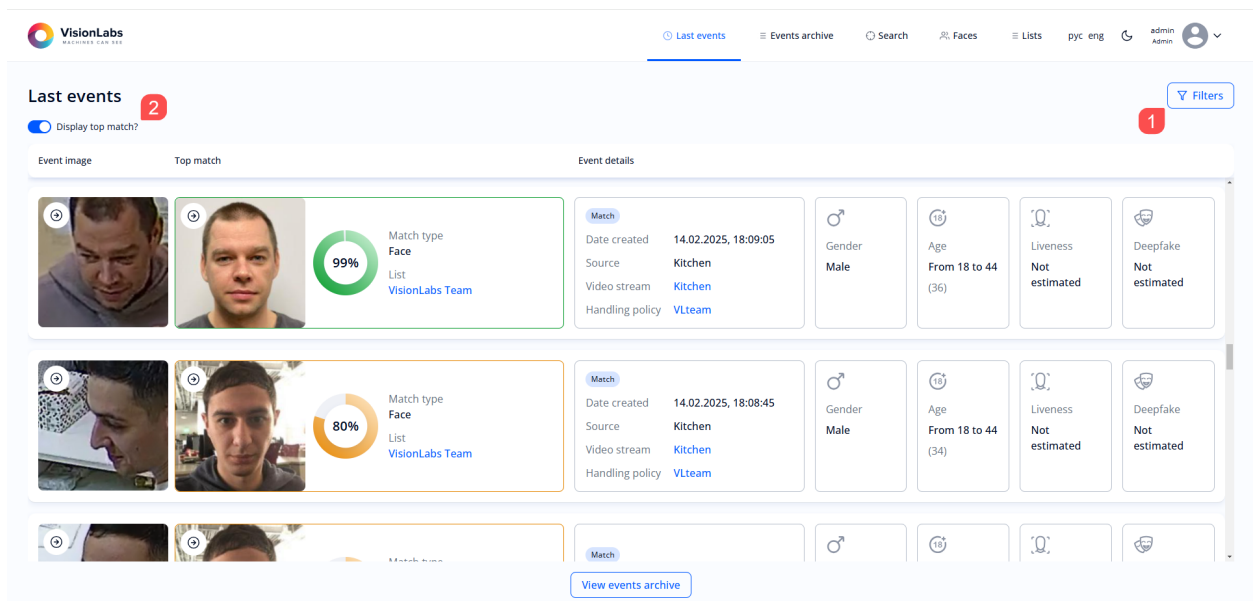


Figure 5: “Last events” section

The filter icon (1), which is located on the right, hides the block with filtering settings. The page shows the following event data (2):

- “Event image”
 - a photo image of the face from the video stream;
 - a photo image of the body from the video stream;
- “Top Match”—the column is shown if the “Display top match” checkbox is active (3). If no matches are found for a photo from an event, then the column with the top match for this event will remain empty. The “Top match” includes:
 - reference photo images of the face and/or body;
 - value of similarity of the identified face with the reference in percentage terms and with the color coding of similarity thresholds:
 - * similarity values below “low” will be marked in red;
 - * similarity values between “low” and “medium” will be marked in yellow;

- * similarity values above “medium” will be marked in green.
- “Match type”—the type of object (face or event), according to which the similarity of the identified face/body with the reference was found;
- “External ID”—external identifier of the face, the field is shown if such an ID is available (for “Face” in “Match type”);
- “User data”—information from the database, linked to a person from the control (for “Face” in “Match type”);
- “List”—the name of the list to which the person is attached (for “Face” in “Match type”);
- “Date created”—date and time of fixing the event (for “Event” in “Match type”);
- “Source”—the name of the source that recorded the event at the time the event was created. Users can change the source name. Then the “Video stream” field will show the new name, and the “Source” field will show the original one (for “Event” in “Match type”);
- “Video stream”—the current name of the source that recorded the event, with a link to the real-time image of the stream (for “Event” in “Match type”);
- “Handling policy”—the name of the handler, according to which the reference photo image of the body was processed (for “Event” in “Match type”).
- “Event details” shows the available event data:
 - “Date of created”—date and time of event registration;
 - “Source”—the name of the source that recorded the event at the time the event was created. Users can change the source name. Then the “Video stream” field will show the new name, and the “Source” field will show the original one;
 - “Video stream”—the current name of the source that recorded the event, with a link to the real-time image of the stream;
 - “Handling policy”—the name of the handler, according to which the reference photo images of the face/body were processed;
 - “Metadata”¹—button for uploading arbitrary user data in JSON format, the field is shown if such data was added to the event (for “Event” in “Match type”).
 - Face attribute, if found:
 - * “Gender”—gender based on face image;
 - * “Age category”—the age of the detected person;
 - * Deepfake check results, if such check was performed;
 - * Liveness check results, if such check was performed
 - Body attributes, if found:
 - * “Upper body colors”—an indication of the color of the clothes of the human body upper part;
 - * “Lower body colors”—indicating the color of the human body upper part;
 - * “Headwear”—the presence or absence of a headaddress, if it is defined.
 - * “Backpack”—the presence or absence of a backpack, if it is defined.

¹All detailed capabilities and limitations of the “Metadata” field are specified in the “Administrator Manual” of LUNA PLATFORM 5 in the paragraph 6.9.4 “Events meta-information”.

7.1 Last events filtering

The Interface allows you to filter last events ([2 in Figure 5](#)) to find and display necessary events (Figure 6).

User can quickly find an event among the last 30, as well as set a limit for displaying new events on the screen.

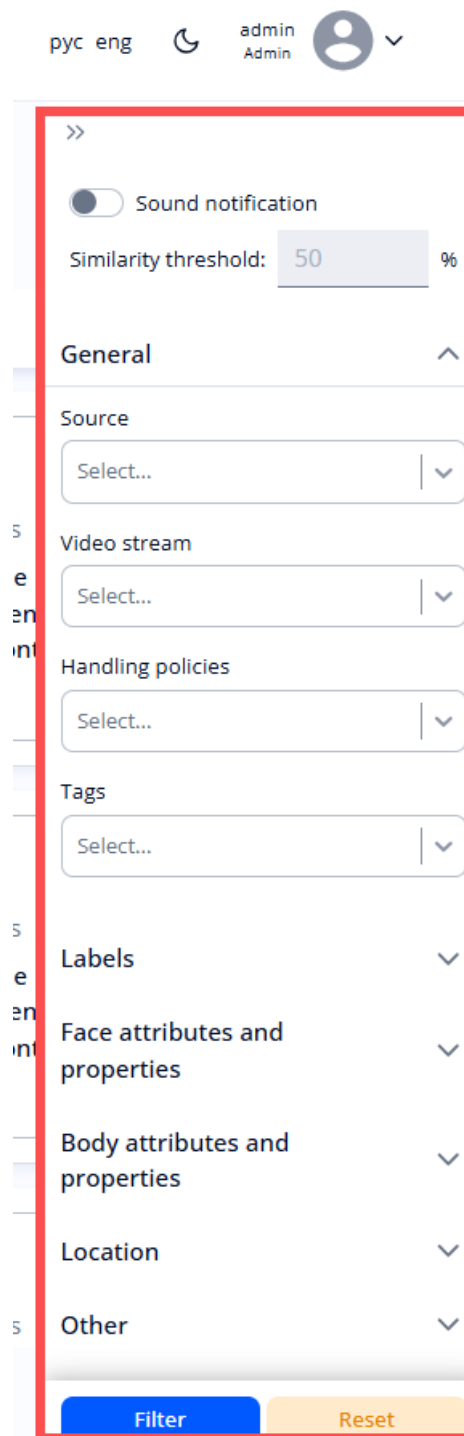


Figure 6: Filter application to display the latest events: gender — male, age from 18 to 44


When a user clicks on the  icon (1 in Figure 5) on the “Last events” page, a menu with settings and filters opens. The number next to the icon shows the number of applied filters. A short description of the elements and parameters of the filter block on the “Last events” page is presented below (Table 1).

Table 1. Filters available to the user to search for last events

Name	Description
“Sound notification” toggle and “Similarity threshold” parameter	Allows a user to configure sound alerts about detection of an object that is not below the specified value of the “Similarity threshold” field
General	
Source	Filter by original source names—select one or more sources from the list of available ones
Video stream	Filter by current source names—select one or more sources from the list of available ones
Handling policies	Select one or more handling policies, according to which the face or body in the image was processed;
Tags	<p>Selection of one or more tags.</p> <p>For example, the “Temperature” tag, is intended for displaying information about the temperature of the human body, filtering events by temperature. “Temperature”:</p> <ul style="list-style-type: none"> • Normal—normal human body temperature range; • Increased—above the specified normal human body temperature range (the event will be highlighted in red); • Abnormal—very low or very high body temperature of a person, which may indicate an incorrect setting of the thermal imaging camera (the event will be highlighted in red); <p>Color coding of temperature values:</p> <ul style="list-style-type: none"> • abnormal temperature values will be marked in red; • normal temperature values will be marked in green. • increased temperature values will be marked in yellow; <p>See the LUNA Access documentation for more information on setting of temperature ranges;</p>
Labels	
Label	Name of the label—rule by which the comparison occurred. Labels are specified when setting up the handling policy ;
Similarity,%	Lower and/or upper limits of similarity for displaying faces identified by the lists;
Face attributes and properties	

Name	Description
Gender	<p>Gender of a person to be detected, determined by the image of a face:</p> <ul style="list-style-type: none"> • Female; • Male; • Not estimated;
Age category	<p>Age range of a person to be detected, determined by the image of a face:</p> <ul style="list-style-type: none"> • below 18; • from 18 to 44; • 45 to 60; • above 60;
Emotion	<p>Emotion of a person to be detected:</p> <ul style="list-style-type: none"> • Anger; • Disgust; • Fear; • Happiness; • Neutral; • Sadness; • Surprise; • Not estimated; <p>A combination of several values is possible;</p>
Mask	<p>Indication of the presence of a mask:</p> <ul style="list-style-type: none"> • Missing; • Medical mask; • Occluded; • Not estimated; <p>A combination of several values is possible;</p>
Liveness	<p>Liveness status selection:</p> <ul style="list-style-type: none"> • Spoof; • Real; • Unknown; • Not estimated; <p>A combination of several values is possible;</p>

Name	Description
Deepfake (Deepfake license required)	<p>Liveness status selection:</p> <ul style="list-style-type: none"> • Fake; • Real; • Not estimated; <p>A combination of several values is possible;</p>
Body attributes and properties	
Upper body colors	<p>Top clothing color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black/Blue/Green/Grey/Orange/Purple/Red/White/Yellow/Pink/Brown/Beige/Khaki/Multicolored; • Not estimated; <p>A combination of several values is possible;</p>
Lower body type	<p>Bottom clothing type specification:</p> <ul style="list-style-type: none"> • Undefined; • Trousers; • Shorts; • Skirt; • Not estimated; <p>A combination of several values is possible;</p>
Lower body colors	<p>Bottom clothing color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black/Blue/Green/Grey/Orange/Purple/Red/White/Yellow/Pink/Brown/Beige/Khaki/Multicolored; • Not estimated; <p>A combination of several values is possible;</p>
Shoes color	<p>Shoe color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black; • White; • Other; • Not estimated; <p>A combination of several values is possible;</p>


Name	Description
Headwear	<p>Headaddress specification:</p> <ul style="list-style-type: none"> • Absent; • Present; • Undefined; • Not estimated; <p>A combination of several values is possible;</p>
Headwear colors	<p>Headaddress color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black; • White; • Other; • Not estimated; <p>A combination of several values is possible;</p>
Backpack	<p>Backpack presence specification:</p> <ul style="list-style-type: none"> • Absent; • Present; • Undefined; • Not estimated; <p>A combination of several values is possible;</p>
Sleeve	<p>Sleeve length specification:</p> <ul style="list-style-type: none"> • Short; • Long; • Undefined; • Not estimated; <p>A combination of several values is possible;</p>
Gender by body	<p>Gender of a person to be detected, determined by the image of a body:</p> <ul style="list-style-type: none"> • Female; • Male; • Undefined; • Not estimated; <p>A combination of several values is possible;</p>

Name	Description
Age category by body	Age range of a person to be detected, determined by the image of a body: <ul style="list-style-type: none">• below 18;• from 18 to 44;• 45 to 60;• above 60;
Location	
City	Event location
Area	
District	
Street	
House number	
Longitude(-180...180);	
Accuracy (0...90);	
Latitude(-90...90);	
Accuracy (0...90);	
Other	
Comma-separated track IDs	Specifying track IDs
Add filter by meta***	Allows you to fill in a set of blocks to create a filter by the “meta” field. The number of meta filters is unlimited. The following blocks are required to be filled in when creating a filter by meta: <ul style="list-style-type: none">• Key—the full path to the required meta field connected with events.• Value—any valid value for the meta field.• Type—selection of the data type stored in this meta field. The data type displays available operators and converts values into the desired data type when sent to the API.• Operator—select operators for a given data type from the list. Operator type depends on the selected data type (for more details see LUNA PLATFORM 5 API, “get events” section)

The user selects one filter or a combination of filters and clicks on the “Filter” button for the applied filters to be applied.

To reset the applied filters, click on the “Reset” button.

The applied filters will affect the appearance of new events on the screen.

To collapse “Filters”, click on the filter icon  on the right side of the screen.

7.2 Event details

Click on an arrow button on the face or body from the event image (Figure 5) to open a page with detailed event data (Figure 7).

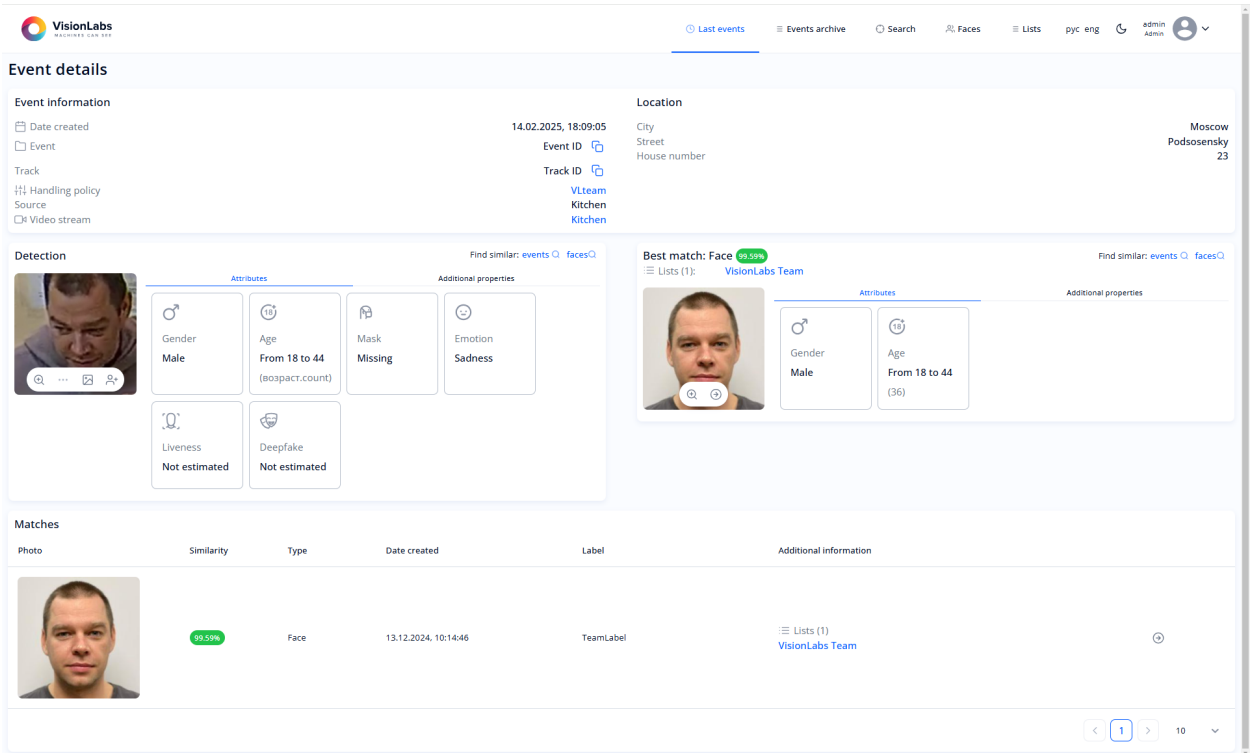




Figure 7: Detailed event data





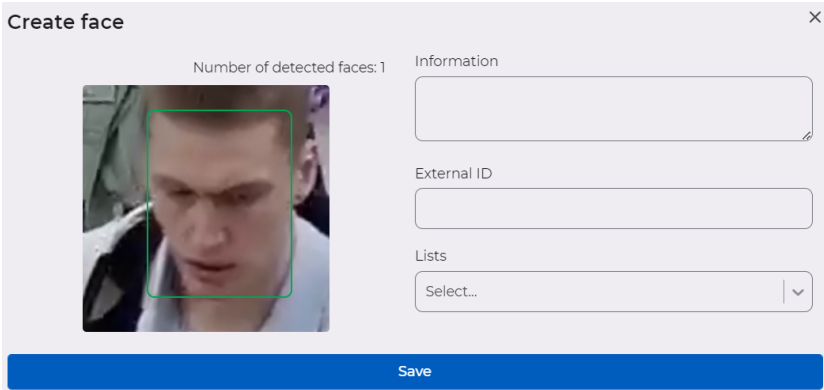
When an event contains data on the detection of both a face and a body, you can switch between these data on the page with event details. If an event contains detection data for only one object, such as a face, then there will be no detection data for another object.

The the page with event details consists of four blocks. The description of the elements of the page is presented below (Table 2).





Table 2. Elements and parameters of the “Event details” page


Name	Description
Event information	Basic information about the event

Name	Description
Date created	Date and time of event recording
Event	“Event ID” — when clicked on  , the value is copied to the clipboard
Track	“Track ID” — when clicked on  , the value is copied to the clipboard
Handling policy	Name of the policy by which the image processing in the video stream is performed. Clicking on the name of the policy opens the form for editing its parameters
Source	The name of the source that recorded the event at the time the event was created. Users can change the source name. Then the “Video stream” field will show the new name, and the “Source” field will show the original one
Video Stream	The current name of the source that recorded the event, with a link to the real-time image of the stream
Tags	Name of tags by which the event is filtered
Metadata	Uploading arbitrary user data in JSON format, if available
Location	Event location data: “City”, “Area”, “District”, “Street”, “House number”, “Coordinates (latitude)”, “Coordinates (longitude)”
Detection	If equipped: face and/or body detection
Find similar: events	Clicking on events Q opens a page in a new tab and searches for events by the Event ID where the face/body was recorded
Find similar: faces	Clicking on facesQ opens the page in a new tab and searches for similar faces by the Face ID For face detection only

Name	Description
Photo image of a face and/or body from a video stream	<p>Normalized image. When clicked on:</p> <ul style="list-style-type: none"> •  the biometric sample opens in a new tab; •  the face/body detection track opens; •  the full frame from the video stream opens; •  a window for adding a face from an event to the list opens: 
Attributes	<p>Face attributes:</p> <ul style="list-style-type: none"> • “Gender”—gender of a person; • “Age category”—specification of age category. Hover the cursor over the card to find out the exact age of the person determined from the face image; • “Emotion”—emotion of a person that was detected; • “Mask”—indication of the presence of a mask <p>If Liveness and Deepfake checks were performed:</p> <ul style="list-style-type: none"> • “Liveness”—result of the Liveness check for person identification purposes; • “Deepfake”—result of the Deepfake check to determine face replacing

Name	Description
	<p>Body attributes:</p> <ul style="list-style-type: none"> • “Gender by body”—gender of a person; • “Age category by body”—specification of age. Hover the cursor over the card to find out the exact age of the person determined from the face image; • “Upper body”—specification of the type and color of clothing of the upper body. • “Lower body”—specification of the type and color of clothing of the lower body. • “Headwear”—specification of the type and color of the headwear. • “Shoes color”—specification of the shoe color. • “Accessories”—specification of the presence or absence of a “backpack”
Additional properties	<p>Face properties:</p> <ul style="list-style-type: none"> • Head tilt angle (roll); • Head tilt angle (pitch); • Head rotation angle (yaw); • Eye direction (pitch); • Eye direction (yaw); • Light; • Dark; • Blur; • Specularity; • Illumination • Mouth state; • Eye state; • Definition of attributes and properties of the face/body is set in the handler settings
Best match: Event or Person	Similarity value of identified face/body with the face/body from control list/event (in percentage);
Find similar: events	Clicking on events Q opens a page in a new tab and searches for evens by the Event ID where the face/body was recorded

Name	Description
Find similar: faces	Clicking on facesQ opens the page in a new tab and searches for similar faces by the Face ID For face detection only
Additional information	“Face” type — “Information”, “Lists”, “External ID”. “Event” type — “Handling policy”, “Source” with the ability to go to the handling policy editing page and view the stream from the source in real time
Photo image of a face and/or body	Reference photo image of the face or body (sample) or no photo. When clicked on <ul style="list-style-type: none">  the biometric sample opens in a new tab;  face details opens  the face/body detection track opens;  the full frame from the video stream opens
Attributes	<p>Face attributes:</p> <ul style="list-style-type: none"> “Gender”—gender of a person; “Age category”—specification of age category. Hover the cursor over the card to find out the exact age of the person determined from the face image; <p>Body attributes:</p> <ul style="list-style-type: none"> “Gender by body”—gender of a person; “Age category by body”—specification of age. Hover the cursor over the card to find out the exact age of the person determined from the face image; “Upper body”—specification of the type and color of clothing of the upper body. “Lower body”—specification of the type and color of clothing of the lower body. “Headwear”—specification of the type and color of the headwear. “Shoes color”—specification of the shoe color. “Accessories”—specification of the presence or absence of a “backpack”

Name	Description
Additional properties	<p>Face properties:</p> <ul style="list-style-type: none"> • Head tilt angle (roll); • Head tilt angle (pitch); • Head rotation angle (yaw); • Eye direction (pitch); • Eye direction (yaw); • Light; • Dark; • Blur; • Specularity; • Illumination • Mouth state; • Eye state; • Definition of attributes and properties of the face/body is set in the handler settings
“Matches”	List of matches with a detected face and/or body
Event photo	<p>“Face” type—an avatar, sample, or no photo image.</p> <p>Similarity value of identified face with the face from control list (in percentage)</p> <p>“Event” type—detection (photo image of a face from a video stream).</p> <p>Similarity value of identified face or body with the face or body from the event (in percentage)</p>
Type	<ul style="list-style-type: none"> • Face; • Event
Date created	Date and time of the biometric sample of the face or body creation from the identification event
Label	Name of the label—rule by which the comparison occurred
Additional information	<p>“Face” type — “Information”, “Lists”, “External ID”. “Event” type — “Handling policy”, “Source”, “Video stream” with the ability to go to the handling policy editing page and view the stream from the source in real time</p>
 When	clicked, the face or event details opens

The external ID is used to integrate LUNA PLATFORM 5 UI with external systems, to transfer data to other systems in order to analyze and quickly respond to an event.

8 Events archive section

The “Events archive” section is designed to display all events of face and body detection as well as recognition and search for events in archive (Figure 8).

Receiving and displaying new events in the event archive is performed with minimal delays in near real-time.

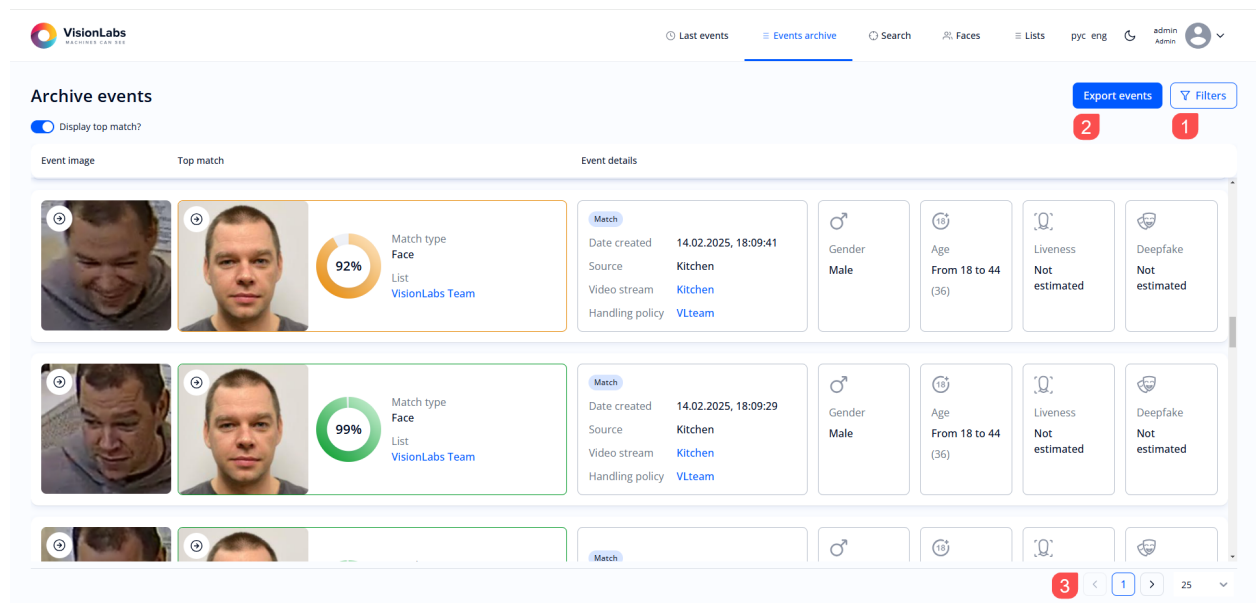


Figure 8: “Events archive” section

If there are no filters applied (1), the Interface displays the latest detection and identification events identical to those presented in the “Last events” section from the last 30 days.

The number of events displayed on the page is set by the switch in the lower right corner of the page. There can be 10, 25, 50 or 100 events in total on one page (2).

Upload events according to the specified parameters by clicking on the “Export events” button (3): [fill in the fields](#), click “Save”, then go to the “Tasks” section and download the results.

The displayed data is identical to the data in the “[Last events](#)” section.

Click on a line to open a page with [event details](#).

Click on a reference photo of a face from the control list to open a page with [face details](#).

8.1 Archived events filtering

The Interface allows you to filter archived events (1 in [Figure 8](#)) to find and display necessary events.

With filters (Figure 9) user can quickly find an event among the last, as well as set a limit for displaying new events on the screen.

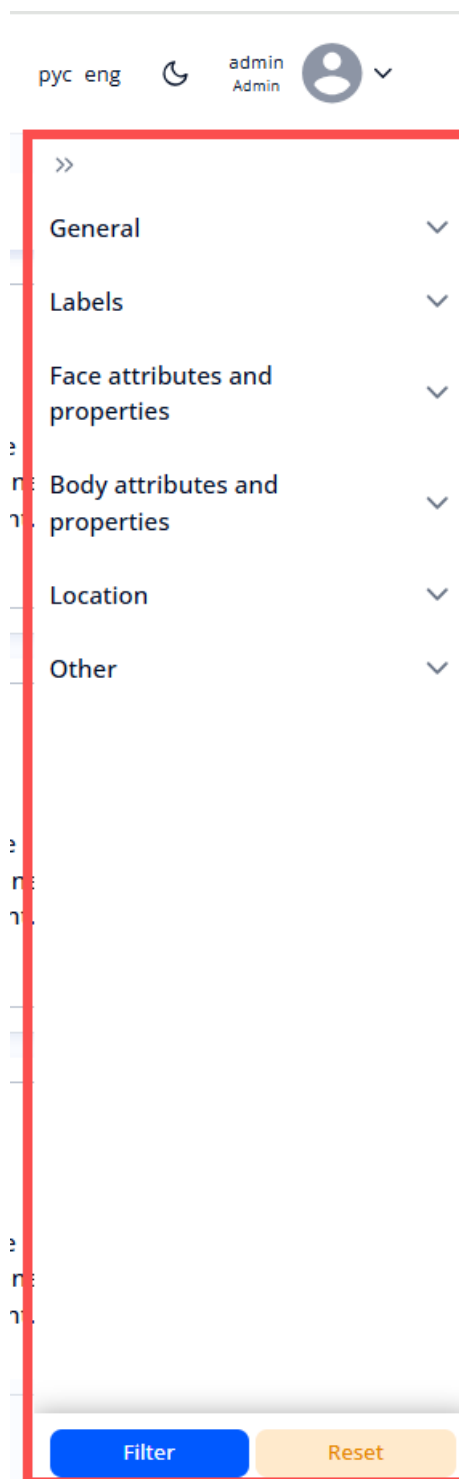


Figure 9: Filters for searching archived events

A short description of the elements and parameters of the block with filters in the “Events archive” section is presented below (Table 3).

Table 3. Filters available to the user to search for archived events:

Name	Description
General	
Date from	Start of the search period by date and time of the event;
Date to	End of the search period by date and time of the event;
Source	Filter by original source names—select one or more sources from the list of available ones
Video stream	Filter by current source names—select one or more sources from the list of available ones
Handling policies	Handling policy names, according to which the face or body in the image was processed. One or several handling policies can be selected for searching.
Tags	<p>Selection of one or more tags.</p> <p>For example, the “Temperature” tag, is intended for displaying information about the temperature of the human body, filtering events by temperature. “Temperature”:</p> <ul style="list-style-type: none"> • Abnormal—very low or very high body temperature of a person, which may indicate an incorrect setting of the thermal imaging camera (the event will be highlighted in red); • Normal—normal human body temperature range; • Increased—above the specified normal human body temperature range (the event will be highlighted in red); <p>Color coding of temperature values:</p> <ul style="list-style-type: none"> • abnormal temperature values will be marked in red; • normal temperature values will be marked in green. • increased temperature values will be marked in yellow; <p>See the LUNA Access documentation for more information on setting of temperature ranges.</p>
Event ID	Identifiers of detection and attribute extraction events. Values are separated by commas, for the correct search must be specified in full;
External events ID	External identifiers of events. Values are separated by commas, for the correct search must be specified in full;
Labels	
Label	Name of the label—rule by which the comparison occurred. Labels are specified when setting up the handling policy

Name	Description
Similarity, %	Lower and/or upper limits of similarity for displaying faces identified by the lists;
ID of objects with maximum match result	The ID of the top similar object (event or face) from matching results (match policy, values are separated by commas, for the correct search must be specified in full);
Face attributes and properties	
Gender	Gender of a person to be detected: <ul style="list-style-type: none"> • Female; • Male; • Not estimated;
Age category	Lower and/or upper limits of age of a person to be detected: <ul style="list-style-type: none"> • Under 18; • From 18 to 44; • 45 to 60; • Over 60;
Emotion	Emotion of a person to be detected: <ul style="list-style-type: none"> • Anger; • Disgust; • Fear; • Happiness; • Neutral; • Sadness; • Surprise; • Not estimated; A combination of several values is possible;
Mask	Indication of the presence of a mask: <ul style="list-style-type: none"> • Missing; • Medical mask; • Occluded; • Not estimated; A combination of several values is possible;


Name	Description
Liveness	<p>Liveness status selection:</p> <ul style="list-style-type: none"> • Spoof; • Real; • Unknown; • Not estimated; <p>A combination of several values is possible;</p>
Deepfake (Deepfake license required)	<p>Liveness status selection:</p> <ul style="list-style-type: none"> • Fake; • Real; • Not estimated; <p>A combination of several values is possible;</p>
Face IDs from events	<p>Face IDs of persons that are created in the LUNA PLATFORM 5 system as a result of a detection event and extraction of attributes. Values are separated by commas, for the correct search must be specified in full;</p>
Body attributes and properties	
Upper body colors	<p>Top clothing color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black/Blue/Green/Grey/Orange/Purple/Red/White/Yellow/Pink/Brown/Beige/Khaki/Multicolored; • Not estimated; <p>A combination of several values is possible;</p>
Lower body type	<p>Bottom clothing type specification:</p> <ul style="list-style-type: none"> • Undefined; • Trousers; • Shorts; • Skirt; • Not estimated; <p>A combination of several values is possible;</p>
Lower body colors	<p>Bottom clothing color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black/Blue/Green/Grey/Orange/Purple/Red/White/Yellow/Pink/Brown/Beige/Khaki/Multicolored; • Not estimated; <p>A combination of several values is possible;</p>

Name	Description
Shoes color	<p>Shoe color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black; • White; • Other; • Not estimated; <p>A combination of several values is possible;</p>
Headwear	<p>Headdress specification:</p> <ul style="list-style-type: none"> • Absent; • Present; • Undefined; • Not estimated; <p>A combination of several values is possible;</p>
Headwear colors	<p>Headdress color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black; • White; • Other; • Not estimated; <p>A combination of several values is possible;</p>
Backpack	<p>Backpack presence specification:</p> <ul style="list-style-type: none"> • Absent; • Present; • Undefined; • Not estimated; <p>A combination of several values is possible;</p>
Sleeve	<p>Sleeve length specification:</p> <ul style="list-style-type: none"> • Short; • Long; • Undefined; • Not estimated; <p>A combination of several values is possible;</p>

Name	Description
Gender by body	Gender of a person to be detected, determined by the image of a body: <ul style="list-style-type: none">• Female;• Male;• Undefined;• Not estimated; A combination of several values is possible;
Age category by body	Age range of a person to be detected, determined by the image of a body: <ul style="list-style-type: none">• below 18;• from 18 to 44;• 45 to 60;• above 60;
Location	
City	Event location
Area	
District	
Street	
House number	
Longitude(-180...180);	
Accuracy (0...90);	
Latitude(-90...90);	
Accuracy (0...90);	
Other	
Comma-separated track IDs	Specifying track IDs

Name	Description
Add filter by meta***	<p>Allows you to fill in a set of blocks to create a filter by the “meta” field. The number of meta filters is unlimited. The following blocks are required to be filled in when creating a filter by meta:</p> <ul style="list-style-type: none"> • Key—the full path to the required meta field connected with events. • Value—any valid value for the meta field. • Type—selection of the data type stored in this meta field. The data type displays available operators and converts values into the desired data type when sent to the API. • Operator—select operators for a given data type from the list. Operator type depends on the selected data type (for more details see LUNA PLATFORM 5 API, “get events” section)

The user selects one filter or a combination of filters and clicks on the “Filter” button for the applied filters to be applied.

To reset the applied filters, click on the “Reset” button. To collapse Filters, click on the filter icon  on the right side of the page.

9 Search section

The “Search” section is designed to search by photo, event (event ID), and face (face ID: “External ID”, “Face ID”). This section displays all detection face and body recognition events that match the search conditions (Figure 10).

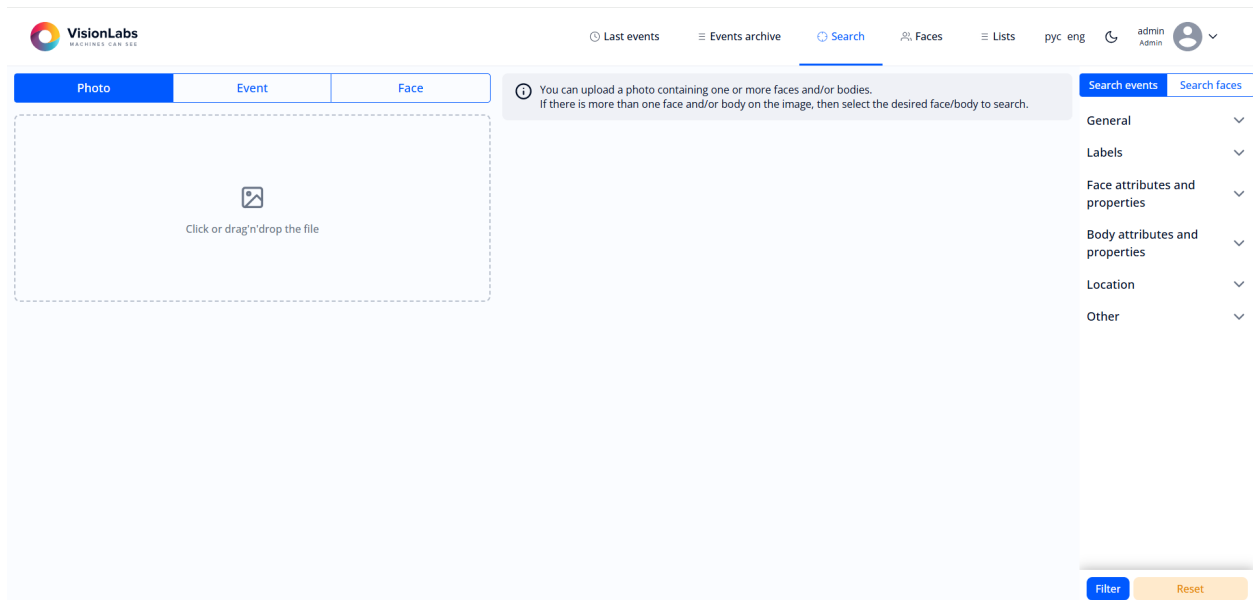


Figure 10: “Search” section

If departments are created, and users and event sources are attached to these departments, the user can search only for those events that were recorded by the event sources of his department.

The “Search” section contains the following blocks:

- Search options:
 - “Photo” — search by uploaded photo image:
 - * field for uploading a photo image;
 - “Event” — search by registered event in the system:
 - * “Event ID” — identifier of the event of detection and attribute extraction;
 - “Face” — search by registered face in the system:
 - * “External ID” — external face identifier;
 - * “Face ID” — face identifier that is created in the LUNA PLATFORM 5 system as a result of a detection event and attribute extraction;
- Searching results:
 - “Events”:
 - * “Display search image” checkbox — disable if you need to hide the column with the original photo;
 - * “Search result”;

- * “Search image”;
 - * “Details”;
- “Faces”:
 - * “Display search image” checkbox — disable if you need to hide the column with the original photo;
 - * “Search result”;
 - * “Search image”;
 - * “Details”;
- Filters.

A short description of the elements and parameters of the filter block in the “Search” section is presented below (Table 4).

Table 4. “Filters” block elements description

Name	Description
Search events	
Date from	Start of the search period by date and time of the event;
Date to	End of the search period by date and time of the event;
Source	Filter by original source names—select one or more sources from the list of available ones
Video stream	Filter by current source names—select one or more sources from the list of available ones
Handling policies	Handling policy names, according to which the face or body in the image was processed. One or several handling policies can be selected for searching.
Liveness	Liveness status selection: <ul style="list-style-type: none"> • Spoof; • Real; • Unknown; • Not estimated; A combination of several values is possible;

Name	Description
Tags	<p>Selection of one or more tags.</p> <p>For example, the “Temperature” tag, is intended for displaying information about the temperature of the human body, filtering events by temperature. “Temperature”:</p> <ul style="list-style-type: none"> • Abnormal—very low or very high body temperature of a person, which may indicate an incorrect setting of the thermal imaging camera (the event will be highlighted in red); • Normal—normal human body temperature range; • Increased—above the specified normal human body temperature range (the event will be highlighted in red); <p>Color coding of temperature values:</p> <ul style="list-style-type: none"> • abnormal temperature values will be marked in red; • normal temperature values will be marked in green. • increased temperature values will be marked in yellow; <p>See the LUNA Access documentation for more information on setting of temperature ranges.</p>
Event ID	Identifiers of detection and attribute extraction events. Values are separated by commas, for the correct search must be specified in full);
External events ID	External identifiers of events. Values are separated by commas, for the correct search must be specified in full);
Similarity is not less than, %	The similarity value is not lower than the specified one, in percent;
Labels	
Label	Name of the label—rule by which the comparison occurred. Labels are specified when setting up the handling policy
ID of objects with maximum match result	The ID of the top similar object (event or face) from matching results (match policy, values are separated by commas, for the correct search must be specified in full);
Face attributes and properties	
Gender	<p>Gender of a person to be detected:</p> <ul style="list-style-type: none"> • Female; • Male; • Not estimated;

Name	Description
Age category	<p>Lower and/or upper limits of age of a person to be detected:</p> <ul style="list-style-type: none"> • Under 18; • From 18 to 44; • 45 to 60; • Over 60;
Emotion	<p>Emotion of a person to be detected:</p> <ul style="list-style-type: none"> • Anger; • Disgust; • Fear; • Happiness; • Neutral; • Sadness; • Surprise; • Not estimated; <p>A combination of several values is possible;</p>
Mask	<p>Indication of the presence of a mask:</p> <ul style="list-style-type: none"> • Missing; • Medical mask; • Occluded; • Not estimated; <p>A combination of several values is possible;</p>
Liveness	<p>Liveness status selection:</p> <ul style="list-style-type: none"> • Spoof; • Real; • Unknown; • Not estimated; <p>A combination of several values is possible;</p>
Deepfake (Deepfake license required)	<p>Liveness status selection:</p> <ul style="list-style-type: none"> • Fake; • Real; • Not estimated; <p>A combination of several values is possible;</p>
Face IDs from events	<p>Face IDs of persons that are created in the LUNA PLATFORM 5 system as a result of a detection event and extraction of attributes. Values are separated by commas, for the correct search must be specified in full;</p>

Name	Description
Body attributes and properties	
Upper body colors	<p>Top clothing color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black/Blue/Green/Grey/Orange/Purple/Red/White/Yellow/Pink/Brown/Beige/Khaki/Multicolored; • Not estimated; <p>A combination of several values is possible;</p>
Lower body type	<p>Bottom clothing type specification:</p> <ul style="list-style-type: none"> • Undefined; • Trousers; • Shorts; • Skirt; • Not estimated; <p>A combination of several values is possible;</p>
Lower body colors	<p>Bottom clothing color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black/Blue/Green/Grey/Orange/Purple/Red/White/Yellow/Pink/Brown/Beige/Khaki/Multicolored; • Not estimated; <p>A combination of several values is possible;</p>
Shoes color	<p>Shoe color specification:</p> <ul style="list-style-type: none"> • Undefined; • Black; • White; • Other; • Not estimated; <p>A combination of several values is possible;</p>
Headwear	<p>Headdress specification:</p> <ul style="list-style-type: none"> • Absent; • Present; • Undefined; • Not estimated; <p>A combination of several values is possible;</p>

Name	Description
Headwear colors	Headdress color specification: <ul style="list-style-type: none"> • Undefined; • Black; • White; • Other; • Not estimated; A combination of several values is possible;
Backpack	Backpack presence specification: <ul style="list-style-type: none"> • Absent; • Present; • Undefined; • Not estimated; A combination of several values is possible;
Sleeve	Sleeve length specification: <ul style="list-style-type: none"> • Short; • Long; • Undefined; • Not estimated; A combination of several values is possible;
Gender by body	Gender of a person to be detected, determined by the image of a body: <ul style="list-style-type: none"> • Female; • Male; • Undefined; • Not estimated; A combination of several values is possible;
Age category by body	Age range of a person to be detected, determined by the image of a body: <ul style="list-style-type: none"> • below 18; • from 18 to 44; • 45 to 60; • above 60;


Location

Name	Description
City	Event location
Area	
District	
Street	
House number	
Longitude(-180...180);	
Accuracy (0...90);	
Latitude(-90...90);	
Accuracy (0...90);	
Other	
Comma-separated track IDs	Specifying track IDs
Add filter by meta***	<p>Allows you to fill in a set of blocks to create a filter by the “meta” field. The number of meta filters is unlimited. The following blocks are required to be filled in when creating a filter by meta:</p> <ul style="list-style-type: none">• Key—the full path to the required meta field connected with events.• Value—any valid value for the meta field.• Type—selection of the data type stored in this meta field. The data type displays available operators and converts values into the desired data type when sent to the API.• Operator—select operators for a given data type from the list. Operator type depends on the selected data type (for more details see LUNA PLATFORM 5 API, “get events” section)
Search faces	
Date from	Beginning of the search period by date and time of face creation
Date before	End of search period by date and time of face creation
External events ID	External event identifiers. To correctly search for the value indicated separated by commas and in full;
Similarity is not less than, %	The similarity value is not lower than the specified value, in percent
Lists	Selecting a list in which to search for a face
User data	Information about the person from the database (if available)

To search by face or body image, select the “Photo” section, click on the field to upload an image from your computer, or drag and drop a photo into this field.

Image file requirements:

- *.jpeg, *.png or *.bmp format;
- image size no less than 320x250 and no more than 3840x2160 pixels;
- image may contain one or more people;
- image must have a person’s face or body.

When loading a photo image containing many faces and/or bodies, the Interface detects all faces and/or bodies in the image, then displays them to the right of the loaded photo image and displays the number of detected faces and/or bodies (Figure 11). To reset the image, click on .

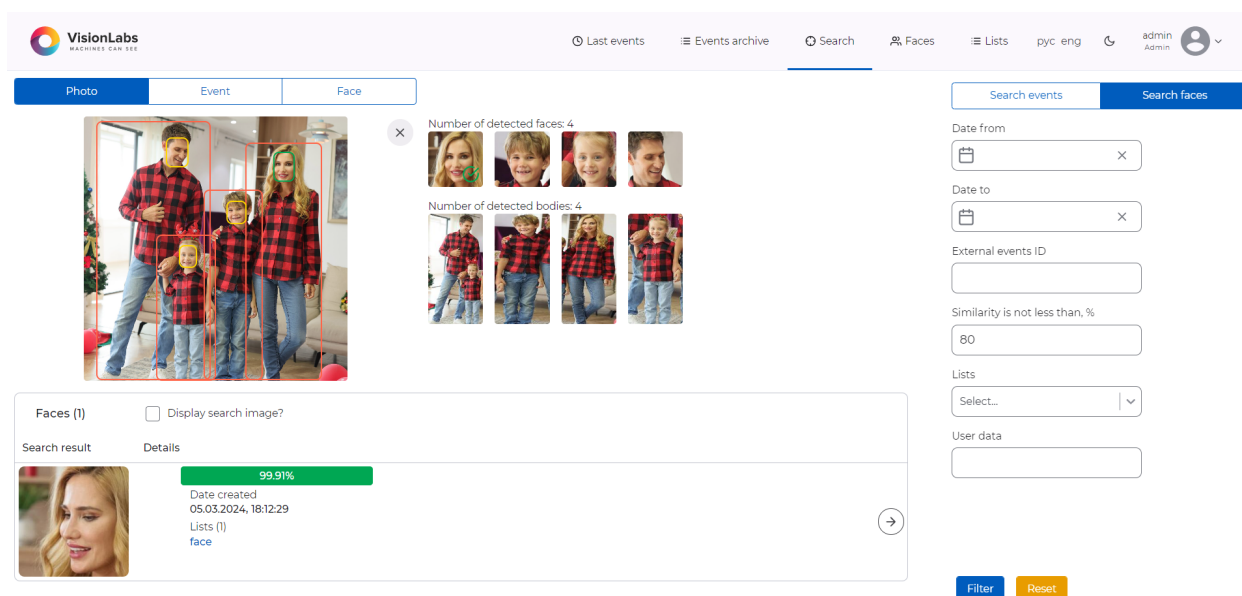


Figure 11: Photo image with multiple faces

To find similar faces or events with the face or body, select one face or body by clicking on it on the uploaded photo image. Then, in the filter block, select the necessary search options and click “Filter”. To reset the parameter values, click the “Reset” button. The search results will be displayed at the bottom of the page (Figure 12).

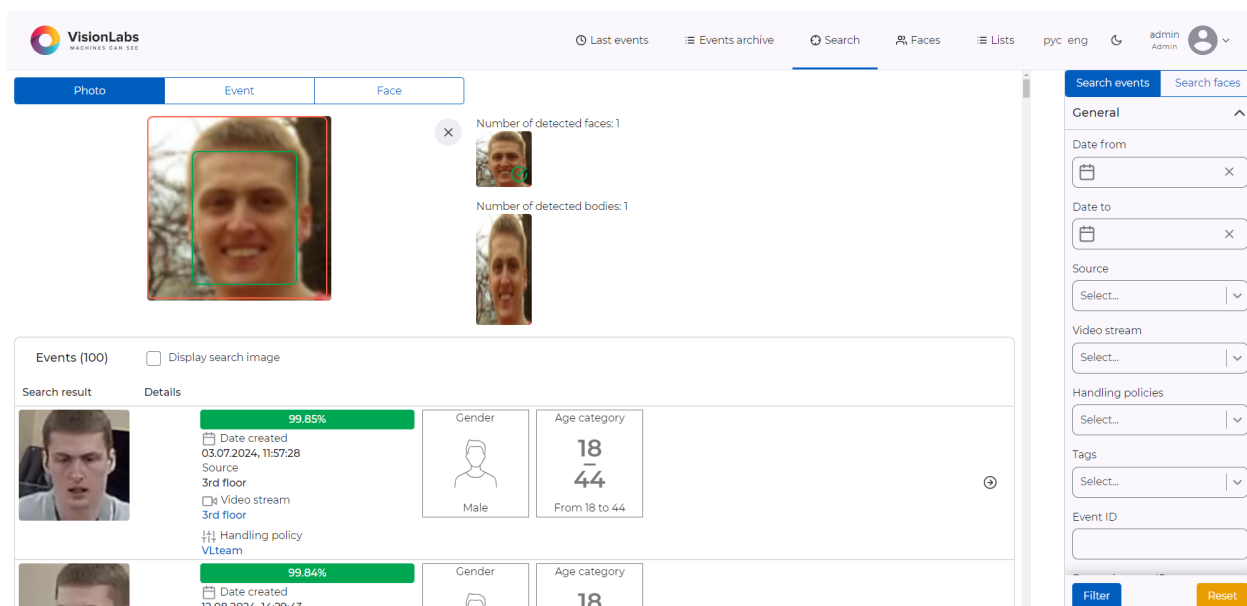


Figure 12: Search by events

The description of the elements of the search results block is presented below (Table 5 and 6).

Table 5. Elements and parameters of the search results, if “Search events” is selected in the block with filters:

Name	Description
Search result	The face and/or body of a person from the event that is the most similar to the one selected in the uploaded photo
Search image	Normalized photo image of a person’s face or body from the uploaded photo. Displayed if the “Display search image” checkbox is enabled
Details	<ul style="list-style-type: none"> The similarity value of the reference face or body from the uploaded photo with the face or body from the event Date created—date and time of the event creation;

Name	Description
	<ul style="list-style-type: none"> Source—the name of the source that recorded the event at the time the event was created. Users can change the source name. Then the “Video stream” field will show the new name, and the “Source” field will show the original one Video Stream—the current name of the source that recorded the event, with a link to the real-time image of the stream Handling policy—policy according to which the event was recorded
Face attributes, if a face is selected as the search object	<ul style="list-style-type: none"> Gender—specification of gender (male/female), determined by the face from the event; Age category—age determined by the face from the event; <p>If Liveness and Deepfake checks were performed:</p> <ul style="list-style-type: none"> Liveness—result of the Liveness check for person identification purposes; Deepfake—result of the Deepfake check to determine face replacing
Body attributes, if a body is selected as the search object	<ul style="list-style-type: none"> Upper body colors—specification of the person’s color top clothing in the photo from the event; Lower body colors—specification of the person’s color bottom clothing in the photo from the event; Headwear—specification of the presence of person’s headwear in the photo from the event; Backpack—specification of the presence of person’s backpack in the photo from the event;



 | Go to the “Event details” page

Table 6. Elements and parameters of the search results, if “Search faces” is selected in the block with filters:

Name	Description
Search result	The face of a person from the event that is the most similar to the one selected in the uploaded photo

Name	Description
Search image	Normalized photo image of a person's face from the uploaded photo. Displayed if the "Display search image" checkbox is enabled
Details	<ul style="list-style-type: none"> • The similarity value of the reference face from the uploaded photo with the face from the database • Date created—of adding a photo with a face to the database; • Lists (amount) — lists to which the person is attached • External ID — external face identifier; • Information — information from the database, linked to a face ;
 Go to	the "Face details" page

10 Faces section

The “Faces” section is intended for viewing, creating and deleting faces (Figure 13).

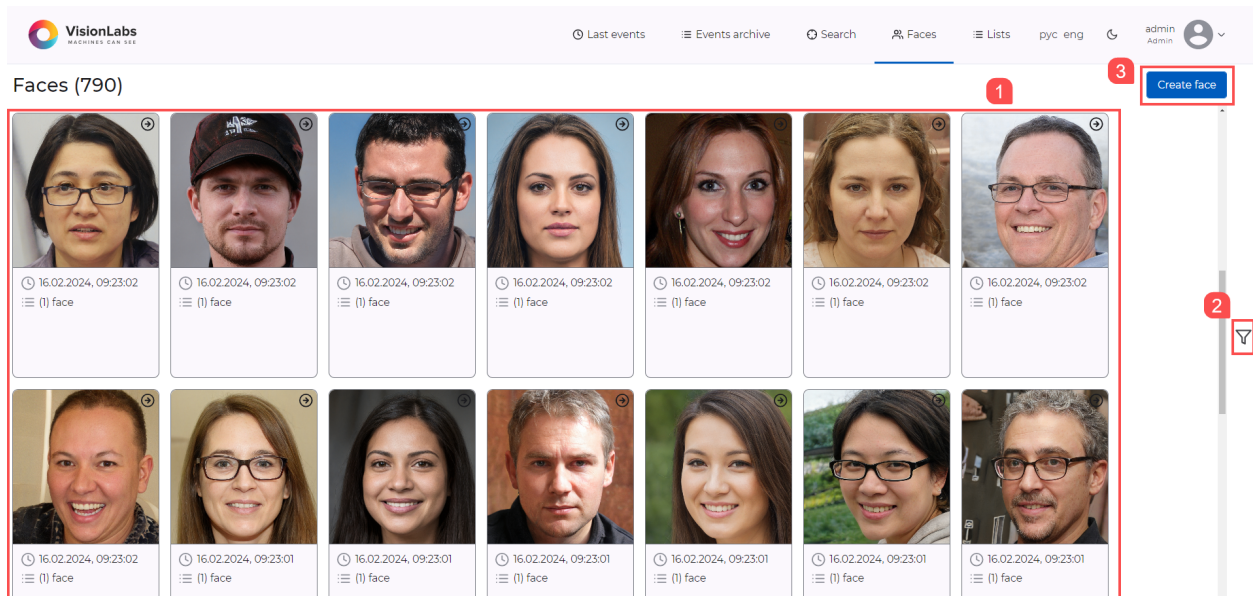



Figure 13: “Faces” Section

The “Faces” section contains the following elements:

- List of faces (1):
 - Photo of the face;
 - Information, such as the temperature of the person whose face is in the photo;
 - Date and time of creation of the face;
 - Lists that contain the face;
 - Face ID;
- Filters (2);
- Button to open the face creation form. (3)

Click on the filter icon  to find events by (Figure 14):

- Lists—select from the list the list to which the persons belong;
- Date of creation—select the period during which the faces were created;
- External ID—specify comma-separated external identifiers. Copy the external ID from the “[Face details](#)” page to find all faces with such external ID;
- Face ID—specify comma-separated face identifiers that are created in the LUNA PLATFORM 5 system as a result of a detection event and extraction of attributes. Copy the face ID from the “Face details” page to find all faces with such IDs;
- Information—specify data associated with the person. Copy the information from the “Face details”

page to find all faces with such information.

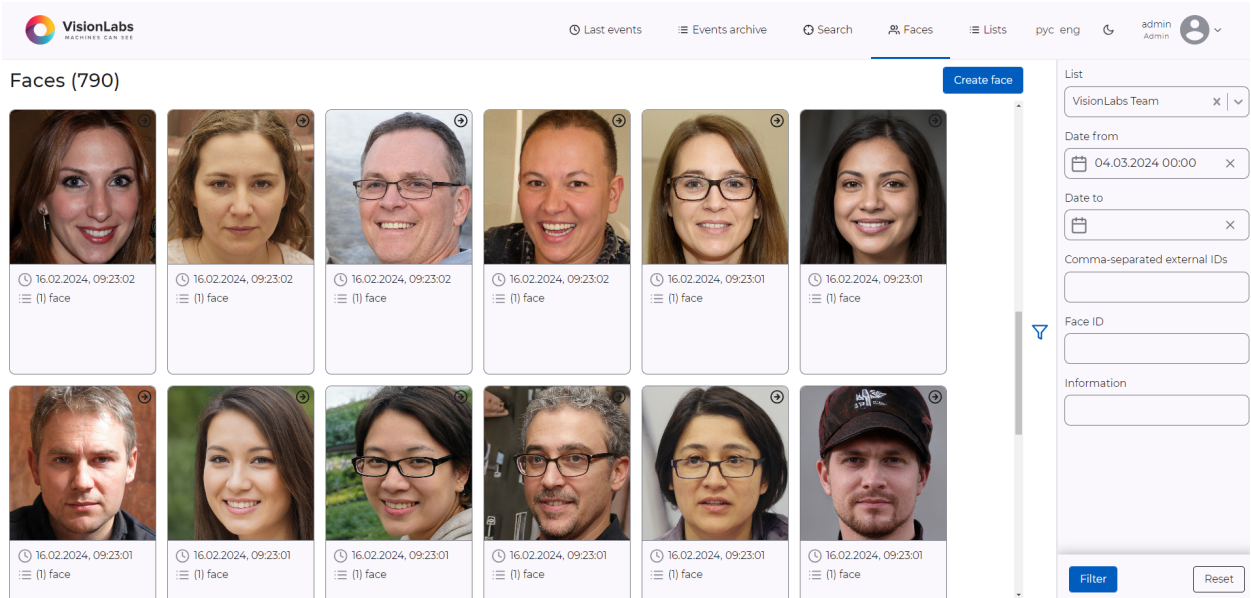



Figure 14: Filtering in the “Faces” section

Click on  from the list of faces to go to the face details.

10.1 Creating face

To add a new face, click on the “Create face” button in the upper right corner of the section page. The general view of the window for creating a face is presented below (Figure 15).

Face adding

Click or drag'n'drop the file

① You can upload a photo with one or more faces. If there is more than one face in the photo, then select the face to add. If you want to add more than one face, use batch import in the "Tasks" section

Information

External ID

Lists

darkside x

Check photo image quality for compliance with the ISO/IEC 19794-5:2011 standard

Save

Figure 15: Form for adding a face

Enter the required information:

- Field for uploading a photo of the person—avatar (required to be filled out). There may be one face or several ones in the photo. If there is more than one face in the photo, then after uploading you have to select which face to be added in the list/lists—the selected face will be highlighted with a green frame. You can add more than one person via [batch import](#);
- “Information”—information about the person. For example, the position of the employee whose face you are adding;
- “External ID”—external identifier of the face. If you need to add a face to an existing face card, copy the External ID from the “[Face details](#)” page and paste it into the field. In this case, several faces will be assigned to one external ID. If you need to create a face with a unique external ID, enter your own identifier in the field as a set of letters and/or numbers;
- “Lists”—the name of the list to which the face will be added (multiple lists can be selected);
- “Check photo image quality for compliance with the ISO/IEC 19794-5:2011 standard”—if enabled, the photo will be added to the list only after passing the ISO/IEC 19794-5:2011 verification.
- —button for resetting the uploaded photo image.

Image file requirements:

- *.jpeg, *.png or *.bmp format;

- image size no more than 15 MB and no more than 3840x2160 pixels;
- image may contain one or more persons;
- image must have person's face.

Fill in the fields and click the “Save” button. A message about the successful face creating will appear on the screen.

10.2 Face details

To open the page with face details click on the arrow button on the face image from the “Top match” column in the “Last events” section or in the event details.

The “Face details” page consists of two blocks (Figure 16).

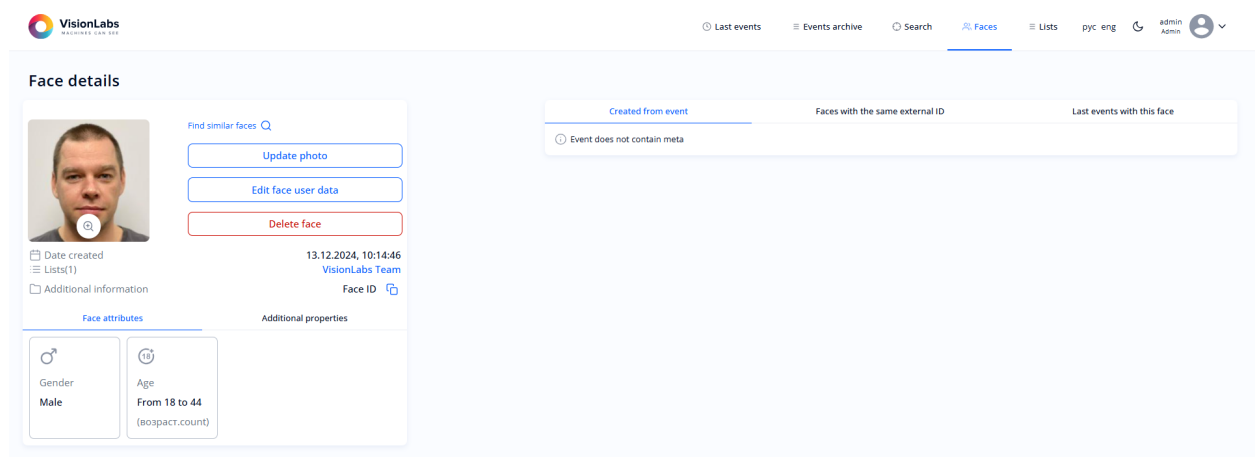








Figure 16: Face details

Descriptions of page elements are presented below (Table 7).

Table 7. Elements and parameters of the face details page

Name	Description
Photo image of a face	Avatar is a biometric sample that is created when uploading a photo image to the list (to the LUNA PLATFORM 5 system). When clicked on  the biometric sample opens in a new tab
“Find similar faces” button	When clicked, a search for faces by face ID is performed in a new tab
Update photo	Opening the form to upload a new face photo image
Edit face user data	Opening a form for editing face data (“Information”, “External ID”, “Lists”)

Name	Description
Delete face	Removal of face biometric sample, face photo image, and face details
Date created	Date and time of creation of the biometric sample
Information	User data from the database, linked to a face (upon availability)
External ID	External identifier of the face
Lists (N)	The list and number of lists to which the person is attached. Clicking on the name opens the list
Additional information	“Face ID” — when clicked on  , the value is copied to the clipboard
Face attributes	<p>“Attributes”:</p> <p>“Gender” — gender of a person (male/female);</p> <p>“Age category” — indication of age category. Hover the cursor over the card to find out the exact age of the person determined from the face image.</p>
Additional properties	<p>Face properties:</p> <ul style="list-style-type: none"> • Head tilt angle (roll); • Head tilt angle (pitch); • Head rotation angle (yaw); • Eye direction (pitch); • Eye direction (yaw); • Light; • Dark; • Blur; • Specularity; • Illumination • Mouth state; • Eye state <p>Indication of attributes and properties of the face/body is specified in the policy settings</p>
Faces with the same external ID	Could be empty (“No external ID”)
Photo image of a face	Avatar, sample or no photo
Date created	Date and time of creation of the biometric sample
Information	User data from the database, linked to a face (upon availability)

Name	Description
Lists (N)	The list and number of lists to which the person is attached. Clicking on a name opens a list
 When	clicked, face details open
View all faces with the same external ID	When clicked, the search for faces by external ID is performed, and a list of all faces, whose external ID matches the one of the reference photo, opens.
Last events with this face	Could be empty (“No events with this face”)
Photo image of a face from a video stream	Normalized image: <ul style="list-style-type: none"> • when clicked on  the biometric sample opens in a new tab; • when clicked on  the full frame from the video stream opens Similarity value of identified face with the face from control list (in percentage)
Date created	Date and time of recording the event with a face
Event source	The name of the event source that recorded the event with a face When clicked on the name of the event source, a preview of the video stream in real time opens
Handling policy	Name of the policy that processed the image in the video stream Clicking on the name of the policy opens the form for editing its parameters
 When	clicked, the event details opens
View all events with this face	When clicked, an events archive page with maximum match result this person opens

10.2.1 Editing and deleting face

Click the “Update photo” button to update the photo image on the page with face details. The general view of the photo image update form is shown below (Figure 17).

Image file requirements:

- *.png , *.jpeg, or *.bmp format;
- image size no more than 15 MB and no more than 3840x2160 pixels;
- image may contain one or more people;

- image must have a person's face.

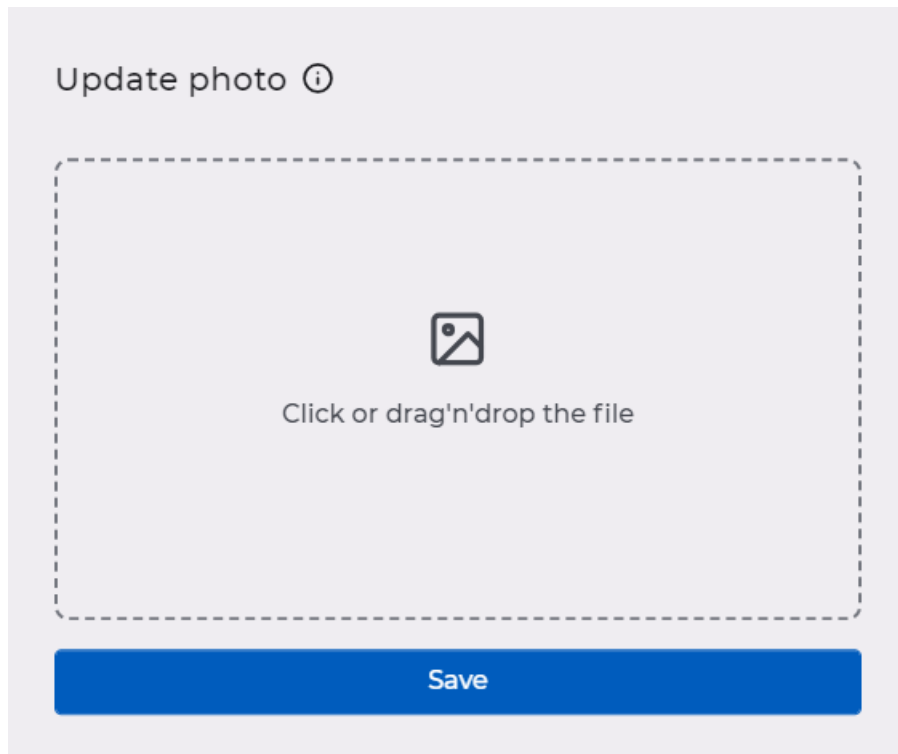
The image shows a user interface for updating a photo. At the top, it says "Update photo" followed by an information icon. Below this is a large dashed rectangular box. Inside the box is a small icon of a picture with a person's face and the text "Click or drag'n'drop the file". At the bottom of the dashed box is a solid blue button with the word "Save" in white text.

Figure 17: Form for updating a photo image on the page with face details.

Click the “Edit face user data” button to edit the face user data. The general view of the face user data editing form is shown below (Figure 18).

Face user data editing form contains:

- “User data” — information from the database, linked to a face (upon availability);
- “External ID” — external identifier of the face;
- “Lists” — lists to which the face is attached;
- “Save” button — button for saving changes.

If you need to go back to the page with face details during editing, press the Esc key on your keyboard.

The form is titled "Information" and contains three main sections. The first section is a large, empty rectangular box with rounded corners and a small pencil icon in the bottom right corner. The second section is labeled "External ID" and contains a single-line text input field. The third section is labeled "Lists" and contains a multi-select dropdown menu. The dropdown menu has a light gray background and contains one item, "VisionLabs Team", which is highlighted with a darker gray background. To the right of the item is a small "x" icon. To the right of the dropdown is a small "x" icon and a small downward arrow icon. Below the "Lists" section is a blue button with the text "Save".

Figure 18: For for editing user data

Click the “Delete face” button to delete the face along with its data. Confirm the action in the pop-up window—click the “Delete” button or cancel the action using the “Cancel” button (Esc key on the keyboard). After successful removal, a corresponding notification will appear.

11 Lists section

The “Lists” section is intended for combining faces according to a certain criterion automatically or manually. For example, you can create a list with staff of the same unit and use it for a biometric identification policy through the list. This will allow you to compare the face detected in the frame with all the faces from the staff list and, if the comparison is successful, save the face to the specified list.

The “Lists” section allows you to create, delete, edit and view lists (Figure 19).

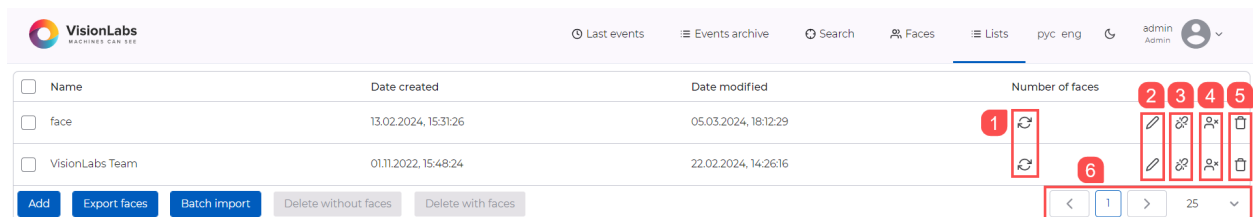


Figure 19: “Lists” section

“Lists” section contains the following elements:

- table of lists:
 - checkbox — selection of a list or lists;
 - “Name” — name of the list;
 - “Date created” — date and time when the list was created;
 - “Date modified” — date and time when the list was last modified;
 - — button for counting the number of faces in the list (1);
 - — button for editing the list name (2);
 - — button for detaching all faces from the selected list and deleting the selected list (3);
 - — button for deleting all faces in the selected list (4);
 - — button for deleting the list with faces (5);
- “Add” button — button for creating a list;
- “Export faces” button — button for [downloading data on faces with certain parameters](#);
- “Batch import” button – button for [uploading several photos with faces to the list at once](#);
- “Delete without faces” button — button for removing all faces from the list and deleting the list;
- “Delete with faves” button — button for deleting the list with faces in it;
- the number of lists displayed on the page is set by the switch in the lower right corner of the page. There can be 10, 25, 50 or 100 lists in total on one page (5).

In the table with lists, it is possible to sort by the columns “Name”, “Date created” and “Date modified”. To sort a column in the table, click on the column name.

The sorting arrow icon indicates the current sorting by one of the parameters: alphabetically, ascending, or descending.

11.1 List creation

To create a list, click on the “Add” button in the lower left corner of the page.

The general view of the form for creating a list is shown below (Figure 20).

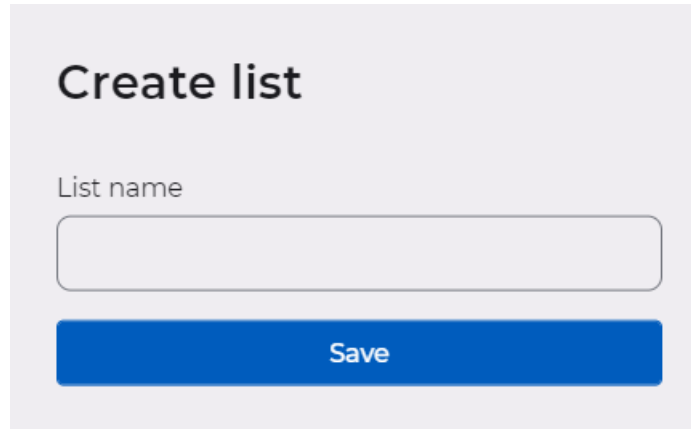
A form titled "Create list" with a light gray background. It contains a text input field labeled "List name" and a blue "Save" button below it.

Figure 20: Form for creating a list

Enter a name for the list and click on the “Save” button. A message about the successful list creation will appear on the screen as well as the new list will appear in the table of lists.

11.2 Adding faces to the list

To add a face to the list, click on the line with the name of the list to which you want to add the face. The form for editing the list will open (Figure 21).

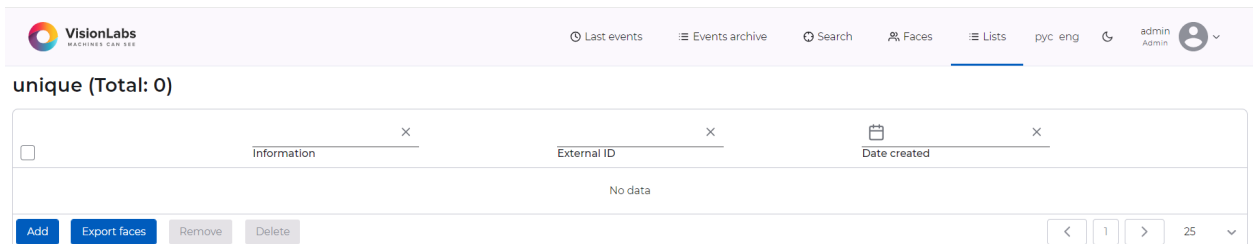
A screenshot of the VisionLabs interface. The top navigation bar includes the VisionLabs logo, "Last events", "Events archive", "Search", "Faces", "Lists" (active), "pyc eng", and a user profile "admin Admin". Below the navigation bar, the text "unique (Total: 0)" is displayed. A table with three columns: "Information", "External ID", and "Date created" is shown. The table is empty, with "No data" centered below the headers. At the bottom of the table, there are buttons: "Add", "Export faces", "Remove", and "Delete". On the right side of the table, there are pagination controls: "<", "1", ">", "25", and a dropdown arrow.

Figure 21: Empty form for editing the list

The number of faces in this list is displayed next to the list name. To add a face to the list, click on the “Add” button. A form for adding a face will open (Figure 22).

Face adding

Click or drag'n'drop the file

① You can upload a photo with one or more faces. If there is more than one face in the photo, then select the face to add. If you want to add more than one face, use batch import in the "Tasks" section

Information

External ID

Lists

darkside x

Check photo image quality for compliance with the ISO/IEC 19794-5:2011 standard

Save

Figure 22: Form for adding a face

Enter the required information:

- Field for uploading a photo of the person—avatar (required to be filled out). There may be one face or several ones in the photo. If there is more than one face in the photo, then after uploading you have to select which face to be added in the list/lists—the selected face will be highlighted with a green frame. You can add more than one person via [batch import](#);
- “Information”—information about the person. For example, the position of the employee whose face you are adding;
- “External ID”—external identifier of the face. If you need to add a face to an existing face card, copy the External ID from the “[Face details](#)” page and paste it into the field. In this case, several faces will be assigned to one external ID. If you need to create a face with a unique external ID, enter your own identifier in the field as a set of letters and/or numbers;
- “Lists”—the name of the list to which the face will be added (multiple lists can be selected);
- “Check photo image quality for compliance with the ISO/IEC 19794-5:2011 standard”—if enabled, the photo will be added to the list only after passing the ISO/IEC 19794-5:2011 verification.
- —button for resetting the uploaded photo image.

Image file requirements:

- *.jpeg, *.png or *.bmp format;

- image size no more than 15 MB and no more than 3840x2160 pixels;
- image may contain one or more persons;
- image must have person's face.

Fill in the fields and click on the “Save” button. A message about the successful face adding will appear on the screen.

The form for list editing allows to search for faces by user data, external ID or creation date in the line for quick search.

The added faces will be displayed in the form for list editing (Figure 23).

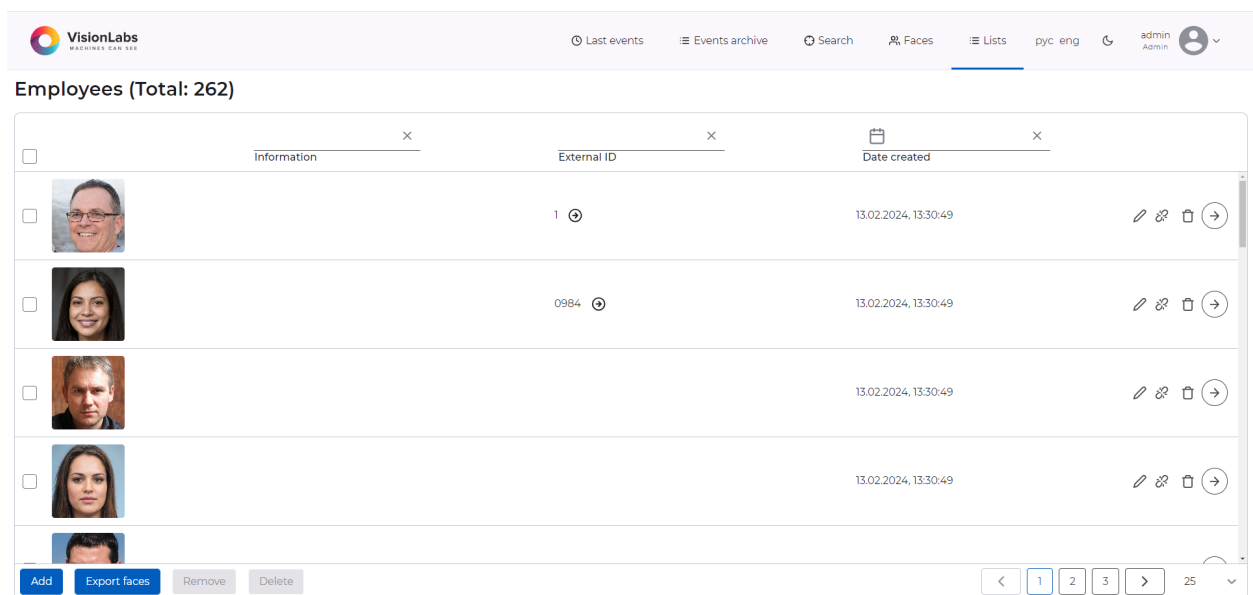



Figure 23: Form for list editing


To export faces according to the specified parameters, click the “Export faces” button: [fill in the fields](#), click “Save”, then go to the “Tasks” section and download the results.

Sort the table with faces by the columns “User data”, “External ID” and “Date created”, clicking on the column name. The sorting arrow icon $\uparrow \downarrow$ indicates the current sorting by one of the parameters: alphabetically, ascending, or descending.

The number of faces displayed on the page is set by the switch in the lower right corner of the page. There can be 10, 25, 50 or 100 faces in total on one page.

To edit a face in the list, click on the  button in the line with that face.

To detach a face from the list, click on the  button in the line with that face.

To delete a face from the list, click on the  button in the line with that face. To delete multiple faces from the list, select those faces and click on the “Delete” button. In the pop-up window (Figure 24), confirm

the action—click on the “Delete” button or cancel the action by clicking on the “Cancel” button. Once a face or faces were successfully deleted from the list, a corresponding notification appears.

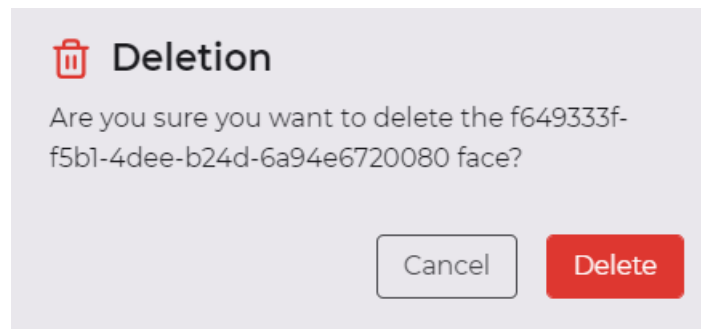




Figure 24: Confirmation of removing a face from the list

You can also delete more than one faces via [creating task for deleting faces from the list](#);

To go to [face details](#), click on the  button in the line with the face on the list editing page.

11.3 List editing

Editing the name of the list is performed by clicking on the  button in the line ([Figure 19](#)). The general view of the form for editing the list name is shown below ([Figure 25](#)).

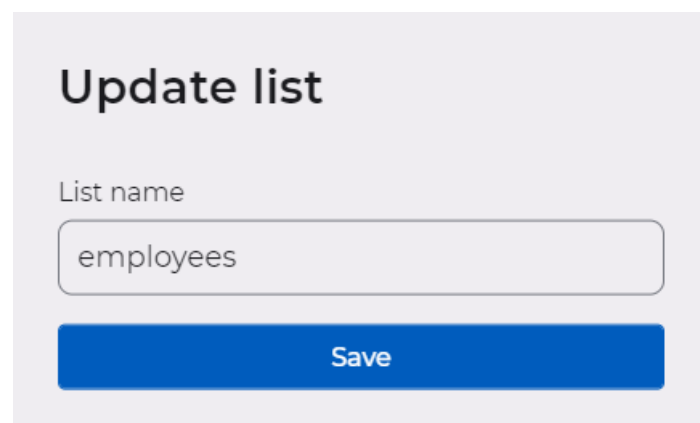




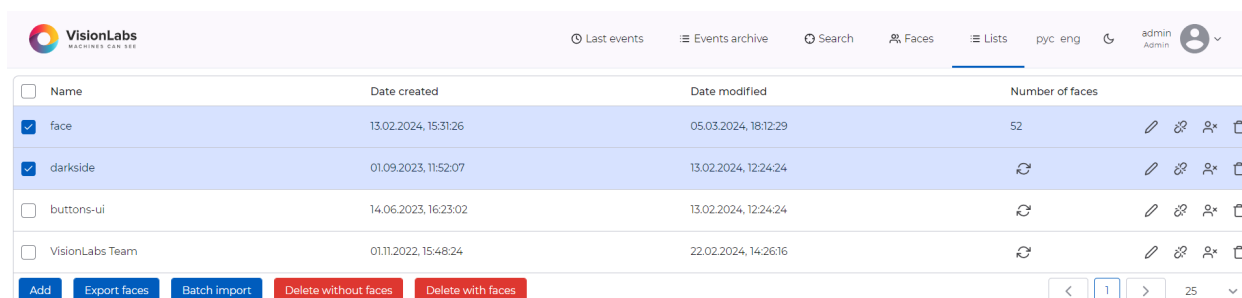
Figure 25: Form for editing the list name

Change the name of the list and click on the “Save” button. A notification about successful list editing appears.

11.4 List deleting

Deleting the list with faces is performed by clicking on the  button ([Figure 19](#)).

To delete multiple lists, select those lists. Then click on the “Delete with faces” button, if you need to delete both the list and the faces in it, or click the “Delete without faces” button if you want to delete only the list. To detach all faces from the selected lists and delete the lists, check the boxes for the names of these lists, and click the  button (Figure 26).



<input type="checkbox"/>	Name	Date created	Date modified	Number of faces	
<input checked="" type="checkbox"/>	face	13.02.2024, 15:31:26	05.03.2024, 18:12:29	52	
<input checked="" type="checkbox"/>	darkside	01.09.2023, 11:52:07	13.02.2024, 12:24:24		
<input type="checkbox"/>	buttons-ui	14.06.2023, 16:23:02	13.02.2024, 12:24:24		
<input type="checkbox"/>	VisionLabs Team	01.11.2022, 15:48:24	22.02.2024, 14:26:16		

Figure 26: Selecting lists to delete

In the pop-up window (Figure 27), confirm the action — click on the “Delete” button or cancel the action by clicking on the “Cancel” button. A corresponding notification appears after successful list deletion.

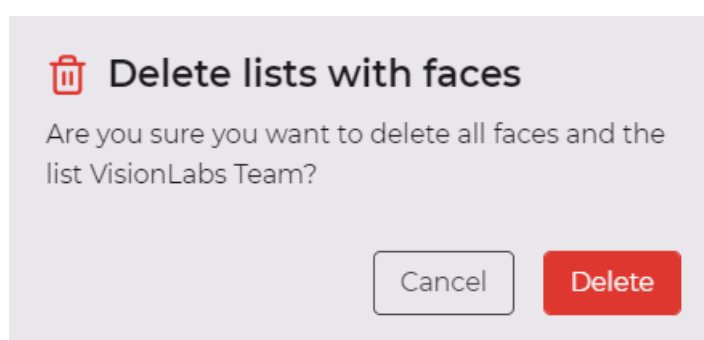


Figure 27: Confirmation of deletion of the selected lists

12 Handling policies section

The “Handling policies” section is intended for creating, deleting, viewing policies, and editing their parameters (Figure 28).

Handling policies (handlers) can be static or dynamic.

If the handler is static, its parameters are specified when creating the handler.

If the handler is dynamic, then you can change its parameters when generating an event. For this, create a `generate_events` request with a specific content type (see [API Reference Manual of the LUNA PLATFORM 5 documentation](#)). In a dynamic handler, administrator can allow users to specify parameters that change with each request. At the same time other technical parameters can be set separately and left hidden from the user. With a static handler, administrator would have to create a new handler for each new task.

Description	Handling Policy ID	Handler type
Bodies+face	ccca821d-2281-43e2-bc12-749c8245534b	Static
clementine	7a14d4fa-719c-42c3-aaf3-9774c12792ed	Dynamic
VLteam	8c8b8b0a-02ad-4f43-ad28-32185377cd14	Static

[Add static](#) [Add dynamic](#)

< 1 > 25

Figure 28: “Handling policies” section

“Handling policies” section contains the following elements:

- table of policies:
 - “Description”—policy name;
 - “Handling policy ID”—policy identifier;
 - “Handler type”—static or dynamic policy;
- —button for editing policy parameters (1);
- —button for deleting the policy (2);
- “Add static” button—button for creating a static handling policy;
- “Add dynamic button—button for creating a dynamic handling policy;
- the number of policies displayed on the page is set by the switch in the lower right corner of the page. There can be 10, 25, 50 or 100 policies in total on one page (3).

12.1 Policy creation

12.1.1 Static policy creation

To create a static policy, click on the “Add static” button (Figure 28). A form will open to select how to create the static policy (Figure 29):

- preconfigured typical policy templates (policies 1–6);
- step by step custom policy (“Other”).

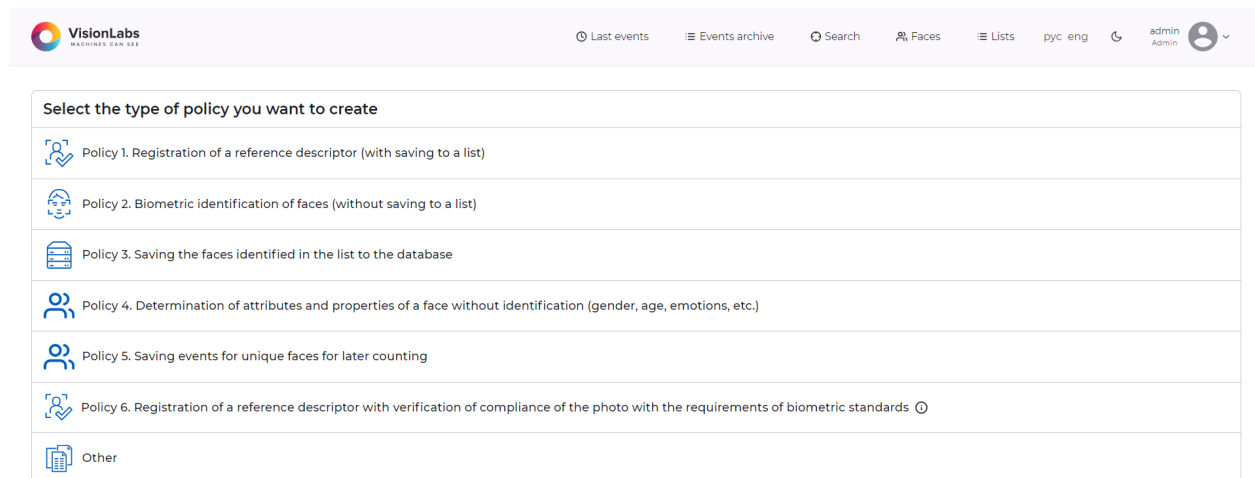


Figure 29: Selecting the template of static policy

To quickly create simple static policies, use one of the typical policy templates.

Six standard templates are available:

- “Policy 1. Registration of a reference descriptor (with saving to a list)” —allows user to detect a face on the frame, check Liveness, and save the face to a specified list;
- “Policy 2. Biometric identification of faces (without saving to a list)” —allows user to detect all faces in the frame and compare them with all faces in the specified list;
- “Policy 3. Saving the faces identified in the list to the database” —allows user to detect all faces on the frame, check Liveness, compare detected faces with all faces in the specified list, and if the comparison is successful, save the face to the specified list;
- “Policy 4. Determination of attributes and properties of a face without identification (gender, age, emotions, etc.)” —allows user to detect all faces in the frame, perform all possible checks, and save the event;
- “Policy 5. Saving events for unique faces for later counting” —allows user to detect all faces in the frame, check Liveness, compare the detected faces with all faces in the list of unique faces, and if this face is not in the list, save the face to this list of unique faces;
- “Policy 6. Registration of a reference descriptor with verification of compliance of the photo with the requirements of biometric standards” —allows you to save the reference descriptor in a specific list only for those photos that have been verified in accordance with the biometric standards.

The following checks are missing in the beta version:

- it is not allowed to use retouching and image editing;

- image cropping is allowed;
- compression code: JPEG (0 x 00), PNG (0 x 03).

When user clicks on a line with a standard template (policies 1–6), a window opens for entering the main parameters of a preconfigured policy (Figure 30).

The "Registration of a reference descriptor (with saving to a list)" policy allows you to detect a face in the frame, check Liveness and save the face to a specified list.

Policy name

List to save the descriptor

Select... | v

Create

Figure 30: Form for entering basic parameters and creating a preconfigured static policy (policy 1)

Fill in all the required parameters and click on the “Create” button. A window will open with a message about the successful creation of the policy (Figure 31).

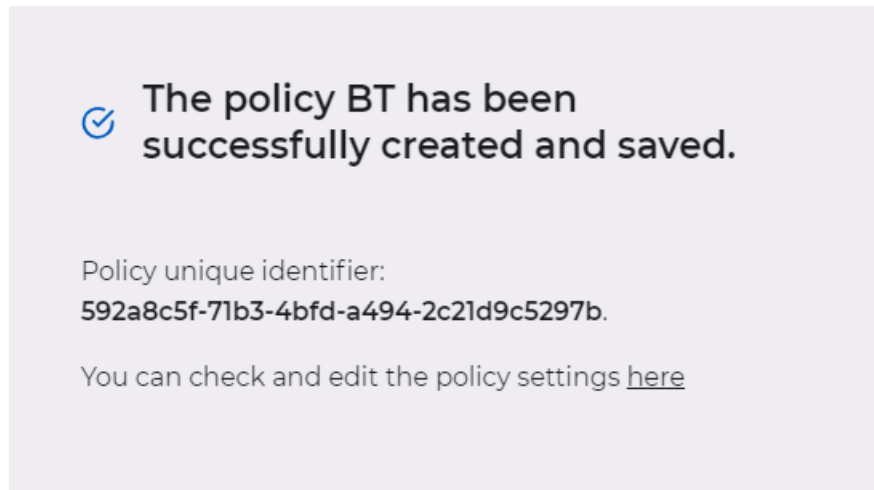


Figure 31: Message about the successful creation of the “Registration of a reference BT” static policy (policy 1)

Click anywhere outside the successful static policy generation message to navigate to the “Select the type of policy you want to create” form (Figure 29).

To create a unique static policy that requires detailed parameter settings, use the step-by-step custom policy.

When user clicks on the line with a step-by-step custom policy (“Other”), a form for step-by-step static policy creation will open (Figure 32).

Create policy

A horizontal progress bar at the top shows 12 steps, with Step 1 selected (filled blue circle) and Steps 2 through 12 as empty circles. Below the progress bar is a form box. Inside the box, the text "Enter a unique policy name" is at the top. Below it is a label "Policy name" followed by a text input field. At the bottom of the form box are two buttons: "Back" and "Next".

Figure 32: “Create policy” form

Fill in all the required parameters and click on the “Next” button to proceed to the next step. After setting all the parameters, a window with a message about the successful creation of the policy will open.

12.1.2 Dynamic policy creation

To create a dynamic policy, click on the “Add dynamic” button on the page with the list of policies (Figure 28). In the opened window, enter the name of the new dynamic policy and click “Save” (Figure 33). If you

need to go back to the page with the list of handlers during creating a handler, press the Esc key on your keyboard.

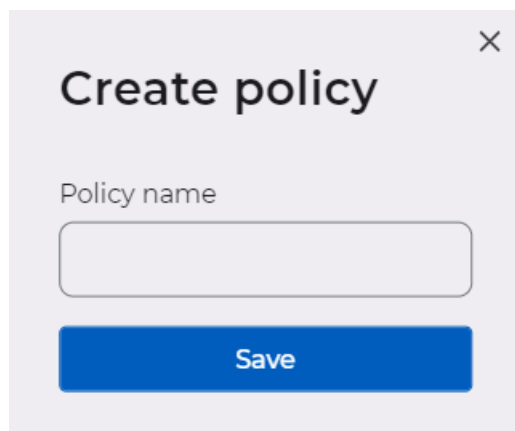
A modal form titled "Create policy" with a close button (X) in the top right corner. It contains a text input field labeled "Policy name" and a blue "Save" button at the bottom.

Figure 33: Form for creating dynamic policy

12.2 Policy editing

12.2.1 Static policy editing

The general view of the static policy editing form is shown below (Figure 34).

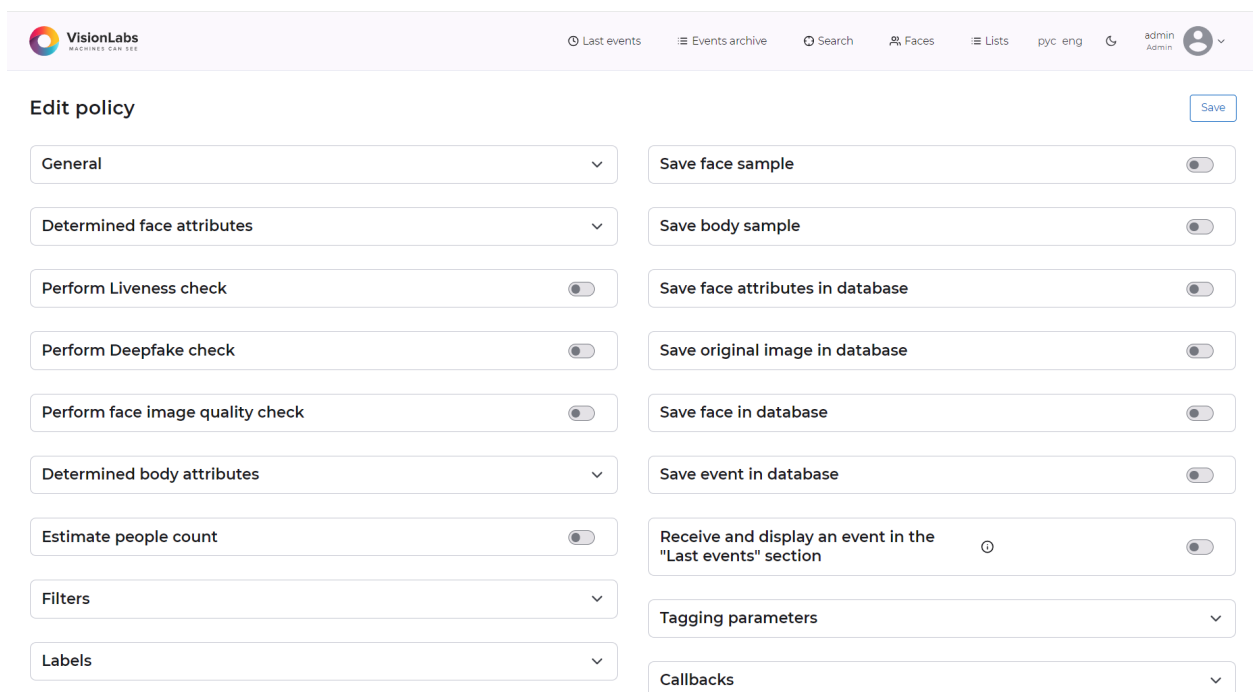
A screenshot of the "Edit policy" form in the VisionLabs interface. The form is divided into two columns of settings. The left column contains dropdown menus for "General", "Determined face attributes", "Determined body attributes", "Filters", and "Labels". The right column contains toggle switches for "Save face sample", "Save body sample", "Save face attributes in database", "Save original image in database", "Save face in database", "Save event in database", and "Receive and display an event in the 'Last events' section". There are also dropdown menus for "Tagging parameters" and "Callbacks". A "Save" button is located in the top right corner of the form area. The top navigation bar includes the VisionLabs logo, "MACHINES CAN SEE", and various menu items like "Last events", "Events archive", "Search", "Faces", "Lists", "pyc eng", and a user profile for "admin Admin".

Figure 34: Static policy editing form

Description of the parameters of the static policy editing form is given below (Table 8-18).

Table 8. Parameters of the static policy editing form: general parameters and determined attributes

Parameter	Description	Default value
General		
Policy name	Specifies the name that will be displayed in the list of other policies. Required field	-
Determined attributes		
Detect face	Face detection in photo images When enabled, the “Face descriptor” and “Basic attributes (gender, age)” options become available	Off
Face descriptor	Image processing and creation of a data set in a closed, binary format using a special extraction algorithm. When the attribute is enabled, the options “Labels”, “Save descriptor in database”, “Save face to database”, “Attach face to list”, “Save event in cases where a face was found”, and “Display event in cases where a face was found” become available	On
Basic attributes (gender, age)	Assessment of the basic attributes of a person in the image. On When the attribute is enabled, the “Save if” and “Call only in cases” options become available	
Head position	Assessment of the head position (angles of inclination and rotation of the head left/right and up/down). When the attribute is enabled, the options “Discard face images with head rotation/tilt angle above” become available	On
Emotion	Determination of the dominant emotion (anger, disgust, fear, happiness, neutral, sadness, surprise)	Off
Mask	Assessment of the presence or absence of a medical mask or mouth covering. When the attribute is enabled, the filter “Process images only if detected” becomes available	Off
Image quality	Determination of quality (the presence of overexposure, blurring, underexposure, the presence of glare on the face, uneven lighting)	On
Eye direction	Assessment of the direction of a person’s gaze in the image	Off

Parameter	Description	Default value
Presence of glasses	Assessment of the presence of glasses and their type (glasses, sunglasses, no glasses)	Off
Eye status	Evaluating whether a person's eyes are open or closed in the image, as well as determining key points of the irises of the eyes	Off
Mouth status	Closed or occluded mouth detection and smile detection	Off
Position of 68 feature points of the face	Determination of 68 feature points of the face (requires additional time for calculations, it is used to determine emotions, eye direction or Liveness check)	Off
EXIF metadata	Defining image metadata	Off

Table 9. Parameters of the static policy editing form: Liveness check

Parameter	Description	Default value
Perform Liveness check	Enabling Liveness check	Off
Liveness threshold	Ignoring images with a Liveness score below the specified value. Possible values: from 0 to 1. Available only if the "Perform Liveness check" attribute is enabled	0,5

Table 10. Parameters of the static policy editing form: Deepfake check

Parameter	Description	Default value
Perform Deepfake check ²	Determination of digital manipulations for replace one person's likeness convincingly with that of another	Off
Deepfake threshold	Ignoring images with a Deepfake score below the specified value. Possible values: from 0 to 1, where 1 is a real person, 0 - fake	0.5

Parameter	Description	Default value
Use specified Deepfake mode	<p>Possible values:</p> <ul style="list-style-type: none"> • Mode 1; • Mode 2; <p>The choice of mode determines what set of neural networks perform photo processing for deepfake checking.</p> <p>For more information about the neural networks used in deepfake verification modes, contact VisionLabs technical support.</p>	Mode 2

Table 11. Parameters of the static policy editing form: image quality check

Parameter	Description	Default value
Perform face image quality check	Enabling quality check	
Image format	<p>Must be saved in .jpeg or .png format (correct verification).</p> <p>Possible values:</p> <ul style="list-style-type: none"> • JPEG; • JPEG2000; • PNG; 	JPEG; PNG JPEG2000;
Image size in Mb	<p>This assessment determines the size of the image in bytes. It also compares the estimated value with the specified threshold</p>	5120: 2097152
Image width in pixels	<p>This assessment determines the width of the image in pixels. It also compares the estimated values with thresholds (according to ISO or custom thresholds)</p>	180:1920
Image height in pixels	<p>This assessment determines the width of the image in pixels. It also compares the estimated values with thresholds (according to ISO or custom thresholds)</p>	180:1080

²Deepfake license required. Deepfake check is not performed on normalized (centered and cropped) images after face detection.

Parameter	Description	Default value
Image aspect ratio	This assessment determines the proportional ratio of the image width to height. It also compares the estimated value with the specified threshold	0.74:0,8
Degree of illumination uniformity	It is possible to evaluate the uniformity of illumination according to the requirements specified in the ICAO standard. It also compares the estimated value with the specified threshold (correct verification)	0.3:1
Degree of image specularity	Bright light artifacts and flash reflection from glasses are not allowed (indirect verification)	0.3:1
Degree of image blureness	The pixel colors of front-type photo images must be represented in the 24-bit RGB color space, in which each pixel has 8 bits for each color component: red, green, and blue (indirect verification)	0.61:1
Degree of absence of underexposure in the photo	An underexposure assessment is available. It also compares the estimated value with the specified threshold	0.5:1
Degree of absence of overexposure in the photo	Too much exposure assessment is available. It also compares the estimated value with the specified threshold	0.57:1
Face illumination uniformity	It is possible to evaluate the uniformity of illumination according to requirements specified in ICAO standard. The face should be evenly lit so that there are no shadows or glare on the face image. It also compares the estimated value with the specified threshold (correct verification)	0.5:1
Skin tone dynamic range	This assessment is a determination of the ratio of the brightness of the lightest and darkest areas of the face according to the requirements specified in the ICAO standard. It also compares the estimated value with the specified threshold (correct verification)	0.5:1

Parameter	Description	Default value
Degree of uniformity of the background	<p>This assessment determines the degree of background uniformity from 0 to 1, where:</p> <ul style="list-style-type: none"> • 0 — non-uniform background; • 1 — uniform background; 	0.5:1
Degree of lightness of the background	<p>This rating determines the degree of background brightness from 0 to 1, where:</p> <ul style="list-style-type: none"> • [0...0.1]—black background; • [0.1...0.3]—dark background; • [0.3...0.97]—light background; • [0.97...1]—white background; 	0.5:1
Presence of radial distortion (Fisheye effect)	<p>Possible values:</p> <ul style="list-style-type: none"> • No — the Fisheye effect is not presented in the image; • Yes — the Fisheye effect is presented in the image 	No
Type of image color based on face	<p>Possible values:</p> <p>Color;</p> <p>Grayscale;</p> <p>Infrared—near-infrared</p>	Color
Shoulders position	<p>This assessment determines the position of the shoulders if they are in the frame:</p> <p>Parallel</p> <p>Non-parallel</p> <p>Hidden</p>	Parallel
Face width in pixels	<p>This assessment determines the width of the face in pixels. It also compares the estimated value with the specified threshold</p>	180:1920
Face height in pixels	<p>This assessment determines the height of the face in pixels. It also compares the estimated value with the specified threshold</p>	180:1080
Face offset from the top edge of the image in pixels	<p>The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification)</p>	20:50

Parameter	Description	Default value
Face offset from the bottom edge of the image in pixels	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification)	20:50
Face offset from the left edge of the image in pixels	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification)	20:50
Face offset from the right edge of the image in pixels	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification)	20:50
Head yaw angle	Head rotation should be no more than 5° from the frontal position (correct verification)	-5:5
Head pitch angle	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification). The tilt of the head should be no more than 5° from the frontal position (correct verification)	-5:5
Head roll angle	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification). The inclination of the head should be no more than 8° from the frontal position (correct verification)	-8:8
Gaze yaw angle	This assessment determines the direction of gaze (yaw)	-5:5
Gaze pitch angle	This assessment determines the direction of gaze (pitch)	-5:5
Probability of smile presence	The facial expression must be neutral (indirect verification).	0:0.5
Probability of mouth occlusion	It is not allowed to cover the face with hair or foreign objects along the entire width, from the eyebrows to the lower lip (indirect verification)	0:0.5

Parameter	Description	Default value
Probability of open mouth presence	This assessment determines the state of the mouth The mouth is closed (correct verification)	0:0.5
Smile properties	This assessment determines the state of the mouth The facial expression must be neutral (indirect verification). Possible values: None—smile is not found; Smile with closed mouth; Smile with teeth	None
Glasses	Sun glasses are not allowed (correct verification). Possible values: Sunglasses; Eyeglasses; No glasses	No glasses
Left eye status	Both eyes are open normally for the respective subject (considering behavioral factors and/or medical conditions, correct verification). It is not allowed to cover the face with hair or foreign objects along the entire width, from the eyebrows to the lower lip (indirect verification) Possible values: Open; Closed; Occluded	Open
Right eye status	Both eyes are open normally for the respective subject (considering behavioral factors and/or medical conditions, correct verification). It is not allowed to cover the face with hair or foreign objects along the entire width, from the eyebrows to the lower lip (indirect verification). Possible values: Open; Closed; Occluded	Open
Red eyes effect presence	Possible values: No—there is no red-eye effect; Yes—there is a red-eye effect	No

Parameter	Description	Default value
Distance between eye centers in pixels	<p>The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification)</p> <p>The distance between the centers of the eyes must be at least 120 pixels or at least 45 pixels in accordance with paragraph 12 of the procedure for placing and updating biometric personal data in a unified biometric system (correct verification)</p>	90:100
Horizontal head size relative to image size	<p>This assessment determines the horizontal head size relative to the image size.</p> <p>It also compares the estimated values with thresholds (according to ISO or custom thresholds)</p>	0.5:75
Vertical head size relative to image size	<p>This assessment determines the vertical head size relative to the image size.</p> <p>It also compares the estimated values with thresholds (according to ISO or custom thresholds)</p>	0.6:0.9
The position of the center point of the face horizontally relative to the image	<p>This assessment determines the horizontal position of the center point relative to the image.</p> <p>It also compares the estimated values with thresholds (according to ISO or custom thresholds)</p>	0.45:0.55
The position of the center point of the face vertically relative to the image	<p>This assessment determines the vertical position of the center point relative to the image.</p> <p>It also compares the estimated values with thresholds (according to ISO or custom thresholds)</p>	0.3:0.5
Eyebrows state	<p>The facial expression must be neutral (indirect verification).</p> <p>Possible values:</p> <p>Neutral;</p> <p>Raised;</p> <p>Squinting;</p> <p>Frowning</p>	Neutral

Parameter	Description	Default value
Headwear type	Possible values: None; Baseball_cap; Beanie; Peaked_cap; Shawl; Hat with earflaps; Helmet; Hood; Hat; Other	None
Presence of natural lighting	The face should be evenly lit so that there are no shadows or glare on the face image (correct verification) Possible values: No—the lighting is unnatural; Yes—the lighting is natural	Yes

Table 12. Parameters of the static policy editing form: face occlusion check

Parameter	Description	Default value
Perform face occlusion check	Detect presence of occlusion areas of the face	Off
Reject face images with occlusion of the following parts of the face	Select which areas of the face should not be covered in frames from the video stream for the system to accept the image: face, forehead, eyes, nose, mouth, lower part of the face	
Acceptable hair occlusion	Set the degree of acceptable face occlusion with hair from 0 to 1	0.15
Acceptable Face occlusion	Set the degree of acceptable face occlusion from 0 to 1	0.07
Acceptable forehead occlusion	Set the degree of acceptable forehead occlusion from 0 to 1	0.2
Acceptable eye occlusion	Set the degree of acceptable eye occlusion from 0 to 1	0.15

Parameter	Description	Default value
Acceptable nose occlusion	Set the degree of acceptable nose occlusion from 0 to 1	0.2
Acceptable mouth occlusion	Set the degree of acceptable mouth occlusion from 0 to 1	0.15
Acceptable lower Face occlusion	Set the degree of acceptable lower face occlusion from 0 to 1	0.2

Table 13. Parameters of the static policy editing form: determined body attributes

Parameter	**Description* *	Default value
Detect body	Face detection in photo images	Off
Body descriptor	Image processing and creation of a data set in a closed, binary format using a special extraction algorithm. When the attribute is enabled, the “Labels” option becomes available	On
Body basic attributes	Gender and age estimation based on body silhouette	
Upper body attributes based on body silhouette	Estimation of headwear, upper body clothing color, and sleeve length	
Lower body attributes based on body silhouette	Estimation of lower body clothing type and shoe color	
Accessories	Estimation of the presence or absence of a backpack	

Table 14. Parameters of the static policy editing form: estimation of people count

Parameter	Description	Default value
Estimate people count	Counts the number of people in the frame	Off
Determine the coordinates of people's bounding box	Getting X and Y coordinates of people	Enabled

Table 15. Parameters of the static policy editing form: filters

Parameter	Description	Default value
Filters		
Discard images with multiple faces	<p>Determination of images containing multiple faces.</p> <p>Possible values:</p> <p>Select only one face of the best quality—process an image containing several faces, but detect only a face of the best quality;</p> <p>Do not discard—detect all faces in the image;</p> <p>Discard—ignore an image containing multiple faces</p>	Do not discard
Reject descriptors with quality below the specified threshold	<p>Ignoring low quality images.</p> <p>To use the filter, you must enable the determination of the descriptor in the determined attributes</p>	0,5
Process images only if detected	<p>Possible values:</p> <p>Missing—the event is created when there is no overlap of the face by the medical mask (no mask);</p> <p>Occluded—the event is created in case of detection of face overlapping;</p> <p>Medical mask—the event is created when a medical mask is detected on the face.</p> <p>Several filter values can be specified.</p> <p>Available only when defining the “Medical mask” attribute</p>	-
Discard face images with head rotation angle (to the left or right, yaw) above	<p>Ignoring images in which the person’s head is turned to the left or right at a too large angle —no information will be extracted when detecting a face and evaluating the angle of head rotation.</p> <p>Available only if the “Head position” attribute is enabled</p>	30
Discard face images with head tilt angle (to the left or right, roll) above	<p>Ignoring images in which a person’s head is tilted to the left or right at a too large angle—no information will be extracted during face detection and head tilt evaluating.</p> <p>Available only if the “Head position” attribute is enabled</p>	40
Discard face images with head tilt angle (up or down, pitch) above	<p>Ignoring images in which the person’s head is tilted up or down at a too large angle —no information will be extracted during face detection and head tilt evaluating.</p> <p>Available only if the “Head position” attribute is enabled</p>	30

Parameter	Description	Default value
Process images of faces only with Liveness states	Processing images with Liveness status: Spoon—the absence of a “live” person in the frame; Real—the presence of a “live” person in the frame; Unknown. Available only if the “Perform Liveness check” attribute is enabled	-
Process images of faces only with Deepfake states	Processing images with Deepfake status: Fake—the absence of a “live” person in the frame; Real—the presence of a “live” person in the frame. Available only if the Perform Deepfake check” attribute is enabled	-
Filter images based on face image quality assessment results	Filter images according to the parameters set in the “Perform face image quality assessment” setting that comply with ISO/IEC 19794-5:2011 and ICAO Available only when the parameter “Perform face image quality assessment*” is enabled	Off

Table 16. Parameters of the static policy editing form: labels

Parameter	Description	Default value
Labels		
Label name	Specify the name that will be displayed in the policy settings, including the parameters for creating and saving an image/descriptor/event/face, adding a tag	-
Identify among	Searching for a detected person for identification among those created in the database: <ul style="list-style-type: none"> • Faces; • Events 	Faces
Search for a descriptor	Among the events created in the database, search for a descriptor: <ul style="list-style-type: none"> • Faces; • Bodies Only for “Identify among events”	Faces

Parameter	Description	Default value
Perform search by	<ul style="list-style-type: none"> • “List”—specifies a list for identifying a person according to a specific control list (only for “Identify among faces”); • “Source”—specifies event source name (only for “Identify among events”); • “Comma-separated Face IDs”—specifies the values of identifiers of faces in LP5 in UUID format for performing an accurate search; • “Comma-separated event IDs”—specifies the values of the event identifiers in LUNA PLATFORM 5 in UUID format for performing an accurate search (only for “Identify among events”); • “User data”—specifies person’s data (up to 128 characters); • “Comma-separated event external IDs”—specifies the values of third-party external identifiers (only for “Identify among events”); • “Comma-separated face external IDs”—specifies the values of third-party external identifiers (only for “Identify among faces”); • “Comma-separated track IDs”—specifies the values of the track identifiers in LUNA PLATFORM 5 in the UUID format for performing an accurate search (only for “Identify among events”); • “Age category”—indicates the lower and/or upper limits of the age of the person (only for “Identify among events”); 	-

Parameter	Description	Default value
	<ul style="list-style-type: none"> • “Gender”—indicates female or male gender (only for “Identify among events”); • “Emotions”—specifies anger, disgust, fear, happiness, neutral, sadness, surprise, it is possible to specify several values (only for “Identify among events”); • “Medical mask”—specifies the detection of the presence/absence of a medical mask, mouth overlap: medical mask, no intersection, mouth is covered, it is possible to specify several values (only for “Identify among events”); • “Comma-separated tags”—specifies a tag or tags (only for “Identify among events”); • “Similarity”—a value from 0 to 1 is specified (only for “Identify among events”); • “Handling policy”—specifies policy name, it is possible to specify several values (only for “Identify among events”); • “Comma-separated track IDs”— specifies IDs of tracks • “Date from”—specifies the period of face creation in LUNA PLATFORM 5; • “Date to”—specifies the period of face creation in LUNA PLATFORM 5. • “Age category by body”—specifies the age range (only for “Identify among events”); • “Gender by body”—specifies the gender (only for “Identify among events”); • “Upper body colors”—specifies top clothing color (only for “Identify among events”); 	

Parameter	Description	Default value
	<ul style="list-style-type: none"> • “Sleeve”—specifies sleeve length (only for “Identify among events”); • “Headwear”—specifies headdress (only for “Identify among events”); • “Headwear color”—specifies headdress color (only for “Identify among events”); • “Backpack”—specifies backpack presence (only for “Identify among events”); • “Lower body type”— specifies bottom clothing type (only for “Identify among events”); • “Lower body colors”— specifies bottom clothing color (only for “Identify among events”); • “Shoes color”— specifies shoe color (only for “Identify among events”); <p>Each filled field imposes a search restriction—the comparison will be successful only if all the search conditions are met</p>	
Location (only for “Identify among events”)	“District”; “Area”; “City”; “Street”; “House number”; “Longitude (-180...180)”; “Accuracy (0...90)”; “Latitude (-90...90)”; “Accuracy (0...90)”	-
Filter search result by	“Gender”—specifies the gender for which the face comparison is performed; “Age category”—specifies the lower and/or upper limits of the age of the face is indicated for comparison; “Liveness”—specifies Liveness state (Spoof, Real or Unknown)	-
Additional search parameters	“The maximum number of similar ones in the search results”; “Accuracy threshold”—a value from 0 to 1	-

Table 17. Parameters of the policy editing form: save parameters

Parameter	Description	Default value
Save parameters		
Save face sample	<p>If enabled, images are saved unconditionally in the database.</p> <p>For selective saving, you must specify: “Save if”:</p> <ul style="list-style-type: none"> • “Gender”—the gender of the face in the image matches the specified; • “Age category”—the age of the face in the image matches the specified limits; • “Liveness”—specifies Liveness state (Spoof, Real or Unknown); • “Deepfake”—specifies Deepfake check (Fake or Real); <p>— “Save face image in cases where a face was found”:</p> <ul style="list-style-type: none"> • “Labels”—the list of labels, specifies the names of labels (the image is saved when the settings of labels are met); • “With precision”—the lower and/or upper limit of the satisfaction of the comparison result with the parameters specified in the comparison (from 0 to 1) <p>— Face sample storage time—specifies the lifetime of objects, after which the samples will be deleted. Possible values:</p> <ul style="list-style-type: none"> • “Not selected”—the default value specified for the entire storage directory of face samples will be applied (more details see in the LUNA PLATFORM 5 documentation) • “Infinite”—allows to store objects infinitely; • Storage days—1, 2, 3, 4, 5, 6, 7, 14, 30, 60, 90, 180, 365; 	On

Parameter	Description	Default value
Save body sample	<p>Saving the event without creating a face in the LUNA PLATFORM 5 database. If enabled, images are saved unconditionally in the database.</p> <p>For selective saving, you must specify: “Save if”:</p> <ul style="list-style-type: none"> • “Gender”—the gender of the face in the image matches the specified; • “Age category”—the age of the face in the image matches the specified limits; • “Liveness”—specifies Liveness state (Spoof, Real or Unknown); • “Deepfake”—specifies Deepfake check (Fake or Real); <p>— “Save body image in cases where a body was found”:</p> <ul style="list-style-type: none"> • “Labels”—the list of labels, specifies the names of labels (the image is saved when the settings of labels are met); • “With precision”—the lower and/or upper limit of the satisfaction of the comparison result with the parameters specified in the comparison (from 0 to 1) <p>— Body sample storage time—specifies the lifetime of objects, after which the samples will be deleted. Possible values:</p> <ul style="list-style-type: none"> • “Not selected”—the default value specified for the entire storage directory of body samples will be applied (more details see in the LUNA PLATFORM 5 documentation) • “Infinite”—allows to store objects infinitely; • Storage days—1, 2, 3, 4, 5, 6, 7, 14, 30, 60, 90, 180, 365; 	On
Save face attributes in database	<p>Saving face attributes in the LUNA PLATFORM 5 database. If enabled, the unconditional saving of face attributes in the database is performed.</p> <p>For selective saving, specify the parameters (for more information see description of “Save face sample” parameter).</p> <p>— “FaceAttributes storage time”—indicates the time in seconds after which the descriptor will be deleted from the database</p>	Off -

Parameter	Description	Default value
Save original image in database	<p>Saving the original image in the LUNA PLATFORM 5 database.</p> <p>For selective saving, specify the parameters (for more information see description of “Save face sample” parameter)</p> <p>— “Use external link as original image URL”</p> <p>if enabled, the link to the external image is stored in the address of the original image, thus avoiding image duplication in the database.</p> <p>If a biometric sample was sent in the request and it was stored in the Image Store, then the link to it will be indicated in the address of the original image.</p> <p>— Origin image storage time—specifies the lifetime of objects, after which the samples will be deleted. Possible values:</p> <ul style="list-style-type: none"> • “Not selected”—the default value specified for the entire storage directory of source images will be applied (more details see in the LUNA PLATFORM 5 documentation) • “Infinite”—allows to store objects infinitely; • Storage days—1, 2, 3, 4, 5, 6, 7, 14, 30, 60, 90, 180, 365; 	Off Off
Save face in database	<p>Saving the face detected in the image in the LUNA PLATFORM 5 database with the creation of a face in the database.</p> <p>Saving is possible only when the option “Save descriptor in database” is enabled.</p> <p>If enabled, the unconditional saving of the descriptor in the database is performed</p> <p>For selective saving, specify the parameters (for more information see description of “Save face sample” parameter)</p> <p>— “Attach face to list”—adds the saved face to the control list or lists in LUNA PLATFORM 5. Possible only if the option “Save descriptor in the database” is enabled.</p> <p>For selective saving, specify the parameters (for more information see description of “Save face sample” parameter)</p>	Off Off
Save event in database	<p>Saving the detection/identification event in the LUNA PLATFORM 5 database.</p> <p>If enabled, all events are stored unconditionally in the database.</p> <p>For selective saving, specify the parameters (for more information see description of “Save face sample” parameter)</p>	On

Parameter	Description	Default value
Receive and display an event in the “Last events” section	Displaying an event in the “Last events” section. For selective displaying of events, specify the parameters (for more information see description of “Save image in database” parameter)	On

Table 18. Parameters of the policy editing form: tagging parameters

Parameter	Description
Tagging parameters	
Tag name	Assigning a tag of the given name when conditions are met. In the absence of parameter specifications, the assignment is unconditional.
Save if	“Gender”—the gender of the face in the image matches the specified; “Age category”—the age of the face in the image matches the specified limits; “Liveness”—specifies Liveness state (Spoof, Real or Unknown); “Deepfake”—specifies Deepfake check (Fake or Real)
Add a tag for each case where a face was found	“Labels”—the list of labels, specifies the names of labels; “With precision”—the lower and/or upper limit of the satisfaction of the comparison result with the parameters specified in the comparison (from 0 to 1)


Table 19. Parameters of the policy editing form: callbacks

Callbacks allows you to send generated events (notifications) to the third-party system at the specified URL. A mechanism for notifications is based on the principles of HTTP webhooks. They provide asynchronous interaction between systems, allowing external services to react to the emergence of events.

Parameter	Description	Default value
Add callback		
Type	Protocol type when creating a notification	HTTP
URL	Address of the external system where the notification will be sent	-
Authorization type	<p>Selecting the type of authorization into an external system and setting up authorization data.</p> <p>The basic type of authorization requires specifying login and password to enter an external system</p>	Basic
Timeout (seconds)	Maximum time to wait for a request to complete	60
Request body format	Data interchange format: JSON or MessagePack	application/json
HTTP Headers	HTTP Request Headers	-
Call only in cases where	<p>Conditions for sending notification</p> <p>Activated when determination of basic attributes (gender, age) is enabled, see the Table 9</p> <p>— Gender:</p> <ul style="list-style-type: none"> • Female; • Male; <p>— Age category:</p> <ul style="list-style-type: none"> • below 18; • from 18 to 44; • from 45 to 60; • above 60; <p>Activated when Liveness check is enabled, see the Table 10</p> <p>— Liveness:</p> <ul style="list-style-type: none"> • Spoof; • Real; • Unknown; <p>Activated when Deepfake check is enabled, see the Table 11</p> <p>— Deepfake:</p> <ul style="list-style-type: none"> • Fake; • Real. 	

Parameter	Description	Default value
Call only in cases where a person or body has been found	<ul style="list-style-type: none"> “Labels”—the list of labels, specifies the names of labels (the image is saved when the settings of labels are met); “With precision”—the lower and/or upper limit of the satisfaction of the comparison result with the parameters specified in the comparison (from 0 to 1) 	

12.2.2 Adding a label

To create a label, click on  in policy editing form (Figure 35).

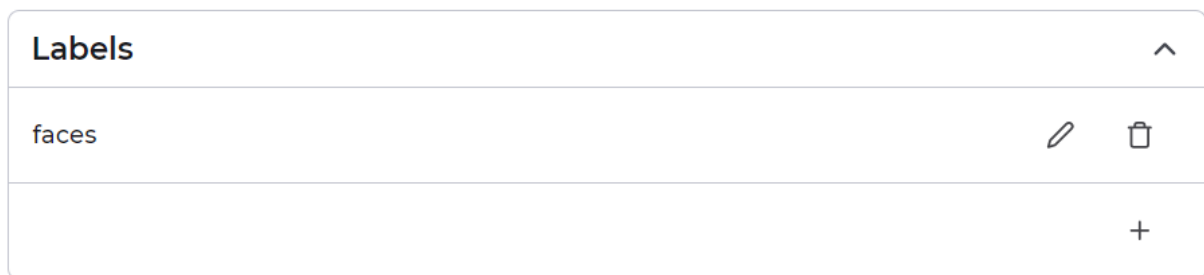


Figure 35: Labels

If you need to identify faces among other faces in the label, then select “Faces” for “Identify among” field in the window for the parameter adding (Figure 36). If you need to identify among events, select “Events” for “Identify among” field (Figure 37).

Add label

Label name

Identify among

Faces

Search for descriptor

Faces

Perform search by

List

Select... | v

Comma-separated Face IDs

ID

User data

Comma-separated face external IDs

ID

Date from

x

Date to

x

Filter search result by

Gender

 | v

Age category

 | v

Liveness

 | v

Additional search parameters

The maximum number of similar ones in the search results

Not specified

Accuracy threshold

Not specified

Add

Figure 36: Form for creating a label. Identify among faces

Add label

Label name

Identify among

Search for descriptor

Perform search by

Source <input type="text" value="Select..."/>	Comma-separated event IDs <input type="text" value="ID"/>	Age category by body <input type="text" value="Select..."/>
User data <input type="text"/>	внешние идентификаторы событий через запятую <input type="text" value="ID"/>	Gender by body <input type="text" value="Select..."/>
Age category <input type="text" value="Select..."/>	Comma-separated Face IDs <input type="text" value="ID"/>	Upper body colors <input type="text" value="Select..."/>
Gender <input type="text" value="Select..."/>	Similarity from <input type="text"/> : to <input type="text"/>	Sleeve <input type="text" value="Select..."/>
Emotions <input type="text" value="Select..."/>	Handling policies <input type="text" value="Select..."/>	Headwear <input type="text" value="Select..."/>
Medical mask <input type="text" value="Select..."/>	Comma-separated track IDs <input type="text" value="ID"/>	Headwear colors <input type="text" value="Select..."/>
Date from <input type="text" value="📅"/>	Comma-separated tags <input type="text"/>	Backpack <input type="text" value="Select..."/>
Date to <input type="text" value="📅"/>		Lower body colors <input type="text" value="Select..."/>
		Lower body type <input type="text" value="Select..."/>
		Shoes colors <input type="text" value="Select..."/>

Location

District <input type="text"/>	Area <input type="text"/>	
City <input type="text"/>	Street <input type="text"/>	House number <input type="text"/>
Longitude (-180 ... 180) <input type="text"/>	Latitude (-90 ... 90) <input type="text"/>	
Accuracy (0 ... 90) <input type="text"/>	Accuracy (0 ... 90) <input type="text"/>	

Filter search result by

<input type="text" value="Gender"/>	<input type="text" value="Age category"/>	<input type="text" value="Liveness"/>
-------------------------------------	---	---------------------------------------

Additional search parameters


The maximum number of similar ones in the search results <input type="text" value="Not specified"/>	Accuracy threshold <input type="text" value="Not specified"/>
--	--

Add

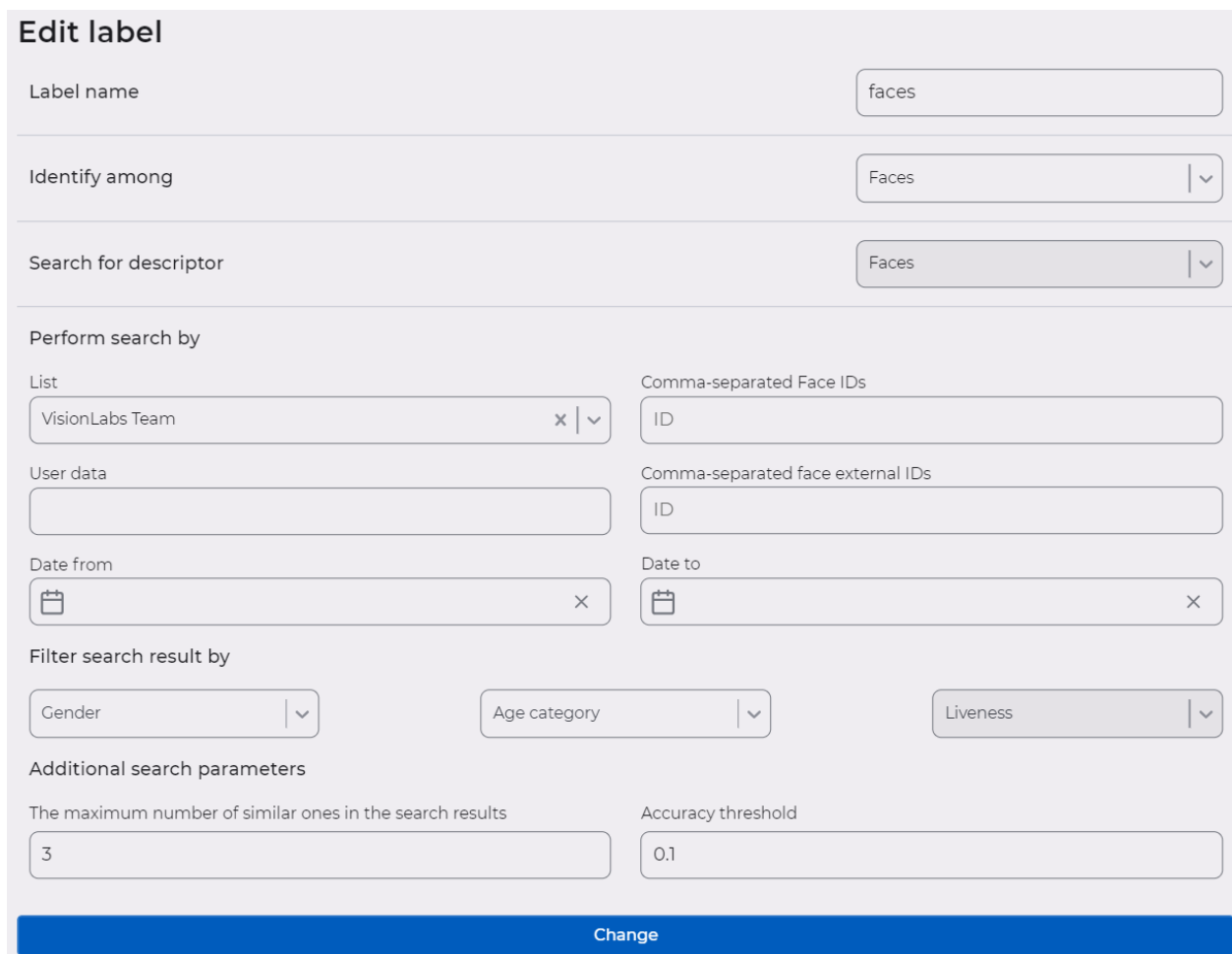
Figure 37: Form for creating a label. Identify among events

Fill in all the required parameters and click on the “Add” button at the bottom of the form.

12.2.3 Label editing

Editing of the label is performed by clicking on the  button in the line with the label name.

A general view of the form for editing the label is shown below (Figure 38).



Edit label

Label name

Identify among | v

Search for descriptor | v

Perform search by

List x | v

Comma-separated Face IDs

User data

Comma-separated face external IDs

Date from x

Date to x

Filter search result by

Gender | v

Age category | v

Liveness | v

Additional search parameters

The maximum number of similar ones in the search results


Accuracy threshold

Change

Figure 38: “Edit label” form

Edit the parameter values and click on the “Change” button.

12.2.4 Label deleting

Deletion of the label is performed by clicking on the  button in the line with the label name.

12.2.5 Tag adding

To create a tag, click on **+** in policy editing form (Figure 39).



Tagging parameters	
Tag	 
+	

Figure 39: Tagging parameters

A general view of the form for creating a tag is shown below (Figure 40).

Add tag

Tag name

Save if

Gender

▼

Age category

▼

Liveness

▼

Deepfake

▼

Add a tag in cases where a face or body was found


+

Add

Figure 40: “Add new tag” form

Fill in all the required parameters and click on the “Add” button at the bottom of the form.

12.2.6 Tag editing


Tag editing is performed by clicking on the  button in the line with the tag name.

A general view of the tag editing form is shown below (Figure 41).

Figure 41: “Edit tag” form

Edit the values of the tag parameters and click on the “Change” button.

12.2.7 Tag deleting

Deletion of the tag is performed by clicking on the  button in the line with the tag name.

After finishing editing the policy, click on the “Save” button in the upper right corner ([Figure 38](#)).

12.2.8 Dynamic policy editing



To edit a dynamic policy, first click on the  button on the page with a list of policies (1 in [Figure 32](#)). Then in the editing form change the name of the policy and click “Save” ([Figure 42](#)).

Figure 42: Form for dynamic policy editing

12.2.9 Policy deleting

Deleting a policy is performed by clicking on the  button in the line (2 in the [Figure 32](#)).

Confirm the action in the pop-up window—click on the “Delete” button or cancel the action by clicking on the “Cancel” button (Figure 43). After successful deletion, a notification will appear.

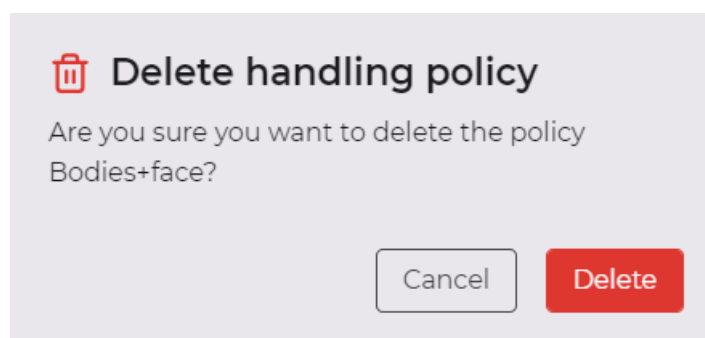


Figure 43: Policy deletion confirmation

13 “Verification” section

The “Verification” section is intended for creating, deleting, testing verifiers, and editing their parameters. Verifiers are used to quickly compare two faces by face photo image and Face ID, external ID, attribute, event, and display the result of the test (Figure 44).

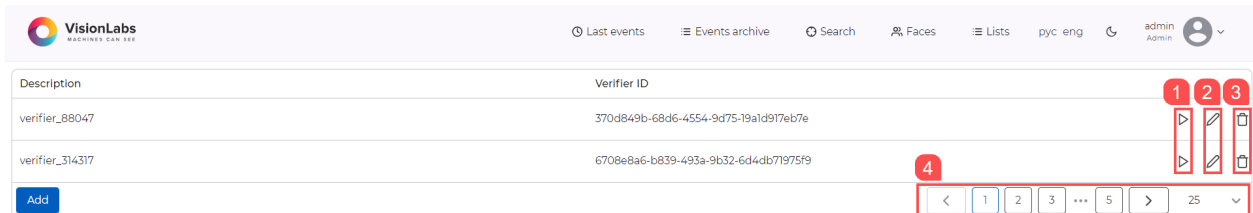


Figure 44: “Verification” section

“Verification” section contains the following elements:

- table of verifiers:
 - “Description”—verifier name;
 - “Verifier ID”—verifier identifier;
 - ▶—button for testing the verifier (1);
 - ✎—button for editing verifier parameters (2);
 - 🗑—button for deleting the verifier (3);
- “Add” button—button for creating a verifier;
- the number of verifiers displayed on the page is set by the switch in the lower right corner of the page. There can be 10, 25, 50 or 100 verifiers in total on one page (4).

13.1 Verifier creation

To create a verifier, click on the “Add” button (Figure 44). A form for step by step verifier creation will open (Figure 45).

Create verifier

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6

Enter a unique verifier name and similarity threshold

Verifier name

Similarity threshold

Figure 45: “Create verifier” form

Fill in all the required parameters and click on the “Next” button to proceed to the next step. The description of the parameters is presented below, in the “[Verifier editing](#)” section.

After setting all the parameters, a window with a message about the successful verifier creation appears (Figure 46). Click anywhere outside the successful verifier creation message to navigate to the “Verification” section.

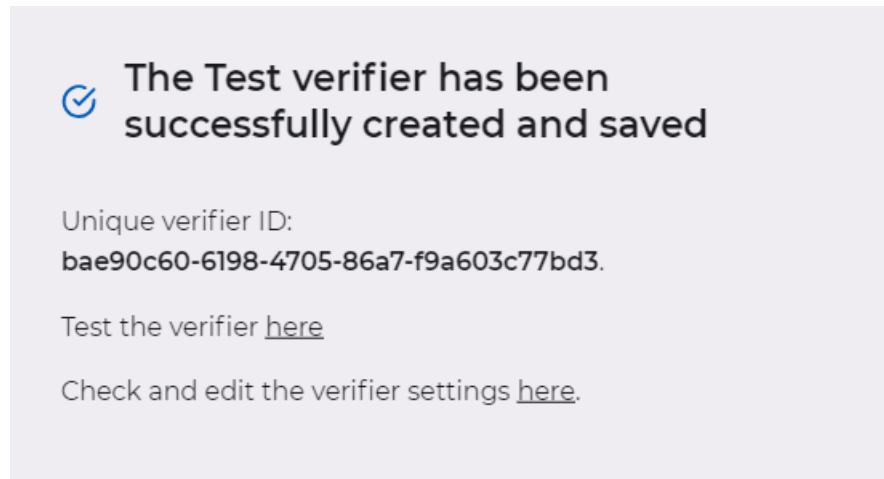



Figure 46: Message about the successful verifier creation

13.2 Verifier testing

Testing a verifier is performed by clicking on the  button in the line (1 in [Figure 44](#)).





The general view of the “Verifier testing” form is shown below (Figure 47).


The form has a title "Verifier verifier_88047 testing" at the top left. In the top right corner is a blue button labeled "Verify". Below the title is a "Search by" section with four tabs: "Face" (selected), "External ID", "Attribute", and "Event". Under the "Face" tab is a "Face ID" label and a text input field. Below the input field is a dashed box containing a plus sign and the text "Choose a file".

Figure 47: “Verifier testing” form

“Verifier testing” form contains the following blocks:

- “Search by”—search options:
 - “Face”—search by registered face in the system:
 - “Face ID”—face identifier that is created in the LUNA PLATFORM 5 system as a result of a detection event and attribute extraction;;
 - “External ID”—search by external face identifier:

- * “External ID”—external face identifier;
- “Attribute”—search by face attribute:
 - * “Attribute ID”—attribute (descriptor) identifier;
- “Event”—search by registered event in the system:
 - * “Event ID”—identifier of the event of detection and attribute extraction;
- Photo image—search by uploaded photo image:
 - field for uploading a photo image;
- Searching results:
 - “Photo”—sample of detected face (candidate);
 - “Similarity, %”—similarity value, in percent;
 - “Status”—verification result:
 - * —successful verification;
 - * —unsuccessful verification;
 - “Link to the reference” —go to the page the reference face;
 - —button for downloading the result of the verification (Figure 48).

To test the verifier by face, in the “Search by” block enter the Face ID and select photo image, click on  or “Select file”, and specify the path to the image file.

Verifier verifier_88047 testing Verify

Search by

Face	External ID	Attribute	Event
------	-------------	-----------	-------

Face ID

7a778061-c277-4029-be5f-5b8f28bb701a


 верификация2.png ✗




Photo	Similarity, %	Status	Link to the reference	
	2.15%	✗		

Figure 48: “Verifier testing” form. Search by face


Image file requirements:

- *.jpeg, *.png or *.bmp format;
- image size no less than 320x250 and no more than 3840x2160 pixels;
- image may contain one or more people;
- image must have a person’s face.

When loading a photo image containing many faces, the Service verifies all faces in the image.

To reset the image, click on ✗.

13.3 Verifier editing

Editing of verifier parameters is performed by clicking the  button in the line (2 in the Figure 44). The general view of the verifier editing form is shown below (Figure 49).

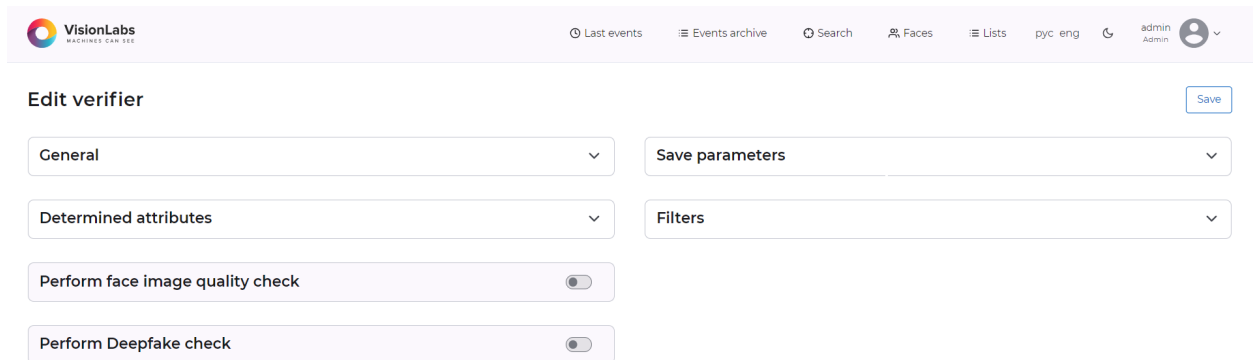


Figure 49: “Edit verifier” form

Description of the parameters of the verifier editing form is given below (Table 19-24).

Table 19. Parameters of the verifier editing form: general parameters and determined attributes

Parameter	Description	Default value
General		
Verifier name	Specifies the name that will be displayed in the list of verifiers	-
Similarity threshold	Specifies a similarity score, which will consider that the reference and the candidate contain the face of the same person	0.93
Determined attributes		
Basic attributes (gender, age)	Assessment of the basic attributes of a person in the image. On When the attribute is enabled, the “Save if” and “Call only in cases” options become available	
Head position	Assessment of the head position (angles of inclination and rotation of the head left/right and up/down). When the attribute is enabled, the options “Discard face images with head rotation/tilt angle above” become available	On
Emotion	Determination of the dominant emotion (anger, disgust, fear, happiness, neutral, sadness, surprise)	Off

Parameter	Description	Default value
Mask	Assessment of the presence or absence of a medical mask or mouth covering. When the attribute is enabled, the filter “Process images only if detected” becomes available	Off
Image quality	Determination of quality (the presence of overexposure, blurring, underexposure, the presence of glare on the face, uneven lighting)	On
Eye direction	Assessment of the direction of a person’s gaze in the image	Off
Presence of glasses	Assessment of the presence of glasses and their type (glasses, sunglasses, no glasses)	Off
Eye status	Evaluating whether a person’s eyes are open or closed in the image, as well as determining key points of the irises of the eyes	Off
Mouth status	Closed or occluded mouth detection and smile detection	Off
Position of 68 feature points of the face	Determination of 68 feature points of the face (requires additional time for calculations, it is used to determine emotions, eye direction or Liveness check)	Off
EXIF metadata	Defining image metadata	Off

Table 20. Parameters of the verifier editing form: Liveness check

Parameter	Description	Default value
Perform Liveness check	Enabling Liveness check	Off
Liveness threshold	Ignoring images with a Liveness score below the specified value. Possible values: from 0 to 1. Available only if the “Perform Liveness check” attribute is enabled	0,5

Table 21. Parameters of the verifier editing form: Deepfake check

Parameter	Description	Default value
Perform Deepfake check ³	Determination of digital manipulations for replace one person's likeness convincingly with that of another	Off
Deepfake threshold	Ignoring images with a Deepfake score below the specified value. Possible values: from 0 to 1, where 1 is a real person, 0 - fake	0.5
Use specified Deepfake mode	Possible values: <ul style="list-style-type: none"> • Mode 1; • Mode 2; The choice of mode determines what set of neural networks perform photo processing for deepfake checking. For more information about the neural networks used in deepfake verification modes, contact VisionLabs technical support.	Mode 2

Table 22. Parameters of the verifier editing form: image quality check

Parameter	Description	Default value
Perform face image quality check	Enabling quality check	
Image format	Must be saved in .jpeg or .png format (correct verification). Possible values: <ul style="list-style-type: none"> • JPEG; • JPEG2000; • PNG; 	JPEG; PNG JPEG2000;
Image size in Mb	This assessment determines the size of the image in bytes. It also compares the estimated value with the specified threshold	5120: 2097152

³Deepfake license required. Deepfake check is not performed on normalized (centered and cropped) images after face detection.

Parameter	Description	Default value
Image width in pixels	This assessment determines the width of the image in pixels. It also compares the estimated values with thresholds (according to ISO or custom thresholds)	180:1920
Image height in pixels	This assessment determines the width of the image in pixels. It also compares the estimated values with thresholds (according to ISO or custom thresholds)	180:1080
Image aspect ratio	This assessment determines the proportional ratio of the image width to height. It also compares the estimated value with the specified threshold	0.74:0,8
Degree of illumination uniformity	It is possible to evaluate the uniformity of illumination according to the requirements specified in the ICAO standard. It also compares the estimated value with the specified threshold (correct verification)	0.3:1
Degree of image specularity	Bright light artifacts and flash reflection from glasses are not allowed (indirect verification)	0.3:1
Degree of image blureness	The pixel colors of front-type photo images must be represented in the 24-bit RGB color space, in which each pixel has 8 bits for each color component: red, green, and blue (indirect verification)	0.61:1
Degree of absence of underexposure in the photo	An underexposure assessment is available. It also compares the estimated value with the specified threshold	0.5:1
Degree of absence of overexposure in the photo	Too much exposure assessment is available. It also compares the estimated value with the specified threshold	0.57:1
Face illumination uniformity	It is possible to evaluate the uniformity of illumination according to requirements specified in ICAO standard. The face should be evenly lit so that there are no shadows or glare on the face image. It also compares the estimated value with the specified threshold (correct verification)	0.5:1

Parameter	Description	Default value
Skin tone dynamic range	<p>This assessment is a determination of the ratio of the brightness of the lightest and darkest areas of the face according to the requirements specified in the ICAO standard.</p> <p>It also compares the estimated value with the specified threshold (correct verification)</p>	0.5:1
Degree of uniformity of the background	<p>This assessment determines the degree of background uniformity from 0 to 1, where:</p> <ul style="list-style-type: none"> • 0 — non-uniform background; • 1 — uniform background; 	0.5:1
Degree of lightness of the background	<p>This rating determines the degree of background brightness from 0 to 1, where:</p> <ul style="list-style-type: none"> • [0...0.1]—black background; • [0.1...0.3]—dark background; • [0.3...0.97]—light background; • [0.97...1]—white background; 	0.5:1
Presence of radial distortion (Fisheye effect)	<p>Possible values:</p> <ul style="list-style-type: none"> • No — the Fisheye effect is not presented in the image; • Yes — the Fisheye effect is presented in the image 	No
Type of image color based on face	<p>Possible values:</p> <p>Color;</p> <p>Grayscale;</p> <p>Infrared—near-infrared</p>	Color
Shoulders position	<p>This assessment determines the position of the shoulders if they are in the frame:</p> <p>Parallel</p> <p>Non-parallel</p> <p>Hidden</p>	Parallel
Face width in pixels	<p>This assessment determines the width of the face in pixels.</p> <p>It also compares the estimated value with the specified threshold</p>	180:1920

Parameter	Description	Default value
Face height in pixels	This assessment determines the height of the face in pixels. It also compares the estimated value with the specified threshold	180:1080
Face offset from the top edge of the image in pixels	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification)	20:50
Face offset from the bottom edge of the image in pixels	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification)	20:50
Face offset from the left edge of the image in pixels	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification)	20:50
Face offset from the right edge of the image in pixels	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification)	20:50
Head yaw angle	Head rotation should be no more than 5° from the frontal position (correct verification)	-5:5
Head pitch angle	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification). The tilt of the head should be no more than 5° from the frontal position (correct verification)	-5:5
Head roll angle	The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification). The inclination of the head should be no more than 8° from the frontal position (correct verification)	-8:8
Gaze yaw angle	This assessment determines the direction of gaze (yaw)	-5:5
Gaze pitch angle	This assessment determines the direction of gaze (pitch)	-5:5

Parameter	Description	Default value
Probability of smile presence	The facial expression must be neutral (indirect verification).	0:0.5
Probability of mouth occlusion	It is not allowed to cover the face with hair or foreign objects along the entire width, from the eyebrows to the lower lip (indirect verification)	0:0.5
Probability of open mouth presence	This assessment determines the state of the mouth The mouth is closed (correct verification)	0:0.5
Smile properties	This assessment determines the state of the mouth The facial expression must be neutral (indirect verification). Possible values: None—smile is not found; Smile with closed mouth; Smile with teeth	None
Glasses	Sun glasses are not allowed (correct verification). Possible values: Sunglasses; Eyeglasses; No glasses	No glasses
Left eye status	Both eyes are open normally for the respective subject (considering behavioral factors and/or medical conditions, correct verification). It is not allowed to cover the face with hair or foreign objects along the entire width, from the eyebrows to the lower lip (indirect verification) Possible values: Open; Closed; Occluded	Open

Parameter	Description	Default value
Right eye status	<p>Both eyes are open normally for the respective subject (considering behavioral factors and/or medical conditions, correct verification).</p> <p>It is not allowed to cover the face with hair or foreign objects along the entire width, from the eyebrows to the lower lip (indirect verification).</p> <p>Possible values:</p> <p>Open;</p> <p>Closed;</p> <p>Occluded</p>	Open
Red eyes effect presence	<p>Possible values:</p> <p>No—there is no red-eye effect;</p> <p>Yes—there is a red-eye effect</p>	No
Distance between eye centers in pixels	<p>The image must contain a full front view of the person's head, including the left and right ear (if person has any), the top point of the forehead area and the chin (correct verification)</p> <p>The distance between the centers of the eyes must be at least 120 pixels or at least 45 pixels in accordance with paragraph 12 of the procedure for placing and updating biometric personal data in a unified biometric system (correct verification)</p>	90:100
Horizontal head size relative to image size	<p>This assessment determines the horizontal head size relative to the image size.</p> <p>It also compares the estimated values with thresholds (according to ISO or custom thresholds)</p>	0.5:75
Vertical head size relative to image size	<p>This assessment determines the vertical head size relative to the image size.</p> <p>It also compares the estimated values with thresholds (according to ISO or custom thresholds)</p>	0.6:0.9
The position of the center point of the face horizontally relative to the image	<p>This assessment determines the horizontal position of the center point relative to the image.</p> <p>It also compares the estimated values with thresholds (according to ISO or custom thresholds)</p>	0.45:0.55

Parameter	Description	Default value
The position of the center point of the face vertically relative to the image	This assessment determines the vertical position of the center point relative to the image. It also compares the estimated values with thresholds (according to ISO or custom thresholds)	0.3:0.5
Eyebrows state	The facial expression must be neutral (indirect verification). Possible values: Neutral; Raised; Squinting; Frowning	Neutral
Headwear type	Possible values: None; Baseball_cap; Beanie; Peaked_cap; Shawl; Hat with earflaps; Helmet; Hood; Hat; Other	None
Presence of natural lighting	The face should be evenly lit so that there are no shadows or glare on the face image (correct verification) Possible values: No—the lighting is unnatural; Yes—the lighting is natural	Yes

Table 23. Parameters of the verifier editing form: face occlusion check

Parameter	Description	Default value
Perform face occlusion check	Detect presence of occlusion areas of the face	Off

Parameter	Description	Default value
Reject face images with occlusion of the following parts of the face	Select which areas of the face should not be covered in frames from the video stream for the system to accept the image: face, forehead, eyes, nose, mouth, lower part of the face	
Acceptable hair occlusion	Set the degree of acceptable face occlusion with hair from 0 to 1	0.15
Acceptable Face occlusion	Set the degree of acceptable face occlusion from 0 to 1	0.07
Acceptable forehead occlusion	Set the degree of acceptable forehead occlusion from 0 to 1	0.2
Acceptable eye occlusion	Set the degree of acceptable eye occlusion from 0 to 1	0.15
Acceptable nose occlusion	Set the degree of acceptable nose occlusion from 0 to 1	0.2
Acceptable mouth occlusion	Set the degree of acceptable mouth occlusion from 0 to 1	0.15
Acceptable lower Face occlusion	Set the degree of acceptable lower face occlusion from 0 to 1	0.2

Table 24. Parameters of the verifier editing form: save parameters

Parameter	Description	Default value
Save parameters		
Save image in database	Saving the image in the LUNA PLATFORM 5 database. If enabled, the unconditional saving of images in the database is performed.	Off
Save biometric template in database	Saving the created biometric template in the LUNA PLATFORM 5 database. If enabled, the unconditional saving of biometric templates in the database is performed.	Off


Table 25. Parameters of the verifier editing form: filters

Parameter	Description	Default value
Filters		
Discard images with multiple faces	<p>Determination of images containing multiple faces.</p> <p>Possible values:</p> <p>Select only one face of the best quality—process an image containing several faces, but detect only a face of the best quality;</p> <p>Do not discard—detect all faces in the image;</p> <p>Discard—ignore an image containing multiple faces</p>	Do not discard
Reject descriptors with quality below the specified threshold	<p>Ignoring low quality images.</p> <p>To use the filter, you must enable the determination of the descriptor in the determined attributes</p>	0,5
Process images only if detected	<p>Possible values:</p> <p>Missing—the event is created when there is no overlap of the face by the medical mask (no mask);</p> <p>Occluded—the event is created in case of detection of face overlapping;</p> <p>Medical mask—the event is created when a medical mask is detected on the face.</p> <p>Several filter values can be specified.</p> <p>Available only when defining the “Medical mask” attribute</p>	-
Discard face images with head rotation angle (to the left or right, yaw) above	<p>Ignoring images in which the person’s head is turned to the left or right at a too large angle —no information will be extracted when detecting a face and evaluating the angle of head rotation.</p> <p>Available only if the “Head position” attribute is enabled</p>	30
Discard face images with head tilt angle (to the left or right, roll) above	<p>Ignoring images in which a person’s head is tilted to the left or right at a too large angle—no information will be extracted during face detection and head tilt evaluating.</p> <p>Available only if the “Head position” attribute is enabled</p>	40
Discard face images with head tilt angle (up or down, pitch) above	<p>Ignoring images in which the person’s head is tilted up or down at a too large angle —no information will be extracted during face detection and head tilt evaluating.</p> <p>Available only if the “Head position” attribute is enabled</p>	30

Parameter	Description	Default value
Process images of faces only with Liveness states	Processing images with Liveness status: Spoof—the absence of a “live” person in the frame; Real—the presence of a “live” person in the frame; Unknown. Available only if the “Perform Liveness check” attribute is enabled	-
Process images of faces only with Deepfake states	Processing images with Deepfake status: Fake—the absence of a “live” person in the frame; Real—the presence of a “live” person in the frame. Available only if the Perform Deepfake check” attribute is enabled	-
Filter images based on face image quality assessment results	Filter images according to the parameters set in the “Perform face image quality assessment” setting that comply with ISO/IEC 19794-5:2011 and ICAO Available only when the parameter “Perform face image quality assessment*” is enabled	Off

After finishing editing the verifier, click on the “Save” button in the upper right corner.

13.4 Verifier deleting

Deleting a verifier is performed by clicking on the  button in the line (3 in the [Figure 44](#)).

In the pop-up window ([Figure 50](#)), you must confirm the action — click on the “Delete” button or cancel the action by clicking on the “Cancel” button.

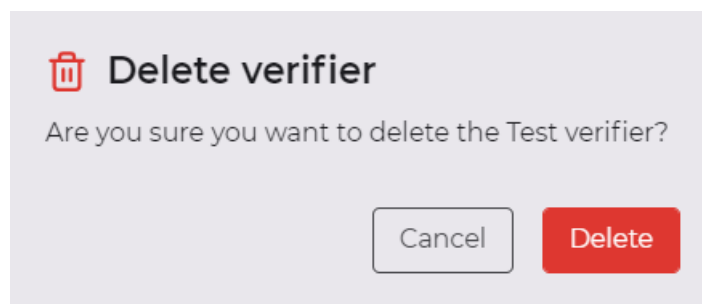


Figure 50: Verifier deletion confirmation

14 “Event sources” section

The “Event sources” section is intended to display all event sources and video streams, event source status, preview, group, and parameters settings for each event source (Figure 51).

Sources can be webcams, USB, and IP cameras (via RTSP protocol), video files, and images.

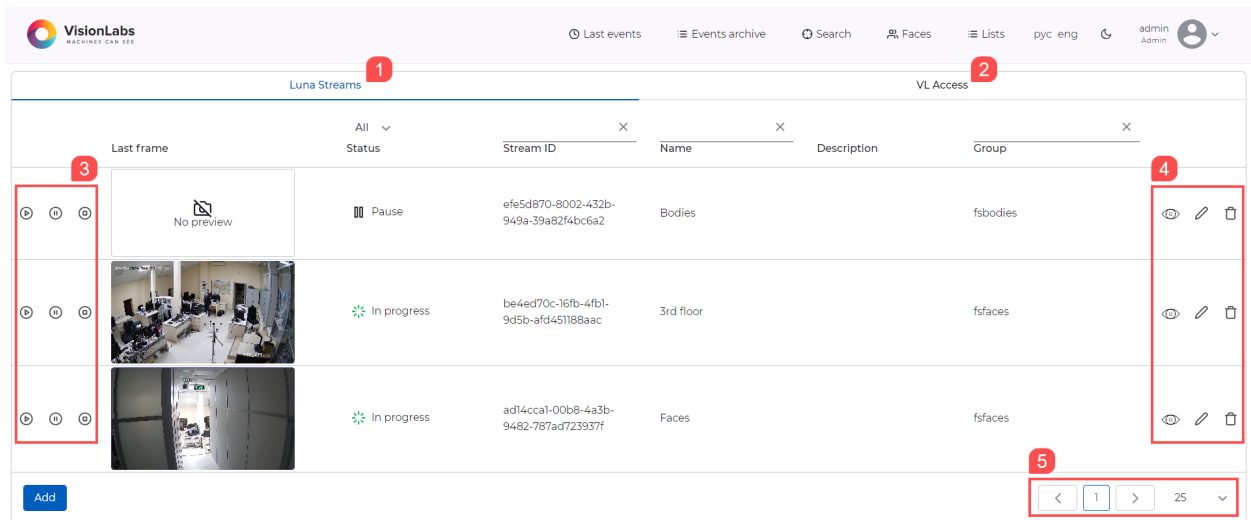





Figure 51: “Event sources” section

“Event sources” section contains the following elements:

- buttons to control video stream processing (1):
 - — “Play” button to start stream processing (sends a request for stream processing, the stream is distributed to a specific FaceStream 5 and it starts processing it);
 - — “Pause” button to pause stream processing, for example, to save resources (pauses the stream processing, but the stream remains assigned to the same FaceStream 5);
 - — “Stop” button to stop stream processing (stops the stream processing, the stream is no longer assigned to the same FaceStream 5);
- the list of streams from LUNA Streams and their parameters (2):
 - “Last frame” — event source video stream preview;
 - “Status” — current status (state) of video stream activity;
 - “Stream ID” — video stream identifier in LUNA Streams, generated when stream is created;
 - “Name” — video stream name;
 - “Description” — additional user-defined information about the video stream;
 - “Group” — the name of the group to which the video stream is attached;
- list of event sources from LUNA Access (3):
 - “Preview” — event source video stream preview;
 - “Name” — event source name;

- buttons for working with streams (4):
 -  — button to edit video stream parameters;
 -  — button to view the event source video stream;
 -  — button to delete video stream;
- “Add” button — button for adding a video stream;
- the number of video streams displayed on the page is set by the switch in the lower right corner of the page. There can be 10, 25, 50 or 100 video streams in total on one page (5).

For searching and filtering video streams use the following fields: “Stream ID”, “Name”, “Description” and “Group”.

LUNA Streams UI is a service that allows user to interact with FaceStream 5 in terms of working with video streams (event sources).

The LUNA Streams interface allows the user to configure video stream parameters such as stream type, stream source address, filtering parameters, etc FaceStream 5 takes settings from LUNA Streams for further processing.

For a detailed description of how FaceStream 5 interacts with LUNA Streams, see the FaceStream 5 documentation Administrator manual.

The following video stream statuses are possible:

- “pending” — the stream has been taken into operation, but no FaceStream 5 handler has been found yet;
- “in_progress” — the stream is being processed by the FaceStream 5 handler;
- “done” — the stream is fully processed (for video files and images);
- “pause” — stream processing has been paused by the user (not applicable to video files and images);
- “restart” — stream processing has been restarted by the server. The status is temporary and can only appear when using the “autorestart” settings group (for more details, see the FaceStream 5 User manual);
- “cancel” — stream processing has been canceled by the user. The “cancel” status may occur after the “pending”, “restart” and “pause” statuses;
- “failure” — Stream processing by FaceStream 5 handler failed (e.g., an error occurred);
- “handler_lost” — FaceStream 5 handler is lost, needs to be transferred to another handler (not applicable for video files and images);
- “not_found” — the stream was deleted by the user while processing;
- “deleted” — the stream was deleted by the user intentionally.

The “restart” and “handler_lost” statuses are temporary. With these statuses, it is not possible to get a stream, however, the transition through these statuses is logged as usual.

The “not_found” status is internal and will be sent back for feedback if the stream has been removed during processing. With this status it is not possible to receive a stream.

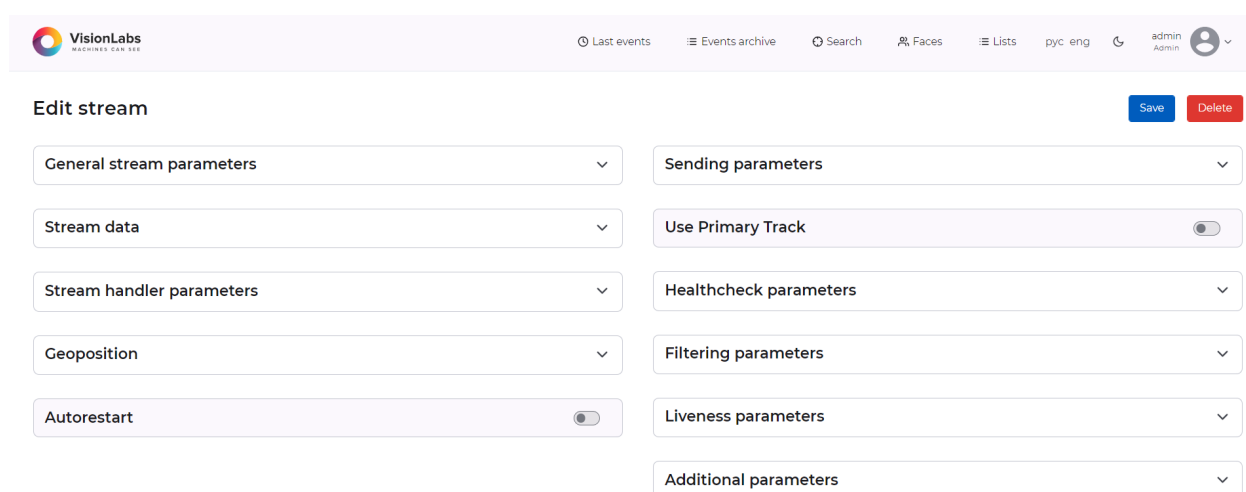
The “deleted” status is virtual. A stream with such a status cannot exist, but this status can be seen in the stream’s logs.

See the FaceStream 5 Administrator manual for details on transition from status to status.

14.1 Adding a video stream

To add a video stream, click on the “Add” button (Figure 51). “Create stream” form will open for specifying the settings (Figure 52).

Start specifying the values of the video stream parameters according to the parameters shown in the table (Table 26). If you need to go back to the page with source list while creating a video stream, press the Esc key on your keyboard.



The screenshot shows the 'Edit stream' form in the VisionLabs interface. The form is titled 'Edit stream' and has 'Save' and 'Delete' buttons. It contains several sections: 'General stream parameters', 'Stream data', 'Stream handler parameters', 'Geoposition', 'Autorestart', 'Sending parameters', 'Use Primary Track', 'Healthcheck parameters', 'Filtering parameters', 'Liveness parameters', and 'Additional parameters'.

Figure 52: “Create stream” form

Table 26. Event source settings

Parameter	Description	Default value
General stream parameters		
Account ID	The parameter is used to bind the received data to a specific user. Required field	Account ID in LP5
Stream name	The stream name displayed in the Service. Used to identify the source of sent frames.	
Description	User information about the video stream	
Group	The name of the group to which the stream is attached	

Parameter	Description	Default value
Status	The current state of the stream. Possible statuses: Pause Pending	Pending;
Stream data		
Type	Video stream transmission type: UDP; TCP; Videofile; Images The TCP protocol implements an error control mechanism that minimizes information loss and missing key frames at the cost of increasing network latency. The UDP protocol does not implement an error control mechanism, so the stream is not protected from damage. The use of this protocol is recommended only if a high quality network infrastructure is available. For a large number of streams (10 or more), it is recommended to use the UDP protocol. When using the TCP protocol, there may be problems with reading streams	UDP

Parameter	Description	Default value
Full path to the source	<p>The path to the source of the video stream.</p> <p>Required field</p> <p>For example, for TCP/UDP type: rtsp://some_stream_address</p> <p>USB device number for TCP/UDP type: /dev/video0</p> <p>To use a USB device, you must specify the –device flag with the address of the USB device when starting the FaceStream 5 Docker container (see “Launching keys” section in the FaceStream 5 Installation manual).</p> <p>The full path to video file for Videofile type: https://127.0.0.1:0000/super_server/</p> <p>The full path to the directory with images for Images type: /example1/path/to/images/</p> <p>To use video files and images, you must first transfer them to a Docker container</p>	
ROI coordinates	<p>A limited frame area where face or body is detected and tracked (for example, in a dense flow of people). Specify the ROI value in one of the two formats–px or %.</p> <p>The first two values specify the coordinates of the top left point of the frame.</p> <p>The second two values indicate the width and height of the area of interest, if the values are specified in px; and the width and height of area relative to current frame size, if the values are specified in %. For example: 0,0,1920,1080 px or 0,0,100,100%</p> <p>Parameter setting can be done visually on the preview image when editing the event source. To do this, click on the gear button. In the opened window, grab the border of the detection area and move it. The width, height and coordinates of the detection area will take on new values. If you need to detect over the entire frame, click the “Full frame” button. Save your changes.</p>	

Parameter	Description	Default value
DROI coordinates	<p>A limited area within the ROI zone. Face detection is performed in the ROI region, but the best frame is selected only in the DROI region. The face detection must be completely within the DROI so that the frame is considered as the best one. Specify the DROI value in one of two formats—px or %.</p> <p>The first two values specify the coordinates of the top left point of the frame.</p> <p>The second two values indicate the width and height of the area of interest, if the values are specified in px; and the width and height of the area relative to the current frame size, if the values are specified in %. For example: 0 , 0 , 1920 , 1080 px or 0 , 0 , 100 , 100%</p> <p>DROI is recommended for use when working with access control systems.</p> <p>This parameter is used only for working with faces.</p> <p>Parameter setting can be done visually on the preview image when editing the event source. To do this, click on the gear button. In the opened window, grab the border of the best frame selection area and move it. The width, height and coordinates of the area will take on new values. If you need to select the best frame over the entire frame, click the “Full frame” button. Save your changes.</p>	
Rotation angle of the image from the source	Used when the incoming video stream is rotated (for example, if the event source is installed on the ceiling)	0

Parameter	Description	Default value
Frame width	The parameter is used only for the TCP and UDP types and is designed to work with protocols that imply the existence of several channels with different bit rates and resolutions (e.g., HLS). If the stream has several such channels, then this parameter will allow you to select from all channels of the entire stream the channel which frame width is closer to the value specified in this parameter	800
Endless	<p>This parameter allows you to control how the stream is restarted when a network error is received.</p> <p>The parameter is available only for the TCP and UDP types.</p> <p>If the parameter takes the Enabled value, then in case of receiving an error and successful reconnection, the stream processing will continue. If all attempts to reconnect failed, then the stream will take the status “failure”.</p> <p>If the parameter takes the Disabled value, then the stream processing will not continue, and the stream will take the “done” status.</p> <p>When broadcasting a video file, the Disabled value is assumed. This will avoid re-processing an already processed video file fragment when an error is received.</p> <p>If the parameter value is Enabled when broadcasting a video file, then after the processing is completed, the video file will be processed from the beginning</p>	Enabled
Stream handler parameters	This group of parameters defines the parameters of the policy (handler) created in LP5, which will be used to process streams. Different handlers should be used for faces and bodies. The handler must be created in LP5 beforehand	

Parameter	Description	Default value
Handler URL	<p>The full network path to the deployed LP5 API service, including the LUNA Handlers and LUNA Events services required to generate an event by handler:</p> <p>http://:/</p> <p>Where is the LUNA API service address, is the port used by the API service. By default: 5000</p> <p>Required field</p>	
API version	<p>API version for event generation in LP5. Required field</p> <p>API version 6 is currently supported</p>	
Handler ID for best shots (static)	<p>The parameter allows using an external static handler_id of the LP5 policy for processing biometric samples of faces or bodies according to the specified rules.</p> <p>When using this policy, LP5 generates an event that contains all the information received from FaceStream 5 and processes it according to the processing rules.</p> <p>For example:</p> <p>aaba1111-2111-4111-a7a7-5caf86621b5a</p> <p>Required field</p>	

Parameter	Description	Default value
URL to save original frames	<p>This parameter specifies the URL for saving original frames of faces or bodies in LP5.</p> <p>The URL can be either the address to the LUNA Image Store service container, or the address to the /images resource of the LUNA API service.</p> <p>When specifying an address to /images resource, original frame will be saved under the image_id identifier.</p> <p>To send a frame, the send_source_frame parameter must be enabled.</p> <p>An example of the address to the LUNA Image Store service container:</p> <p><code>http://127.0.0.1:5020/1/buckets/<frames>/images</code></p> <p>Where 127.0.0.1 is IP address where the LUNA Image Store service is deployed; 5020 is the default port of the LUNA Image Store service; 1 is API version of the LUNA Image Store service; is the name of the LUNA Image Store service container where face or body image should be stored.</p> <p>Container must be created by the user beforehand.</p> <p>An example of the address to the /images resource of the LUNA API service:</p> <p><code>http://127.0.0.1:5000/6/images</code></p> <p>Where 127.0.0.1 is the IP address where the LUNA API service is deployed; 6 is the API version of the LUNA API service; 5000 is the default API service port</p>	
Authorization (Token)	<p>This parameter specifies either a token or an LP5 account ID for making requests to the LUNA API service.</p> <p>If the authorization field is not filled, then the LP5 account ID will be used, which is set when creating a stream</p>	
Geoposition	This group of parameters includes information about location of video stream source	

Parameter	Description	Default value
City	Event source geographical location	
Area		
District		
Street		
House number		
Longitude		
Latitude		
Autorestart	This group of parameters allows to configure the automatic restart of the stream	
Autorestart	Whether or not to use automatic stream restart	Enabled
Attempt count	Number of attempts to automatically restart the stream	10
Autorestart delay (in seconds)	Stream auto restart delay	60
Sending parameters	This group of parameters defines the period during which frames will be analyzed to select the best shot, as well as all parameters associated with compiling a collection of the best shots	
Frame analysis period after which the best shot will be sent	<p>The period starts from the moment a person appears in the frame — the first detection. Decreasing this parameter allows to quickly determine person, but with a greater error. Possible values:</p> <ul style="list-style-type: none"> number of frames; number of seconds; 1 — frames are analyzed for all frames until the end of the track. At the end of the track (when the object leaves the frame) the best shot will be sent to LP5. 	-1 0
Wait duration between track analysis periods	<p>Specifies the timeout between two consecutive tracks. Possible values:</p> <ul style="list-style-type: none"> number of frames; number of seconds; 0 — there is no timeout; 1 — timeout will last indefinitely 	0

Parameter	Description	Default value
Track analysis and waiting period duration measure	Specifies the measurement type of the frame analysis period and the timeout period: Seconds; Frames The choice depends on the business task	Seconds
Number of frames that the user sets to receive from the track or certain periods of this track	Assumes the creation of a collection of the best shots of the track or the time interval of the track, specified in the “Frame analysis period after which the best shot will be sent” parameter. This collection will be sent to LP5. Increasing the value increases the probability of correct recognition of the object, but affects the network load. Possible values are from 1 and more.	1
Send only full set	Allows to send data (best shots and detections) only if user have the required number of best shots (“Number of frames that the user sets to receive from the track or certain periods of this track”) and the track length (“Minimum detection size for Primary Track mode”)	Enabled
Delete bestshot and detection data	Allows to delete the best shots and detections after sending data. If disabled, data remains in memory	Disabled
Use Primary Track	<p>This group of parameters is designed to work with access control systems (ACS, turnstiles at the entrances) to simplify control and of face recognition technology at the entrance to a protected area.</p> <p>This group of parameters is only used for working with faces.</p> <p>This group of parameters is not used for the Image type</p>	

Parameter	Description	Default value
Use Primary Track	<p>If the value of this parameter is Enabled, then the implementation mode of the Primary Track is turned on.</p> <p>Of all the detections on the frame, the detection with the maximum size is selected and its track becomes the main one. Further analysis is performed based on this track.</p> <p>The best shot from that track is sent to LP5.</p> <p>When using the parameter at the checkpoint, the best shots of only the person closest to the turnstile will be sent (the condition for the largest detection is met)</p>	Disabled
Minimum detection size for Primary Track mode	Sets the minimum detection size (vertically in pixels) at which the analysis of stream frames begins and the determination of the best frame	70
Size of detection for the main track	<p>Sets the detection size in pixels for the Primary Track.</p> <p>When the detection size in pixels reaches the specified value, the track immediately sends the best shot to the server</p>	140
Healthcheck parameters	<p>This parameter group is used only when working with streams (TCP, UDP) and video files.</p> <p>In this group, user can set the parameters for reconnecting to the stream in case of stream playback errors</p>	

Parameter	Description	Default value
Maximum number of stream errors to reconnect to the stream	<p>The maximum number of errors during stream playback.</p> <p>The parameter works in conjunction with the parameters “Error count period duration (in seconds)” and ” Time between reconnection attempts (in seconds)”.</p> <p>After the first error is received, the timeout specified in the “Time between reconnection attempts (in seconds)” parameter is performed, and then the connection to the stream is retried.</p> <p>If during the time specified in the “Error count period duration (in seconds)” parameter, the number of errors is greater than or equal to the number specified in the parameter, then the processing of the stream will be terminated, and its status will change to “failure”.</p> <p>Errors can be caused by a problem with the network or video availability</p>	10
Error count period duration (in seconds)	Parameter-criterion of the time to reconnect to the video stream. If the maximum number of errors occurs within the specified time, an attempt is made to reconnect to the video stream	3600
Time between reconnection attempts (in seconds)	After receiving the first error, the timeout specified in the parameter is performed, then the connection to the stream is retried	5
Filtering parameters	The parameter group describes objects for image filtering and sending the resulting best shots	

Parameter	Description	Default value
Threshold value to filter detections	Also called Approximate Garbage Score (AGS) for faces and Detector score for bodies — threshold for filtering face or body detections sent to the server. All detections with a score above the value of the parameter can be sent to the server as an HTTP request, otherwise the detections are not considered acceptable for further work with them. The recommended threshold value was identified through research and analysis of detections on various images of faces and bodies	0,5187
Head rotation angle threshold (to the left or right, yaw)	The maximum value of the angle of rotation of the head to the left and right to the source of the stream (in degrees). If the head rotation angle on the frame is greater than the specified value, the frame is considered unacceptable for further processing. This parameter is used only for working with faces	40
Head tilt angle threshold (up or down, pitch)	The maximum value of the head tilt angle up and down relative to the source of the stream. If the head tilt angle on the frame is greater than the specified value, then the frame is considered unacceptable for further processing. This parameter is used only for working with faces	40
Head tilt angle threshold (to the left or right, roll)	The maximum head tilt angle to the left and right relative to the source of the stream. If the head tilt angle on the frame is greater than the specified value, then the frame is considered unacceptable for further processing. This parameter is used only for working with faces	30

Parameter	Description	Default value
Number of frames used to filter photo images by the angle of rotation of the head	<p>Filtering cuts off images with faces strongly turned away from the stream source.</p> <p>Specifies the number of frames for analyzing head rotation angles on each of these frames. If the angle is drastically different from the group average, the frame will not be considered the best shot.</p> <p>This parameter is used only for working with faces. With a value of 1, the parameter is disabled.</p> <p>Recommended value: 7</p>	1
Number of frames the system must collect to analyze head yaw angle	<p>The parameter indicates to the system that it is necessary to collect the number of frames specified in the “Number of frames used to filter photo images by the angle of rotation of the head” parameter to analyze the head rotation angle.</p> <p>If the parameter is disabled, the Service will sequentially analyze incoming frames, i.e., first, two frames are analyzed, then three, and so on. The maximum number of frames in this sequence is set in “Number of frames used to filter photo images by the angle of rotation of the head”.</p> <p>This parameter is used only for working with faces</p>	Disabled
Mouth overlap threshold (minimum mouth visibility)	<p>If the received value exceeds the specified threshold, the image is considered unacceptable for further processing. For example, with the parameter value equals to 0.5, 50% of the mouth area is allowed to be covered. This parameter is used only for working with faces</p>	0
Minimum body detection size	<p>The parameter specifies the body detection size, less than which it will not be sent for processing. If the value is 0, then body detection will not be filtered by size</p>	0

Parameter	Description	Default value
Liveness parameters	Liveness is used to check if there is a live person in the frame and prevents a printed photo or a photo from a phone from being used to pass the check. This group of parameters is only used for working with faces. This group of parameters is not used for the Image type	
Check RGB ACS Liveness	Enables the mode of checking the presence of a person in the frame, based on working with the background. The check execution speed depends on the frame size of the video stream. If the processing speed drops with the enabled parameter, you need to reduce the video resolution in the event source settings	Disabled
Check FlyingFaces Liveness	Enables the mode of checking the presence of a person in the frame, based on working with the environment of the face	Disabled
Track frames to run liveness check on	The parameter specifies for which frames of track the Liveness check will be performed. Frame selection options: First N shots; Last N shots before best shot sending; All shots of track. The value “N” is specified in the parameter “Number of frames in the track for Liveness check when liveness-mode is enabled”	First N frames
Number of frames in the track for Liveness check when liveness-mode ” is enabled	The number of frames in a track for checking Liveness when using the parameter “Track frames to run liveness check on	0
Threshold value at which the system will consider that there is a real person in the frame	The threshold value at which the Service considers that there is a living person in the frame. The Service verdict on the presence of a real person in the frame will follow only if Liveness returns a value higher than the specified threshold value	0

Parameter	Description	Default value
Livenesses weights (RGB ACS, FlyingFaces)	<p>The coefficient of influence of each type of Liveness checking on the final estimate of the presence of a living person in the frame.</p> <p>Three values are indicated, referring to different types of Liveness.</p> <p>Values are indicated in fractions of a unit.</p> <p>The ratio is scaled based on the given numbers, regardless of whether they constitute a unit and which Liveness methods are enabled</p>	0 0 0
Number of background frames that are used for the corresponding checks	<p>Allows to set the number of background frames in the track for the Liveness check.</p> <p>Recommended value: 300. It is not recommended to change this parameter</p>	0
Additional parameters		
Frame processing	<p>The parameter is used only for TCP, UDP and Videofile types.</p> <p>Possible values:</p> <p>Auto;</p> <p>Full frame;</p> <p>Scale frame. The parameter is set for a specific instance of FaceStream 5.</p> <p>With Full frame value, frame is immediately converted to an RGB image of required size after decoding. This results in a better image quality, reduces the frame rate.</p> <p>When set to Scale frame, the image is scaled based on the TrackeEngine settings.</p> <p>The default value is Auto. In this case, one of the two modes is selected automatically</p>	Auto
Number of threads for video decoding	<p>Sets the number of streams for video decoding with FFMPEG. With an increase in the number of streams, the number of processor cores involved in decoding increases. Increasing the number of streams is recommended when processing high-definition video (4K and above)</p>	0

Parameter	Description	Default value
Maximum FPS for video processing	<p>The parameter is used only for Videofile type. The video is processed at the specified. Video cannot be processed with FPS higherFPS. than specified in this parameter</p> <p>If the video has a high FPS value and FaceStream 5 cannot operate at the specified FPS, then frames will be skipped.</p> <p>Thus, the video file imitates a stream from a real video camera. This can be useful for performance tuning. The video will be played at the selected speed, which is convenient for load testing and further analysis.</p> <p>The parameter is not used if the value is 0</p>	0

After saving the settings for the newly created video stream, the message “Source has been successfully created” will appear on the screen (Figure 53).

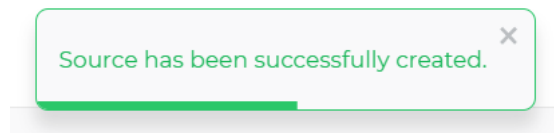



Figure 53: Confirmation of the successful event source creation

14.2 Video stream editing

Clicking the  (4 in the Figure 51) button to start editing a video stream, or click the “Edit” button on the page for viewing the video stream of the source (Figure 54).

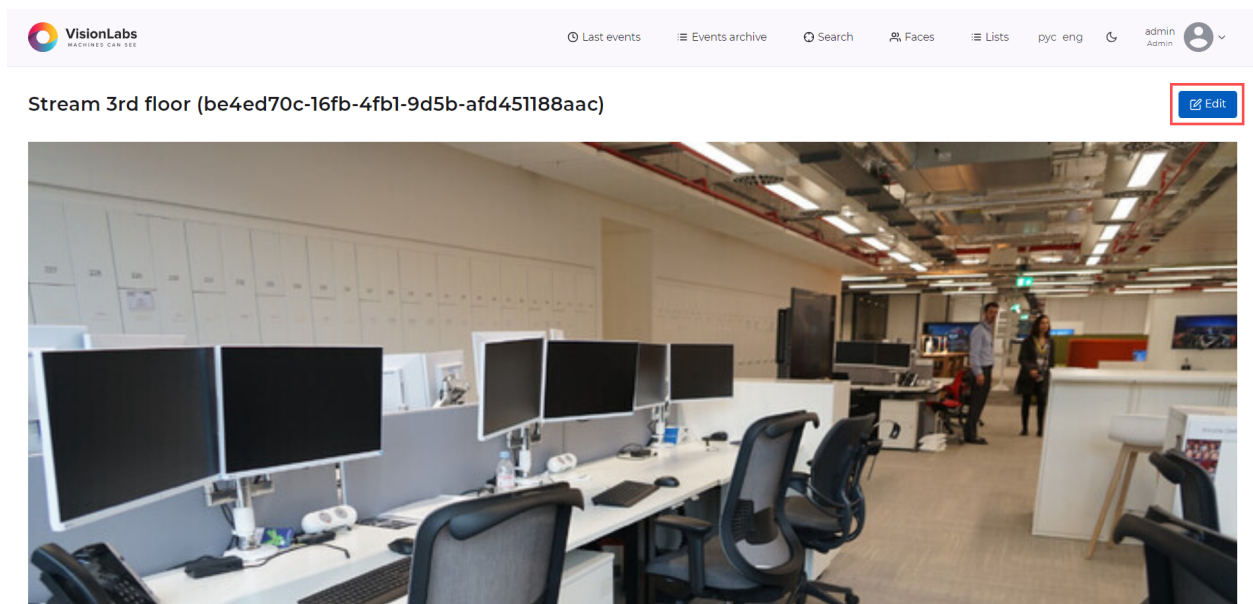


Figure 54: Go to stream editing from the video stream viewing page

General view of the form for editing a video stream is similar to the view of the form for creating a video stream (Figure 52).

Start editing stream parameters. If you need to go back to the page with the list of sources during editing, press the Esc key on your keyboard.

After saving the settings for the stream parameters, the message “Source was successfully updated” will appear (Figure 55).

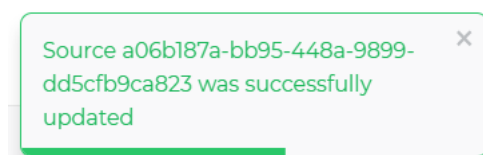



Figure 55: Confirmation of a successful stream update

14.3 Video stream deleting

To delete a video stream, click on the  button in the line with the video stream you want to delete (3 in the Figure 51). In the pop-up window (Figure 56), confirm the action—click on the “Delete” button or cancel the action by clicking on the “Cancel” button.

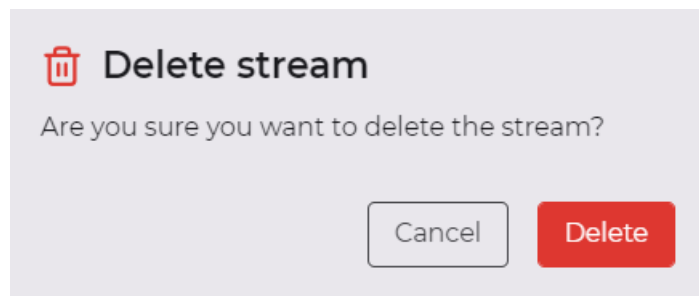


Figure 56: Confirmation of event source deletion

After clicking the “Delete” button, a message about successful stream deletion appears (Figure 57).

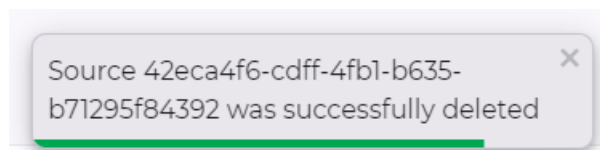


Figure 57: Message about stream deletion

15 Tasks section

The “Tasks” is intended for creating, deleting, and displaying tasks, downloading search results by events and persons. Export to a file is implemented in the Interface in the form of a task;




General view of the “Tasks” section is shown below (Figure 58).

ID	Description	Type	Date created	Expiration date	Status	
155		Garbage collecting	27.11.2024, 09:30:00	27.11.2024, 09:30:00	✓	📄 🗑️
154		Garbage collecting	26.11.2024, 09:30:00	26.11.2024, 09:30:00	✓	📄 🗑️
153	estimator task with zip archive	Batch processing	25.11.2024, 13:04:50	25.11.2024, 13:04:53	✓	📄 🗑️
152	estimator task with zip archive	Batch processing	25.11.2024, 12:58:56	25.11.2024, 12:58:57	✓	📄 🗑️
151	estimator task with zip archive	Batch processing	25.11.2024, 12:55:48	25.11.2024, 12:55:55	✓	📄 🗑️
150	estimator task with zip archive	Batch processing	25.11.2024, 12:55:14	25.11.2024, 12:55:15	✓	📄 🗑️
149		Garbage collecting	25.11.2024, 09:30:00	25.11.2024, 09:30:00	✓	📄 🗑️
148		Garbage collecting	24.11.2024, 09:30:00	24.11.2024, 09:30:00	✓	📄 🗑️
147		Garbage collecting	23.11.2024, 09:30:00	23.11.2024, 09:30:00	✓	📄 🗑️
146		Garbage collecting	22.11.2024, 09:30:00	22.11.2024, 09:30:00	✓	📄 🗑️
145		Garbage collecting	21.11.2024, 09:30:00	21.11.2024, 09:30:00	✓	📄 🗑️




Figure 58: “Tasks” section

The “LUNA PLATFORM. Deferred tasks” tab contains the following elements:

- task counter (1);
- “Cross-matching” button — button for creating a task for cross-matching lists of faces;
- “Export faces” button — button for creating a task to export faces and information on them;
- “Export events” button — button for creating a task to export events and information on them;
- “Batch processing” button — button for creating a task for batch processing of photo image archives according to a specific policy;
- “Batch import” button — button for creating a task for batch import of photo image archive into the list;
- “Batch identification” — button for creating a task for identifying an archive of photo images of references with candidates (faces or events with faces);
- “Deleting faces from the list” — button for creating a task for removing persons from the selected list;
- table of tasks:
- “ID” — task identifier;
- “Description” — user who created the task;
- “Type” — task type (cross-matching, export, batch processing, batch import, batch identification);

- “Date created” — date and time of task creation;
- “Expiration date” — date and time of completion of the task;
- “Status” — task progress state;
-  — button to stop the task (appears if the task status is “In progress”);
-  — button for downloading the result of the task (2);
-  — button for deleting a task (3);
- the number of tasks displayed on the page is set by the switch in the lower right corner of the page. There can be 10, 25, 50 or 100 tasks in total on one page (4).

The status changes during the task execution. In total, 4 statuses are applied to tasks in the Interface:

-  — task is being performed;
- “Collecting results” — collecting the results of the task;
-  — task completed;
-  — an error occurred while executing a task.

The process of creating tasks and the values of the specified parameters are described below. If you need to go back to the task list page during creating a task, press the Esc key on your keyboard.

Configure notifications about task status using the “callbacks” functionality. Notifications will be sent to the external system at the specified URL. The notification settings block opens after filling in the required fields to create a task (Table 25).

Table 25. Notification settings in the task creation form

Parameter	Description	Default value
Add callback		
Type	Protocol type when creating a notification. Users can receive notifications in the interface via http and Telegram	HTTP
URL	Address of the external system where the notification will be sent	-
Authorization type	Selecting the type of authorization into an external system and setting up authorization data. The basic type of authorization requires specifying login and password to enter an external system	Basic
Timeout (seconds)	Maximum time to wait for a request to complete	60
Request body format	Data interchange format: JSON or MessagePack	application/json
HTTP Headers	HTTP Request Headers	-

15.0.1 Creating a cross-matching task

To create a task for cross-matching lists of faces, click on the “Cross-matching” button ([Figure 58](#)). A general view of the form for creating a cross-matching task is shown below ([Figure 59](#)).

Cross-matching

● Step 1 ○ Step 2

Настройки задачи

List Find matches in

Select... Select...

The maximum number of similar ones Minimum similarity threshold, %

3 50

Back Next

Figure 59: Form for creating a cross-matching task

The “Cross-matching” form contains the following elements:

- “List” — selection of a list for comparison. Required field;
- “Find matches in” — selection of a list for comparison. Required field;
- “The maximum number of similar ones” — maximum number of similar candidates (the default is

3);

- “Minimum similarity threshold, %” — the lowest score of similarity in percentage between candidates that the Interface accepts as a possible match (the default is 50).

Fill in all the required parameters and click on the “Create task” button (or Enter key on your keyboard)..

Resource-intensive tasks can take a while. In the pop-up window (Figure 60), you must confirm the action — click on the “Ok” button or cancel the action by clicking on the “Cancel” button (Esc key on keyboard)..

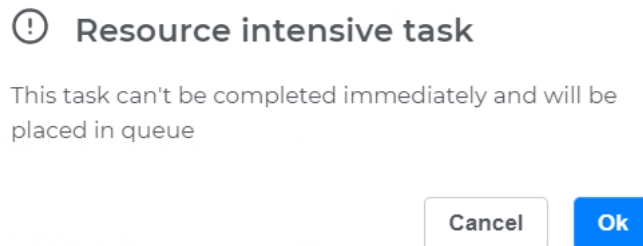


Figure 60: Confirmation of the creation of a cross-matching task

After successfully creating a cross-matching task, the message “Task for cross-matching has been created” will appear in the upper right corner of the screen (Figure 61).

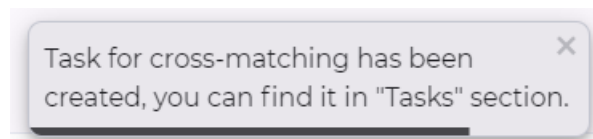


Figure 61: Confirmation of successful creation of a cross-matching task

15.1 Creating an export faces task

To create a task to export faces and information on them, click on the “Export faces” button (Figure 58). A general view of the form for creating an export task is shown below (Figure 62).

Parameter	Description	Default value
List	Specifies the list for export	-
User data	Indicates face data (up to 128 characters)	-
Face IDs	Specifies the values of identifiers of faces in LUNA PLATFORM 5 in UUID format	-
Face external IDs	Specifies the values of third-party external identifiers	-
Date from	Specifies the lower limit of the period of creation of faces or events in LUNA PLATFORM 5	-
Date to	Specifies the upper limit of the period of creation of faces or events in LUNA PLATFORM 5	-
ID of the first face	Specify the values of the identifier of the first face from the exported faces	-
ID of the last face	Specify the values of the identifier of the last face from the exported faces	-
Additional parameters		
Columns in the report—selecting table columns to be included in the file upon export, and indication the order in which they are located	Face ID	On
	User data	On
	External ID	On
	Time	On
	Avatar	On
	Event ID	On
Save face images	Lists	Off
	Enabling this option allows you to upload face images into the archive with the .csv report	Off
Type of biometric template	Specifies the biometric template of which objects will be exported—faces or bodies	Faces
Delimiter for .csv	A special character that will be used in the file with export results to divide text into columns	,

Fill in all the required parameters and click on the “Create task” button.

Resource-intensive tasks can take a while. In the pop-up window (Figure 63), you must confirm the action — click on the “Ok” button or cancel the action by clicking on the “Cancel” button (Esc key on keyboard)..

ⓘ Resource intensive task

This task can't be completed immediately and will be placed in queue



Figure 63: Confirmation of the creation of an export task

After successfully creating an export task, the message “Export task has been successfully created” will appear in the upper right corner of the screen (Figure 64).

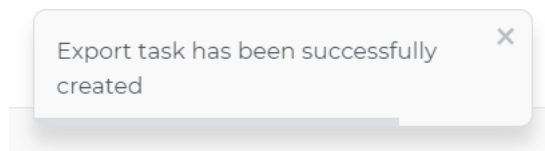


Figure 64: Confirmation of successful creation of an export task

15.2 Creating an export events task

To create a task to export objects events and information on them, click on the “Export events” button (Figure 58). A general view of the form for creating an export events task is shown below (Figure 65).

Export events

● Step 1

○ Step 2

○ Step 3

Data upload parameters

General data about the event

Advanced event filters

Face attributes

Body attributes

Best match data

Geoposition

Advanced geoposition filters

Other

Back

Next

Figure 65: Form for creating an export events task

Description of the parameters of the “Export events” form is given in Table 27.

Table 27. Export events task parameters

Parameter	Description	Default value
Data upload parameters		
General data about the event		
Source	Specifies the name of the event source	-
Event IDs	Specifies the values of the event identifiers in UUID format for performing an accurate search separated by commas	-
User data	Indicates face data (up to 128 characters)	-
Event external IDs	Specifies the values of third-party external identifiers separated by commas	-
Face IDs	Specifies the values of identifiers of faces in UUID format separated by commas	-
Similarity	A value from 0 to 1 is specified	-
Tags	Specifies a tag or tags separated by commas	-
Handling policies	Specifies policy name, it is possible to specify several values	-
Date from	Specifies the lower limit of the period of creation of events	-
Date to	Specifies the upper limit of the period of creation of events	-
Advanced event filters		
End date from	Indicates the lower limit of the event end period	-
End date to	Indicates the upper limit of the event end period	-
ID of the first event	Indicate the value of the identifier of the first event from the exported events	-
ID of the last event	Indicates the value of the identifier of the last event from the exported events	-
Track IDs	Specifies the values of the track identifiers in the UUID format separated by commas	-
Face attributes		
Gender	Specifies male/female gender	-

Parameter	Description	Default value
Age category	Specifies the age range	-
Emotions	Specifies emotions	-
Medical mask	Detection of the presence/absence of a medical mask, mouth occlusion	-
Liveness	Specifies the result of checking for the presence of a living person in the frame	-
Body attributes		
Gender by body	Specifies the female, male, undefined gender	-
Age category by body	Specifies the age range by body image	-
Headwear	Specifies headdress	-
Upper body colors	Specifies top clothing color	-
Sleeve	Specifies sleeve length	-
Headwear color	Specifies headdress color	-
Lower body colors	Specifies bottom clothing color	-
Lower body type	Specifies bottom clothing type	-
Shoes color	Specifies shoe color (only for “Identify among events”;	-
Backpack	Specifies backpack presence	-
Best match data		
Face IDs	Specifies the values of identifiers of faces 5 in UUID format	-
Face external IDs	Specifies the values of third-party external identifiers	-
Label	Name of the label—rule by which the comparison occurred	-
Geoposition	“District”; “Area”; “City”; “Street”; “House number”;	

Parameter	Description	Default value
Advanced geolocation filters	“Longitude (-180...180)”; “Accuracy (0...90)”; “Latitude (-90...90)”; “Accuracy (0...90)”	
Other		
Add filter by meta	Allows you to fill in a set of blocks to create a filter by the “meta” field. The number of meta filters is unlimited. The following blocks are required to be filled in when creating a filter by meta: <ul style="list-style-type: none"> • Key—the full path to the required meta field connected with events. • Value—any valid value for the meta field. • Type—selection of the data type stored in this meta field. The data type displays available operators and converts values into the desired data type when sent to the API. • Operator—select operators for a given data type from the list. Operator type depends on the selected data type 	
Additional parameters		
Columns in the report—selecting table columns to be included in the file upon export, and indication the order in which parameters are located in the report	Event data	Off
	DFace data from the event	Off
	Body data from the event	Off
	Match data	Off
	Geo position	On
Save face images	Enabling this option allows you to upload face images into the archive with the .csv report	Off
Type of biometric template	Specifies the biometric template of which objects will be exported—faces or bodies	Faces
Delimiter for .csv	A special character that will be used in the file with export results to divide text into columns	,

Fill in all the required parameters and click on the “Create task” button or the Enter key on your keyboard.

Resource-intensive tasks can take a while. In the pop-up window, confirm the action — click on the “Ok” button or cancel the action by clicking on the “Cancel” button (Esc key on keyboard).

After successfully creating an export task, the message “Export task has been successfully created” will appear in the upper right corner of the screen.

15.2.1 Creating a batch processing task

The batch processing task allows user to process several photos using a specified policy.

To create a task for batch processing of photo image archives according to a specific policy, click on the “Batch processing” button ([Figure 58](#)). The general view of the form for creating a batch processing task is shown below (Figure 66).

Batch processing

● Step 1 ————— ○ Step 2

Task settings

Data source type

File

+ Pack of photos (*.zip)

Description

admin@example.com

Handling policy

Select...

Back Next

Figure 66: Form for creating a batch processing task

By default the “Batch Processing” form contains the following elements:

- “Data source type” — selection of the source type of the loaded data;
- “Description” — description of the task;
- “Handling policy” — selection of a policy. Required field;

The resource can accept five types of sources with images for processing:

- File;
- ZIP;

- S3;
- Network disk;
- FTP;
- Samba.

Additional options appear depending on the selected data source type.

To quickly download a ZIP archive from your local machine without additional options, select “File” as the data source type. Then upload or drag-and-drop the archive with photo images in the field for uploading data.

Download file requirements:

- *.zip file format;
- there can be one or more people on the image (depends on policy settings);
- the image must contain a person’s face or body;
- images must be located immediately inside the archive, and not in a folder inside the archive;
- the archive size is set using the ARCHIVE_MAX_SIZE parameter in the config.py configuration file of the Tasks component, the default size is 100 GB (for details, see “VisionLabs LUNA PLATFORM 5. Administrator manual”).

When choosing a ZIP archive as image source for the batch processing task, the following parameters can be set:

- “File URL” — URL address of the archive with images, the default archive size is 100 GB. Required field;
- “Archive password” — a password for the transferred archive protection;
- “File key prefix” — [a file key prefix](#) that can be used to load images from a specific directory, for example, “2022/January”;;
- “File key postfix” — file key postfix that can be used to upload images with a specific extension;
- “Whether to estimate images from ZIP archive subdirectories recursively?” switch — allows you to recursively receive images from subdirectories.
- “Input image type” — selection of the type of image that is input in the batch processing task — “Raw image”, “Face warped image”, “Body warped image”.

When choosing an S3-like storage as an image source for the batch processing task, the following parameters can be set:

- “Storage endpoint” — only when specifying the bucket name;
- “Bucket name” — [Access Point ARN](#) / [Outpost ARN](#). Required field;
- “File key prefix” — [file key prefix](#). It can be used to load images from a specific folder, such as “2022/January”;
- “Bucket region” — only when specifying the bucket name;
- “Public access key” — public key for setting up authorization. Required field;
- “Secret access key” — secret key for setting up authorization. Required field;

- “Signature version” — signature “s3v2” / “s3v4”;
- “Whether to estimate images from bucket subdirectories recursively?” — possibility to recursively download images from nested bucket folders;
- “Whether to save image origin?” — saving original images in the LUNA PLATFORM 5 database.

It is also possible to select the type of transferred images. For more information about working with S3-like repositories, see [AWS User Guide](#).

When choosing a network disk as an image source for the batch processing task, the following parameters can be set:

- “Path to directory with images” — absolute path to the directory with images in the container. Required field;
- “File key prefix” — a file key prefix that can be used to load images from a specific directory;
- “File key postfix” — file key postfix that can be used to upload images with a specific extension;
- “Whether follow file system links?” — enable/disable of symbolic links processing.

As in the batch processing task using S3-like storage as image source, it is possible to recursively receive images from nested directories, and to select the type of transferred images.

When choosing a FTP server as an image source for the batch processing task, the following parameters can be set:

- “Server host” — FTP server IP address or hostname. Required field;
- “Port” — FTP server port;
- “FTP sessions” — maximum number of allowed sessions on the FTP server;
- “Server user” and “Server password” — authorization parameters.

As in the batch processing task using network disk as image source, it is possible to set the path to the directory with images, recursively receive images from nested directories, select the type of transferred images, and specify the prefix and postfix.

When choosing a Samba as an image source for the batch processing task, the parameters are similar to those of an FTP server, except for the “max_sessions” parameter. Also, if authorization data is not specified, the connection to Samba will be performed as a guest.

Fill in all the required parameters and click on the “Create task” button or the Enter key on your keyboard. Resource-intensive tasks can take a while. In the pop-up window (Figure 67), you must confirm the action — click on the “Ok” button or cancel the action by clicking on the “Cancel” button.

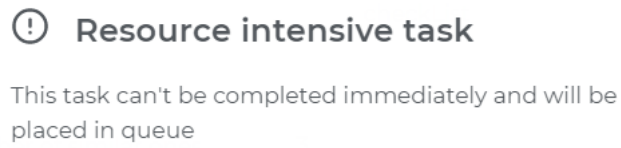


Figure 67: Confirmation of the creation of a batch processing task

After successfully creating a batch processing task, the message “Batch processing task has been successfully created” will appear in the upper right corner of the screen (Figure 68).

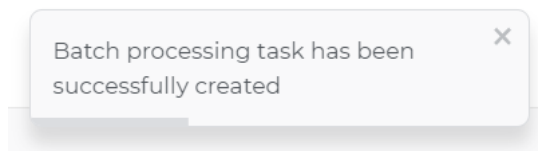


Figure 68: Confirmation of successful creation of a batch processing task

15.2.2 Creating a batch import task


The batch import task allows you to batch import faces from photos into a specified list.

To create a task for batch import of photo image archive into the list, click on the “Batch import” button (Figure 58). The general view of the form for creating a batch import task is shown below (Figure 69).

Batch import

● Step 1 ————— ○ Step 2

Task settings

 Pack of photos (*.zip)

List


Select... | v

Add a photo to the list only if it complies with the ICAO standard ☐

[Back](#) [Next](#)

Figure 69: Form for creating a batch import task

The “Batch import” form contains the following elements:

- field for uploading an archive with photographs* — it is possible to upload archives in *.ZIP format (required);
- “List” — selection of a list. Required field;
- “Add a photo to the list only if it complies with the ISO/IEC standard” — the photo will be added to the list only after passing the ISO/IEC 19794-5:2011 verification.
-  — button for deleting the loaded archive — button for deleting the loaded archive.

Download file requirements:

- *.ZIP file format;
- there can be one or more people on the image (depends on policy settings);
- the image must contain a person's face;
- images must be located immediately inside the archive, and not in a folder inside the archive;
- the archive size is set using the ARCHIVE_MAX_SIZE parameter in the config.py configuration file of the Tasks component, the default size is 100 GB (for details, see “VisionLabs LUNA PLATFORM 5. Administrator manual”).

Fill in all the required parameters and click on the “Create task” button or the Enter key on your keyboard.

Resource-intensive tasks can take a while. In the pop-up window (Figure 70), you must confirm the action — click on the “Ok” button or cancel the action by clicking on the “Cancel” button.

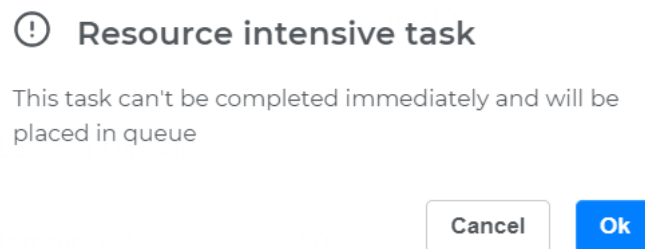


Figure 70: Confirmation of the creation of a batch import task

After successfully creating a batch import task, the message “Batch import task has been successfully created” will appear in the upper right corner of the screen (Figure 71).

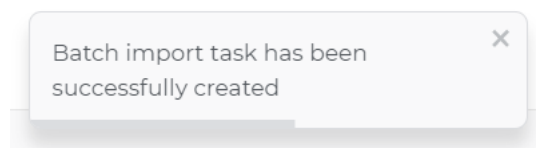


Figure 71: Confirmation of successful creation of a batch import task

15.2.3 Creating a batch identification task

To create a task for identifying an archive of photo images (faces or events with faces), click on the “Batch identification” button (Figure 58). The general view of the form for creating a batch identification task is shown below (Figure 72).

Batch identification

● Step 1

○ Step 2

Task settings

+

Pack of photos (*.zip)

Identify among

Faces

Filters

List

Select...

Comma-separated Face IDs

ID

User data

Comma-separated face external IDs

ID

Date from

Date to

Additional filter parameters

Similarity threshold, %

80

Number of records (from 1 to 100)

3

Back

Next

Figure 72: Form for creating a batch identification task

The “Batch Identification” form contains the following elements:

- field for uploading an archive with photographs in *.ZIP format (required);
- **+**—button for deleting the loaded archive;

- “Identify among”—look for matches among “Faces” or “Events”;
- “Filters” block—settings for user identification. A description of the parameters of the “Filters” block, depending on the selected object for identification, is presented below (Table 28 and Table 29);
- “Additional filter parameters” block—general parameters for identification among faces and events:
 - “Similarity threshold, %”—the lowest percentage similarity score between candidates that the Interface accepts as a possible match (default: 80).
 - “Number of records (from 1 to 100)” —the number of lines with matches with a limit of 100 lines (default: 3).

Table 28. “Filters” block parameters of the batch identification task when searching for a match among faces

Name	Description
List	List name
Comma-separated Face IDs	Face ID from the list
User data	Information linked to the person from the database
Comma-separated external face IDs	External ID of persons face
Date from	Specifies the lower limit of the period of creation of faces or events in LUNA PLATFORM 5
Date to	Specifies the upper limit of the period of creation of faces or events in LUNA PLATFORM 5

Table 29. “Filters” block parameters of the batch identification task when searching for a match among events

Name	Description
Source	List of available event sources
User data	Information linked to the person from the database
Age category	Age group: below 18; from 18 to 44; from 45 to 60; above 60

Name	Description
Gender	Female; Male Not estimated
Emotion	Anger; Sadness; Neutral; Disgust; Fear; Happiness; Surprise. Its possibly to select multiple emotions.
Medical mask	Detection of the presence/absence of a medical mask or mouth occlusion. Missing; Medical mask; Occluded. Its possibly to select multiple variants.
Creation date from	Specifies the lower limit of the period of creation of faces or events in LUNA PLATFORM 5
Creation date to	Specifies the upper limit of the period of creation of faces or events in LUNA PLATFORM 5
Comma-separated event IDs	Event ID of detection and attribute retrieval
Comma-separated external event IDs	External event ID
Comma-separated Face IDs	Face ID from events that are created in LUNA PLATFORM 5 as a result of a detection event and attribute extraction
Similarity	The lower threshold on the similarity if the person was identified
Handling policies	Handling Policy ID
Comma-separated track IDs	Specifies the values of the track identifiers in LUNA PLATFORM 5 in the UUID format
Comma-separated tags	Specifies a tag or tags
Gender by body	female male undefined

Name	Description
Headwear	Specifies headdress
Sleeve	Specifies sleeve length
Lower body colors	Specifies bottom clothing color
Shoes color	Specifies shoe color (only for “Identify among events”;
Age category by body	Specifies the age range below 18; from 18 to 44; from 45 to 60; above 60
Upper body colors	Specifies top clothing color
Headwear color	Specifies headdress color
Lower body type	Specifies bottom clothing type
Backpack	Specifies backpack presence
Location	“District”; “Area”; “City”; “Street”; “House number”; “Longitude (-180...180)”; “Accuracy (0...90)”; “Latitude (-90...90)”; “Accuracy (0...90)”

To upload an archive with photo images of faces to be identified, click on **+** in the “References” section and specify the path to the archive on the local computer.

Download file requirements:

- *.ZIP file format;
- there can be one or more people on the image (depends on policy settings);
- the image must contain a person’s face;
- images must be located immediately inside the archive, and not in a folder inside the archive;
- the archive size is set using the ARCHIVE_MAX_SIZE parameter in the config.py configuration file of the Tasks component, the default size is 100 GB (for details, see “VisionLabs LUNA PLATFORM 5. Administrator manual”).

Fill in all the necessary parameters and click the “Create task” button or the Enter key on your keyboard.. Resource-intensive tasks can take a while. In the pop-up window (Figure 73), you must confirm the action — click on the “Ok” button or cancel the action by clicking on the “Cancel” button.

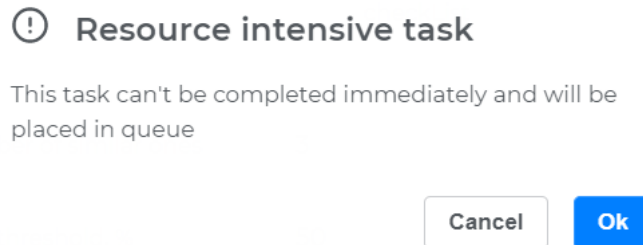


Figure 73: Confirmation of the creation of a batch identification task

After successfully creating a batch identification task, the message “Batch identification task has been successfully created” will appear in the upper right corner of the screen (Figure 74).

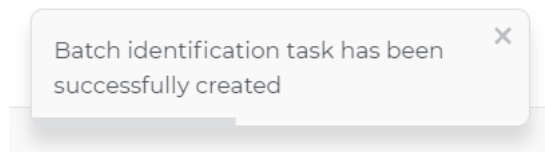


Figure 74: Confirmation of successful creation of a batch identification task

15.2.4 Creating a task for deleting faces from the list

The task of removing persons from the list (Cleanup task) allows you to select faces based on specific parameters and then remove them from the selected list.

To create a Cleanup task, click on the “Deleting faces from the list” button (Figure 58). The general view of the window for creating a task for batch import is shown below (Figure 75).

Deleting faces from the list

● Step 1 ————— ○ Step 2

Настройки задачи

Description

☒ Store results

☒ Remove samples

List

Select... ▼

Information

Delete data after

×

Delete data before

×

Figure 75: Window for creating a “Deleting faces from the list” task

The “Deleting faces from the list” window contains the following elements:

- “Description”—a field for adding an explanatory note to the task;
- “Store results” checkbox—if enabled, the results of the task will be saved in the Image Store service storage.
- “Delete samples” checkbox—if enabled, wrapped images obtained after detecting faces from the list will be deleted;

- “List”—select a list from which faces will be removed. Required field;
- “Information”—a field for specifying information about persons from the list. Allows you to remove only a few people from the list, for example, those for whom the same information is provided.
- “Delete data after”—the lower included threshold value of the face creation time;
- “Delete data before”—the upper excluded threshold value of the face creation time.

Fill in all the required parameters and click on the “Create task” button or the Enter key on your keyboard.

Resource-intensive tasks may take some time to complete. Confirm the action in the pop-up window—click the “Ok” button or cancel the action using the “Cancel” button (Figure 76).

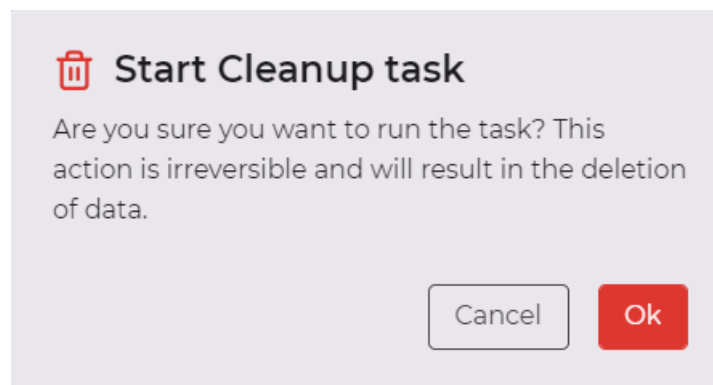


Figure 76: Confirmation of creating a “Deleting faces from the list” task

After successfully creating a task for removing persons from the list, the message “Cleanup task has been successfully created” appears on the screen (Figure 77).

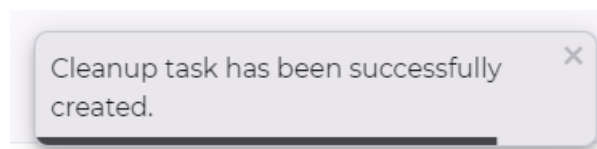



Figure 77: Confirmation of successful creation of the “Deleting faces from the list” task

15.2.5 Viewing the results of a task

Viewing the results of a task is performed by pressing the button  in the line (3 in the Figure 58). For viewing the *.ZIP archive for export tasks, the *.csv file for cross-matching tasks, the *.json file for batch processing, batch import and batch identification tasks (where * is the task ID) will be loaded.

The downloaded *.csv file contains a table with the export parameters selected in “[Creating an export task](#)” section (Figure 78) or with the results of cross-matching (Figure 79).


event_id	create_time	external_id	handler_id	source	top_match	face_id	gender	age
665135b4-9f	27.09.2021 16:47	3rd Floor4062	79e6f4e6-534 3rd Floor		{'face_id': 'e6b70df2-b483-4fc1-98f6-e32989da3637', 'label': 'employees', 'similarity': 0.1409004927}	1f18738a-4f	1	24
6645002e-0e	22.09.2021 12:37	3rd Floor674	79e6f4e6-534 3rd Floor		{'face_id': 'f0fcc688-13ed-4e6c-907f-3848201a35bb', 'label': 'employees', 'similarity': 0.1418588161}	90e2357f-2:	1	26
662fa4fa-c0f	22.09.2021 20:16	3rd Floor1240	79e6f4e6-534 3rd Floor		{'face_id': 'a917214a-fd31-48f1-afa3-053964804333', 'label': 'employees', 'similarity': 0.9974253178}	ade23c53-4:	1	27
662a4881-ff	21.09.2021 16:26	3rd Floor300	79e6f4e6-534 3rd Floor		{'face_id': '573ffe89-9792-4932-a9dd-9cb6beaa2d9f', 'label': 'employees', 'similarity': 0.9825840592}	ec08654e-f2	1	25
660e10f1-1c	22.09.2021 11:12	3rd Floor571	79e6f4e6-534 3rd Floor		{'face_id': 'bb493577-e96e-4b47-8a74-2cb7244a52ef', 'label': 'employees', 'similarity': 0.2021719962}	44d534ef-8:	1	25
65fd799f-b9	28.09.2021 15:48	3rd Floor5606	79e6f4e6-534 3rd Floor		{'face_id': 'c39341c2-a89f-4d0b-b07b-bce8431eaf3c', 'label': 'employeesLabel', 'similarity': 0.999461594cb37193-3}	1	26	
65f69dbb-f4	24.09.2021 11:38	3rd Floor2135	79e6f4e6-534 3rd Floor		{'face_id': '951ce496-d7b3-426a-a932-9e622ad77bfe', 'label': 'employees', 'similarity': 0.2092717141}	92dce519-4:	1	27
65f10e37-12	22.09.2021 17:13	3rd Floor1092	79e6f4e6-534 3rd Floor		{'face_id': '8fc25ca3-d60f-4247-a993-9fb417e5923c', 'label': 'employees', 'similarity': 0.1687758565}	23bf2636-f3	1	27
65d9ed33-5:	30.09.2021 10:42	3rd Floor7165	79e6f4e6-534 3rd Floor		{'face_id': '78b0896a-b4dd-4fec-81d6-4767fe4f75f8', 'label': 'employeesLabel', 'similarity': 0.78575140b3655a34-b}	1	22	

Figure 78: Export results table

Reference face ID	Candidate 1 face ID	Percentage of similarity 1	Candidate 2 face ID	Percentage of similarity 2
5e182c16-004f-4c09-a5b7-8	5e182c16-004f-4c09-a5b7-8	1	ef7a6ba0-aa0c-4723-b638-0	0.622937023639679
ef7a6ba0-aa0c-4723-b638-0	ef7a6ba0-aa0c-4723-b638-0	1	5e182c16-004f-4c09-a5b7-8	0.622937023639679
c7e2d36a-e954-48da-bc1d-5	c7e2d36a-e954-48da-bc1d-5	1	f36592c9-9ce0-4756-872a-3	0.5655199289321899
f36592c9-9ce0-4756-872a-3	f36592c9-9ce0-4756-872a-3	1	c7e2d36a-e954-48da-bc1d-5	0.5655199289321899
c678f1ff-c526-4ebd-8c87-9	c678f1ff-c526-4ebd-8c87-9	1	c74ef496-fb1d-4e7c-bccb-b	0.5562521815299988
c74ef496-fb1d-4e7c-bccb-b	c74ef496-fb1d-4e7c-bccb-b	1	c678f1ff-c526-4ebd-8c87-9	0.5562521815299988
4d6fa981-37f7-49be-a384-6	4d6fa981-37f7-49be-a384-6	1	aa4e9933-a3d0-4961-be42-0	0.5087094902992249
aa4e9933-a3d0-4961-be42-0	aa4e9933-a3d0-4961-be42-0	1	4d6fa981-37f7-49be-a384-6	0.5087094902992249

Figure 79: Cross-matching results table

15.2.6 Task deleting

Deleting a task is performed by clicking the  button in the line (4 in the Figure 58).

In the pop-up window (Figure 80), you must confirm the action — click on the “Delete” button or cancel the action by clicking on the “Cancel” button. After the successful deletion, a corresponding notification appears.

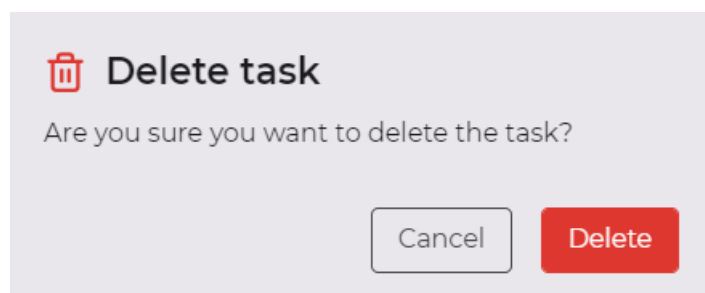


Figure 80: Confirmation of deletion of the task

16 “Statistics” section

The “Statistics” section is designed for getting statistical data on events and building graphs based on them. When you open the section, a page opens with a list of pre-configured charts (Figure 81):

- Age distribution;
- Attendance by gender;
- Distribution gender,
- Gender ratio;
- Emotion distribution;
- Average age by gender.

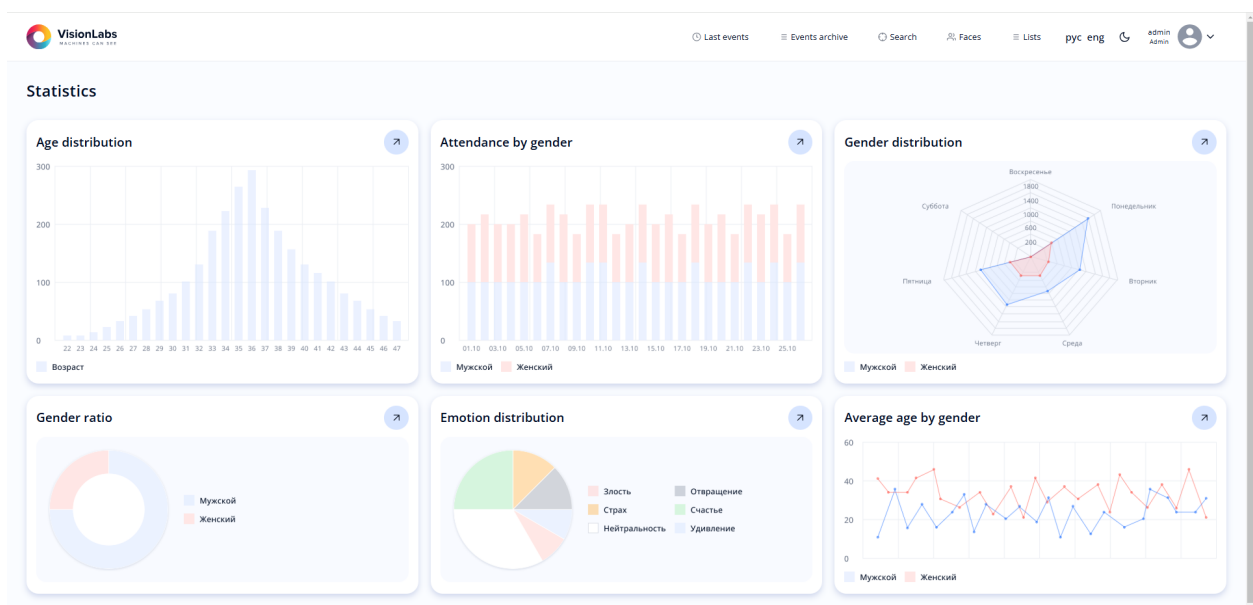



Figure 81: “Statistics” section

Go to the chart editing page by clicking  next to the chart. Change the field values and build a new charts.

16.1 Chart settings

The chart creation and configuration page consists of table (Table 28). Specify the data for building the chart. After selecting the parameters, click the “Refresh” button to show the specified data on the chart. Click “Reset to default” to reset values in the fields to the original ones.

Table 28. Description of the elements of the chart setup page

Name	Description
“Basic parameters”	Fields required for plotting a chart
“Chart Title”	Field for entering the chart title
“Chart type”	Drop-down list for selecting the chart type: <ul style="list-style-type: none"> • Bars • Horizontal bars • Areas • Step areas • Stacks • Lines • Pie • Doughnut • Radar
“Data”	Drop-down list for selecting event characteristic. The chart is based on those events that have the selected characteristic filled in. You can select events that have, for example, “top ,atching candidates label”, “Liveness” rating or event ID — for grouping by all events. The event characteristics to select in the “Data” field are related to the data shown in the last events .
“Aggregator”	Drop-down list for selecting the type of data aggregation. The set of acceptable values in the field depends on the value selected in the “Data” field. Possible values of the “Aggregator” field: <ul style="list-style-type: none"> • Count • Maximum value • Minimum value • Average value
“Grouping” tab	
Group by time	Fields required for grouping data by time

Name	Description
"Group by"	<p>Drop-down list for selecting the type of grouping by time. Available values:</p> <ul style="list-style-type: none"> By time intervals—when this type is selected, the "Count" and "Dimension" fields become mandatory. By frequency—when this type is selected, the "Frequency" field becomes mandatory. <p>The "Count" field is used to specify the number of time intervals specified in the "Dimension" field.</p> <p>The "Dimension" field is a drop-down list of dimension values. Valid field values: "Minute", "Hour", "Day", "Week", "Month", "Year".</p> <p>The "Frequency" field is a drop-down list of frequency values. Valid field values: "By months of the year", "By weeks of the year", "By days of the year", "By days of the month", "By days of the week", "By hours of the day", "By minutes of the hour"</p>
Group by field	Fields required to group data by field value
"Field"	<p>Drop-down list for selecting the field by which events will be grouped. For example, specify "Age" to get the distribution of events by age. Leave the value empty, to get the distribution by all events containing the characteristic specified in the "Data" field, "Basic Parameters" tab.</p> <p>Add an additional field for distribution, for example "Gender", to get a combined chart (Figure 82)</p> <p>The field is available for input except when the "Donut" or "Pie" chart type or the group by time intervals is selected.</p>
Filters tab	
"Period"	Fields required to filter data by period
"From" and "To"	Fields for selecting a date. The chart includes events created between the specified dates and times.
"Data"	Fields required to group data by field value
"Add field" button	Button for adding a new group of fields to fill in the filter parameters
"Field"	Drop-down list for selecting the field by which filtering will be performed
"Function"	<p>Drop-down list of functions for filtering. Activated by selecting a value in the "Field". Valid field values:</p> <p>Contains/Does not contain symbol, Includes/Excludes value, Equals/Not equals, Greater than, Greater than or equal to, Less than, Less than or equal to, Empty, Included in the area</p>

Name	Description
------	-------------

“Value”	<p>Field for entering a value corresponding to the function for filtering. It can be either text format or drop-down options, depending on the selected value in the “Field”.</p> <p>Activated by selecting a value in the “Functions” field.</p> <p>For example, select filtering by “Emotions” in the “Field”. Specify the value “Equals” in the “Function” field and “Happiness” in the “Value” field to find out the number of events in which the emotion of the detected of the person was identified as “Happiness”.</p> <p>Add another field to expand the filtering. Specify “Age” in “Field”, “Greater than or equal to” in the “Function” and “30” as a “Value”. The chart will show the number of events where people with the emotion “Happiness” and age from 30 years were recognized (Figure 83)</p>
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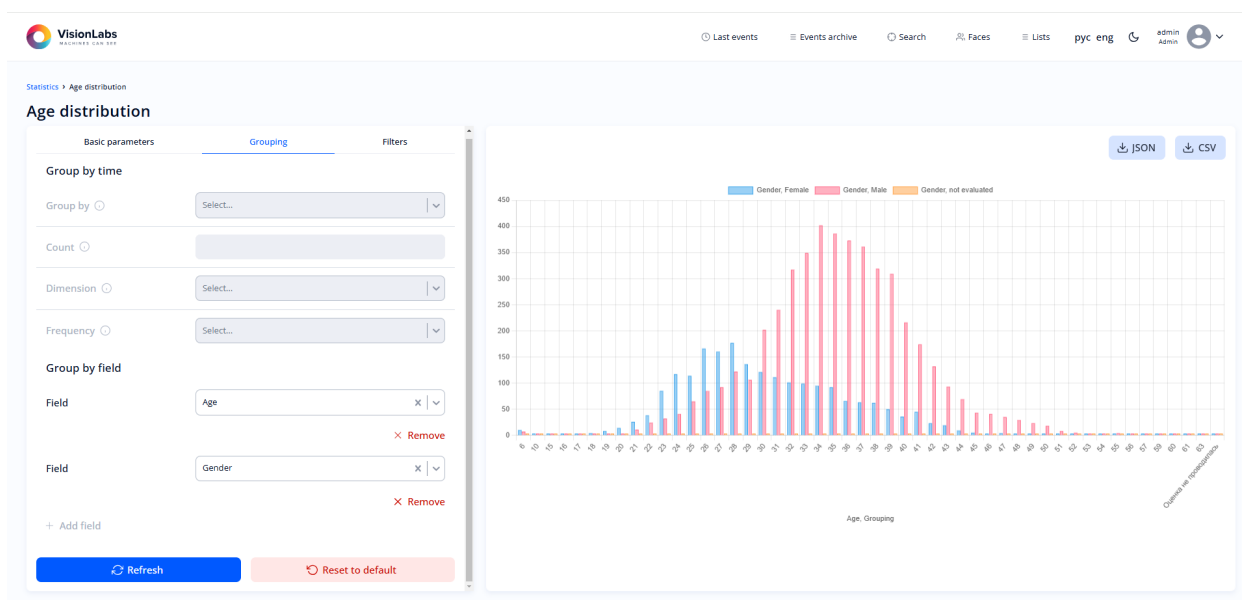


Figure 82: Combined diagram of distribution of events by age and gender

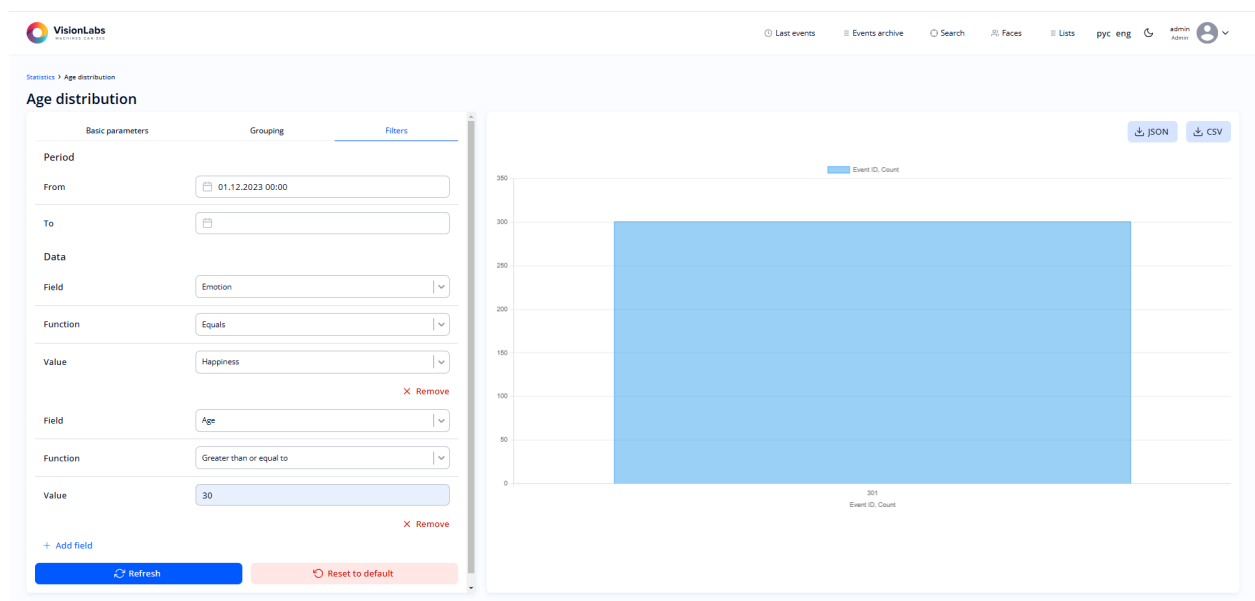




Figure 83: Diagram of distribution of events by the presence of the emotion “Happiness” in people over 30 years old

Download the event report that the graph is based on. Clicking the  or  button to download the report in json or csv format.

17 “Checks” section

The “Checks” section is intended to evaluate uploaded photo images for:

- Liveness;
- DeepFake;
- compliance with the requirements of the ISO/IEC 19794-5:2011 standard;
- compliance with ICAO standard;
- compliance with the biometric standards.

Checks are available only if user has the corresponding licenses.

The “Checks” section contains the following items (Figure 84):

- Photo image upload window allows you to upload a photo image by clicking the file or using drag and drop;
- A list of checks, where the user selects which ones to use to check the image.

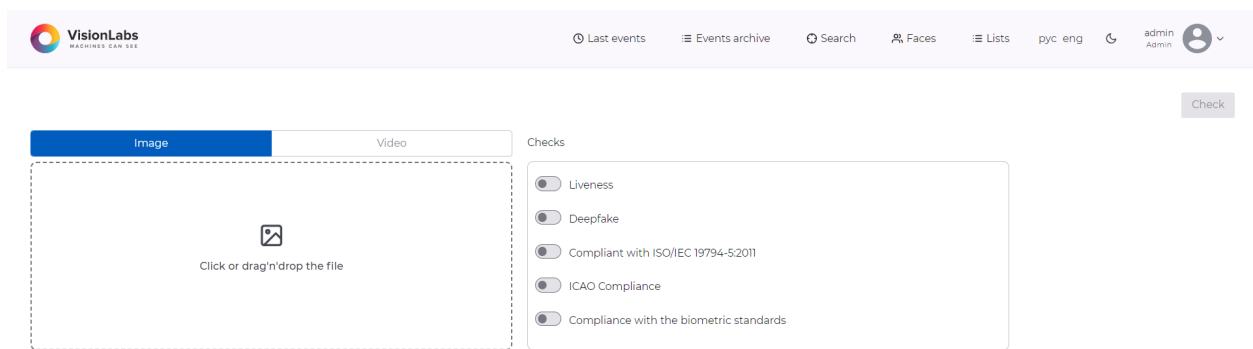


Figure 84: “Checks” section

To start checking a photo, upload or drag and drop your file, select checks from the list, then click the “Check” button.

The form with the results of checking contains (Figure 85):

- Final assessment of whether the photo passed the selected checks;
- Results for each check criterion: if the photo meets the criterion, then the font color is green; if it doesn't, then the font color is red. A photo must meet all the criterion in order to comply with the check;
- The number of criteria that the photo does not meet if the result of the check is negative;
- Button for downloading results of checking in json;
- Button to reset old photo. Allows you to start a new scan for a different photo.

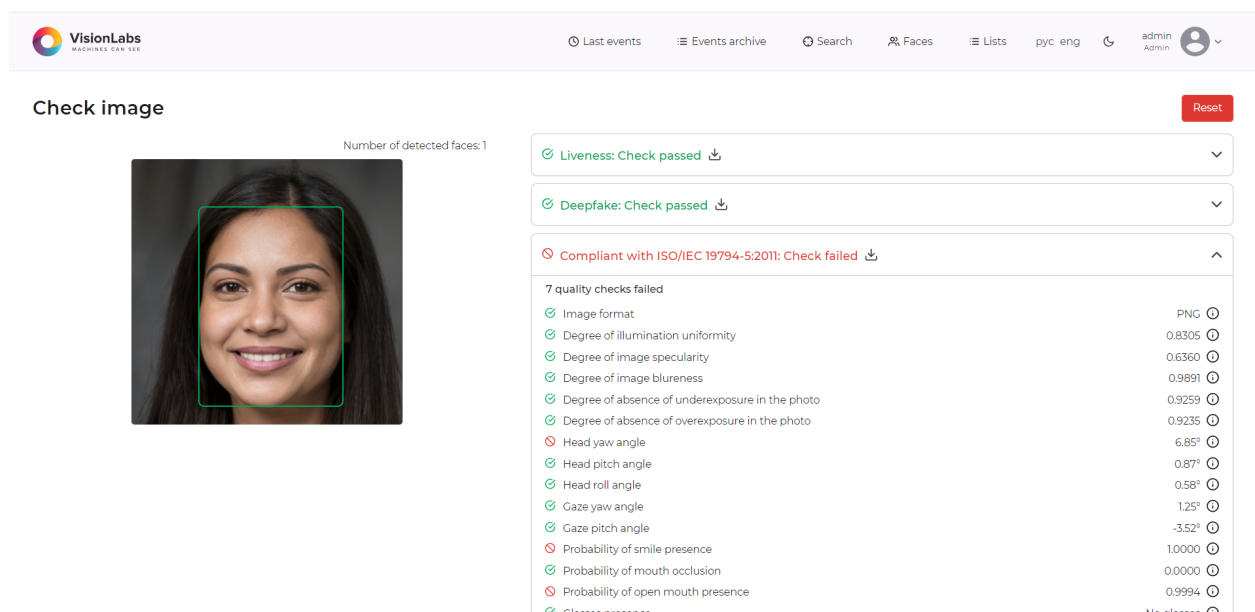


Figure 85: Results of photo checking

Image file requirements:

- *.jpeg, *.png or *.bmp format;
- image size no more than 15 MB and no more than 3840x2160 pixels;
- image may contain one or more people;
- image must have a person's face.

18 Users section

The “Users” section is intended for showing user accounts, created in LUNA PLATFORM 5. General view of the “Users” section is shown below (Figure 86).

Full name	Email	Position	Role
admin	admin@example.com		Admin
Dmitry Basavin	d.basavin@visionlabs.ru	Администратор	Admin
Egor	e.gaifutdinov@visionlabs.ai		User
user	user@example.com	Пользователь	User

Figure 86: “Users” section

“Users” section contains the following elements:

- Table of existing user accounts containing columns:
 - “Login—account login;
 - “Description”—account description
 - “Account type”
 - * user — the type of account with which you can create objects and use only your account data.
 - * advanced_user — allows to interact with its own data and view other accounts data
 - * admin — the type of account for which rights similar to “advanced_user” are available, and there is also access to the [Admin service](#).
 - “Create time” — date and time of account creation;
 - “Last update time” — date and time of the last account update.

To sort a column in the table, click on the column name. The sorting arrow icon indicates the current sorting by one of the parameters: alphabetically, ascending, or descending.

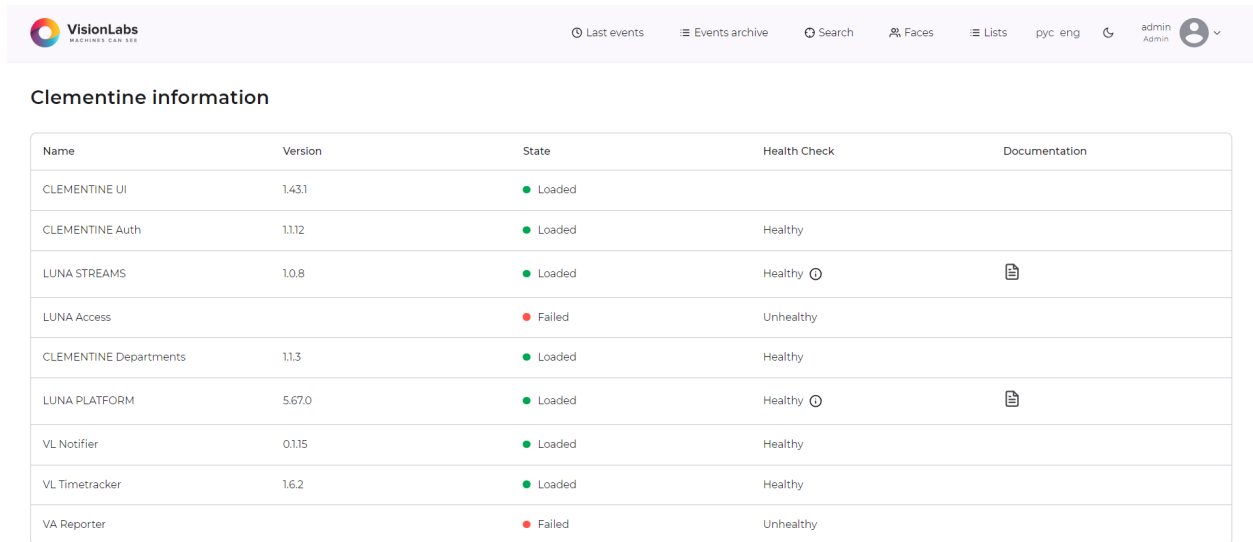
You can work with all types of accounts in the API service, but only “advanced_user” and “user” types of accounts can be created, while in the Admin service you can create all three types.

18.1 Creating a user account

Create a user account using a POST request [“create account” to the API service](#), or using the [Admin service](#). When creating the account, you must specify the following data: login (email), password and account type.

19 Monitoring section

The “Monitoring” section is intended for viewing information and status of connected services, modules, components, and systems (Figure 87).








Name	Version	State	Health Check	Documentation
CLEMENTINE UI	1.43.1	● Loaded		
CLEMENTINE Auth	1.1.12	● Loaded	Healthy	
LUNA STREAMS	1.0.8	● Loaded	Healthy ⓘ	
LUNA Access		● Failed	Unhealthy	
CLEMENTINE Departments	1.1.3	● Loaded	Healthy	
LUNA PLATFORM	5.67.0	● Loaded	Healthy ⓘ	
VL Notifier	0.1.15	● Loaded	Healthy	
VL Timetracker	1.6.2	● Loaded	Healthy	
VA Reporter		● Failed	Unhealthy	

Figure 87: “Monitoring” section

“Monitoring” section contains the following elements:

- List of connected services, modules, components, and systems:
 - “Name” — component/service/system name;
 - “Version” — component/service/system version;
 - “State” — current state (status) of a component/service/system;
 - “Health check” — checks access to the service. Useful in situations when the service is running, i.e. in the “Loaded” state, but is not available. The system response time in seconds is shown next to the check status;
 - “Documentation” — links to the documentation if it is present in the component/service/system.

This colors are used to indicate the current status of a service, module, component, or system:

-  — green color — component/service/system is up and running;
-  — blue color — component/service/system is loading;
-  — red color — component/service/system is temporarily unavailable.

20 Licenses section

The “Licenses” section provides the information about available licenses.

The section contains the following tabs:

“General information”–shows whether the license has expired (Figure 88);

Licenses

General information	Estimations	Modules
License has not expired		
Buy or renew a license		

Figure 88: “General information” in the “Licenses” section

“Estimations”–shows the status (enabled/disabled) of licenses for (Figure 89):

- estimating the number of people in an image (PlatformPeopleCounter);
- checking quality of facial image (PlatformISO);
- estimation of body attributes (PlatformBodyAttributes);
- Liveness check (PlatformLiveness);
- Deepfake check (PlatformDeepfake);

Licenses

General information		Estimations	Modules
Name	Description	Technical name	Status
Counting the number of people in the frame	Availability of functionality for estimating the number of people in an image	PlatformPeopleCounter	Enabled
Photo check	Availability of functionality to check the image for compliance with ISO/IEC 19794-5:2011 and other biometric standards	PlatformISO	Enabled
Body attributes	Availability of estimating body parameters functionality	PlatformBodyAttributes	Enabled
OneShotLiveness	Availability of Liveness (OneShot)	PlatformLiveness	Enabled
Deepfake	Availability of Deepfake	PlatformDeepfake	Enabled
Buy or renew a license			

Figure 89: “Estimations” in the “Licenses” section

“Modules”–shows the status (enabled/disabled) of service licenses for (Figure 90):

- storing data about events in the database (Events Service);
- completing tasks (Tasks Service);
- sending event notifications via a web socket (Sender Service);
- storing samples, reports on task execution, created clusters and additional metadata (Image Store Service);
- creating and storing handlers (Handlers Service).

Licenses

General Information		Estimations	Modules
Name	Description		Status
Events service	Stores data on the generated events in the database		Enabled
Tasks service	Performs long tasks, such as garbage collection, extraction of descriptors with a new neural network version, clustering		Enabled
Sender service	Sends notifications about created events via web-socket		Enabled
Image Store service	Stores samples, any objects, reports about long tasks execution, created clusters and additional metadata		Enabled
Handlers service	Creates and stores handlers. Accepts requests for detection, estimation and extraction and redirects them to the Remote SDK service		Enabled
lambdas			Disabled
Buy or renew a license			

Figure 90: “Modules” in the “Licenses” section

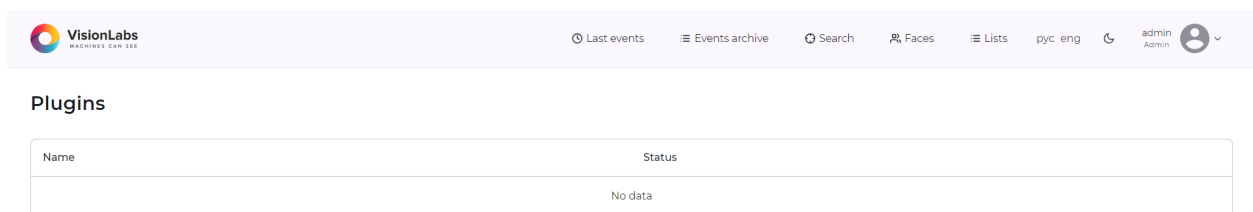
Each tab allows you to go to the page for buying license or renewal.

21 Plugins section

The “Plugins” section provides the information about plugins imported into LUNA PLATFORM 5. Plugins are used to perform secondary actions for the user’s needs. For example, you can expand the standard functionality of the product using them. The general view of the “Plugins” section is presented below (Figure 91).

“Plugins” section contains the following elements:

- table of plugins:
 - “Name” — name of the plugin;
 - “Status”—shows the current status (running/not running) of the plugin.



Name	Status
No data	

Figure 91: “Plugins” section

For more information on getting a list of imported plugins and their status, [see LUNA PLATFORM 5 documentation](#).