



# REST API for Eocortex

Published: 2/20/2024

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# Introduction

Eocortex REST API permits to:

- Configure cameras, users, groups, screen profiles, certain automated scenarios, people counting module.
- Review information regarding the status of servers and cameras and supported camera modules.
- Work with face databases: receive, add and modify entries regarding faces and groups.

**Eocortex** REST API can be used for configuring the system without using Eocortex Configurator application.

The **configure/** resource of the function is only available for Eocortex with **Enterprise** and **Ultra** licenses. Configuring with REST API can only be performed by a user with full rights, i.e. by the user belonging to the **Senior Administrators** group.

**api/** resource is available for all users and in any **Eocortex** product.



## Resource description

REST API allows to receive, add, modify and delete various resources.

All the resources will be listed in the tables below (GET: reading of objects, POST: adding objects, PUT: modifying objects, DELETE: deleting objects).

Description of the resources used for configuring the system (such requests are to be sent strictly to the main video surveillance server; the request string starts with the word **configure**):

**Version:** indicates the version with which the resource appears in the REST API.

Resource	Description	Version	GET	POST	PUT	DELETE
<b>configure/channels</b>	Brief information regarding all cameras, adding/modifying cameras	2.5	+	+	+	n/a
<b>configure/channels/{channel_id}</b>	Detailed information regarding a camera, deleting a camera	2.5	+	n/a	n/a	+
<b>configure/channels/{channel_id}/scenarios</b>	Information regarding a camera's scenarios, modification of a camera's scenarios	2.5	+	n/a	+	n/a
<b>configure/channels/{channel_id}/facescomplete</b>	Face Recognition Complete module settings, modification of Face Recognition Complete module's settings	3.4	+	n/a	+	n/a
<b>configure/channels/{channel_id}/peoplecounter</b>	People Counting module settings, changing People Counting module settings	2.5	+	n/a	+	n/a
<b>configure/channels/{channel_id}/visitors</b>	Unique Visitor Counting module settings, modification of Unique Visitor Counting module's settings	3.4	+	n/a	+	n/a

<b>configure/channels/{channel_id}/queuecounter</b>	People Counting in Queue module settings, modification of People Counting in Queue module's settings	3.4	+	n/a	+	n/a
<b>configure/channels/{channel_id}/platescomplete</b>	License Plate Recognition Complete module settings, modification of License Plate Recognition Complete module's settings	3.4	+	n/a	+	n/a
<b>configure/secobjects</b>	Root safety object, adding/modifying safety objects	2.5	+	+	+	n/a
<b>configure/secobjects/{secobject_id}</b>	Selected safety object, deleting safety object	2.5	+	n/a	n/a	+
<b>configure/groups</b>	Brief description of all groups, adding/modifying groups	2.5	+	+	+	n/a
<b>configure/groups/{group_id}</b>	Detailed description of a group, deleting a group	2.5	+	n/a	n/a	+
<b>configure/groups/{group_id}/users</b>	Brief description of all users of the group	2.5	+	n/a	n/a	n/a
<b>configure/users</b>	Brief description of all users, adding/modifying users	2.5	+	+	+	n/a
<b>configure/users/{user_id}</b>	Detailed description of a user, deleting a user	2.5	+	n/a	n/a	+/-
<b>configure/viewprofiles</b>	Brief description of all profiles, adding/modifying profiles	2.5	+	+	+	n/a
<b>configure/viewprofiles/{viewprofile_id}</b>	Description of a profile, deleting a profile	2.5	+	n/a	n/a	+

<b>configure/servers</b>	Brief information regarding all servers	2.5	+	n/a	n/a	n/a
<b>configure/servers/{server_id}</b>	Detailed information regarding a server	2.5	+	n/a	n/a	n/a
<b>configure/servers/{server_id}/channels</b>	Brief information regarding the server's cameras	2.5	+	n/a	n/a	n/a
<b>configure/devicemanufacturers</b>	Supported camera models	2.5	+	n/a	n/a	n/a
<b>configure/monitoring</b>	Monitoring settings	3.5	+	n/a	+	n/a

Description of the resources used for obtaining information regarding a server (such requests can be sent to any video surveillance server; the request string starts with the word "api"):

<b>Resource</b>	<b>Description</b>	<b>Version</b>	<b>GET</b>	<b>POST</b>	<b>PUT</b>	<b>DELETE</b>
<b>api/channels</b>	Brief information regarding all cameras assigned to a server	2.5	+	n/a	n/a	n/a
<b>api/channels/{channel_id}</b>	Brief information regarding a camera	2.5	+	n/a	n/a	n/a
<b>api/channels/{channel_id}/status</b>	Camera performance status (reception bitrate, recording bitrate, issues detected)	2.5	+	n/a	n/a	n/a
<b>api/faceconfig</b>	Information regarding available face recognition modules	2.8	+	n/a	n/a	n/a
<b>api/faces</b>	Description of all faces in database with possibility to add one new face	2.8	+	+	n/a	n/a
<b>api/faces/&lt;id&gt;</b>	Detailed description of a face with images, updating/deleting/modifying a face	2.8	+	n/a	+	+

<b>api/faces-groups</b>	List of groups of faces with description, adding a group of faces	2.8	+	+	n/a	n/a
<b>api/faces-groups/&lt;id&gt;</b>	Description of a group with list of faces in it	2.8	+	n/a	+	+

# Using REST API

All requests must be made as a user belonging to the **Senior Administrator group**.

- Requests for **configuring the system (configure)** are sent to the main server of the system.
- Requests **for information about the server (api)** are sent to any video surveillance server.

To access resources, you must be authorized.

Authorization methods

1. Passing authorization data through GET-parameters of the request

This method involves passing authorization data through GET-parameters of the request. These parameters can be used not only in GET-requests, but also in POST and PUT-requests when working with REST API.

Parameters

**login:** username (e.g. root or novikov@ent.eocortex.com for AD users)

**password:** user password

- **MD5 hash of the password** for the internal MC user, if the password is empty, this parameter can be omitted. (you can generate it, for example, here <https://www.md5hashgenerator.com/>).
- **Base64-encoded password** for AD user

**usertype:** user type

- **internal:** for internal Eocortex user, or this parameter can be omitted.
- **ActiveDirectory:** for the AD user.

Examples

Request a list of cameras for the internal user user with password **1234**.

```
curl --location "localhost:8080/api/channels?login=user&password=81dc9bdb52d04dc20036dbd8313ed055"
```

Request a list of cameras for AD user novikov@ent.eocortex.com with password **password**.

```
curl --location "localhost:8080/api/channels?login=novikov%40ent.eocortex.com&usertype=ActiveDirectory&password=cGFzc3dvcmQ%3D"
```

## 2. HTTP Basic authentication

This method ([https://en.wikipedia.org/wiki/Basic\\_access\\_authentication](https://en.wikipedia.org/wiki/Basic_access_authentication)) is standard, as it is supported by most browsers and various HTTP clients, such as POSTMAN, as well as libraries (HttpClient, RestSharp) for various programming languages.

To use this authorization you should add the following authorization header to HTTP-request: **Authorization: Basic Base64(login:password).**

For example, Authorization: Basic bm92aWtvdkBlbnQubWFjcm9zY29wLmNvbTpQbGFpbIRleHRBZFBhc3N3b3Jk.

Parameters

**login:** username, which must match the user's name in Eocortex.

**password:** user password

- **MD5 hash of the password** for the internal Eocortex user, if the password is empty, this parameter can be omitted. (you can generate it, for example, here <https://www.md5hashgenerator.com/>).
- **The password** is a pure password for the AD user. Since the entire **login:password** combination is then **Base64** encoded, the password is not encoded separately.

For Basic authorization to work for Active Directory users, the following header must be added to the request:

**UserType:** ActiveDirectory

Examples

Request a list of cameras for the internal user user with password **1234**.

```
curl --location "localhost:8080/api/channels" --header "Authorization: Basic dXNlcjo4MWRjOWJkYjUyZDA0ZGM5MDAzNmRiZDgzMTNlZDA1NQ=="
```

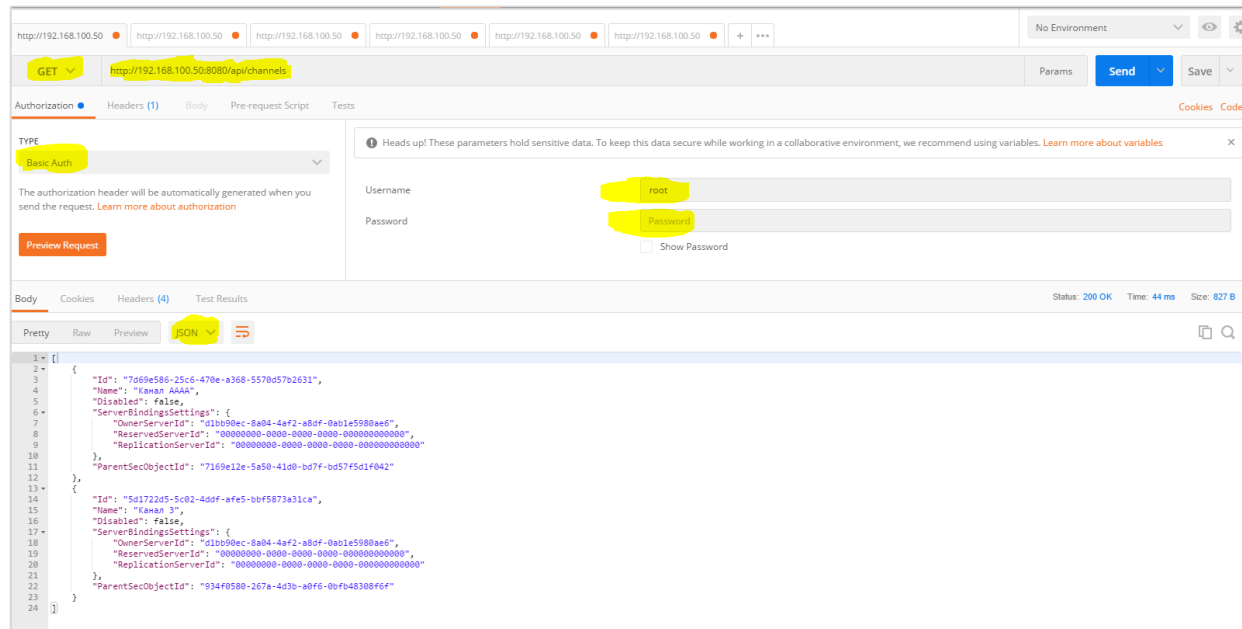
Request a list of cameras for AD user novikov@ent.eocortex.com with password **password**.

```
curl --location "localhost:8080/api/channels" --header "UserType: ActiveDirectory" --header "Authorization: Basic bm92aWtvdkBlbnQubWFjcm9zY29wLmNvbTpQbGFuVGV4dEFkUGFzc3dvcmQ="
```

Please note that the configuration feature is available for Eocortex Ultra only and can be executed exclusively by a user with full rights, i.e. by the user belonging to the Senior Administrators group.

To use REST API, a browser only will not be enough, since many requests are POST, PUT, and DELETE ones; that is why we recommend to use applications like Postman (https://chrome.google.com/webstore/detail/postman/fhbjgbiflinjbdggehcddcbncdddomop?hl=ru)

Below is a screenshot of the Postman application (to use the program, it is required to enter the path to the resource and activate the Basic Authorization):



## Description of response codes

HTTP code	Description
<b>200 (OK)</b>	Request completed successfully.
<b>400 (BadRequest)</b>	Request not completed. Request created wrongly, or an unexpected error occurred during fulfilling the request.
<b>403 (Forbidden)</b>	Request not completed. Resource requested forbidden for current user; make sure that user has configuration rights.
<b>404 (NotFound)</b>	Request not completed. Requested resource not found.
<b>409 (Conflict)</b>	Request not completed. Configuration modification detected in the course of making the request. Repeat request later.

At that, in case of an error, the response is usually accompanied by a textual description of the error, e.g. the GET request with a misprint ("channel" instead of "channels") `http://192.168.100.50:8080/configure/channel` will be responded with the HTTP code 404 (NotFound), and the response will also contain the following description of the error:

```
{  
  "ErrorMessage": "Resource is not found (/configure/channel | GET)"  
}
```



## Logging requests on server side

All the requests are logged on the server side in the standard folder with the Eocortex Server logs. The requests for configuring the system are logged in the log entitled RestConfigure.log; the requests for server information are logged in the log entitled RestApi.log.

Here is an example of logging the misprinted request <http://192.168.100.50:8080/configure/channel>:

```
[2018-01-28 16:33:42,961 Thread=Server Worker: 1D0AFD5]
Start (/configure/channel | GET)

[2018-01-28 16:33:42,962 Thread=Server Worker: 1D0AFD5]
ERROR
Resource is not found (/configure/channel | GET)
ConfigStorage.Rest.Exceptions.RestNotFoundException: Application error.
ConfigStorage.Rest.RestResourcesFactory.Create(String rawUrl) in
Q:\AlarusRootGit_rest\Alarus\Core\ConfigStorage\Rest\RestResourcesFactory.cs:string 86
ConfigStorage.Rest.RestRequestProcessor.ProcessRequest() in
Q:\AlarusRootGit_rest\Alarus\Core\ConfigStorage\Rest\RestRequestProcessor.cs:string 63

[2018-01-28 16:33:42,964 Thread=Server Worker: 1D0AFD5]
Generating response (/configure/channel | GET)

[2018-01-28 16:33:42,966 Thread=Server Worker: 1D0AFD5]
Finish (/configure/channel | GET)
```

## api/channels

Brief information regarding all cameras bound to server

### Example of a request

```
GET http://192.168.100.50:8080/configure/channels/
```

### Example of a response

```
[
  {
    "Id": "428d7aff-2e4a-46df-acff-0550cd827cd3",
    "Name": "Channel 1",
    "Disabled": false,
    "ServerBindingsSettings": {
      "OwnerServerId": "cd81195c-9c0e-42f0-8535-c55af9c35161",
      "ReservedServerId": "00000000-0000-0000-0000-000000000000",
      "ReplicationServerId": "00000000-0000-0000-0000-000000000000"
    },
    "ParentSecObjectId": "1f2c7319-9e87-46a2-be33-61bf2872b7df"
  },
  {
    "Id": "44afcd50-7b7c-4f91-89f5-5385acd66c96",
    "Name": "Channel 2",
    "Disabled": false,
    "ServerBindingsSettings": {
      "OwnerServerId": "9162138b-046a-48ed-82ed-6c6c7f6a52ba",
      "ReservedServerId": "00000000-0000-0000-0000-000000000000",
      "ReplicationServerId": "00000000-0000-0000-0000-000000000000"
    },
    "ParentSecObjectId": "25f867d0-92d5-4571-86da-403ea9458501"
  },
  {
    "Id": "56eeec10-c6ac-4257-8821-907dd85013ff",
    "Name": "Channel 3",
    "Disabled": false,
    "ServerBindingsSettings": {
```

```
    "OwnerServerId": "cd81195c-9c0e-42f0-8535-c55af9c35161",
    "ReservedServerId": "00000000-0000-0000-0000-000000000000",
    "ReplicationServerId": "00000000-0000-0000-0000-000000000000"
  },
  "ParentSecObjectId": "1f2c7319-9e87-46a2-be33-61bf2872b7df"
```

```
},
{
```

```
  "Id": "f6ffec63-3255-47de-85d6-99692ebace41",
  "Name": "Channel 4",
  "Disabled": false,
  "ServerBindingsSettings": {
    "OwnerServerId": "9162138b-046a-48ed-82ed-6c6c7f6a52ba",
    "ReservedServerId": "00000000-0000-0000-0000-000000000000",
    "ReplicationServerId": "00000000-0000-0000-0000-000000000000"
  },
  "ParentSecObjectId": "25f867d0-92d5-4571-86da-403ea9458501"
```

```
}
```

```
]
```

api/channels/{channel\_id}

Brief camera information

**Example of a request**

```
GET http://192.168.100.50:8080/api/channels/7d69e586-25c6-470e-a368-5570d57b2631
```

**Example of a response**

```
{
  "Id": "7d69e586-25c6-470e-a368-5570d57b2631",
  "Name": "Channel 1",
  "Disabled": false,
  "ServerBindingsSettings": {
    "OwnerServerId": "cd81195c-9c0e-42f0-8535-c55af9c35161",
    "ReservedServerId": "00000000-0000-0000-0000-000000000000",
    "ReplicationServerId": "00000000-0000-0000-0000-000000000000"
  },
  "ParentSecObjectId": "1f2c7319-9e87-46a2-be33-61bf2872b7df"
}
```

## api/channels/{channel\_id}/status

### Camera operating capacity status (reception bitrate, recording bitrate, issued detected)

Camera operating capacity status corresponds with the status gathered by the ULTRA Monitoring. The status can be obtained even when the ULTRA Monitoring is disabled.

#### Example of a request

```
GET http://192.168.100.50:8080/api/channels/7d69e586-25c6-470e-a368-5570d57b2631/status
```

#### Example of a response

```
{
  "Id": "7d69e586-25c6-470e-a368-5570d57b2631",
  "Name": "Camera 1",
  "AltEnabled": false,
  "ReceiveVideoMbps": 0.8812103271484375,
  "ReceiveAltVideoMbps": 0,
  "WriteVideoMbps": 0,
  "Status": "Ok"
}
```

Description of a JSON object of the response:

Parameter	Description
<b>Id</b>	Camera ID
<b>Name</b>	Name of camera
<b>AltEnabled</b>	Indicates that alternative stream is enabled on camera
<b>ReceiveVideoMbps</b>	Main stream reception bitrate, Mbps
<b>ReceiveAltVideoMbps</b>	Alternative stream reception bitrate, Mbps

<b>WriteVideoMbps</b>	Bitrate of recording to archive, Mbps
<b>StreamsStatuses</b>	Status by camera streams
<b>Status</b>	Status of issues detected on camera: OK – no issues, ErrorMain – issues with main stream, ErrorAlt –issues with alternative stream, ErrorSound – issues with sound, Wait – status not determined yet

# cameras

## Receiving a list of the camera's settings

### Example of a request

```
http://localhost:8080/webapi/cameras
```

### Headers

Content-Type	application/json
--------------	------------------

### Example of a response

```
[  
  {  
    "ChannelId": "3fa85f64-5717-4562-b3fc-2c963f66afa6",  
    "ChannelName": "string",  
    "WatermarkSettings": {  
      "IsEnabled": true,  
      "Opacity": 0,  
      "ColorCode": "string",  
      "IsDateAndTimeEnabled": true,  
      "IsUserNameEnabled": true,  
      "IsComputerNameEnabled": true,  
      "LocationMode": 0  
    }  
  }  
]
```

### Parameters of response

Name	Description	Format
------	-------------	--------

<b>ChannelId</b>	Camera ID	string
<b>ChannelName</b>	Camera name	string
<b>IsEnabled</b>	Watermark is displayed	boolean
<b>Opacity</b>	Opacity level. A high opacity means a low transparency	number(\$double)
<b>ColorCode</b>	Appearance color	string
<b>IsDateAndTimeEnabled</b>	Display date and time	boolean
<b>IsUserNameEnabled</b>	Display a current user name	boolean
<b>IsComputerNameEnabled</b>	Display hostname	boolean
<b>LocationMode</b>	The overlay text location in cell	integer(\$int32)



## cameras/{cameraId}

### Receiving a camera setting by ID

#### Example of a request

```
http://localhost:8080/webapi/cameras/3fa85f64-5717-4562-b3fc-2c963f66afa6
```

#### Headers

Content-Type	application/json
--------------	------------------

#### Parameters

Name	Description	Format
cameraId	Required parameter. Camera ID.	array[string]

#### Example of a response

```
{
  "ChannelId": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
  "ChannelName": "string",
  "WatermarkSettings": {
    "IsEnabled": true,
    "Opacity": 0,
    "ColorCode": "string",
    "IsDateAndTimeEnabled": true,
    "IsUserNameEnabled": true,
    "IsComputerNameEnabled": true,
    "LocationMode": 0
  }
}
```

**Parameters of response**

<b>Name</b>	<b>Description</b>	<b>Format</b>
<b>ChannelId</b>	Camera ID	string
<b>ChannelName</b>	Camera name	string
<b>IsEnabled</b>	Watermark is displayed	boolean
<b>Opacity</b>	Opacity level. A high opacity means a low transparency	number(\$double)
<b>ColorCode</b>	Appearance color	string
<b>IsDateAndTimeEnabled</b>	Display date and time	boolean
<b>IsUserNameEnabled</b>	Display a current user name	boolean
<b>IsComputerNameEnabled</b>	Display hostname	boolean
<b>LocationMode</b>	The overlay text location in cell	integer(\$int32)

## cameras/{cameraId}/archive\_days

### Receiving archive recording dates

#### Example of a request

```
http://localhost:8080/webapi/cameras/3fa85f64-5717-4562-b3fc-2c963f66afa6/archive_days?startTimeUtc=2024-08-20T08%3A20&endTimeUtc=2024-08-20T08%3A46
```

#### Headers

Content-Type	application/json
--------------	------------------

#### Parameters

Name	Description	Format
cameraId	Required parameter. Camera ID.	array[string]
startTimeUtc	Date and time when recording in the archive began. In UTC format	string(\$date-time)
endTimeUtc	The end date and time of recording in the archive. In UTC format	string(\$date-time)

#### Example of a response

```
{  
  "ChannelId": "3fa85f64-5717-4562-b3fc-2c963f66afa6",  
  "ChannelName": "string",  
  "ArchiveDays": [  
    "2024-08-20T08:51:12.732Z"  
  ]  
}
```

**Parameters of response**

<b>Name</b>	<b>Description</b>	<b>Format</b>
<b>ChannelId</b>	Camera ID	string
<b>ChannelName</b>	Camera name	string
<b>ArchiveDays</b>	Archive recording dates	string(\$date-time)

## cameras/analytics

Receiving a list of video analytics modules used for selected cameras

### Example of a request

```
http://localhost:8080/webapi/cameras/analytics?channelIds=3fa85f64-5717-4562-b3fc-2c963f66afa6
```

### Headers

Content-Type	application/json
--------------	------------------

### Parameters

Name	Description	Format
channelIds	Optional parameter. Camera IDs.	array[string]

### Example of a response

```
[  
  {  
    "ChannelId": "3fa85f64-5717-4562-b3fc-2c963f66afa6",  
    "ChannelName": "string",  
    "PluginIds": [  
      "3fa85f64-5717-4562-b3fc-2c963f66afa6"  
    ]  
  }  
]
```

**Parameters of response**

<b>Name</b>	<b>Description</b>	<b>Format</b>
<b>ChannelId</b>	Camera ID	string
<b>ChannelName</b>	Camera name	string
<b>PluginIds</b>	Enabled video analytics modules	string(\$uuid)

## configure/channels

Brief information regarding all cameras

### Example of a request

```
GET http://192.168.100.50:8080/configure/channels/
```

### Example of a response

```
[
  {
    "Id": "cb595719-09bf-4753-9566-742dd8719bca",
    "Name": "no coordinates at all",
    "Disabled": false,
    "ServerBindingsSettings": {
      "OwnerServerId": "916f94bb-17e2-4864-92f0-278c498706bc",
      "ReservedServerId": "00000000-0000-0000-0000-000000000000",
      "ReplicationServerId": "00000000-0000-0000-0000-000000000000",
      "VideoAnalyticsServerId": "00000000-0000-0000-0000-000000000000"
    },
    "ParentSecObjectId": "d4df033e-c67b-4f72-bd3a-d230f51d8758",
    "MapSettings": {
      "Latitude": null,
      "Longitude": null,
      "IsOnMap": false
    }
  },
  {
    "Id": "7c08f772-120c-420d-b140-0098a3ed6c5f",
    "Name": "on map",
    "Disabled": false,
    "ServerBindingsSettings": {
      "OwnerServerId": "916f94bb-17e2-4864-92f0-278c498706bc",
      "ReservedServerId": "00000000-0000-0000-0000-000000000000",
      "ReplicationServerId": "00000000-0000-0000-0000-000000000000",
      "VideoAnalyticsServerId": "00000000-0000-0000-0000-000000000000"
    }
  }
]
```

```
"ParentSecObjectId": "b43793a0-eece-4053-8db6-ef9a32138938",
  "MapSettings": {
    "Latitude": 19.891552649257235,
    "Longitude": 10.621652603149414,
    "IsOnMap": true
  }
},
{
  "Id": "e7c89311-70ee-4436-9ecf-64d347eb5ed6",
  "Name": "off map",
  "Disabled": false,
  "ServerBindingsSettings": {
    "OwnerServerId": "916f94bb-17e2-4864-92f0-278c498706bc",
    "ReservedServerId": "00000000-0000-0000-0000-000000000000",
    "ReplicationServerId": "00000000-0000-0000-0000-000000000000",
    "VideoAnalyticsServerId": "00000000-0000-0000-0000-000000000000"
  },
  "ParentSecObjectId": "b43793a0-eece-4053-8db6-ef9a32138938",
  "MapSettings": {
    "Latitude": 0.0,
    "Longitude": 50.0,
    "IsOnMap": false
  }
}
]
```

The camera coordinates displayed in the response are as follows:

```
"MapSettings": {
  "Latitude": 19.12345678901234,
  "Longitude": 10.12345678901234,
  "IsOnMap": true
}
```

Description of coordinate fields

Field	Description	Format
-------	-------------	--------



<b>Latitude</b>	latitude of the camera on the map, range of values from -90 to 90 degrees. If the camera has not yet set coordinates, null is returned.	double
<b>Longitude</b>	longitude of the camera on the map, the range of values is from -180 to 180 degrees. If the camera has not yet set coordinates, null is returned.	double
<b>IsOnMap</b>	indicator indicating the presence of the camera on the map. It takes the value true if the camera is present, false if it is absent.	bool

Note: **Latitude** and **Longitude** values can contain no more than 14 decimal places, which corresponds to the limitations of the **double** type.

## Adding new cameras

### Example of a request

```
POST http://192.168.100.50:8080/configure/channels
```

The body of a POST request shall contain the array of JSON objects corresponding with the cameras being added (see the `configure/channels/{channel_id}` resource).

The description of the fields of a JSON object of the camera being added is as follows:

Field	Description
<b>Name</b>	Name of camera
<b>Disabled</b>	Indicates that camera is off
<b>* ServerBindingsSettings</b>	Camera binding to server parameters
<b>* ServerBindingsSettings.OwnerServerId</b>	ID of server where the camera archive is recorded. It is considered that the camera is bound to this server.
<b>ServerBindingsSettings.ReservedServerId</b>	ID of server to which the camera performs backup
<b>ServerBindingsSettings.ReplicationServerId</b>	ID of server to which the camera performs replication
<b>ParentSecObjectId</b>	ID of security object where the camera is located
<b>Description</b>	Camera description
<b>* ConnectionSettings</b>	Camera connection parameters
<b>* ConnectionSettings.ModelId</b>	Camera model. The value can be found in the <code>configure/devicemanufacturers</code> resource

<b>ConnectionSettings.Hostname</b>	Camera connection address
<b>ConnectionSettings.Login</b>	Camera connection login
<b>ConnectionSettings.Password</b>	Camera connection password
<b>ConnectionSettings.MainVideoStreamFormat</b>	Main stream video format: MJPEG, MPEG4_Part2, H264, Hvc
<b>ConnectionSettings.AltVideoStreamEnabled</b>	Indicates that alternative stream is enabled
<b>ConnectionSettings.AltVideoStreamFormat</b>	Alternative video stream format: MJPEG, MPEG4_Part2, H264, Hvc
<b>ConnectionSettings.SoundReceivingEnabled</b>	Indicates that sound reception is enabled
<b>ConnectionSettings.PtzEnabled</b>	Indicates that PTZ camera control is enabled
<b>ConnectionSettings.Ipv6Enabled</b>	Indicates that IPV6 is enabled
<b>ConnectionSettings.PtzEnabled</b>	Indicates that PTZ camera control is enabled
<b>ConnectionSettings.MultiChannelServerEnabled</b>	Indicates that the camera is a channel of a video server
<b>ConnectionSettings.MultiChannelServerChannelNum</b>	Video server channel number
<b>ConnectionSettings.IoProcessingEnabled</b>	Indicates that camera I/O processing is enabled
<b>ConnectionSettings.SoundTransmittingEnabled</b>	Indicates that transmission of sound to camera is enabled

<b>ConnectionSettings.ExternalNetworkPorts</b>	External network ports of the camera. Integrated camera port (DefaultPortValue) and external port (PortValue) are indicated. It is not allowed to modify the integrated port. When making a modification, it is required to indicate the integrated port and the modified external port.
<b>ConnectionSettings.SoundVolume</b>	Sound level. Value lies in the range of 0 to 100
<b>ConnectionSettings.MainVideoAdditionalParams</b>	Additional main stream connection parameters
<b>ConnectionSettings.AltVideoAdditionalParams</b>	Additional alternative stream connection parameters
<b>ConnectionSettings.MainStreamRotationMode</b>	Rotation of main stream when displaying in client: None, By90ClockwiseDegree, By90AntiClockwiseDegree, By180Degree. Note: it is not recommended to modify this field because it can cause malfunctions of motion detector and video analysis modules when rotating. Perform rotation in IP camera settings.
<b>ConnectionSettings.AltStreamRotationMode</b>	Rotation of alternative stream when displaying in client: None, By90ClockwiseDegree, By90AntiClockwiseDegree, By180Degree. Note: it is not recommended to modify this field because it can cause malfunctions of motion detector and video analysis modules when rotating. Perform rotation in IP camera settings.
<b>ConnectionSettings.DirectNetworkConnectionToCameraEnabled</b>	Indicates that the client application will connect to camera directly. Note: it is not recommended to modify this field because it can cause serious issues.

<b>ConnectionSettings.GpuClientVideoDecodingEnabled</b>	Indicates that decoding on video card is enabled in client application. Note: for decoding to operate on video card, it is also required to enable the corresponding option in the client application settings.
<b>ConnectionSettings.AlternativeVideoDecoderEnabled</b>	Indicates that alternative decoder is enabled for video stream decoding. Note: it is not recommended to modify this field because it can cause serious issues.
<b>ConnectionSettings.StreamSettings.MainStreamSettings.VideoStreamEnabled</b>	Whether or not the main stream is enabled. Read-only field, main stream cannot be disabled
<b>ConnectionSettings.StreamSettings.MainStreamSettings.VideoFormat</b>	Main stream video format: MJPEG, MPEG4_Part2, H264, Hvc
<b>ConnectionSettings.StreamSettings.MainStreamSettings.VideoAdditionalParams</b>	Additional connection options for the main stream
<b>ConnectionSettings.StreamSettings.MainStreamSettings.RotationMode</b>	Rotation of the main stream when displayed in the client: None, By90ClockwiseDegree, By90AntiClockwiseDegree, By180Degree. It is not recommended to change this field, because motion detection and video analytics modules may not work correctly when turning. Set the rotation of the stream in the settings of the IP camera.
<b>ConnectionSettings.StreamSettings.MainStreamSettings.Roles</b>	Roles of the main stream main stream roles: Archive stream is used for recording i archive, VideoAnalysis stream is used for video analysis.
<b>ConnectionSettings.StreamSettings.AlternativeStreamSettings.[...]</b>	Additional stream setting 1
<b>ConnectionSettings.StreamSettings.SecondAlternativeStreamSettings.[...]</b>	Additional stream setting 2

<b>ConnectionSettings.StreamSettings.ThirdAlternativeStreamSettings.[...]</b>	Additional stream setting 3
<b>ArchiveSettings</b>	Parameters of recording to archive
<b>ArchiveSettings.ArchivingDisabled</b>	Indicates that archiving is enabled
<b>ArchiveSettings.ArchivingMode</b>	Archiving mode: MDandManual – by detector, AlwaysOn - continuous, OnlyManual - manual, BySchedule – according to schedule
<b>ArchiveSettings.ArchivingVideoStreamType</b>	Video stream to be saved in the archive: Main, Alternative
<b>ArchiveSettings.ArchivingMinDeepnessInDays</b>	Store the archive during the specified time, no less than, days
<b>ArchiveSettings.ArchivingMaxDeepnessInDays</b>	Store the archive during the specified time, not exceeding, days
<b>ArchiveSettings.ArchivingSoundDisabled</b>	Indicates that the recording of sound to the archive is disabled
<b>ArchiveSettings.PreMotionDetectionRecSecs</b>	Number of seconds of recording to archive before motion (when recording to archive on motion is enabled). Value in seconds from 1 to 6
<b>ArchiveSettings.PostMotionDetectionRecSecs</b>	Number of seconds of recording to archive after the motion start (when recording to archive on motion start is enabled). Value is in seconds from 1 to 6
<b>ArchiveSettings.LimitRecordFpsAndOnlyIndepFramesEnabled</b>	Indicates that recording to archive frequency is limited
<b>ArchiveSettings.LimitedRecordFps</b>	Frames per second value for recording to archive when recording to archive frequency is enabled

<b>ArchiveSettings.DeviceArchiveEnabled</b>	Indicates that the access to archive of device (camera SD card) is enabled
<b>ArchiveSettings.DeviceArchiveAutoSynchronizationEnabled</b>	Indicates that the automatic synchronization of main archive and device archive (camera SD card) is enabled
<b>AnalyzeSettings</b>	Analysis parameters
<b>AnalyzeSettings.MotionDetectorEnabled</b>	Indicates that the motion detector is enabled
<b>AnalyzeSettings.MotionDetectorSettings</b>	Settings of the motion detector
<b>[...].BuildInCameraDetectorEnabled</b>	Indicates that the motion detector built into the camera is enabled
<b>[...].GenerationOfEventMotionStartAndEndEnabled</b>	Indicates that the generation of an event upon starting and ending of movement is enabled
<b>[...].DetectOnlyIndependentFrames</b>	Detection of key frames only. Note: this mode may significantly decrease the CPU load
<b>[...].CustomFpsEnabled</b>	Indication of motion detection with specified frequency. Note: this mode allows to detect motion with higher fps, but its activation may significantly increase CPU load
<b>[...].CustomFpsValue</b>	Frequency of detection of frames. Note: the value will only be used if CustomFpsEnabled field == true
<b>[...].Zones</b>	Detection zones
<b>AnalyzeSettings.AnalyzeStreamType</b>	Video stream for analysis: Main, Alternative. Note: enabling Main mode will lead to high CPU load

<b>AnalyzeSettings.FaceDetectorEnabled</b>	Indicates that the face recognition module is enabled. Note: enabling this mode will lead to high CPU load
<b>AnalyzeSettings.FaceDetectorMode</b>	Face recognition module quality settings: Basic, OptimizedQuality. Note: OptimizedQuality consumes more CPU resources
<b>AnalyzeSettings.InteractiveSearchEnabled</b>	Indicates that the interactive search is enabled. Note: enabling this mode will lead to high CPU load
<b>AnalyzeSettings.InteractiveSearchSettings</b>	Interactive search settings
<b>MapSettings</b>	Optional parameter indicating the camera's binding to the coordinates. When adding new coordinates, both fields must be filled in: Latitude and Longitude.
<b>MapSettings.Latitude</b>	Latitude of the camera on the map, range of values from -90 to 90 degrees. If the camera has not yet set coordinates, null is returned.
<b>MapSettings.Longitude</b>	Longitude of the camera on the map, the range of values is from -180 to 180 degrees. If the camera has not yet set coordinates, null is returned.
<b>MapSettings.IsOnMap</b>	Optional parameter. Indicator indicating the presence of the camera on the map. It takes the value true if the camera is present, false if it is absent.

\* Mandatory field



Example of a POST request body for adding 2 new cameras bound to the cd81195c-9c0e-42f0-8535-c55af9c35161 server:

```
[
  {
    "Name": "New Camera 1",
    "ServerBindingsSettings": {
      "OwnerServerId": "cd81195c-9c0e-42f0-8535-c55af9c35161"
    },
    "ConnectionSettings": {
      "ModelId": "b499b4c5-4109-475d-8f08-341a5a5e70bd"
    }
  },
  {
    "Name": "New Camera 2",
    "ServerBindingsSettings": {
      "OwnerServerId": "cd81195c-9c0e-42f0-8535-c55af9c35161"
    },
    "ConnectionSettings": {
      "ModelId": "b499b4c5-4109-475d-8f08-341a5a5e70bd"
    }
  }
]
```

### Example of a response

```
{
  "CreatedObjectsIds": [
    "aafb80e1-56a0-488d-9e99-8683d34fd37a",
    "7e2fc411-000b-4c12-b62e-1cd17f2f291e"
  ]
}
```

Note: the response contains a JSON object with the array of the IDs of the added cameras.

Example POST request body for adding a camera with coordinates on the map:

```
[
  {
    "Name": "on map",
```

```
"ServerBindingsSettings": {  
  "OwnerServerId": "916f94bb-17e2-4864-92f0-278c498706bc"  
},  
"ConnectionSettings": {  
  "ModelId": "b499b4c5-4109-475d-8f08-341a5a5e70bd"  
},  
"MapSettings": {  
  "Latitude": 84.99999,  
  "Longitude": 19  
}  
}
```

```
]
```

## Modification of existing cameras

### Example of a request

```
PUT http://192.168.100.50:8080/configure/channels
```

PUT request body must contain an array of JSON objects corresponding to the cameras being modified (see channels/{channel\_id} resource).

Description of the JSON object of the camera being modified (see other fields in the Adding New Cameras section):

Field	Description
* <b>Id</b>	Camera ID
<b>MapSettings.Latitude</b>	Latitude of the camera on the map, range of values from -90 to 90 degrees. If the camera has not yet set coordinates, null is returned.
<b>MapSettings.Longitude</b>	Longitude of the camera on the map, the range of values is from -180 to 180 degrees. If the camera has not yet set coordinates, null is returned.
<b>MapSettings.IsOnMap</b>	Optional parameter. Indicator indicating the presence of the camera on the map. It takes the value true if the camera is present, false if it is absent.

\* Mandatory field; a request will not be successfully fulfilled without it.

Example of a body of PUT request for modification of the names of 2 cameras:

```
[  
  {  
    "Id" : "aafb80e1-56a0-488d-9e99-8683d34fd37a",  
    "Name": "Renamed Camera 1",
```

```
    },  
    {  
      "Id" : "cd81195c-9c0e-42f0-8535-c55af9c35161",  
      "Name": "Renamed Camera 2",  
    }  
  ]
```

Example of POST request body for changing camera coordinates on the map:

```
[  
  {  
    "Id": "67023b0b-8296-4795-be64-d7134f020ba5",  
    "Name": "Changing one coordinate",  
    "MapSettings": {  
      "Longitude": 170.123456789012345  
    }  
  },  
  {  
    "Id": "67023b0b-8296-4795-be64-d7134f020ba6",  
    "Name": "Taking the camera off the map",  
    "MapSettings": {  
      "IsOnMap": false  
    }  
  },  
  {  
    "Id": "67023b0b-8296-4795-be64-d7134f020ba7",  
    "Name": "Adding coordinates to the camera",  
    "MapSettings": {  
      "Latitude": 50,  
      "Longitude": 170.123456789012345  
    }  
  }  
]
```

Note: PUT request is used for modifying several cameras, but it modifies not the whole array of cameras but only the cameras for which the identifiers were specified (i.e. not all the existing cameras are modified). It is a deviation from REST, but it allows to conveniently modify several cameras at the same time.

## configure/channels/{channel\_id}

Detailed camera information

### Example of a request

```
GET http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631
```

### Example of a response

```
{
  "Id": "7c08f772-120c-420d-b140-0098a3ed6c5f",
  "Name": "on map",
  "Disabled": false,
  "ServerBindingsSettings": {
    "OwnerServerId": "916f94bb-17e2-4864-92f0-278c498706bc",
    "ReservedServerId": "00000000-0000-0000-0000-000000000000",
    "ReplicationServerId": "00000000-0000-0000-0000-000000000000",
    "VideoAnalyticsServerId": "00000000-0000-0000-0000-000000000000"
  },
  "ParentSecObjectId": "b43793a0-eece-4053-8db6-ef9a32138938",
  "Description": "",
  "ConnectionSettings": {
    "ModelId": "b499b4c5-4109-475d-8f08-341a5a5e70bd",
    "Hostname": "127.0.0.1",
    "Login": null,
    "Password": null,
    "StreamsSettings": {
      "MainStreamSettings": {
        "VideoStreamEnabled": true,
        "VideoFormat": "MJPEG",
        "VideoAdditionalParams": null,
        "RotationMode": "None",
        "Roles": [
          "Archive",
          "DesktopClient",
          "MobileClient",
          "VideoAnalysis"
        ]
      }
    }
  }
}
```

```
    ],
  },
  "AlternativeStreamSettings": {
    "VideoStreamEnabled": false,
    "VideoFormat": "MJPEG",
    "VideoAdditionalParams": null,
    "RotationMode": "None",
    "Roles": [
      "DesktopClient",
      "MobileClient"
    ]
  },
  "SecondAlternativeStreamSettings": {
    "VideoStreamEnabled": false,
    "VideoFormat": "MJPEG",
    "VideoAdditionalParams": null,
    "RotationMode": "None",
    "Roles": [
      "DesktopClient",
      "MobileClient"
    ]
  },
  "ThirdAlternativeStreamSettings": {
    "VideoStreamEnabled": false,
    "VideoFormat": "MJPEG",
    "VideoAdditionalParams": null,
    "RotationMode": "None",
    "Roles": [
      "DesktopClient",
      "MobileClient"
    ]
  }
},
"MainVideoStreamFormat": "MJPEG",
"AltVideoStreamEnabled": false,
"AltVideoStreamFormat": "MJPEG",
"SoundReceivingEnabled": false,
"PtzEnabled": false,
"Ipv6Enabled": false,
```

```
"MultiChannelServerEnabled": false,
"MultiChannelServerChannelNum": 1,
"IoProcessingEnabled": false,
"SoundTransmittingEnabled": false,
"ExternalNetworkPorts": [
  {
    "DefaultPortValue": 554,
    "PortValue": 554,
    "IsExternallyDefined": false
  }
],
"SoundVolume": 100,
"MainVideoAdditionalParams": null,
"AltVideoAdditionalParams": null,
"MainStreamRotationMode": "None",
"AltStreamRotationMode": "None",
"DirectNetworkConnectionToCameraEnabled": false,
"GpuClientVideoDecodingEnabled": false,
"AlternativeVideoDecoderEnabled": false,
"IsSecureConnectionEnabled": false
},
"ArchiveSettings": {
  "ArchivingDisabled": false,
  "ArchivingMode": "AlwaysOn",
  "ArchivingVideoStreamType": "Main",
  "ArchivingMinDeepnessInDays": 7.0,
  "ArchivingMaxDeepnessInDays": 365.0,
  "ArchivingSoundDisabled": false,
  "PreMotionDetectionRecSecs": 1,
  "PostMotionDetectionRecSecs": 1,
  "LimitRecordFpsAndOnlyIndepFramesEnabled": false,
  "LimitedRecordFps": 30,
  "DeviceArchiveEnabled": false,
  "DeviceArchiveAutoSynchronizationEnabled": false
},
"AnalyzeSettings": {
  "MotionDetectorEnabled": false,
  "MotionDetectorSettings": {
    "BuildInCameraDetectorEnabled": false,
```

```
    "GenerationOfEventMotionStartAndEndEnabled": false,  
    "DetectOnlyIndependentFrames": false,  
    "CustomFpsEnabled": false,  
    "CustomFpsValue": 10,  
    "Zones": [  
      {  
        "Id": "66cc5617-cb80-4d70-8378-96a4f51d0a30",  
        "Name": "Zona 1",  
        "MinObjWidth": 0.05,  
        "MinObjHeight": 0.05  
      }  
    ]  
  },  
  "AnalyzeStreamType": "Main",  
  "FaceDetectorEnabled": false,  
  "FaceDetectorMode": "Basic",  
  "InteractiveSearchEnabled": false,  
  "InteractiveSearchSettings": {  
    "IndexatorEnabled": false,  
    "IndexatorProportionsEnabled": false,  
    "IndexatorMinObjWidth": 0.05,  
    "IndexatorMinObjHeight": 0.05,  
    "IndexatorMaxObjWidth": 1.0,  
    "IndexatorMaxObjHeight": 1.0  
  },  
  "IsUseRemoteVideoAnalyticsServer": false  
},  
"MapSettings": {  
  "Latitude": 19.891552649257235,  
  "Longitude": 10.621652603149414,  
  "IsOnMap": true  
}  
}
```



## Deletion of existing camera

### **Example of a request**

```
DELETE http://192.168.100.50:8080/configure/channels/7e2fc411-000b-4c12-b62e-1cd17f2f291e
```

## configure/channels/{channel\_id}/facescomplete

Appeared in version 3.4.

Receiving Face Recognition Complete module's settings

### Example of request

```
GET http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/facescomplete
```

### Example of response

```
{
  "GeneralSettings": {
    "DatabaseSettings": {
      "IsDedicated": false,
      "IpAddress": "127.0.0.1",
      "Port": 3050,
      "User": "SYSDBA",
      "Password": "masterkey",
      "OsType": "Windows"
    }
  },
  "ChannelSettings": {
    "DelayBetweenSameDetectionsSeconds": 5,
    "MinObjectSize": "0.1,0.1,0.06,0.06",
    "MaxObjectSize": "0.3,0.3,0.5,0.5",
    "UnknownFaceThreshold": 85.0,
    "FaceDetectorSensitivity": "Medium",
  }
}
```



## Modifying settings of the Face Recognition Complete module

### Example of request

```
PUT http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/facescomplete
```

Parameter	Description
<b>Enabled</b>	On or off state of the module True: the module is on False: the module is off
<b>GeneralSettings</b>	Common settings of the face recognition module that apply to all cameras with the module enabled
<b>GeneralSettings.DatabaseSettings</b>	Common settings of the module's database that apply to all the cameras with the module enabled
<b>GeneralSettings.DatabaseSettings.IsDedicated</b>	Remote or local database True: a remote database is used False: a local database is used Values of fields IpAddress; Port; User; Password; OsType must be entered if GeneralSettings.DatabaseSettings.IsDedicated is True
<b>GeneralSettings.DatabaseSettings.IpAddress</b>	Remote database server address, string
<b>GeneralSettings.DatabaseSettings.Port</b>	port, number

<b>GeneralSettings.DatabaseSettings.User</b>	User name, string
<b>GeneralSettings.DatabaseSettings.Password</b>	User password, string
<b>GeneralSettings.DatabaseSettings.OsType</b>	Type of operating system, Windows or Linux string
<b>ChannelSettings</b>	Settings of the face recognition module specific to a specific camera
<b>ChannelSettings.DelayBetweenSameDetectionsSeconds</b>	Minimum time in seconds before the repeated recognition of a person (0, 5, 30, 60)
<b>ChannelSettings.MinObjectSize</b>	<p>Minimum size of a face in the frame, the rectangle defined by 4 digits in the interval of 0 to 1, "x, y, w, h"</p> <p>X: X axis position</p> <p>Y: Y axis position</p> <p>W: width</p> <p>H: height</p>
<b>ChannelSettings.MaxObjectSize</b>	<p>Maximum size of a face in the frame, the rectangle defined by 4 digits in the interval of 0 to 1, "x, y, w, h"</p> <p>X: X axis position</p> <p>Y: Y axis position</p> <p>W: width</p> <p>H: height</p>
<b>ChannelSettings.UnknownFaceThreshold</b>	Minimal likeness with the recognition sample in percentage points, the value in the range of 60 to 99

<b>ChannelSettings.FaceDetectorSensitivity</b>	Sensitivity of searching for faces in a frame, string, Minimum, Low, Medium, High, Maximum
<b>ChannelSettings.DetectionMap</b>	Detection zone, mask array [40x40], 0 and 1 2-D array 1: a pixel is used in detection 0: a pixel is not used in detection
<b>ChannelSettings.DbId</b>	Database identifier, string Empty string: common database usage Non-empty string: unique database usage (it is possible to specify the same identifier for several cameras; in this case, they will interact with the same database) The identifier must be no more than 32-symbol long, contain Latin characters, digits and underscore (_), otherwise no unique database will be set
<b>ChannelSettings.RecognizeCoveredFaces</b>	Necessity to attempt to recognize faces covered by face masks or kerchiefs/scarfs. True: covered faces will be detected and recognized in case of matching False: covered faces will be detected but will never be recognized
<b>ChannelSettings.RecognizeRotatedFaces</b>	Necessity to attempt to recognize faces turned to more than ~30 from the face-forward position True: turned faces will be detected and recognized in case of matching False: turned faces will be detected but will never be recognized

Example of PUT request body for disabling the module:

```
{
  "GeneralSettings": {
    "DatabaseSettings": {
      "IsDedicated": false,
      "IpAddress": "127.0.0.1",
      "Port": 3050,
      "User": "SYSDBA",
```



## configure/channels/{channel\_id}/peoplecounter

Since version 3.4, new fields have been added.

Acquiring settings of visitor counting module

### Example of a request

```
GET http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/peoplecounter
```

### Example of a response

```
{
  "Enabled": true,
  "CountingMethod": "MultiplePeople",
  "ObjWidth": 0.3,
  "ObjHeight": 0.3,
  "LineBeginX": 0.05,
  "LineBeginY": 0.5,
  "LineEndX": 0.95,
  "LineEndY": 0.5,
  "CountingInversedDirection": false,
  "UseChannelResetCounterSettings": false,
  "ZeroCountingTimeUTC": "2021-04-28T11:24:30.8956469Z",
  "IntervalInHours": 0,
  "PeopleCountingVariant": "InOut",
  "Sensitivity": "Medium",
  "ProcessFullFrame": false,
}
```



## Modifying settings of visitor counting module

### Example of a request

```
PUT http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/peoplecounter
```

Description of resource parameters

Parameter	Description	Version
<b>Enabled</b>	Indicates that the module is enabled. Note: make sure that the motion detector is on. It is required for the correct operation of the module.	2.5
<b>CountingMethod</b>	Counting method: SinglePeople – for counting individual people, MultiplePeople – for counting people in streams. Note: for the MultiplePeople method, the camera must be placed vertically to face the floor.	2.5
<b>ObjWidth</b>	Width of object in frame. Value is in the range of 0 to 1	2.5
<b>ObjHeight</b>	Height of object in frame. Value is in the range of 0 to 1	2.5
<b>LineBeginX</b>	Initial point of visitor counting line of the X coordinate. Value is in the range of 0 to 1	2.5
<b>LineBeginY</b>	Initial point of visitor counting line of the Y coordinate. Value is in the range of 0 to 1	2.5
<b>LineEndX</b>	End of visitor counting line of the X coordinate. Value in the range of 0 to 1	2.5
<b>LineEndY</b>	End of visitor counting line of the Y coordinate. Value in the range of 0 to 1	2.5
<b>CountingInversedDirection</b>	Inverting counting direction	2.5
<b>UseChannelResetCounterSettings</b>	set unique counter reset settings true - unique settings false - does not change camera reset settings	3.4
<b>ZeroCountingTimeUTC</b>	initial reset time, date in UTC format, changed if UseChannelResetCounterSettings is passed true	3.4

<b>IntervalInHours</b>	reset period in hours, number, 0, 12, 24, 168, changed if UseChannelResetCounterSettings is passed true	3.4
<b>PeopleCountingVariant</b>	visitor counting option, string InOut - incoming and outgoing InOnly - incoming OutOnly - outgoing	3.4
<b>Sensitivity</b>	algorithm sensitivity, string, Minimum, Low, Medium, High, Maximum	3.4
<b>ProcessFullFrame</b>	process full frame	3.4

Example of the PUT request body for disabling the module:

```
{
  "Enabled": false,
  "CountingMethod": "MultiplePeople",
  "ObjWidth": 0.3,
  "ObjHeight": 0.3,
  "LineBeginX": 0.05,
  "LineBeginY": 0.5,
  "LineEndX": 0.95,
  "LineEndY": 0.5,
  "CountingInversedDirection": false,
  "UseChannelResetCounterSettings": false,
  "ZeroCountingTimeUTC": "2021-04-02T10:34:59.6615578Z",
  "IntervalInHours": 0,
  "PeopleCountingVariant": "InOut",
  "Sensitivity": "Medium",
  "ProcessFullFrame": false,
}
```

## configure/channels/{channel\_id}/platescomplete

Appeared in version 3.4.

Receiving License Plate Recognition Complete module's settings

### Example of request

```
GET http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/platescomplete
```

### Example of response

```
{
  "ChannelSettings": {
    "DbId": "123"
  },
  "Enabled": false
}
```

## Modifying settings of the License Plate Recognition Complete module

### Example of request

```
PUT http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/platescomplete
```

Description of resource parameters

Parameter	Description
<b>Enabled</b>	On or off state of the module True: the module is on False: the module is off
<b>ChannelSettings.DbId</b>	Database identifier, string Empty string: common database usage Non-empty string: unique database usage (it is possible to specify the same identifier for several cameras; in this case, they will interact with the same database) The identifier must be no more than 32-symbol long, contain Latin characters, digits and underscore (_), otherwise no unique database will be set

Example of the PUT request body for disabling the module:

```
{
  "ChannelSettings": {
    "DbId": "123"
  },
  "Enabled": false
}
```

## configure/channels/{channel\_id}/platesstandard

Appeared in version 4.2.

### Receiving License Plate Recognition module's settings

#### Example of request

```
GET http://localhost:8080/configure/channels/a7c7fd2d-7f1b-4a2e-bcf9-475120bd3752/platesstandard
```

#### Example of response

```
{
  "ChannelSettings": {
    "MinPlateSize": "0.10000000149011612,0.10000000149011612,0.03999999910593033,0.014999999664723873",
    "MaxPlateSize": "0.20000000298023224,0.20000000298023224,0.699999988079071,0.5",
    "PolygonZones": [
      {
        "Name": "Area 1",
        "Id": "a17cadce-c6a2-46dc-8301-d20853590caa",
        "Points": [
          "0,0",
          "1,0",
          "1,1",
          "0,1"
        ]
      }
    ]
  },
  "Direction": 1,
  "UseDirection": true,
  "MinDecisionFrames": 3,
  "DetectDoublePlates": true,
  "PlateColorClasses": [
    1,
    2,
    4,
    8
  ]
}
```

```
    ],  
    "DirectionFilterTypes": [],  
    "FpsLockMode": 1,  
    "TimeSecNotRecognizeSamePlate": 30,  
    "MinPlateTextLength": 5,  
    "MinPlateTextNumCount": 2,  
    "DbId": "",  
    "PluginBarrierControlEnabled": false,  
    "PluginBarrierManualControlEnabled": true,  
    "PluginBarrierAutomaticControlEnabled": true,  
    "IsBarrierSupportAutoClose": false,  
    "PluginBarrierAutomaticCloseTimeDelay": 30,  
    "RecognizeVehicleAttributes": true,  
    "RecognizeTwoVehicleColors": false  
  },  
  "Enabled": true
```

```
}
```

## Modifying settings of the License Plate Recognition module

### Example of request

```
PUT http://127.0.0.1/configure/channels/8edcc8a2-c355-4722-90f1-3f8be571ffd1/platesstandard
```

### Description of resource parameters

Parameter	Description
<b>Enabled</b>	On or off state of the module True: the module is on False: the module is off
<b>MinPlateSize</b>	The minimum number size is a set of four numbers Example (X, Y, width, height): "0.5862616837331068, 0.09501247031804629, 0.028037383177570093, 0.03740648379052369" all values must be in the range from 0 to 1
<b>MaxPlateSize</b>	The maximum size of the number is a set of four numbers. Example (X, Y, width, height): "0.2168224328867743,0.22493765884058137, 0.6869158759295384, 0.48004987531172066" All values must be in the range from 0 to 1
<b>PolygonZones</b>	List of detection zones
<b>PolygonZone.Name</b>	Zone name, string
<b>PolygonZone.Id</b>	Zone identifier Exmample: D5B1A5F7-8EAD-4815-9BD7-85ADBA46695A
<b>PolygonZone.Points</b>	List of points forming the zone Example: ["0.5,0", "1,0", "1,1", "0,1"]

	Coordinate values must be in the range from 0 to 1
<b>Direction</b>	Specifying the number movement from top to bottom, takes a numeric value: 1: entry -1: exit
<b>UseDirection</b>	Enable direction detection Takes values true and false
<b>MinDecisionFrames</b>	Required number of frames with a number for recognition Non-negative value
<b>DetectDoublePlates</b>	Enabling detection of two-line numbers Takes values true and false
<b>PlateColorClasses</b>	Filtering by plate color, accepts a list of numbers from the following digits: 1 - black 2 - blue 4 - orange 8 - white
<b>DirectionFilterTypes</b>	Filtering by direction, accepts a list of numbers from the following digits: 1 - on entry 2 - at exit 4 - for undefined direction
<b>FpsLockMode</b>	Module operation mode, accepts a numeric value: 0 - slow 1 - medium 2 - fast
<b>PluginBarrierControlEnabled</b>	Switching the barrier control on and off Takes values true and false



<b>PluginBarrierManualControlEnabled</b>	Switching the manual barrier control on and off Takes values true and false
<b>PluginBarrierAutomaticControlEnabled</b>	Switching the automatic barrier control on and off Takes values true and false
<b>IsBarrierSupportAutoClose</b>	Action when license plates are detected in front of the barrier True - open and close the barrier False - open the barrier
<b>PluginBarrierAutomaticCloseTimeDelay</b>	Time after which the barrier will be closed, in seconds Non-negative value
<b>ChannelSettings.DbId</b>	Database identifier, string Empty string: common database usage Non-empty string: unique database usage (it is possible to specify the same identifier for several cameras; in this case, they will interact with the same database) The identifier must be no more than 32-symbol long, contain Latin characters, digits and underscore (_), otherwise no unique database will be set
<b>TimeSecNotRecognizeSamePlate</b>	Time after which a repeated event of number recognition may be sent Non-negative value representing the time interval in seconds
<b>MinPlateTextLength</b>	The minimum required number of characters (digits and letters) in the license plate number Non-negative value
<b>MinPlateTextNumCount</b>	Minimum required number of digits in the license plate number Non-negative value
<b>RecognizeVehicleAttributes</b>	Enable recognition of transport color attributes: color, type and make Takes values true and false

**RecognizeTwoVehicleColors**

Whether to record two colors in the event in an ambiguous color recognition case when vehicle attribute recognition is enabled

Takes values true and false

**Example of response**

```
{
  "ChannelSettings": {
    "MinPlateSize": "0.58626168373310681,0.09501247031804629,0.028037383177570093,0.03740648379052369",
    "MaxPlateSize": "0.2168224328867743,0.22493765884058137,0.6869158759295384,0.48004987531172066",
    "PolygonZones": [
      {
        "Name": "Area 1",
        "Id": "5e7cc86e-cf7d-4316-9682-04b3bf2e0029",
        "Points": [
          "0.5,0",
          "1,0",
          "1,1",
          "0,1"
        ]
      }
    ],
    "Direction": -1,
    "UseDirection": true,
    "MinDecisionFrames": 5,
    "PlateColorClasses": [
      1,
      2,
    ],
    "DirectionFilterTypes": [
      2,
      4
    ],
    "DbId": "",
    "PluginBarrierControlEnabled": false,
    "PluginBarrierManualControlEnabled": true,
    "PluginBarrierAutomaticControlEnabled": true,
  }
}
```

```
    "IsBarrierSupportAutoClose": true,  
    "PluginBarrierAutomaticCloseTimeDelay": 30  
  },  
  "Enabled": false  
}
```

## configure/channels/{channel\_id}/queuecounter

Appeared in version 3.4.

### Receiving People Counting in Queue module's setting

#### Example of request

```
GET http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/queuecounter
```

#### Example of response

```
{
  "ChannelSettings": {
    "DetectionZones": [
      {
        "Contour": {
          "Name": "Area 1",
          "Id": "55f42d44-c772-4d81-8937-a76bfa1be739",
          "Points": [
            "0.25,0.25",
            "0.75,0.25",
            "0.75,0.75",
            "0.25,0.75"
          ]
        },
        "ShouldAlertOnMaxCount": false,
        "MaxAllowedCount": 0,
        "Sensitivity": "Medium",
        "SmoothingMode": "Interval10Sec",
        "Id": "55f42d44-c772-4d81-8937-a76bfa1be739",
        "Name": "Area 1"
      },
      {
        "Contour": {
          "Name": "Area 2",
          "Id": "2663d439-6713-4a0e-a168-7c3c573c14a1",
```

```
        "Points": [
            "0.25,0.25",
            "0.75,0.25",
            "0.75,0.75",
            "0.25,0.75"
        ]
    },
    "ShouldAlertOnMaxCount": false,
    "MaxAllowedCount": 0,
    "Sensitivity": "Medium",
    "SmoothingMode": "Interval10Sec",
    "Id": "2663d439-6713-4a0e-a168-7c3c573c14a1",
    "Name": "Area 2"
}
]
},
"Enabled": true
}
```

## Modifying settings of the People Counting in Queue module

### Example of request

```
PUT http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/queuecounter
```

### Description of resource parameters

Parameter	Description
<b>Enabled</b>	On or off state of the module True: the module is on False: the module is off
<b>ChannelSettings.DetectionZones</b>	List of detections zones with settings of each zone Settings of each zone included into ChannelSettings.DetectionZones[i] are indicated further (see example of response to a GET query)
<b>Contour.Name</b>	Name of zone, string
<b>Contour.Id</b>	Zone identifier, string
<b>Contour.Points</b>	Coordinates of rectangle defining the zone in the following format: ["x1, y1", "x2, y2", "x3, y3", "x4, y4"], where x and y are numbers in the interval of 0 to 1
<b>ShouldAlertOnMaxCount</b>	Generation of an alarm upon exceedance of the preset number of people in the queue True: generate False: not generate
<b>MaxAllowedCount</b>	Maximum allowable number of people in the zone, number
<b>Sensitivity</b>	Algorithm sensitivity, string, Minimum, Low, Medium, High, Maximum
<b>SmoothingMode</b>	Averaging of results, string, None, Interval10Sec, Interval15Sec, Interval30Sec, Interval60Sec

	None: no averaging Interval10Sec: averaging of results for 10 seconds Interval15Sec: averaging of results for 15 seconds Interval30Sec: averaging of results for 30 seconds Interval60Sec: averaging of results for 60 seconds
--	--

Example of the PUT request body for disabling the module:

```
{
  "ChannelSettings": {
    "DetectionZones": [
      {
        "Contour": {
          "Name": "Area 1",
          "Id": "55f42d44-c772-4d81-8937-a76bfa1be739",
          "Points": [
            "0.25,0.25",
            "0.75,0.25",
            "0.75,0.75",
            "0.25,0.75"
          ]
        },
        "ShouldAlertOnMaxCount": false,
        "MaxAllowedCount": 0,
        "Sensitivity": "Medium",
        "SmoothingMode": "Interval10Sec",
        "Id": "55f42d44-c772-4d81-8937-a76bfa1be739",
        "Name": "Area 1"
      }
    ]
  },
  "Enabled": false
}
```

## configure/channels/{channel\_id}/scenarios

Description of camera scenarios

### Example of a request

```
GET http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/scenarios
```

### Example of a response

```
[
  {
    "EventType": "MotionFact",
    "Actions": [
      {
        "ActionType": "AlarmGeneration",
        "ActionBodyJson": "{\"RepeatIntervalMs\":7000}"
      }
    ]
  },
  {
    "EventType": "MotionBegin",
    "Actions": [
      {
        "ActionType": "ArchiveRecordingOn",
        "ActionBodyJson": "{\"RecordingDurationMs\":300000,\"RepeatIntervalMs\":5000}"
      }
    ]
  },
  {
    "EventType": "MotionEnd",
    "Actions": [
      {
        "ActionType": "ArchiveRecordingOn",
        "ActionBodyJson": "{\"RecordingDurationMs\":300000,\"RepeatIntervalMs\":5000}"
      }
    ]
  },
],
```



```
{
  "EventType": "CameraLostConnection",
  "Actions": [
    {
      "ActionType": "AlarmGeneration",
      "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
    }
  ]
},
{
  "EventType": "CameraEstablishConnection",
  "Actions": [
    {
      "ActionType": "AlarmGeneration",
      "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
    }
  ]
},
{
  "EventType": "CameraNoConnection",
  "Actions": [
    {
      "ActionType": "AlarmGeneration",
      "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
    },
    {
      "ActionType": "AlarmGeneration",
      "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
    }
  ]
},
{
  "EventType": "CameraInput",
  "Actions": [
    {
      "ActionType": "AlarmGeneration",
      "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
    }
  ]
}
```

```

    },
    {
      "EventType": "UserAlarm",
      "Actions": [
        {
          "ActionType": "AlarmGeneration",
          "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
        }
      ]
    }
  ]
]

```

Response consists of an array of JSON objects (scenarios) constituting an event (EventType) and the actions (Actions).

Description of events (EventType):

Parameter	Description
<b>MotionFact</b>	Movement detected in frame (event will be continuously generated until there is no movement in the frame)
<b>MotionBegin</b>	Commencement of movement in frame (no repeated generation of event will be performed until movement stops). Do not forget to enable the corresponding option responsible for generating this event in the motion detector settings.
<b>MotionEnd</b>	End of movement in frame (no repeated generation of event will be performed until movement stops). Do not forget to enable the corresponding option responsible for generating this event in the motion detector settings.
<b>CameraLostConnection</b>	Connection with camera is lost
<b>CameraEstablishConnection</b>	Connection with camera is restored
<b>CameraNoConnection</b>	Lasting absence of connection with camera
<b>CameraInput</b>	Signal on camera input detected

<b>UserAlarm</b>	User alarm detected (generated from client application)
------------------	---

Description of actions (Actions):

<b>Parameter</b>	<b>Description</b>
<b>ArchiveRecordingOn</b>	Enabling manual recording to archive
<b>ArchiveRecordingOff</b>	Disabling manual recording to archive
<b>SendingEmail</b>	Sending email message
<b>ExecutingCameraOutput</b>	Setting value on camera output
<b>AlarmGeneration</b>	Alarm generation

## Modification of camera scenarios

### Example of a request

```
PUT http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/scenarios
```

PUT response must contain an array of JSON objects (scenarios, configure/channels/{channel\_id}/scenarios) constituting an event (EventType) and the actions (Actions).

Description of events (EventType):

Parameter	Description
<b>MotionFact</b>	Movement is detected in frame (event will be generated continuously until there is movement in the frame)
<b>MotionBegin</b>	Commencement of movement in frame (no repeated generation of event will be performed until movement stops).
<b>MotionEnd</b>	End of movement in frame (no repeated generation of event will be performed until movement stops).
<b>CameraLostConnection</b>	Connection with camera lost
<b>CameraEstablishConnection</b>	Connection with camera restored
<b>CameraNoConnection</b>	Lasting absence of connection with camera
<b>CameraInput</b>	Signal on camera input detected
<b>UserAlarm</b>	User alarm detected (generated from client application)

Description of actions (Actions):

Parameter	Description
<b>ArchiveRecordingOn</b>	Enabling manual recording to archive

<b>ArchiveRecordingOff</b>	Disabling manual recording to archive
<b>SendingEmail</b>	Sending email message
<b>ExecutingCameraOutput</b>	Setting value on camera output
<b>AlarmGeneration</b>	Alarm generation

Example of a PUT request body that modifies the repeat interval of Alarm Generation event for Movement event type to 30000 milliseconds:

```
[
  {
    "EventType": "MotionFact",
    "Actions": [
      {
        "ActionType": "AlarmGeneration",
        "ActionBodyJson": "{\"RepeatIntervalMs\":30000}"
      }
    ]
  },
  {
    "EventType": "MotionBegin",
    "Actions": [
      {
        "ActionType": "ArchiveRecordingOn",
        "ActionBodyJson": "{\"RecordingDurationMs\":300000,\"RepeatIntervalMs\":5000}"
      }
    ]
  },
  {
    "EventType": "MotionEnd",
    "Actions": [
      {
        "ActionType": "ArchiveRecordingOn",
        "ActionBodyJson": "{\"RecordingDurationMs\":300000,\"RepeatIntervalMs\":5000}"
      }
    ]
  },
  {
```

```
"EventType": "CameraLostConnection",
"Actions": [
  {
    "ActionType": "AlarmGeneration",
    "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
  }
],
},
{
"EventType": "CameraEstablishConnection",
"Actions": [
  {
    "ActionType": "AlarmGeneration",
    "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
  }
],
},
{
"EventType": "CameraNoConnection",
"Actions": [
  {
    "ActionType": "AlarmGeneration",
    "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
  },
  {
    "ActionType": "AlarmGeneration",
    "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
  }
],
},
{
"EventType": "CameraInput",
"Actions": [
  {
    "ActionType": "AlarmGeneration",
    "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
  }
],
},
},
```

```
[
  {
    "EventType": "UserAlarm",
    "Actions": [
      {
        "ActionType": "AlarmGeneration",
        "ActionBodyJson": "{\"RepeatIntervalMs\":5000}"
      }
    ]
  }
]
```

Note: the PUT request is used for modifying multiple scenarios, and it modifies the whole array of scenarios (i.e. all the existing scenarios are modified). This behavior is different from modifying the `configure/channels/{channel_id}` resource.

## configure/channels/{channel\_id}/visitors

Appeared in version 3.4.

### Receiving Unique Visitor Counting module's settings

#### Example of request

```
GET http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/visitors
```

#### Example of response

```
{
  "GeneralSettings": {
    "DatabaseSettings": {
      "IsDedicated": false,
      "IpAddress": "127.0.0.1",
      "Port": 3050,
      "User": "SYSDBA",
      "Password": "masterkey",
      "OsType": "Windows"
    }
  },
  "ChannelSettings": {
    "DelayBetweenSameDetectionsSeconds": 5,
    "MinObjectSize": "0.1,0.1,0.06,0.06",
    "MaxObjectSize": "0.3,0.3,0.5,0.5",
    "UnknownFaceThreshold": 85.0,
    "FaceDetectorSensitivity": "Medium",
  }
}
```





## Modifying settings of the Unique Visitor Counting module

### Example of request

```
PUT http://192.168.100.50:8080/configure/channels/7d69e586-25c6-470e-a368-5570d57b2631/visitors
```

Parameter	Description
<b>Enabled</b>	On or off state of the module True: the module is on False: the module is off
<b>GeneralSettings</b>	Common settings of the Unique Visitor Counting module, applied to all cameras with the module enabled
<b>GeneralSettings.DatabaseSettings</b>	Common settings of the module's database applied to all cameras with the module enabled
<b>GeneralSettings.DatabaseSettings.IsDedicated</b>	Remote or local database used True: a remote database is used False: a local database is used Values of the fields IpAddress; Port; User; Password; OsType are to be entered if GeneralSettings.DatabaseSettings.IsDedicated is True
<b>GeneralSettings.DatabaseSettings.IpAddress</b>	Remote database server address, string
<b>GeneralSettings.DatabaseSettings.Port</b>	port, number

<b>GeneralSettings.DatabaseSettings.User</b>	User name, string
<b>GeneralSettings.DatabaseSettings.Password</b>	User password, string
<b>GeneralSettings.DatabaseSettings.OsType</b>	Type of operating system, Windows or Linux string
<b>ChannelSettings</b>	Settings of the Unique Visitor Counting module specific to a specific camera
<b>ChannelSettings.DelayBetweenSameDetection sSeconds</b>	Minimum time in seconds before the repeated recognition of a person: 0, 5, 30, 60
<b>ChannelSettings.MinObjectSize</b>	Minimum size of a face in the frame, the rectangle defined by 4 digits x, y, w, h X: X axis position Y: Y axis position W: width H: height
<b>ChannelSettings.MaxObjectSize</b>	Minimum size of a face in the frame, the rectangle defined by 4 digits x, y, w, h X: X axis position Y: Y axis position W: width H: height
<b>ChannelSettings.UnknownTreshold</b>	Minimal likeness with the recognition sample in percentage points, the value in the range of 0 to 100
<b>ChannelSettings.FaceDetectorSensitivity</b>	Sensitivity of searching for faces in a frame, string, Minimum, Low, Medium, High, Maximum

<b>ChannelSettings.DetectionMap</b>	<p>Detection zone, mask array [40x40], 0 and 1 2-D array</p> <p>1: a pixel is used in detection</p> <p>0: a pixel is not used in detection</p>
<b>ChannelSettings.DbId</b>	<p>Database identifier, string</p> <p>Empty string: common database usage</p> <p>Non-empty string: unique database usage (it is possible to specify the same identifier for several cameras; in this case, they will interact with the same database)</p> <p>The identifier must be no more than 32-symbol long, contain Latin characters, digits and underscore (_), otherwise no unique database will be set</p>

Example of PUT request body for disabling the module:

```
{
  "GeneralSettings": {
    "DatabaseSettings": {
      "IsDedicated": false,
      "IpAddress": "127.0.0.1",
      "Port": 3050,
      "User": "SYSDBA",
      "Password": "masterkey",
      "OsType": "Windows"
    }
  },
  "ChannelSettings": {
    "DelayBetweenSameDetectionsSeconds": 5,
    "MinObjectSize": "0.1,0.1,0.06,0.06",
    "MaxObjectSize": "0.3,0.3,0.5,0.5",
    "UnknownFaceThreshold": 85.0,
    "FaceDetectorSensitivity": "Medium",
  }
}
```



# configure/devicemanufacturers

## Supported camera models

Below is the abridged version of the response, with only the beginning of the list of camera models. The full response contains the complete list of camera models.

### Example of a request

```
GET http://192.168.100.50:8080/configure/devicemanufacturers
```

### Example of a response

```
[
  {
    "Name": "3S",
    "DeviceModels": [
      {
        "Id": "4c2c3083-21d9-4f32-ae8e-42903ea64241",
        "Name": "N10xx",
        "AltStreamSupported": true,
        "MultiChannelServerSupported": false,
        "DeviceArchiveSupported": false,
        "PtzSupported": false,
        "SoundReceivingSupported": true,
        "SoundTransmittingSupported": false,
        "IoProcessingEnabledSupported": true,
        "MainVideoStreamFormatsSupported": [
          "MJPEG",
          "H264"
        ],
        "AltVideoStreamFormatsSupported": [
          "MJPEG",
          "H264"
        ],
        "DefaultExternalNetworkPorts": [
          554
        ]
      }
    ]
  }
]
```

```
    }
  ]
},
{
  "Name": "ABRON",
  "DeviceModels": [
    {
      "Id": "d5d62eba-a314-4fd0-a9c4-b29ae7d0f356",
      "Name": "ABC-i(2xx,4xx,6xx)(P,VP,VRP)",
      "AltStreamSupported": true,
      "MultiChannelServerSupported": false,
      "DeviceArchiveSupported": false,
      "PtzSupported": false,
      "SoundReceivingSupported": true,
      "SoundTransmittingSupported": true,
      "IoProcessingEnabledSupported": true,
      "MainVideoStreamFormatsSupported": [
        "H264",
        "MJPEG"
      ],
      "AltVideoStreamFormatsSupported": [
        "H264",
        "MJPEG"
      ],
      "DefaultExternalNetworkPorts": []
    },
    {
      "Id": "ebe511c5-31fd-48d9-bd0d-00a0ef22a9e2",
      "Name": "ABC-i(31x,41x,61x)(FR,FP,VP,VRP)",
      "AltStreamSupported": true,
      "MultiChannelServerSupported": false,
      "DeviceArchiveSupported": false,
      "PtzSupported": false,
      "SoundReceivingSupported": false,
      "SoundTransmittingSupported": false,
      "IoProcessingEnabledSupported": false,
      "MainVideoStreamFormatsSupported": [
        "MPEG4_Part2",
        "H264",

```

```
        "MJPEG"
      ],
      "AltVideoStreamFormatsSupported": [
        "MPEG4_Part2",
        "H264",
        "MJPEG"
      ],
      "DefaultExternalNetworkPorts": []
    },
    {
      "Id": "2d21b065-bb0c-4bff-8096-25feb89d5093",
      "Name": "ABR",
      "AltStreamSupported": true,
      "MultiChannelServerSupported": true,
      "DeviceArchiveSupported": false,
      "PtzSupported": false,
      "SoundReceivingSupported": true,
      "SoundTransmittingSupported": false,
      "IoProcessingEnabledSupported": false,
      "MainVideoStreamFormatsSupported": [
        "H264"
      ],
      "AltVideoStreamFormatsSupported": [
        "H264"
      ],
      "DefaultExternalNetworkPorts": [
        554
      ]
    }
  ]
},
...
]
```



## configure/groups

Brief description of all groups

### Example of a request

```
GET http://192.168.100.50:8080/configure/groups
```

### Example of a response

```
[
  {
    "Id": "a03f6f5b-7f43-4537-89ea-77eee1e2d15a",
    "Name": "Senior Administrators ",
    "ConfiguringType": "SeniorAdmin"
  },
  {
    "Id": "4a553dc0-660f-4153-8d7b-6a99e6492b0d",
    "Name": "Junior Administrators",
    "ConfiguringType": "JuniorAdmin"
  },
  {
    "Id": "f0254188-79b1-4b87-a670-6c95dbd24f96",
    "Name": "Operators",
    "ConfiguringType": "Operator"
  }
]
```

## Adding new groups

### Example of a request

```
POST http://192.168.100.50:8080/configure/groups
```

POST request body must contain the array of JSON objects corresponding to the groups being added (see configure/groups resource).

Description of a JSON object of the group being added:

<b>Parameter</b>	<b>Description</b>
<b>* Name</b>	Name of group
<b>* ConfiguringType</b>	Group type: SeniorAdmin – senior administrator (this group is embedded, it holds all rights, and it is impossible to delete it or create a second one); JuniorAdmin – junior administrator (holds rights to configure parts of the system), Operator – a standard group with no rights to configure the system.
<b>ConfiguringJuniorAdminOptions</b>	Settings of the rights to configure the system. It is required to specify this field for junior administrators only (ConfiguringType == JuniorAdmin)
<b>WorkplaceOptions</b>	Client application settings. It is required to specify this field for junior administrators and operators. See the object description in the configure/groups/{group_id} resource.
<b>ChannelsAccessOptions</b>	Settings of access to cameras. It is required to specify this field only for junior administrators and operators. See the object description in the configure/groups/{group_id} resource.
<b>ChannelsAccessOptions.AllowedOnePermissionForRealtimeAndArchiveEnabled</b>	If the value of this field is "true", the archive access rights will be the same as the rights for real time access. The cameras will not be considered in the list of the archive access rights. The value of the field is "true" by default.
<b>ChannelsAccessOptions.AccessToNewCamerasEnabled</b>	The rights of access to the newly added cameras. It is set for operators only. For junior administrators, this value is always "false".
<b>WebAndMobileOptions</b>	Settings of access to mobile applications and web client. It is required to specify this field for junior administrators and operators only. See object description on the configure/groups/{group_id} resource.
<b>Comment</b>	Comment regarding a group

\* Mandatory field

Example of a POST request body that adds Admins and Users groups:

```
[
  {
    "Name": "Admins",
    "ConfiguringType": "JuniorAdmin"
  },
  {
    "Name": "Users",
    "ConfiguringType": "Operator"
  }
]
```

### Example of a response

```
{
  "CreatedObjectsIds": [
    "0369a2ce-9f18-4666-9160-dc3f8223a5ab",
    "6cba6b02-ca33-4e22-8bbd-072493d82c86"
  ]
}
```

Note: the Senior Administrators group has full and unalterable access. It is impossible to add another Senior Administrators type group.

## Modifying existing groups

### Example of a request

```
PUT http://192.168.100.50:8080/configure/groups
```

PUT request body must contain an array of JSON objects corresponding with the groups being modified (see the `configure/groups` resource).

Description of a JSON object of the group being added:

<b>Parameter</b>	<b>Description</b>
<b>* Id</b>	Unique identifier of the group
<b>Name</b>	Name of group
<b>ConfiguringType</b>	Type of group: SeniorAdmin – senior administrator (this group is embedded, it has all rights and it is impossible to delete it or create a second one); JuniorAdmin – junior administrator (it has the rights for configuring parts of the system); Operator is a standard group that cannot perform configuring of the system.
<b>ConfiguringJuniorAdminOptions</b>	Settings of system configuring rights. It is required to specify this field for junior administrators only (ConfiguringType == JuniorAdmin )
<b>WorkplaceOptions</b>	Settings of client application. It is required to specify this field for junior administrators and operators only. See configure/groups/{group_id} resource for object description.
<b>ChannelsAccessOptions</b>	Camera access settings. It is required to specify this field for junior administrators and operators only. See the configure/groups/{group_id} resource for object description.
<b>ChannelsAccessOptions.AllowedOnePermissionForRealtimeAndArchiveEnabled</b>	If the value of this field is "true", the archive access rights will be the same as the rights for real time access. The cameras will not be considered in the list of the archive access rights. The value of the field is "true" by default.
<b>ChannelsAccessOptions.AccessToNewCamerasEnabled</b>	Rights of access to the newly added cameras. It is set for operators only. This value is always "false" for junior administrators.
<b>WebAndMobileOptions</b>	Settings of access to mobile applications and web client. This value is to be specified for junior administrators and operators only. See configure/groups/{group_id} resource for object description.
<b>Comment</b>	Comment for group

\* Mandatory field

Example of a PUT request body modifying Admins and Users groups into NonAdmins and NonUsers groups:

```
[
  {
    "Id": "0369a2ce-9f18-4666-9160-dc3f8223a5ab",
    "Name": "NonAdmins",
  },
  {
    "Id": "6cba6b02-ca33-4e22-8bbd-072493d82c86"
    "Name": "NonUsers",
  }
]
```

Note: a PUT request is used for modifying multiple groups, but it modifies not the whole array of groups but only those for which the identifiers were specified. It is a deviation from REST, but it allows to conveniently modify several groups at the same time.

Note: the Senior Administrators group has full and unalterable access, that is why it is impossible to modify the settings of this group.

## configure/groups/{group\_id}

Detailed group description

### Example of a request

```
GET http://192.168.100.50:8080/configure/groups/a03f6f5b-7f43-4537-89ea-77eee1e2d15a
```

### Example of a response for senior administrator:

```
{
  "Id": "a03f6f5b-7f43-4537-89ea-77eee1e2d15a",
  "Name": "Senior Administrators ",
  "ConfiguringType": "SeniorAdmin",
  "ConfiguringJuniorAdminOptions": null,
  "WorkplaceOptions": null,
  "ChannelsAccessOptions": null,
  "WebAndMobileOptions": null,
  "Comment": null
}
```

### Example of a response for junior administrator:

```
{
  "Id": "4a553dc0-660f-4153-8d7b-6a99e6492b0d",
  "Name": "JunAmin",
  "ConfiguringType": "JuniorAdmin",
  "ConfiguringJuniorAdminOptions": {
    "ConfigureChannelsEnabled": true,
    "ConfigureAddChannelsEnabled": true,
    "ConfigureModifyChannelsEnabled": true,
    "ConfigureServersEnabled": true,
    "ConfigureRemoveChannelsEnabled": true,
    "ConfigureChannelsAllowed": [
      "7d69e586-25c6-470e-a368-5570d57b2631",
      "5d1722d5-5c02-4ddf-afe5-bbf5873a31ca"
    ]
  }
}
```

```
    ],
    "ConfigureVideowallEnabled": false
  },
  "WorkplaceOptions": {
    "ConfigurationEnabled": true,
    "ShutdownEnabled": true,
    "ChangeChannelModeEnabledEnabled": true,
    "ManageRecEnabled": true,
    "AccessExpertModeEnabled": true,
    "PtzEnabled": true,
    "ReceiveSoundEnabled": true,
    "TransmitSoundEnabled": true,
    "ExportVideoEnabled": true,
    "ExportVideoToAviEnabled": true,
    "ReceiveMainStreamEnabled": true,
    "UnifiedLogEnabled": true,
    "UnifiedLogAccessToAllUsersEnabled": true,
    "UnifiedLogForbiddenEventTypes": "None",
    "ArchiveMarksEnabled": true,
    "InteractiveSearchEnabled": true,
    "ReportsEnabled": true,
    "AnalystPluginsEditingEnabled": true,
    "PlansEnabled": true,
    "VideowallBrowsingEnabled": false,
    "ChatReceiveMessagesEnabled": false,
    "ChatSendMessageEnabled": false,
    "ChangePasswordEnabled": false,
    "DelayedReloadClientEnabled": false,
    "IsWatermarkEnabled": false,
    "WatermarkDisplayMode": 1,
    "PtzPriority": 0,
    "GridTypesAllowed": [
      "GridType1",
      "GridType2",
      "GridType4",
      "GridType1x4",
      "GridType6",
      "GridType3x2",
      "GridType2X4",
    ]
  }
}
```

```
    "GridType7",
    "GridType8",
    "GridType4x2",
    "GridType9",
    "GridType10",
    "GridType12",
    "GridType13",
    "GridType16",
    "GridType17",
    "GridType20",
    "GridType24",
    "GridType25",
    "GridType30",
    "GridType36",
    "GridType64",
    "GridType100",
    "GridType110",
    "GridType12X11",
    "GridType256",
    "GridType262"
  ],
  "AnalyticModulesForbidden": [],
  "PlansForbidden": []
},
"ChannelsAccessOptions": {
  "AllowedOnePermissionForRealtimeAndArchiveEnabled": true,
  "ChannelsRealtimeAllowed": [
    "7d69e586-25c6-470e-a368-5570d57b2631",
    "5d1722d5-5c02-4ddf-afe5-bbf5873a31ca"
  ],
  "ChannelsArchiveAllowed": [
    "7d69e586-25c6-470e-a368-5570d57b2631",
    "5d1722d5-5c02-4ddf-afe5-bbf5873a31ca"
  ],
  "AccessToNewCameraEnabled": false,
},
"WebAndMobileOptions": {
  "MobilePushReceivingEnabled": true,
  "TranscodedVideoFromMobileServerEnabled": true,
```



```
    "VideoViaWebEnabled": true
  },
  "Comment": null
}
```

Example of a response for operator:

```
{
  "Id": "f0254188-79b1-4b87-a670-6c95dbd24f96",
  "Name": "User",
  "ConfiguringType": "Operator",
  "ConfiguringJuniorAdminOptions": null,
  "WorkplaceOptions": {
    "ConfigurationEnabled": true,
    "ShutdownEnabled": true,
    "ChangeChannelModeEnabled": true,
    "ManageRecEnabled": true,
    "AccessExpertModeEnabled": true,
    "PtzEnabled": true,
    "ReceiveSoundEnabled": true,
    "TransmitSoundEnabled": true,
    "ExportVideoEnabled": true,
    "ExportVideoToAviEnabled": true,
    "ReceiveMainStreamEnabled": true,
    "UnifiedLogEnabled": true,
    "UnifiedLogAccessToAllUsersEnabled": true,
    "UnifiedLogForbiddenEventTypes": "None",
    "ArchiveMarksEnabled": true,
    "InteractiveSearchEnabled": true,
    "ReportsEnabled": true,
    "AnalystPluginsEditingEnabled": true,
    "PlansEnabled": true,
    "VideowallBrowsingEnabled": false,
    "ChatReceiveMessagesEnabled": false,
    "ChatSendMessageEnabled": false,
    "ChangePasswordEnabled": false,
    "DelayedReloadClientEnabled": false,
    "IsWatermarkEnabled": true,
    "WatermarkDisplayMode": 2,
    "PtzPriority": 0,
  }
}
```

```
"GridTypesAllowed": [
  "GridType1",
  "GridType2",
  "GridType4",
  "GridType1x4",
  "GridType6",
  "GridType3x2",
  "GridType2X4",
  "GridType7",
  "GridType8",
  "GridType4x2",
  "GridType9",
  "GridType10",
  "GridType12",
  "GridType13",
  "GridType16",
  "GridType17",
  "GridType20",
  "GridType24",
  "GridType25",
  "GridType30",
  "GridType36",
  "GridType64",
  "GridType100",
  "GridType110",
  "GridType12X11",
  "GridType256",
  "GridType262"
],
"AnaliticModulesForbidden": [],
"PlansForbidden": []
},
"ChannelsAccessOptions": {
  "AllowedOnePermissionForRealtimeAndArchiveEnabled": true,
  "ChannelsRealtimeAllowed": [
    "7d69e586-25c6-470e-a368-5570d57b2631",
    "5d1722d5-5c02-4ddf-afe5-bbf5873a31ca"
  ],
  "ChannelsArchiveAllowed": [
```

```
        "7d69e586-25c6-470e-a368-5570d57b2631",
        "5d1722d5-5c02-4ddf-afe5-bbf5873a31ca"
    ],
    "AccessToNewCameraEnabled": true,
},
"WebAndMobileOptions": {
    "MobilePushReceivingEnabled": true,
    "TranscodedVideoFromMobileServerEnabled": true,
    "VideoViaWebEnabled": true
},
"Comment": null
}
```

## Deleting an existing group

### Example of a request

```
DELETE http://192.168.100.50:8080/configure/groups/8eeab264-274a-43f3-b2ee-1ea041ef5e98
```

Note: deleting a group deletes all the users of this group.

# configure/groups/{group\_id}/users

Brief description of the group's users

## Example of a request

```
GET http://192.168.100.50:8080/configure/groups/a03f6f5b-7f43-4537-89ea-77eee1e2d15a/users
```

## Example of a response

```
[  
  {  
    "Id": "4dbb3d27-51a4-4a94-92e3-fbe3a522431b",  
    "GroupId": "a03f6f5b-7f43-4537-89ea-77eee1e2d15a",  
    "Login": "root"  
  }  
]
```

## configure/monitoring

### Monitoring settings information

#### Example of a request

```
GET http://192.168.100.50:8080/configure/monitoring
```

#### Example of a response

```
{
  "MonitoringEnabled": "true",
  "Password": "",
  "MonitoringUrl": "http://192.168.100.115:8889",
  "MonitoringNewServerEnabled": true,
  "MonitoringPushIntervalSeconds": 5,
  "ServerIds": [
    "fa289c64-05fc-4b1c-a367-727f02578c07"
  ]
  "ProxySettings":
  {
    "ProxyServerEnabled": "true",
    "ProxyServerId": "fa289c64-05fc-4b1c-a367-727f02578c07"
  }
}
```

### Modifying monitoring settings

#### Example of a request

```
PUT http://192.168.100.50:8080/configure/monitoring
```

Description of a JSON object monitoring setting:

Parameter	Description	Type	
<b>*Password</b>	monitoring server password	string	
<b>*MonitoringUrl</b>	server monitoring address	string	
<b>*MonitoringNewServerEnabled</b>	server list adding mode (true - new servers are automatically added, false - new servers are not added for monitoring).	bool	
<b>*ServerIds</b>	list of server IDs to monitor	array	
<b>MonitoringEnabled</b>	monitoring enabled or not	bool	
<b>*MonitoringPushIntervalSeconds</b>	interval for sending information from the monitoring agent to the monitoring server in milliseconds. Possible values are 2, 5, 10, 30, 45 seconds. (Default interval will be 2 seconds)	int	
<b>ProxySettings</b>	<b>ProxyServerEnabled*</b>	monitoring data proxying enabled or not	bool
	<b>ProxyServerId*</b>	ID of server that is used to proxy monitoring data	Guid

\* Mandatory field

Example of a request body for modifying monitoring settings:

```
{
  "MonitoringEnabled": "true",
  "Password": "",
  "MonitoringUrl": "http://192.168.100.115:8889",
  "MonitoringNewServerEnabled": true,
  "MonitoringPushIntervalSeconds": 5,
```

```
"ServerIds": [  
  "fa289c64-05fc-4b1c-a367-727f02578c07"  
]  
"ProxySettings":  
{  
  "ProxyServerEnabled": "true",  
  "ProxyServerId": "fa289c64-05fc-4b1c-a367-727f02578c07"  
}  
}
```

# configure/secobjects

## Root security object

Returns the description of a root security object and all the inner security objects. Also, the representation of the objects will include a brief description of the associated cameras.

### Example of a request

```
GET http://192.168.100.50:8080/configure/secobjects/
```

### Example of a response

```
{
  "Id": "934f0580-267a-4d3b-a0f6-0bfb48308f6f",
  "ParentId": "00000000-0000-0000-0000-000000000000",
  "Name": null,
  "ChildObjects": [
    {
      "Id": "601c8ff9-8a3a-4fd8-a19c-dfaa1729cac4",
      "ParentId": "934f0580-267a-4d3b-a0f6-0bfb48308f6f",
      "Name": "Object 1",
      "ChildObjects": [
        {
          "Id": "7169e12e-5a50-41d0-bd7f-bd57f5d1f042",
          "ParentId": "601c8ff9-8a3a-4fd8-a19c-dfaa1729cac4",
          "Name": "Object 6",
          "ChildObjects": [],
          "ChildChannels": [
            {
              "Id": "7d69e586-25c6-470e-a368-5570d57b2631",
              "Name": "Channel 1"
            }
          ]
        }
      ]
    }
  ],
  "ChildChannels": []
},
```



```
{
  {
    "Id": "cc586375-1f7e-49ca-845e-ebc1c2d95f78",
    "ParentId": "934f0580-267a-4d3b-a0f6-0bfb48308f6f",
    "Name": "Object 3",
    "ChildObjects": [],
    "ChildChannels": []
  }
],
"ChildChannels": [
  {
    "Id": "5d1722d5-5c02-4ddf-afe5-bbf5873a31ca",
    "Name": "Channel 3"
  }
]
}
```

Note: the root (allocated, the first) security object has the ParentId value: "00000000-0000-0000-0000-000000000000" and "Name": null, and these values cannot be modified.

## Adding new security objects

### Example of a response

```
POST http://192.168.100.50:8080/configure/secobjects
```

POST request body must contain JSON objects corresponding with the security objects (see `configure/secobjects/{secobject_id}` resource).

Description of a JSON object:

Parameter	Description
<b>ParentId</b>	ID of parent security object. If the field is left empty, the security object will be added to the root security object.
<b>Name</b>	Name of security object
<b>ChildObjects</b>	Inner security objects. Specify the existing security objects here. If the security object is embedded into another security object at the moment of fulfilling the request, it will be transferred to the object being created. The objects contained within the ChildObjects array are similar to the JSON object under consideration.
<b>ChildChannels</b>	Embedded cameras. Specify the existing cameras here. If the camera is embedded into another security object, it will be transferred to the object being created. See the description of JSON objects contained within the ChildChannels array below.

Description of the objects contained in the ChildChannels array:

Parameter	Description
<b>* Id</b>	ID of camera contained in the related security object

\* Mandatory parameter

Example of the POST request that adds 2 security objects; at that, the second security object will contain 1 embedded security object and 1 embedded camera:

```
[
  {
    "Name": "New object 1"
  },
  {
    "Name": "New object 2",
    "ChildObjects": [
      {
        "Id": "7169e12e-5a50-41d0-bd7f-bd57f5d1f042",
```

```
    },
    "ChildChannels": [
      {
        "Id": "7d69e586-25c6-470e-a368-5570d57b2631",
      }
    ]
  }
]
```

### Example of a response

```
{
  "CreatedObjectsIds": [
    "ec1baec4-88f4-4704-b8e6-7327a3b3ffaf",
    "8a1851cc-a66a-483d-9170-3893a808be3a"
  ]
}
```

## Modifying existing security objects

### Example of a request

```
PUT http://192.168.100.50:8080/configure/secobjects
```

PUT request body must contain JSON objects that correspond to the security objects being modified (see `configure/secobjects/{secobject_id}` resource).

JSON object description:

Parameter	Description
<b>ParentId</b>	ID of parent security object. If this field is left blank, the parent security object will not be modified.
<b>Name</b>	Name of security object
<b>ChildObjects</b>	Embedded security objects. Specify the existing security objects here. If the security object is embedded into another security object at the moment of fulfilling the request, it will be transferred. The objects contained within the ChildObjects array are similar to the JSON object under consideration.
<b>ChildChannels</b>	Embedded cameras. Specify the existing cameras here. If the camera is embedded into another security object, it will be transferred. See the description of JSON objects contained within the ChildChannels array below.

Description of objects contained in the ChildChannels array:

Parameter	Description
<b>* Id</b>	ID of camera contained within the corresponding security object

\* Mandatory parameter

Example of the PUT request modifying 2 security objects:

```
[
  {
    "Name": "Renamed object 1"
  },
  {
    "Name": "Renamed object 2",
    "ChildObjects": [
      {
        "Id": "7169e12e-5a50-41d0-bd7f-bd57f5d1f042",
      }
    ],
  },
]
```

```
    "ChildChannels": [  
      {  
        "Id": "7d69e586-25c6-470e-a368-5570d57b2631",  
      }  
    ]  
  }  
]
```

Note: PUT request is used for modifying several security objects, but it modifies not the whole array of security objects but only those for which the identifiers were specified (i.e. not all the existing security objects are modified). It is a deviation from REST, but it allows to conveniently modify several security objects at the same time.

## configure/secobjects/{secobject\_id}

### Selected security objects

Returns a description of the selected and all the inner security objects. Also, the representation of the objects will include a brief description of the associated cameras.

#### Example of a request

```
GET http://192.168.100.50:8080/configure/secobjects/a78db714-69f3-4fec-9792-a708cb88c3ac
```

#### Example of a response

```
{
  "Id": "a78db714-69f3-4fec-9792-a708cb88c3ac",
  "ParentId": "934f0580-267a-4d3b-a0f6-0bfb48308f6f",
  "Name": null,
  "ChildObjects": [
    {
      "Id": "7169e12e-5a50-41d0-bd7f-bd57f5d1f042",
      "ParentId": "a78db714-69f3-4fec-9792-a708cb88c3ac",
      "Name": "Object 6",
      "ChildObjects": [
        {
          "Id": "ea9d5762-0ebb-4e22-bf73-62ec8089a0a6",
          "ParentId": "7169e12e-5a50-41d0-bd7f-bd57f5d1f042",
          "Name": "allyourbasearebelongtous",
          "ChildObjects": [],
          "ChildChannels": []
        }
      ],
      "ChildChannels": []
    }
  ],
  "ChildChannels": [
    {
      "Id": "7d69e586-25c6-470e-a368-5570d57b2631",
      "Name": "Channel 1"
    }
  ]
}
```

```
}  
  ]  
}
```

## Deleting existing security object

### Example of a request

```
DELETE http://192.168.100.50:8080/configure/secobjects/0f8dd2e1-ffcc-4764-b008-23e494ff5adf
```

Note: deleting a security object will also delete all the embedded cameras and security objects.

## configure/servers

Brief information about all servers

### Example of a request

```
GET http://192.168.100.50:8080/configure/servers
```

### Example of a response

```
[
  {
    "Id": "cd81195c-9c0e-42f0-8535-c55af9c35161",
    "Name": "Server 1",
    "Hostname": "192.168.100.50",
    "Port": 8080,
    "IsReplicationServer": false,
    "UseFastReservation": false,
    "TotalLicParams": {
      "Channels": 400,
      "SoundChannels": 400,
      "PtzChannels": 400,
      "FaceRecognitionChannels": 16,
      "PlateRecognCompleteChannels": 400,
      "PlateRecognLightChannels": 0,
      "PeopleCounterChannels": 400,
      "ReservedChannels": 400
    },
    "UsedLicParams": {
      "Channels": 2,
      "SoundChannels": 0,
      "PtzChannels": 0,
      "FaceRecognitionChannels": 0,
      "PlateRecognCompleteChannels": 0,
      "PlateRecognLightChannels": 0,
      "PeopleCounterChannels": 0,
      "ReservedChannels": 0
    }
  }
]
```



```
},
{
  "Id": "9162138b-046a-48ed-82ed-6c6c7f6a52ba",
  "Name": "Server 2",
  "Hostname": "10.1.1.86",
  "Port": 8081,
  "IsReplicationServer": false,
  "UseFastReservation": false,
  "TotalLicParams": {
    "Channels": 400,
    "SoundChannels": 400,
    "PtzChannels": 400,
    "FaceRecognitionChannels": 16,
    "PlateRecognCompleteChannels": 400,
    "PlateRecognLightChannels": 0,
    "PeopleCounterChannels": 400,
    "ReservedChannels": 400
  },
  "UsedLicParams": {
    "Channels": 2,
    "SoundChannels": 0,
    "PtzChannels": 0,
    "FaceRecognitionChannels": 0,
    "PlateRecognCompleteChannels": 0,
    "PlateRecognLightChannels": 0,
    "PeopleCounterChannels": 0,
    "ReservedChannels": 0
  }
}
```

configure/servers/{server\_id}

Detailed server information

**Example of a request**

```
GET http://192.168.100.50:8080/configure/servers/cd81195c-9c0e-42f0-8535-c55af9c35161
```

**Example of a response**

```
{
  "Id": "cd81195c-9c0e-42f0-8535-c55af9c35161",
  "Name": "Server 1",
  "Hostname": "192.168.100.50",
  "Port": 8080,
  "IsReplicationServer": false,
  "UseFastReservation": false,
  "TotalLicParams": {
    "Channels": 400,
    "SoundChannels": 400,
    "PtzChannels": 400,
    "FaceRecognitionChannels": 16,
    "PlateRecognCompleteChannels": 400,
    "PlateRecognLightChannels": 0,
    "ReservedChannels": 400
  },
  "UsedLicParams": {
    "Channels": 2,
    "SoundChannels": 0,
    "PtzChannels": 0,
    "FaceRecognitionChannels": 0,
    "PlateRecognCompleteChannels": 0,
    "PlateRecognLightChannels": 0,
    "ReservedChannels": 0
  }
}
```

## configure/servers/{server\_id}/channels

Brief information regarding cameras of the server

### Example of a request

```
GET http://192.168.100.50:8080/configure/servers/cd81195c-9c0e-42f0-8535-c55af9c35161/channels
```

### Example of a response

```
[
  {
    "Id": "428d7aff-2e4a-46df-acff-0550cd827cd3",
    "Name": "Channel 1",
    "Disabled": false,
    "ServerBindingsSettings": {
      "OwnerServerId": "cd81195c-9c0e-42f0-8535-c55af9c35161",
      "ReservedServerId": "00000000-0000-0000-0000-000000000000",
      "ReplicationServerId": "00000000-0000-0000-0000-000000000000"
    },
    "ParentSecObjectId": "1f2c7319-9e87-46a2-be33-61bf2872b7df"
  },
  {
    "Id": "56eeec10-c6ac-4257-8821-907dd85013ff",
    "Name": "Channel 3",
    "Disabled": false,
    "ServerBindingsSettings": {
      "OwnerServerId": "cd81195c-9c0e-42f0-8535-c55af9c35161",
      "ReservedServerId": "00000000-0000-0000-0000-000000000000",
      "ReplicationServerId": "00000000-0000-0000-0000-000000000000"
    },
    "ParentSecObjectId": "1f2c7319-9e87-46a2-be33-61bf2872b7df"
  }
]
```

## configure/users

Brief description of all users

### Example of a request

```
GET http://192.168.100.50:8080/configure/users
```

### Example of a response

```
[
  {
    "Id": "4dbb3d27-51a4-4a94-92e3-fbe3a522431b",
    "GroupId": "a03f6f5b-7f43-4537-89ea-77eee1e2d15a",
    "Login": "root"
  },
  {
    "Id": "a7357e79-32d7-449c-b0e6-b563a45398c4",
    "GroupId": "4a553dc0-660f-4153-8d7b-6a99e6492b0d",
    "Login": "usr"
  }
]
```

## Adding new users

Note: ActiveDirectory of users cannot be added using REST API.

### Example of a request

```
POST http://192.168.100.50:8080/configure/users
```

POST request body must contain an array of JSON objects corresponding to the users being added (see `configure/users/{user_id}` resource).

Description of a JSON object of the user being added:

Parameter	Description
* <b>GroupId</b>	User group ID
* <b>Login</b>	User name
<b>NewPassword</b>	User password. If this field is not specified, the default password will be the empty one.
<b>UserBlocked</b>	Indicates that the account is blocked
<b>Comment</b>	Comment to user

\* Mandatory field

Example of a POST request body for adding a user called Petrov:

```
[
  {
    "GroupId": "beaa06e0-45a2-4fff-97fa-ac120f284368",
    "Login": "Petrov"
  }
]
```

**Example of a response**

```
{
  "CreatedObjectsIds": [
    "96c4c285-5111-4789-a342-12985deb47d6"
  ]
}
```

## Modifying existing users

### Example of a request

```
PUT http://192.168.100.50:8080/configure/users
```

PUT response body must contain JSON objects corresponding to the `configure/users/{user_id}` resource and obligatorily containing user ID and other information being modified.

PUT request body must contain an array of JSON objects corresponding to the users being modified (see `configure/users/{user_id}` resource).

Description of a JSON object of the user being modified:

Parameter	Description
* <b>Id</b>	User ID
<b>GroupId</b>	User group ID. If this field is not filled, the group will not be modified.
<b>Login</b>	User name. Note: it is impossible to modify names for ActiveDirectory users.
<b>NewPassword</b>	New user password
<b>UserBlocked</b>	Indicates that the account is blocked
<b>Comment</b>	Comment to user

\* Mandatory field

Example of a PUT request body for renaming user called Petrov into PetrovJunior:

```
[
  {
    "Id": "96c4c285-5111-4789-a342-12985deb47d6",
    "Login": "PetrovJunior"
  }
]
```

Note: a PUT request is used for modifying multiple users, but it modifies not the whole array of users but only those for which the identifiers were specified. It is a deviation from REST, but it allows to conveniently modify several users at the same time.

## configure/users/{user\_id}

Detailed user description

### Example of a request

```
GET http://192.168.100.50:8080/configure/users/4dbb3d27-51a4-4a94-92e3-fbe3a522431b
```

### Example of a response

```
{
  "Id": "4dbb3d27-51a4-4a94-92e3-fbe3a522431b",
  "GroupId": "a03f6f5b-7f43-4537-89ea-77eee1e2d15a",
  "Login": "root",
  "UserType": "Standart",
  "UserBlocked": false,
  "Comment": null
}
```

Note: UserType field has Standart value for ordinary users and ActiveDirectory value for ActiveDirectory users.

## Deleting existing user

### Example of a request

```
DELETE http://192.168.100.50:8080/configure/users/bd22f81d-ce66-43b7-a6a1-57cef8b6bf03
```



# configure/viewprofiles

Brief description of all profiles

## Example of a request

```
GET http://192.168.100.50:8080/configure/viewprofiles
```

## Example of a response

```
[
  {
    "Id": "ddf047bf-70d1-482d-b1fa-fdc38207e148",
    "Name": "New profile 1",
    "GridType": "GridType6",
    "ChannelsPositions": [
      {
        "GridIndex": 0,
        "ChannelId": "501bd18f-6b09-491f-a1f4-8d5545f7f0fa"
      },
      {
        "GridIndex": 2,
        "ChannelId": "405c1bbd-f0d5-4a3f-b8de-e238e021f6c3"
      }
    ]
  },
  {
    "Id": "ccf047bf-70d1-482d-b1fa-fdc38207e148",
    "Name": "New profile 222",
    "GridType": "GridType6",
    "ChannelsPositions": [
      {
        "GridIndex": 0,
        "ChannelId": "501bd18f-6b09-491f-a1f4-8d5545f7f0fa"
      },
      {
        "GridIndex": 1,
        "ChannelId": "405c1bbd-f0d5-4a3f-b8de-e238e021f6c3"
      }
    ]
  }
]
```

```
    }
  ],
},
{
  "Id": "a932fbdd-bbb6-40fa-9b7f-bf27dd2067de",
  "Name": "New profile 223",
  "GridType": "GridType6",
  "ChannelsPositions": [
    {
      "GridIndex": 0,
      "ChannelId": "501bd18f-6b09-491f-a1f4-8d5545f7f0fa"
    },
    {
      "GridIndex": 1,
      "ChannelId": "405c1bbd-f0d5-4a3f-b8de-e238e021f6c3"
    }
  ]
}
]
```

## Adding new profiles

### Example of a request

```
POST http://192.168.100.50:8080/configure/viewprofiles
```

POST request body must contain an array of JSON objects corresponding to the profiles being added (see the `configure/viewprofiles/{viewprofile_id}` resource).

Description of a JSON object of the profile being added:

Parameter	Description
<b>Name</b>	Name of profile
<b>GridType</b>	Type of grid. It can have one of the following values: GridType1, GridType2, GridType4, GridType3x2, GridType6, GridType7, GridType4x2, GridType8, GridType9, GridType10, GridType12, GridType13, GridType16, GridType17, GridType20, GridType24, GridType25, GridType30, GridType36, GridType64, GridType100, GridType110, GridType1x4, GridType256, GridType262, GridType2X4, GridType12X11
<b>ChannelsPositions</b>	The array that determines a cell where the certain camera is located.

Description of JSON objects contained in the ChannelsPositions array:

Parameter	Description
<b>GridIndex</b>	Index in grid (reckoned from the upper left corner), begins with 0
<b>ChannelId</b>	ID of camera located in corresponding cell

Example of a POST request body for adding two profiles:

```
[
  {
    "Name": "Main Profile",
    "GridType": "GridType6",
    "ChannelsPositions": [
      {
        "GridIndex": 0,
        "ChannelId": "501bd18f-6b09-491f-a1f4-8d5545f7f0fa"
      },
      {
```

```

        "GridIndex": 2,
        "ChannelId": "405c1bbd-f0d5-4a3f-b8de-e238e021f6c3"
    }
  ]},
  {
    "GridType": "GridType16",
    "ChannelsPositions": [
      {
        "GridIndex": 0,
        "ChannelId": "501bd18f-6b09-491f-a1f4-8d5545f7f0fa"
      },
      {
        "GridIndex": 2,
        "ChannelId": "405c1bbd-f0d5-4a3f-b8de-e238e021f6c3"
      }
    ]
  }
]

```

### Example of a response

```

{
  "CreatedObjectsIds": [
    "781f76ac-0995-46a3-92c1-5d960edb85c4",
    "0689209c-68af-4b57-b2a3-bcb9cf2e0906"
  ]
}

```

## Modifying existing profiles

### Example of a request

```
PUT http://192.168.100.50:8080/configure/viewprofiles
```

PUT request body must contain JSON objects corresponding with the `configure/viewprofiles/{viewprofile_id}` resource and mandatorily containing the profile's ID and other information to be modified.

POST request body must contain an array of JSON objects corresponding to the profiles being added (see the `configure/viewprofiles/{viewprofile_id}` resource).

Description of a JSON object of the profile being added:

Parameter	Description
* <b>Id</b>	Profile ID
<b>Name</b>	Name of profile
<b>GridType</b>	Type of grid. It can have one of the following values: GridType1, GridType2, GridType4, GridType3x2, GridType6, GridType7, GridType4x2, GridType8, GridType9, GridType10, GridType12, GridType13, GridType16, GridType17, GridType20, GridType24, GridType25, GridType30, GridType36, GridType64, GridType100, GridType110, GridType1x4, GridType256, GridType262, GridType2X4, GridType12X11
<b>ChannelsPositions</b>	The array that determines a cell where the certain camera is located.

\* Mandatory field

Description of JSON objects contained in the ChannelsPositions array:

Parameter	Description
<b>GridIndex</b>	Index in grid (reckoned from the upper left corner), begins with 0
<b>ChannelId</b>	ID of camera located in corresponding cell

Example of a PUT request where the profile is renamed and the location of cameras in the profile is modified:

```
[
  {
    "Id": "781f76ac-0995-46a3-92c1-5d960edb85c4",
    "Name": "Renamed Profile",
    "ChannelsPositions": [
```

```
    {
      "GridIndex": 3,
      "ChannelId": "501bd18f-6b09-491f-a1f4-8d5545f7f0fa"
    },
    {
      "GridIndex": 4,
      "ChannelId": "405c1bbd-f0d5-4a3f-b8de-e238e021f6c3"
    }
  ]
}
```

Note: a PUT request is used for modifying multiple profiles, but it modifies not the whole array of profiles but only those for which the identifiers were specified. It is a deviation from REST, but it allows to conveniently modify several profiles at the same time.

## configure/viewprofiles/{viewprofile\_id}

### Profile information

#### Example of a request

```
GET http://192.168.100.50:8080/configure/viewprofiles/ddf047bf-70d1-482d-b1fa-fdc38207e148
```

#### Example of a response

```
{
  "Id": "ddf047bf-70d1-482d-b1fa-fdc38207e148",
  "Name": "New profile 1",
  "GridType": "GridType6",
  "ChannelsPositions": [
    {
      "GridIndex": 0,
      "ChannelId": "501bd18f-6b09-491f-a1f4-8d5545f7f0fa"
    },
    {
      "GridIndex": 2,
      "ChannelId": "405c1bbd-f0d5-4a3f-b8de-e238e021f6c3"
    }
  ]
}
```

### Deleting an existing profile

#### Example of a request

```
DELETE http://192.168.100.50:8080/configure/viewprofiles/781f76ac-0995-46a3-92c1-5d960edb85c4
```

## REST API for face recognition

Starting from Version 1.7 of Eocortex Ultra, the REST API for working with Eocortex face database is available. All the main operations with the database are supported. The term "face" means an entry regarding a person in the Eocortex face database.

A possibility to perform synchronization of the databases of Eocortex and external software has been added. The common element unifying the Eocortex database and the external application database is the external\_id field. A 36-symbol string is used for filling out this field. It is also possible to use the id field for the identification of the database objects instead of using the external\_id external identifier. The id field is the internal identifier of the Eocortex face database.

The external ids can be specified for both faces and groups. The internal identifier cannot be modified.

The work with the following face recognition modules is supported:

- Eocortex Light
- Eocortex Complete

## Requirements

For editing a face database, it is required (PUT, POST, DELETE requests) that all the requests be fulfilled by a user with the right to edit the data of the intelligent modules.


For Eocortex Ultra, the user on behalf of whom the requests are being made must have access to the module for any query to the face database of a particular module. Additionally, API is not available for the users with Operator rights in Eocortex Ultra.



## Requirements for the photos to be uploaded

- The image must contain a single face located in the center of the frame.
- The image must be square or close to being square.
- The image must be in color.
- The height of a face must be at least 25% of the height of the image.
- The facial expression must be neutral, eyes open, mouth closed.
- There must be free space all around the face (the facial contours must not touch the edges).



The module lets you add entries to the face database with images that do not meet the requirements of the module, or without any of them at all. Such images will be marked with the  icon in the database and will not be used by the module as a recognition sample. To add a record with an unrecognizable sample, set the *force* parameter in the query body to *true*.

## GET /api/faceconfig

To obtain the list of all the available face recognition modules

### Example of a request

```
http://localhost:8080/api/faceconfig
```

### Example of a response

```
{
  "faces_modules": [
    {
      "name": "basic",
      "enabled": true
    },
    {
      "name": "expert",
      "enabled": false
    }
  ]
}
```

## GET /api/faces

To obtain the list of all the faces from the database

### Example of a request

```
http://localhost:8080/api/faces?offset=0&portion=50&module=complete
```

### Parameters

Parameter	Description
<b>offset</b>	Non-mandatory parameter. It specifies the number of a face starting from which it is needed to obtain the list of faces. The default value is 0.
<b>portion</b>	Non-mandatory parameter. The number of faces that needs to be obtained. The default value is 1000, the maximum value equals the number of faces in the database.
<b>module</b>	Mandatory parameter. The name of the face recognition module to work with. The list of the available modules can be viewed using the /api/faceconfig request.
<b>filter</b>	<p>&lt;attribute_name&gt; &lt;logical comparison operator&gt; '&lt;assumed value&gt;', where</p> <ul style="list-style-type: none"><li><b>&lt;attribute_name&gt;</b> - name of attribute (field) of entity. <b>external_id</b> and <b>group_id</b> are available;</li><li><b>&lt;logical comparison operator&gt;</b> - '=' operator available for searching for the entrance to the collections;</li><li><b>'&lt;assumed value&gt;'</b> - ID value;</li></ul> <p><u>Important: the parameter must correspond with the URL encoding</u></p> <p>Example of requests with filtration:</p> <p><a href="http://localhost:8080/api/faces?offset=0&amp;portion=50&amp;module=basic&amp;filter=external_id='123'">http://localhost:8080/api/faces?offset=0&amp;portion=50&amp;module=basic&amp;filter=external_id='123'</a></p> <p><a href="http://localhost:8080/api/faces?offset=0&amp;portion=50&amp;module=basic&amp;filter=">http://localhost:8080/api/faces?offset=0&amp;portion=50&amp;module=basic&amp;filter=</a></p> <p>The filters can be combined using AND operator, e.g. search for people belonging to several groups:</p> <p><a href="http://localhost:8080/api/faces?offset=0&amp;portion=50&amp;module=basic&amp;filter=group_id='05a21e32-51e5-405e-b4cf-3082796c8703' AND group_id='2090779b-9091-4989-a5f8-92d1920d8291'">http://localhost:8080/api/faces?offset=0&amp;portion=50&amp;module=basic&amp;filter=group_id='05a21e32-51e5-405e-b4cf-3082796c8703' AND group_id='2090779b-9091-4989-a5f8-92d1920d8291'</a></p>

Example of displaying in URL encoding:

[http://localhost:8080/api/faces?offset=0&portion=50&module=basic&filter=group\\_id%3D%2705a21e32-51e5-405e-b4cf-3082796c8703%27](http://localhost:8080/api/faces?offset=0&portion=50&module=basic&filter=group_id%3D%2705a21e32-51e5-405e-b4cf-3082796c8703%27)

### Example of a response

```
{
  "offset": 0,
  "portion": 50,
  "total_count": 153,
  "faces": [
    {
      "id": "d1bd0147-e3d7-4bcd-a19c-e9a1acafaadd",
      "external_id": "0",
      "first_name": "John",
      "patronymic": "B.",
      "second_name": "Smith",
      "additional_info": "\"Sacred Motors\" CEO",
      "modification_time": "2019-05-28T05:58:17.994Z"
    },
    {
      "id": "59e5994d-85a5-4ca8-b4b5-1b660bb45e2a",
      "external_id": "1",
      "first_name": "William",
      "patronymic": "W.",
      "second_name": "Woodman",
      "additional_info": "",
      "modification_time": "2019-06-13T22:07:41.045Z"
    }
  ]
}
```



*modification\_time* is the UTC time when a face was added or updated in the database.

## POST /api/faces

To add a new face to the database. The response includes full description of the face.

### Example of a request

```
http://localhost:8080/api/faces?module=complete
```

### Parameters

Parameter	Description
<b>module</b>	Mandatory parameter. Name of face recognition module to work with. List of available modules can be obtained using /api/faceconfig request.

### Headers

Parameter	Description
Content-Type	application/json

### Body (application/json)

```
{
  "external_id" : "0",
  "first_name": "John",
  "patronymic": "B.",
  "second_name": "Smith",
  "additional_info": "\"Sacred Motors\" CEO",
  "groups": [
    {
      "id": "4cf2c1bb-707a-4455-a00b-c7d114eae96f"
```

```

    },
    "face_images": [
"/9j/4AAQSkZJRgABAQEASABIAAD/4QAIrXhpZgAATU0AKgAAAQgAAQESAAMAAAABAEEAAAAAAD/2wBDAAIIBAQBIAQCAGICAgICAwUDAwMDAwYEBAMFBwYHBwGBwICQs
JCAGKCAcHCg0KCgsMDAwMBwkODw0MDgsMDAz/2wBDAAQICAgMDAwYDAwYMCACIDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAz/wAA
RCABGAE8DASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRV
S0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMX
Gx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJ
BUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqO
kpaanQmqsR00tba3uLm6wsPExcbHyMnK0tPUIdbX2Nna4uPk5ebn60nq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwDqvs1Hk/u6uf8ALOmRw+bX3B8eMt4qk8r5PuU60LyqP/R
dAE3/AC0+5Tk6VDUkXagBr9ag/wBVJVnyv++qJYv31AFZ4vNqtLFmSrkv3Kh8mgC0nWm0UUGgv1fvKmjiipnm+9Pj1oMxH6UJ0ofpQnSgAz+8qT7J+7pn1fwn/AMGygChL/rK
mji/d1NJFSJ0Ab/rY6Z5X0qaPZ5aUSRUGgyiSKnwf6xqfJL+8oMxn1fWnxxebRF9ypo4vKjoAIu1Q3H+tp8f+sp8kX7ugCnHvqxUUKVD76AK1v8AwJVyOoY7WrX/ACzoAdh
sqGSL95T44v31PnoAI/3VP8r60W/9K1oAbF9+mS/6ymW/7qSpo/3u+gBn1fWnvF+7qbyamji/d0AYsYkL/eqxRRQAU5+1FFACxxc1LRRQAPH1c/xU3/1pRRQBNL3p6y+YKKK
AP//Z"
    ]
}

```

### Example of a response

```

{
  "id": "d1bd0147-e3d7-4bcd-a19c-e9a1acafaadd",
  "external_id": "0",
  "first_name": "John",
  "patronymic": "B.",
  "second_name": "Smith",
  "additional_info": "\"Sacred Motors\" CEO",
  "modification_time": "2019-05-28T05:58:17.994Z",
  "groups": [
    {
      "id": "4cf2c1bb-707a-4455-a00b-c7d114eae96f"
    }
  ],
  "face_images": [


```

```
"/9j/4AAQSkZJRgABAQEASABIAAD/4QAIrXhpZgAATU0AKgAAAQAAQESAAMAAAABAAEAAAAAAD/2wBDAAIBAQIBAQICAgICAgICAwUDAwMDAwYEBAMFBwYHBwGBwICQs  
JCAgKCAhCg0KCgsMDAwMBwkODw0MDgsMDAz/2wBDAQICAgMDAwYDAwYMCAcIDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAz/wAA  
RCABGAIE8DASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRV  
S0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMX  
Gx8jJytLT1NXW19jZ2uHi4+T15ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJ  
BUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVV1dYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqO  
kpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn60nq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwDQvs1Hk/u6uf8ALOmRw+bX3B8eMt4qk8r5PuU60LyqP/R  
dAE3/AC0+5Tk6VDUKXagBr9ag/wBVJVnyv++qJYv31AFZ4vNqtLFmSrkv3Kh8mgC0nWm0UUGgv1fvKmjiipnm+9Pj1oMxH6UJ0ofpQnSgAz+8qT7J+7pn1fWn/AMSA  
niaPopoVGygChL/rKmji/d1NJFSJ0oAb/rY6Z5X0qaPZ5aUSRUGgyiSKnwf6xqfJL+8oMxn1fWnxxebRF9ypo4vKjoAIu1Q3H+tp8f+sp8kX7ugCnHvqxUUkVD76AK1v8AwJVyOoY7W  
rX/ACzoAdHsqGSL95T44v31PnoAI/3VP8r60W/9K1oAbF9+mS/6ymW/7qSpo/3u+gBn1fWnvF+7qbyamji/d0AYsYkL/eqxRRQAU5+1FFACxxc1LRRQAPh1c/xU3/1pRRQBN  
L3p6y+YKKKAP//Z"  
  ]  
}
```



The *face\_images* array must contain at least one photo. All the other fields may be empty or *null*. The photos CAN be transferred in the following formats: jpg, png and bmp. The photos MUST be coded in base64 string.



The module lets you add entries to the face database with images that do not meet the requirements of the module, or without any of them at all. Such images will be marked with the  icon in the database and will not be used by the module as a recognition sample. To add a record with an unrecognizable sample, set the *force* parameter in the query body to *true*.

## GET /api/faces/<id>

To obtain the detailed description of a face together with the images from the database coded in base64

### Example of a request

```
http://localhost:8080/api/faces/d1bd0147-e3d7-4bcd-a19c-e9a1acafaadd?module=complete&onlymainsample=true
```

Parameters

Parameter	Description
<b>module</b>	Mandatory parameter. Name of face recognition module to work with. List of available modules can be obtained using /api/faceconfig request.
<b>onlymainsample</b>	Non-mandatory parameter. Allows to download a reference image of a face only. Values available: true and false

### Example of a response

```
{
  "id": "d1bd0147-e3d7-4bcd-a19c-e9a1acafaadd",
  "external_id": "0",
  "first_name": "John",
  "patronymic": "B.",
  "second_name": "Smith",
  "additional_info": "\"Sacred Motors\" CEO",
  "modification_time": "2019-05-28T05:58:17.994Z",
  "groups": [
    "4cf2c1bb-707a-4455-a00b-c7d114eae96f"
  ],
  "face_images": [
```



```
"/9j/4AAQSkZJRgABAQEASABIAAD/4QAIrXhpZgAATU0AKgAAAAGAAQESAAMAAAABAAEAAAAAAAAAD/2wBDAAIBAQIBAQICAgICAgICAwUDAwMDAwYEBAMFBwYHBwcbGwbcICQs
JCAGkCACHCg0KCgsMDAwMBwkODw0MDgsMDAz/2wBDAQICAgMDAwYDAwYMCACIDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAz/wAA
RCABGAIE8DASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRV
S0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMX
Gx8jJytLT1NXW19jZ2uHi4+T15ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJ
BUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqO
kpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn60nq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwDqvs1Hk/u6uf8ALOmRw+bX3B8eMt4qk8r5PuU60LyqP/R
dAE3/AC0+5Tk6VDUKXagBr9ag/wBVJVnyv++qJYv31AFZ4vNqtLFmSrkv3Kh8mgC0nWm0UUGgv1fvKmjipnm+9PjloMxH6UJ0ofpQnSgAz+8qT7J+7pn1fWn/AMGyChL/rK
mji/d1NJFSJ0oAb/rY6Z5X0qaPZ5aUSRUGgyiSKnwf6xqfJL+8oMxn1fWnxebRF9ypo4vKjoAIu1Q3H+tp8f+sp8kX7ugCnHvqxUUKVD76AK1v8AwJVyOoY7WrX/ACzoAdH
sqGSL95T44v31PnoAI/3VP8r60W/9K1oAbF9+mS/6ymW/7qSpo/3u+gBn1fWnvF+7qbyamji/d0AYsYkL/eqxRRQAU5+1FFACxxc1LRRQAPH1c/xU3/1pRRQBNL3p6y+YKKK
AP//Z"
]
}
```



*modification\_time* is the UTC time when a face was added or updated in the database.

## PUT /api/faces/<id>

To update an existing face in the database. Full description is returned in response.

### Example of a request

```
http://localhost:8080/api/faces/d1bd0147-e3d7-4bcd-a19c-e9a1acafaadd?module=complete
```

### Parameters

Parameter	Description
<b>module</b>	Mandatory parameter. Name of face recognition module to work with. List of available modules can be obtained using /api/faceconfig request.

### Headers

Parameter	Description
<b>Content-Type</b>	application/json

### Body (application/json)

```
{
  "external_id" : "3",
  "first_name" : "John",
  "patronymic" : "B.",
  "second_name" : "Smith",
  "groups" : [
    {
      "id" : "4cf2c1bb-707a-4455-a00b-c7d114eae96f"
    }
  ],
}
```

```
"additional_info" : "\"Sacred Motors\" CEO",
"face_images": [
```

```
"/9j/4AAQSkZJRgABAQEASABIAAD/4QAIhXhpZgAATU0AKgAAAAgAAQESAAMAAAABAAEAAAAAAAD/2wBDAAIIBAQBIAQCAgICAgICAwUDAwMDAwYEBAMFBwYHBwGBwICQs
JCAGkCACHCg0KCgsMDAwMBwkODw0MDgsMDAz/2wBDAQICAgMDAwYDAwYMCAcIDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAz/wAA
RCABGAE8DASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRV
S0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMX
Gx8jJytLT1NXW19jZ2uHi4+Tl5ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJ
BUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVVldYWVpjZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqQ
kpaanqKmqsrO0tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn60nq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwDqvs1Hk/u6uf8ALOmRw+bX3B8eMt4qk8r5PuU60LyqP/R
dAE3/AC0+5Tk6VDUKXagBr9ag/wBVJVnyv++qJYv31AFZ4vNqtLFmSrkv3Kh8mgC0nWm0UUGgv1fvKmjiipnm+9Pj1oMxH6UJ0ofpQnSgAz+8qT7J+7pn1fwn/AMGygChL/rK
mji/d1NJFSJ0oAb/rY6Z5X0qaPZ5aUSRUGgyiSKnwf6xqfJL+8oMxn1fWnxxebRF9ypo4vKjoAIu1Q3H+tp8f+sp8kX7ugCnHvqxUUKVD76AK1v8AwJVyOoY7WrX/ACzoAdH
sqGSL95T44v31PnoAI/3VP8r60W/9K1oAbF9+mS/6ymW/7qSpo/3u+gBn1fWnvF+7qbyamji/d0AYsYkL/eqxRRQAU5+1FFACxxc1LRRQAPH1c/xU3/lpRRQBNL3p6y+YKKK
AP//Z"
]
}
```

### Example of a response

```
{
  "id" : "d1bd0147-e3d7-4bcd-a19c-e9a1acafaadd",
  "external_id" : "3",
  "first_name": "John",
  "patronymic": "B.",
  "second_name": "Smith",
  "groups": [
    {
      "id": "4cf2c1bb-707a-4455-a00b-c7d114eae96f"
    }
  ],
  "additional_info": "\"Sacred Motors\" CEO",
  "modification_time": "2019-05-28T05:58:17.994Z",
```

```


"face_images": [
"/9j/4AAQSkZJRgABAQEASABIAAD/4QAIrXhpZgAATU0AKgAAAQgAAQESAAMAAAABAAEAAAAAAAAAD/2wBDAAIBAQIBAQICAgICAgICAwUDAwMDAwYEBAMFBwYHBwcbGwbcICQs
JCAGkCACHCg0KCgsMDAwMBwkODw0MDgsMDAz/2wBDAQICAgMDAwYDAwYMCAcIDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAwMDAz/wAA
RCABGAIE8DASIAAhEBAxEB/8QAHwAAAQUBAQEBAQEAAAAAAAAAAAECAwQFBgcICQoL/8QAtRAAAgEDAwIEAwUFBAQAAAF9AQIDAAQRBRIhMUEGE1FhByJxFDKBkaEII0KxwRV
S0fAkM2JyggkKFhcYGRolJicoKSo0NTY3ODk6Q0RFRkdISUpTVFVWV1hZWmNkZWZnaGlqc3R1dnd4eXqDhIWGh4iJipKTlJWWl5iZmqKjpKWmp6ipqrKztLW2t7i5usLDxMX
Gx8jJytLT1NXW19jZ2uHi4+T15ufo6erx8vP09fb3+Pn6/8QAHwEAAwEBAQEBAQEBAQAAAAAAAAECAwQFBgcICQoL/8QAtREAAgECBAQDBAcFBAQAAQJ3AAECAxEEBSExBhJ
BUQdhcRMiMoEIFEKRobHBCSMzUvAVYnLRChYkNOEl8RcYGRomJygpKjU2Nzg5OkNERUZHSElKU1RVV1dYVWVpZGVmZ2hpanN0dXZ3eHl6goOEhYaHiImKkpOUlZaXmJmaoqO
kpaanqKmqsr00tba3uLm6wsPExcbHyMnK0tPU1dbX2Nna4uPk5ebn60nq8vP09fb3+Pn6/9oADAMBAAIRAxEAPwDqvs1Hk/u6uf8ALOmRw+bX3B8eMt4qk8r5PuU60LyqP/R
dAE3/AC0+5Tk6VDUkXagBr9ag/wBVJVnyv++qJYv31AFZ4vNqtLFmSrkv3Kh8mgC0nWm0UUGgv1fvKmjiipnm+9Pj1oMxH6UJ0ofpQnSgAz+8qT7J+7pn1fwn/AMGygChL/rK
mji/d1NJFSJ0oAb/rY6Z5X0qaPZ5aUSRUGgyiSKnwf6xqfJL+8oMxn1fWnxebRF9ypo4vKjoAIu1Q3H+tp8f+sp8kX7ugCnHvqxUUKVD76AK1v8AwJVyOoY7WrX/ACzoAdH
sqGSL95T44v31PnoAI/3VP8r60W/9K1oAbF9+mS/6ymW/7qSpo/3u+gBn1fWnvF+7qbyamji/d0AYsYkL/eqxRRQAU5+1FFACxxc1LRRQAPH1c/xU3/1pRRQBNL3p6y+YKKK
AP//Z"
]
}

```



The *face\_images* array must contain at least one photo. All the other fields may be empty or *null*. The photos CAN be transferred in the following formats: jpg, png and bmp. The photos MUST be coded in base64 string.



The module lets you add entries to the face database with images that do not meet the requirements of the module, or without any of them at all. Such images will be marked with the  icon in the database and will not be used by the module as a recognition sample. To add a record with an unrecognizable sample, set the *force* parameter in the query body to *true*.

## DELETE /api/faces/<id>

To delete a face with the specified identifier from the database.

### Example of a request

```
http://localhost:8080/api/faces/d1bd0147-e3d7-4bcd-a19c-e9a1acafaadd?module=complete
```

### Parameters

Parameter	Description
<b>module</b>	Name of face recognition module to work with. List of available modules can be obtained using <i>/api/faceconfig</i> request.

## GET /api/faces-groups

To obtain a list of the groups of faces from the database.

### Example of a request

```
http://localhost:8080/api/faces-groups?offset=0&portion=10&module=complete
```

### Parameters

Parameter	Description
<b>offset</b>	Non-mandatory parameter. It specifies a number of the group of faces starting from which it is needed to obtain the list of groups. The default value is 0.
<b>portion</b>	Non-mandatory parameter. The number of the groups of faces that needs to be obtained. The default value is 1000, the maximum value equals the number of faces in the database.
<b>module</b>	Mandatory parameter. The name of the face recognition module to work with. The list of the available modules can be viewed using the /api/faceconfig request.
<b>filter</b>	<p>&lt;attribute_name&gt; &lt;logical comparison operator&gt; '&lt;assumed value&gt;', where</p> <p><b>&lt;attribute_name&gt;</b> - name of attribute (field) of entity.</p> <p>Parameter value options:</p> <ul style="list-style-type: none"><li>● <b>external_id</b> - identifier of the record from the third-party software integrated with Eocortex;</li><li>● <b>external_sys_id</b> - identifier of the third-party software integrated with Eocortex. It is used by the database synchronization functionality from an external system. The maximum length is 64 characters.</li></ul> <p><b>&lt;logical comparison operator&gt;</b> - '=' operator available for searching for the entrance to the collections;</p> <p>'&lt;assumed value&gt;' - ID value;</p> <p><u>Important: the parameter must correspond with the URL encoding</u></p>

Example of the requests with filtration:

[http://localhost:8080/api/faces-groups?offset=0&portion=10&module=basic&filter=external\\_id='123'](http://localhost:8080/api/faces-groups?offset=0&portion=10&module=basic&filter=external_id='123')

Example of displaying in URL encoding:

[http://localhost:8080/api/faces-groups?offset=0&portion=10&module=basic&filter=external\\_id%3D%27123%27](http://localhost:8080/api/faces-groups?offset=0&portion=10&module=basic&filter=external_id%3D%27123%27)

### Example of a response

```
{
  "offset": 0,
  "portion": 2,
  "total_count": 2,
  "groups": [
    {
      "id" : "4cf2c1bb-707a-4455-a00b-c7d114eae96f",
      "external_id" : "0",
      "name" : "Employess",
      "intercept" : false,
      "modification_time": "2019-05-28T05:58:17.994Z"
      "external_sys_id": ""
    },
    {
      "id" : "d2282515-520f-4d57-9cee-8674de0eb0cb",
      "external_id" : "1",
      "name" : "Thieves",
      "intercept" : true,
      "modification_time": "2019-05-28T05:58:17.994Z"
      "external_sys_id": ""
    }
  ]
}
```



*modification\_time* is the UTC time when a face was added or updated in the database.

## POST /api/faces-groups

To add a group of faces into database. The complete description of the group is returned in a response.

### Example of a request

```
http://localhost:8080/api/faces-groups?module=complete
```

### Parameters

Parameter	Description
module	Mandatory parameters. Name of the face recognition module to work with. Available modules can be viewed using the <i>/api/faceconfig</i> request.

### Headers

Parameter	Description
Content-Type	application/json

### Body (application/json)

```
{
  "external_id": "0",
  "name": "Employess",
  "intercept": false,
  "color": "ff00ff00"
}
```



### Example of a response

```
{
  "id" : "4cf2c1bb-707a-4455-a00b-c7d114eae96f",
  "external_id" : "0",
  "name" : "Employess",
  "color" : "ffffffff",
  "intercept" : false,
  "modification_time": "2019-05-28T05:58:17.994Z"
}
```



The *name* field must be filled mandatorily. All the other fields may be empty or *null*. The *hex* value of a *string* type is used for the *color* field (for *argb* color).

## GET /api/faces-groups/<id>

To obtain a description of the group.

### Example of a request

```
http://localhost:8080/api/faces-groups/4cf2c1bb-707a-4455-a00b-c7d114eae96f?module=complete
```

Parameters

Parameter	Description
module	Mandatory parameter. Name of face recognition module to work with. Available modules can be viewed using <i>/api/faceconfig</i> request.

### Example of response

```
{
  "id" : "4cf2c1bb-707a-4455-a00b-c7d114eae96f",
  "external_id" : "0",
  "name" : "Employess",
  "color" : "ffffffff",
  "intercept" : false,
  "modification_time": "2019-05-28T05:58:17.994Z"
}
```

## PUT /api/faces-groups/<id>

To update an existing group of faces in the database. Full description is returned in response.

### Example of a request

```
http://localhost:8080/api/faces-groups/4cf2c1bb-707a-4455-a00b-c7d114eae96?module=complete
```

### Parameters

Parameter	Description
module	Mandatory parameter. Name of face recognition module to work with. Available modules can be viewed using <i>/api/faceconfig</i> request.

### Headers

Parameter	Description
Content-Type	application/json

### Body (application/json)

```
{
  "external_id" : "0",
  "name" : "Employess",
  "color" : "ffffffff",
  "intercept" : false
}
```

### Example of a response

```
{
  "id": "4cf2c1bb-707a-4455-a00b-c7d114eae96f",
  "external_id" : "0",
  "name": "Employess",
  "color": "ffffffff",
  "intercept": false,
  "modification_time": "2019-05-28T05:58:17.994Z"
}
```



The *name* field must be filled mandatorily. All the other fields may be empty or *null*. The *hex* value of a *string* type is used for the *color* field (for *argb* color).

## DELETE /api/faces-groups/<id>

To delete a group of faces from the database.

### Example of a request

```
http://localhost:8080/api/faces-groups/4cf2c1bb-707a-4455-a00b-c7d114eae96?module=complete
```

### Parameters

Parameter	Description
module	Mandatory parameter. Name of face recognition module to work with. Available modules can be viewed using <i>/api/faceconfig</i> request.



When a group is deleted, all its members exit the group without being deleted.

## REST API interaction with License Plate database

Starting from version 3.4 of Eocortex, the REST API functionality for working with the license plate database has become available. It supports all basic operations with the database: getting, adding, modifying and deleting records about vehicles and groups.

The following modules are supported:

- Eocortex LPR Light
- Eocortex LPR Complete

Below is the description of the resources used for working with license plates database:

Resource	Description	GET	POST	PUT	DELETE
<b>api/carconfig</b>	Type of query for obtaining a list of available license plate recognition modules	+	n/a	n/a	n/a
<b>api/cars</b>	Category of queries for obtaining information about vehicles already added to the database and adding new entries	+	+	n/a	n/a
<b>api/cars/&lt;id&gt;</b>	Type of query for getting/adding/modifying/deleting detailed information about a specific vehicle record in the database	+	n/a	+	+
<b>api/cars-groups</b>	Category of queries for getting a list of license plate groups and adding new groups	+	+	n/a	n/a
<b>api/cars-groups/&lt;id&gt;</b>	Type of query for obtaining/changing/deleting detailed information about a specific group of license plates	+	n/a	+	+

## Use cases

### Synchronization of license plates database with external systems

It is possible to synchronize the license plate database with the third-party software. The common element that unites Eocortex database with the third-party software database is the "**external\_id**" field. A 36-symbol string is used to fill in this field. It is allowed to not use the external identifier "**external\_id**" at all, but use the ID field, which works as an internal identifier in the Eocortex license plate database, to identify database objects.

External ID can be set for both vehicles and groups.

The internal identifier cannot be changed.

## Requirements, limitations, recommendations

### Compatibility with previous versions

Starting from version 3.4, the **ExternalId** and **ExternalSystemId** fields have been added to the license plate recognition events and entries in the database. This change affects compatibility with previous versions of the software in case of system downgrade. If the system downgrade is needed, it is recommended to restore the database from the backup. But please do remember that restoring a database from a backup only partially solves the issue: database entries created by previous versions will be viewable in the Client application, but all entries created by version 3.4 will be lost.

To restore the database, follow the "Restoring a database from backups" instruction from the "Service operations with FirebirdDBMS" guide.

### Requirements

To edit the license plate database, it is necessary to execute all queries (PUT, POST, DELETE) under a user with the "Editing face database and license plate database data" user right granted.

For **Eocortex Enterprise/Ultra** version, the user must have access to the module itself to perform any queries to the database of this module.

# Requests

## GET /api/carconfig

Get a list of all available license plate recognition modules.

### Request example

```
http://localhost:8080/api/carconfig
```

### Response example

```
{
  "auto_modules":
  { "name":
    "complete",
    "enabled": true
  },
  {
    "name": "light",
    "enabled": false
  }
}
```



## GET /api/cars

Get a list of all vehicles from the license plate database.

### Request example

```
http://localhost:8080/api/cars?offset=0&portion=50
```

### Parameters

<b>offset</b>	<b>Optional parameter.</b> Specifies the sequence number of the entry from which you want to get the list of cars. The default value is 0.
<b>portion</b>	<b>Optional parameter.</b> The number of vehicle records to retrieve. The default value is 1000, the maximum value is equal to the number of vehicle records in the database.
<b>filter</b>	<b>Optional parameter.</b> The filter syntax is as follows: <attribute_name> <logical comparison operator> '<assumed value>', where  <attribute_name> – name of attribute (field) of entity.  Parameter value options: <ul style="list-style-type: none"><li>● <b>group_id</b> – filter by group ID;</li><li>● <b>first_name</b> – filter by First Name line;</li><li>● <b>last_name</b> – filter by Last Name line;</li><li>● <b>patronymic</b> – filter by Patronymic line;</li><li>● <b>license_plate_number</b> – filter by license plate number;</li><li>● <b>required_ratio</b> – the required percentage of coincidence of the full name or plate number to include the vehicle</li></ul>

in the list (solid value from 0 to 100, default 100). The higher will be value, the more accurate will be search;

- **external\_id** – identifier of the record from the third-party software integrated with Eocortex;
- **external\_sys\_id** – identifier of the third-party software integrated with Eocortex. It is used by the database synchronization functionality from an external system (this functionality has not yet been implemented for car numbers). The maximum length is 64 characters.
- **external\_owner\_id** – vehicle owner identifier used by third-party software integrated with Eocortex. It can be used for integration with external systems for 2FA tasks. Vehicle owner identifier may not be unique for entries in the database to make such tasks, as "One person can have several vehicles, but one pass" possible. The maximum length is 64 characters.

**<logical comparison operator>** – operator '=' to search for matching entities in the database;

**'<assumed value>'** – value for the parameter used;

Note. Parameter must match URL encoding

Request samples with filtering:

[http://localhost:8080/api/cars?offset=0&portion=50&module=basic&filter=external\\_id='123'](http://localhost:8080/api/cars?offset=0&portion=50&module=basic&filter=external_id='123')

Filters can be combined using the "AND" operator, such as searching for vehicles belonging to multiple groups:

[http://localhost:8080/api/cars?offset=0&portion=50&module=basic&filter=group\\_id='05a21e32-51e5-405e-b4cf-3082796c8703' AND group\\_id='2090779b-9091-4989-a5f8-92d1920d8291'](http://localhost:8080/api/cars?offset=0&portion=50&module=basic&filter=group_id='05a21e32-51e5-405e-b4cf-3082796c8703' AND group_id='2090779b-9091-4989-a5f8-92d1920d8291')

But several filters cannot be set at once for the first\_name, last\_name, patronymic parameters.

Request sample in URL encoding:

[http://localhost:8080/api/cars?offset=0&portion=50&module=basic&filter=group\\_id%3D%2705a21e32-51e5-405e-b4cf-3082796c8703%27](http://localhost:8080/api/cars?offset=0&portion=50&module=basic&filter=group_id%3D%2705a21e32-51e5-405e-b4cf-3082796c8703%27)

<b>dbid</b>	<p><b>Optional parameter.</b></p> <p>Available only for the License Plate Recognition Complete module.</p> <p>Identifier of the specific license plate database.</p> <p>Multiple license plate databases can be created in Eocortex for the License Plate Recognition module. If this parameter is specified, the action is performed with a unique database that corresponds the identifier used. If the parameter is not specified, then the action is performed with the common database.</p> <p>More information about this feature can be found in the Eocortex Admin Guide.</p>
-------------	---

### Response example

```
{
  "offset": 0,
  "portion": 2,
  "total_count": 2,
  "plates": [
    {
      "id": "74d8b8cb-ca9c-4a6f-af8c-f990dad24325",
      "external_id": "",
      "license_plate_number": "0529KH70",
      "additional_info": "Custom additional note",
      "modification_time": "0001-01-01T00:00:00"
    },
    {
      "id": "c25ddd15-53a3-47f4-8471-3b5425a983f9",
      "external_id": "",
      "license_plate_number": "K999YB70",
      "additional_info": "No",
      "modification_time": "0001-01-01T00:00:00"
    }
  ]
}
```

**Note**

*modification\_time* - time in UTC when the record was added or updated in the license plate database.

## POST /api/cars

Adds a record about a new vehicle to the license plate database. A full description of the vehicle is returned in response.

### Request example

```
http://localhost:8080/api/cars
```

### Parameters

<b>dbid</b>	<p><b>Optional parameter.</b></p> <p>Available only for the License Plate Recognition Complete module.</p> <p>Identifier of the specific license plate database.</p> <p>Multiple license plate databases can be created in Eocortex for the License Plate Recognition module. If this parameter is specified, the action is performed with a unique database that corresponds the identifier used. If the parameter is not specified, then the action is performed with the common database.</p> <p>More information about this feature can be found in the Eocortex Admin Guide.</p>
-------------	---

### Headers

Content-Type	application/json
--------------	------------------

### Body (application/json)

```
{
  "owner": {
    "first_name": "John",
    "second_name": "Cash",
    "third_name": "Ray"
  },
  "external_id": "0",
  "license_plate_number": "0529KH34",
  "additional_info": "Custom note",
}
```

```
"model": "Rolls-Royce Silver Shadow",
"color": "Black",
"groups": [
{
  "id": "8d7223c9-b9ff-42b8-8fe8-ec7c5a6efa67"
}
]
}
```

### Response example

```
{
  "owner": {
    "first_name": "John",
    "second_name": "Cash",
    "third_name": "Ray"
  },
  "id": "f23fddff-d58f-4d4e-9b31-ba1b513f537d",
  "external_id": "0",
  "license_plate_number": "0529KH34",
  "additional_info": "Custom note",
  "modification_time": "0001-01-01T00:00:00",
  "model": "Rolls-Royce Silver Shadow",
  "color": "Black",
  "groups": [
    {
      "id": "8d7223c9-b9ff-42b8-8fe8-ec7c5a6efa67"
    }
  ]
}
```

## GET /api/cars/<id>

Get a detailed description of the vehicle from the license plate database.

### Request example

```
http://localhost:8080/api/cars/74d8b8cb-ca9c-4a6f-af8c-f990dad24325
```

### Parameters

<b>dbid</b>	<p><b>Optional parameter.</b></p> <p>Available only for the License Plate Recognition Complete module.</p> <p>Identifier of the specific license plate database.</p> <p>Multiple license plate databases can be created in Eocortex for the License Plate Recognition module. If this parameter is specified, the action is performed with a unique database that corresponds the identifier used. If the parameter is not specified, then the action is performed with the common database.</p> <p>More information about this feature can be found in the Eocortex Admin Guide.</p>
-------------	---

### Response example

```
{
  "owner": {
    "first_name": "John",
    "second_name": "Cash",
    "third_name": "Ray"
  },
  "id": "74d8b8cb-ca9c-4a6f-af8c-f990dad24325",
  "external_id": "",
  "license_plate_number": "0529KH70",
  "additional_info": "Custom note",
  "modification_time": "0001-01-01T00:00:00",
  "model": "Rolls-Royce Silver Shadow",
  "color": "Black",
  "groups": [
```

```
{  
  "id": "8d7223c9-b9ff-42b8-8fe8-ec7c5a6efa67"  
}  
]  
}
```

**Note**

*modification\_time* - time in UTC when the record was added or updated in the license plate database.



## PUT /api/cars/<id>

Updating an existing vehicle record in the license plate database. A full description is returned in response.

### Request example

```
http://localhost:8080/api/cars/d1bd0147-e3d7-4bcd-a19c-e9a1acafaadd
```

### Parameters

<b>dbid</b>	<b>Optional parameter.</b> Available only for the License Plate Recognition Complete module. Identifier of the specific license plate database. Multiple license plate databases can be created in Eocortex for the License Plate Recognition module. If this parameter is specified, the action is performed with a unique database that corresponds the identifier used. If the parameter is not specified, then the action is performed with the common database. More information about this feature can be found in the Eocortex Admin Guide.
-------------	--

### Headers

Content-Type	application/json
--------------	------------------

### Body (application/json)

```
{
  "owner": {
    "first_name": "John",
    "second_name": "Cash",
    "third_name": "Ray"
  },
  "id": "74d8b8cb-ca9c-4a6f-af8c-f990dad24325",
  "external_id": "",
  "license_plate_number": "JCASH1",
```

```
"additional_info": "Singer",
"modification_time": "0001-01-01T00:00:00",
"model": "Rolls-Royce Silver Shadow",
"color": "Black",
"groups": [
{
  "id": "8d7223c9-b9ff-42b8-8fe8-ec7c5a6efa67"
}
]
}
```

### Response example

```
{
  "owner": {
    "first_name": "John",
    "second_name": "Cash",
    "third_name": "Ray"
  },
  "id": "74d8b8cb-ca9c-4a6f-af8c-f990dad24325",
  "external_id": "",
  "license_plate_number": "JCASH1",
  "additional_info": "Singer",
  "modification_time": "0001-01-01T00:00:00",
  "model": "Rolls-Royce Silver Shadow",
  "color": "Black",
  "groups": [
    {
      "id": "8d7223c9-b9ff-42b8-8fe8-ec7c5a6efa67"
    }
  ]
}
```

## DELETE /api/cars/

Delete a record about a vehicle with the specified identifier from the database.

### Request example

```
http://localhost:8080/api/cars/74d8b8cb-ca9c-4a6f-af8c-f990dad24325
```

### Parameters

<b>dbid</b>	<p><b>Optional parameter.</b></p> <p>Available only for the License Plate Recognition Complete module.</p> <p>Identifier of the specific license plate database.</p> <p>Multiple license plate databases can be created in Eocortex for the License Plate Recognition module. If this parameter is specified, the action is performed with a unique database that corresponds the identifier used. If the parameter is not specified, then the action is performed with the common database.</p> <p>More information about this feature can be found in the Eocortex Admin Guide.</p>
-------------	---

## GET /api/cars-groups

Get a list of vehicle groups from the license plate database.

### Request example

```
http://localhost:8080/api/cars-groups?offset=0&portion=10
```

### Parameters

<b>offset</b>	<b>Optional parameter.</b> Specifies the sequence number of the entry from which you want to get the list of groups. The default is 0.
<b>portion</b>	<b>Optional parameter.</b> The number of groups to receive. The default value is 1000, the maximum value is equal to the number of vehicle records in the database.
<b>filter</b>	<b>Optional parameter.</b> The filter syntax is as follows: <attribute_name> <logical comparison operator> '<assumed value>', where  <b>&lt;attribute_name&gt;</b> - name of attribute (field) of entity.  Parameter value options: <ul style="list-style-type: none"><li>● <b>external_id</b> – identifier of the record from the third-party software integrated with Eocortex;</li><li>● <b>external_sys_id</b> – identifier of the third-party software integrated with Eocortex. It is used by the database synchronization functionality from an external system. The maximum length is 64 characters.</li></ul> <b>&lt;logical comparison operator&gt;</b> – operator "=" to search for matching entities in the database;

	<p>'&lt;assumed value&gt;' – value for the parameter used;</p> <p><u>Note. Parameter must match URL encoding</u></p> <p>Request samples with filtering:</p> <p><a href="http://localhost:8080/api/cars-groups?offset=0&amp;portion=10&amp;module=basic&amp;filter=external_id='123'">http://localhost:8080/api/cars-groups?offset=0&amp;portion=10&amp;module=basic&amp;filter=external_id='123'</a></p> <p>Request sample in URL encoding:</p> <p><a href="http://localhost:8080/api/cars-groups?offset=0&amp;portion=10&amp;module=basic&amp;filter=external_id%3D%27123%27">http://localhost:8080/api/cars-groups?offset=0&amp;portion=10&amp;module=basic&amp;filter=external_id%3D%27123%27</a></p>
<b>dbid</b>	<p><b>Optional parameter.</b></p> <p>Available only for the License Plate Recognition Complete module.</p> <p>Identifier of the specific license plate database.</p> <p>Multiple license plate databases can be created in Eocortex for the License Plate Recognition module. If this parameter is specified, the action is performed with a unique database that corresponds the identifier used. If the parameter is not specified, then the action is performed with the common database.</p> <p>More information about this feature can be found in the Eocortex Admin Guide.</p>

### Response example

```
{
  "offset": 0,
  "portion": 3,
  "total_count": 3,
  "groups": [
    {
      "id": "8d7223c9-b9ff-42b8-8fe8-ec7c5a6efa67",
      "external_id": "",
      "name": "White list",
      "intercept": false,
      "open_barrier": false,
      "modification_time": "2021-02-14T02:26:01.423Z"
    }
  ]
}
```

```
"external_sys_id": ""
},
{
  "id": "fbf579b5-b171-40ea-acd7-e4680ce3b962",
  "external_id": "",
  "name": "Interception",
  "intercept": true,
  "open_barrier": false,
  "modification_time": "2021-02-14T02:26:01.423Z"
  "external_sys_id": ""
},
{
  "id": "976cff8b-6ad3-4153-bf57-3321836c8006",
  "external_id": "",
  "name": "Open barrier gate",
  "intercept": false,
  "open_barrier": true,
  "modification_time": "2021-02-14T02:26:01.423Z"
  "external_sys_id": ""
}
]
}
```

**Note**

*modification\_time* – time in UTC when the record was added or updated in the license plate database.

## POST /api/cars-groups

Adds a group to the license plate database. A full description of the group is returned in response.

### Request example

```
http://localhost:8080/api/cars-groups
```

### Parameters

<b>dbid</b>	<p><b>Optional parameter.</b></p> <p>Available only for the License Plate Recognition Complete module.</p> <p>Identifier of the specific license plate database.</p> <p>Multiple license plate databases can be created in Eocortex for the License Plate Recognition module. If this parameter is specified, the action is performed with a unique database that corresponds the identifier used. If the parameter is not specified, then the action is performed with the common database.</p> <p>More information about this feature can be found in the Eocortex Admin Guide.</p>
-------------	---

### Headers

Content-Type	application/json
--------------	------------------

### Body (application/json)

```
{
  "external_id": "3",
  "name": "White list",
  "intercept": false,
  "open_barrier": false,
  "color": "ff00ff00"
}
```

### Response example

```
{
  "id": "ce25fa01-f49c-41c2-ac9d-7653ab900dd5",
  "external_id": "3",
  "name": "White list",
  "intercept": false,
  "open_barrier": false,
  "modification_time": "2021-02-16T17:37:27.3336743Z",
  "color": "ff00ff00"
}
```

### Note

The *Name* field must be filled for each request, all other fields may be empty or *null*. For the *Color* field *string* type hex value (for *argb* color) must be used.



## GET /api/cars-groups/<id>

Get a description of the group.

### Request example

```
http://localhost:8080/api/cars-groups/8d7223c9-b9ff-42b8-8fe8-ec7c5a6efa67
```

### Parameters

<b>dbid</b>	<p><b>Optional parameter.</b></p> <p>Available only for the License Plate Recognition Complete module.</p> <p>Identifier of the specific license plate database.</p> <p>Multiple license plate databases can be created in Eocortex for the License Plate Recognition module. If this parameter is specified, the action is performed with a unique database that corresponds the identifier used. If the parameter is not specified, then the action is performed with the common database.</p> <p>More information about this feature can be found in the Eocortex Admin Guide.</p>
-------------	---

### Response example

```
{
  "id": "8d7223c9-b9ff-42b8-8fe8-ec7c5a6efa67",
  "external_id": "",
  "name": "White list",
  "intercept": false,
  "open_barrier": false,
  "modification_time": "2021-02-14T02:26:01.423Z",
  "color": "ff00ff00"
}
```

## PUT /api/cars-groups/<id>

Updates an existing group in the license plate database. A full description of the group is returned in response.

### Request example

```
http://localhost:8080/api/cars-groups/ce25fa01-f49c-41c2-ac9d-7653ab900dd5
```

### Parameters

<b>dbid</b>	<b>Optional parameter.</b> Available only for the License Plate Recognition Complete module. Identifier of the specific license plate database.  Multiple license plate databases can be created in Eocortex for the License Plate Recognition module. If this parameter is specified, the action is performed with a unique database that corresponds the identifier used. If the parameter is not specified, then the action is performed with the common database.  More information about this feature can be found in the Eocortex Admin Guide.
-------------	--

### Headers

Content-Type	application/json
--------------	------------------

### Body (application/json)

```
{
  "external_id": "4",
  "name": "White list",
  "intercept": false,
  "open_barrier": false,
  "color": "ff00ff00"
}
```

### Response example

```
{
  "id": "ce25fa01-f49c-41c2-ac9d-7653ab900dd5",
  "external_id": "4",
  "name": "White list",
  "intercept": false,
  "open_barrier": false,
  "modification_time": "2021-02-16T17:44:32.833567Z",
  "color": "ff00ff00"
}
```

### Note

The *Name* field must be filled for each request, all other fields may be empty or *null*. For the *Color* field *string* type hex value (for *argb* color) must be used.

## DELETE /api/cars-groups/

Remove a group from the license plate database.

### Request example

```
http://localhost:8080/api/cars-groups/ce25fa01-f49c-41c2-ac9d-7653ab900dd5
```

### Parameters

<b>dbid</b>	<p><b>Optional parameter.</b></p> <p>Available only for the License Plate Recognition Complete module.</p> <p>Identifier of the specific license plate database.</p> <p>Multiple license plate databases can be created in Eocortex for the License Plate Recognition module. If this parameter is specified, the action is performed with a unique database that corresponds the identifier used. If the parameter is not specified, then the action is performed with the common database.</p> <p>More information about this feature can be found in the Eocortex Admin Guide.</p>
-------------	---

### Note

When you delete a group, all members automatically leave the group without deleting them.

# REST API for getting data from the Object Classification and Counting module

Starting from version 4.0 of Eocortex, with the advent of the Object Classification and Counting module, the REST API for obtaining data from this module is available. The REST API is necessary because the events received from the database don't provide the user with readable information about the data accumulated by the module.

Description of the resources used to get data from the Object Classification and Counting module:

<b>Resource</b>	<b>Description</b>	<b>GET</b>
<b>api/objects_counting/current_counters</b>	Obtaining current counter values for lines and areas. The data is the same as what is seen in the Eocortex Client in real time.	+
<b>api/objects_counting/report</b>	Obtaining data on the number of objects that crossed the lines for the specified time interval.	+

## GET /api/object\_counting/current\_counters

Get the current counter values for lines and areas. The data is the same as what is seen in the Eocortex Client in real time.

### Request example

```
http://127.0.0.1:8080/api/objects_counting/current_counters?login=root&password=&channelId=9e2cd158-f739-4715-89fb-a460147fc33b
```

### Parameters

<b>ChannelId</b>	<b>Optional parameter.</b> Camera ID for which to get data. If not set, the data is output as a list for all cameras on which the module is running.
------------------	--

### Response example

```
{
  "Id": "9e2cd158-f739-4715-89fb-a460147fc33b",
  "ChannelName": "Plant",
  "Zones": [
    {
      "Id": "0af772da-9993-4a39-a785-4e7c89efe55a",
      "Name": "Crossing of the line",
      "Type": "LineSection",
      "CurrentCounts": {
        "Person": 16,
        "Animal": 7
      }
    },
    {
      "Id": "d98c95d6-9e6a-4a5e-80a4-184826846b17",
      "Name": "Counting objects in area",
      "Type": "Zone",
      "CurrentCounts": {
        "Person": 3,
```

```
"Car": 0,  
"Bus": 0,  
"Truck": 0,  
"Motorbike": 0,  
"Animal": 0
```

```
}
```

```
}
```

```
]
```

```
}
```

## GET /api/object\_counting/report

Get data on the number of objects that crossed the lines for a specified time interval.

### Request example

```
http://127.0.0.1:8080/api/objects_counting/report?login=root&password=&channelId=9e2cd158-f739-4715-89fb-a460147fc33b&startTime="2022.12.22 18:00:00"&endTime="2022.12.22 18:15:00"
```

### Parameters

<b>ChannelId</b>	<b>Optional parameter.</b> Camera ID for which to get data. If not set, the data is output as a list for all cameras on which the module is running.
<b>StartTime</b>	Search start time (local to the server) in the format dd.MM.yyyy HH:mm:ss.fff
<b>EndTime</b>	Search end time (local to the server) in the format dd.MM.yyyy HH:mm:ss.fff

### Response example

```
{
  "Id": "9e2cd158-f739-4715-89fb-a460147fc33b",
  "ChannelName": "Plant",
  "Zones": [
    {
      "Id": "0af772da-9993-4a39-a785-4e7c89efe55a",
      "Name": "Crossing of the line",
      "StartCounts": {
        "Person": 9,
        "Animal": 4
      },
      "TotalCounts": {
        "Person": 11,
        "Animal": 3
      }
    }
  ]
}
```



```
}  
  ]  
    }  
      }
```

**StartCounts** - values at the beginning of the search period, **Total Counts** - the number of objects crossing the line during the period.

**Note**

This command returns counters only for lines. Counters for areas are not available, since counting for a period is meaningless for them.

# REST API for working with the Episode Archive service

Through HTTP API the user can add new episodes to the episode archive, as well as search for the required episode and export it without the need to use the client application.

## Requests

### POST /archive\_episodes/episodes

Add a new episode to the Episode Archive service

```
http://localhost:8080/webapi/archive_episodes/episodes
```

#### Headers

Content-Type	application/json
--------------	------------------

#### Body (application/json)

```
{
  "StartTimeUtc": "2024-02-26T07:07:50.711Z",
  "EndTimeUtc": "2024-02-26T07:07:50.711Z",
  "CameraId": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
  "Comment": "string"
}
```

#### Response parameters

Parameter	Description	Format
StartTimeUtc	Episode start date and time. In UTC format	string(\$date-time)
EndTimeUtc	Episode end date and time. In UTC format	string(\$date-time)

CameraId	ID of the camera from which the episode was recorded	string(\$uuid)
Comment	<b>Optional parameter.</b> Episode comment	string

## GET /archive\_episodes/episodes/{episodeId}

Return a single episode by its ID

[http://localhost:8080/webapi/archive\\_episodes/episodes/1](http://localhost:8080/webapi/archive_episodes/episodes/1)

### Parameters

Parameter	Description	Format
episodeId	Episode ID	integer(\$int64)

### Headers

Content-Type	application/json
--------------	------------------

### Response example

```
{
  "Id": 5,
  "CreationTimeUtc": "2023-05-26T07:51:45.617841",
  "StartTimeUtc": "2023-05-26T07:50:16.130021",
  "EndTimeUtc": "2023-05-26T07:51:45.611039",
  "CameraId": "762a2797-dde4-4558-ad58-d1e6aad69744",
  "UserId": "6383c0df-ecd1-4ff9-a685-0c94dee7d5c4",
  "ServerId": "9b7cfde0-8c49-4bb9-9bc1-d7d2e0175f10",
  "Comment": null,
  "Status": 2,
  "Size": "39"
}
```

## Response parameters

Parameter	Description	Format
Id	Episode ID	integer(\$int64)
CreationTimeUtc	Episode creation date and time. In UTC format	string(\$date-time)
StartTimeUtc	Episode start date and time. In UTC format	string(\$date-time)
EndTimeUtc	Episode end date and time. In UTC format	string(\$date-time)
CameraId	ID of the camera from which the episode was recorded	string(\$uuid)
UserId	ID of the user who created the episode	string(\$uuid)
ServerId	ID of the server to which the camera is linked	string(\$uuid)
Comment	Episode comment	string
Status	Statuses of the episodes to be searched: 0 - InQueue, 1 - Uploading, 2 - Uploaded, 3 - ArchiveNotFound, 4 - NotEnoughSpace, 5 - UploadingPaused, 6 - ConnectionError, 7 - UnknownError.	integer(\$int32)

Size	Episode size, MB	string
------	------------------	--------

## DELETE /archive\_episodes/episodes/{episodeId}

Delete an episode from the Episode Archive service

[http://localhost:8080/webapi/archive\\_episodes/episodes/1](http://localhost:8080/webapi/archive_episodes/episodes/1)

### Parameters

Parameter	Description	Format
episodeId	ID of the episode being deleted	integer(\$int64)

### Headers

Content-Type	Text/plain
--------------	------------

## POST /archive\_episodes/episodes/search

Return a list of episodes that match the given parameters. If the user has access only to his own episodes, then the search will be carried out only for them

```
http://localhost:8080/webapi/archive_episodes/episodes/search?limit=100&offset=0&startTimeSortOrder=0
```

### Parameters

Parameter	Description	Format
limit	Number of episodes in the returned list	string(\$date-time)
offset	The order number of the episode starting from which the list will be generated	string(\$date-time)
startTimeSortOrder	Sort episodes list in descending order, from newest to oldest. Possible values: 0 - Descending, 1 - Ascending.	string(\$uuid)
MinStartTimeUtc	The date and time when the episode started. In UTC format	string(\$date-time)
MaxStartTimeUtc	The date and time when the episode ended. In UTC format	string(\$date-time)

### Headers

Content-Type	application/json
--------------	------------------

### Body (application/json)

```
{  
  "Id": 0,
```



```

"CreationTimeUtc": "2024-02-27T05:35:12.334Z",
"StartTimeUtc": "2024-02-27T05:35:12.334Z",
"EndTimeUtc": "2024-02-27T05:35:12.334Z",
"CameraId": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
"UserId": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
"ServerId": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
"Comment": "string",
"Status": "0 - InQueue",
"Size": "string"
}

```

### Response parameters

Parameter	Description	Format
Id	Episode ID	integer(\$int64)
CreationTimeUtc	Episode creation date and time. In UTC format	string(\$date-time)
StartTimeUtc	Episode start date and time. In UTC format	string(\$date-time)
EndTimeUtc	Episode end date and time. In UTC format	string(\$date-time)
CameraId	ID of the camera from which the episode was recorded	string(\$uuid)
UserId	ID of the user who created the episode	string(\$uuid)
ServerId	ID of the server to which the camera is linked	string(\$uuid)
Comment	Episode comment	string
Status	Statuses of the episodes to be searched: 0 - InQueue,	integer(\$int32)

	1 - Uploading, 2 - Uploaded, 3 - ArchiveNotFound, 4 - NotEnoughSpace, 5 - UploadingPaused, 6 - ConnectionError, 7 - UnknownError.	
Size	Episode size, MB	string

## GET /archive\_episodes/episodes/{episodeId}/export

Export the episode to an MP4 file

```
http://localhost:8080/webapi/archive_episodes/episodes/1/export?isSoundEnabled=false&useTimeStamps=false&fps=30&addHvc1TagForHvc=false
```

### Parameters

Parameter	Description	Format
<code>episodeId</code>	ID of the episode being exported	integer(\$int64)
<code>isSoundEnabled</code>	Export to a file with audio if the episode contains audio	boolean
<code>useTimeStamps</code>	Include timestamps in the result MP4 file	boolean
<code>fps</code>	FPS in the resulted MP4 file	number(\$double)
<code>addHvc1TagForHvc</code>	Include a hevc tag in the result MP4 file containing H.265 video. This is required to play H.265 videos on Apple devices	boolean

### Headers

Content-Type	application/octet-stream
--------------	--------------------------

# REST API for archive export management

Through HTTP API the user can view information about archive export tasks, search for the necessary task, start the export process, cancel it and download the export file.

## Requests

### POST /archive\_export/tasks

The history of the archive export. Return a list of archive export tasks, including both unfinished tasks and the export history. Allows to watch the status of current tasks and download movies created in any completed task. A history is unique to the user. Each record is retained as long as the archive data it exported is stored.

```
http://localhost:8080/webapi/archive_export/tasks?page=1&size=2147483647
```

#### Parameters

Parameter	Description	Format
page	The order number of the output page	integer(\$int32)
size	Number of records per page	integer(\$int32)

#### Headers

Content-Type	application/json
--------------	------------------

## Response example

```
{
  "Items": [
    {
      "Id": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
      "Params": {
        "ChannelId": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
        "StartTimeUtc": "2024-02-26T12:40:07.188Z",
        "EndTimeUtc": "2024-02-26T12:40:07.188Z",
        "IsSoundEnabled": true,
        "UseTimeStamps": true,
        "CreationTime": "2024-02-26T12:40:07.188Z",
        "Fps": 0,
        "AddHvc1TagForHevc": true
      },
      "State": "1 - InQueue",
      "Error": "0 - None"
    }
  ],
  "Page": 0,
  "TotalItems": 0
}
```

## Response parameters

Parameter	Description	Format
Id	Archive export task ID	string(\$uuid)
ChannelId	Camera IDs	string(\$uuid)
StartTimeUtc	The start date and time of the exported fragment. In UTC format	string(\$date-time)
EndTimeUtc	The end date and time of the exported fragment. In UTC format	string(\$date-time)

<b>IsSoundEnabled</b>	Export to a file with audio if the archive contains audio	boolean
<b>UseTimeStamps</b>	Include timestamps in the result MP4 file	boolean
<b>CreationTime</b>	The date and time when the archive export task was created. In UTC format	string(\$date-time)
<b>Fps</b>	FPS in the resulted MP4 file	number(\$double)
<b>AddHvc1TagForHevc</b>	Include the hevc tag for H.265 video in the exported file. This is required to play H.265 video on Apple devices	boolean
<b>State</b>	States of the archive export task: 1 - InQueue, 2 - InProcess, 3 - Cancelled, 4 - Error, 5 - Done, 6 - Expired	integer(\$int32)
<b>Error</b>	Description of the archive export task error: 0 - None, 1 - InternalServerError, 2 - NotEnoughSpace, 3 - FileLocked	integer(\$int32)
<b>Page</b>	Page number	integer(\$int32)
<b>TotalItems</b>	Total number of records	integer(\$int32)

# POST /archive\_export

Create a task to export from archive to MP4 file

`http://localhost:8080/webapi/archive_export`

## Headers

Content-Type	application/json
--------------	------------------

## Body (application/json)

```
[
  {
    "StartTimeUtc": "2024-02-26T12:47:00.710Z",
    "EndTimeUtc": "2024-02-26T12:47:00.710Z",
    "IsSoundEnabled": true,
    "UseTimeStamps": true,
    "CreationTime": "2024-02-26T12:47:00.710Z",
    "Fps": 0,
    "AddHvc1TagForHvc": true
  }
]
```

## Response parameters

Parameter	Description	Format
StartTimeUtc	The start date and time of the exported fragment. In UTC format	string(\$date-time)
EndTimeUtc	The end date and time of the exported fragment. In UTC format	string(\$date-time)

<code>IsSoundEnabled</code>	Export to a file with audio if the archive contains audio	boolean
<code>useTimeStamps</code>	Include timestamps in the result MP4 file	boolean
<code>CreationTime</code>	The date and time when the archive export task was created. In UTC format	string(\$date-time)
<code>fps</code>	FPS in the resulted MP4 file	number(\$double)
<code>addHvc1TagForHvc</code>	Include the hevc tag for H.265 video in the exported file. This is required to play H.265 video on Apple devices	boolean



## GET /archive\_export/{taskId}

Return a single export task by its ID

[http://localhost:8080/webapi/archive\\_export/1](http://localhost:8080/webapi/archive_export/1)

### Parameters

Parameter	Description	Format
taskId	ID of the archive export task	string(\$uuid)

### Headers

Content-Type	application/json
--------------	------------------

### Response example

```
{
  "Id": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
  "Params": {
    "ChannelId": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
    "StartTimeUtc": "2024-02-26T12:51:52.079Z",
    "EndTimeUtc": "2024-02-26T12:51:52.079Z",
    "IsSoundEnabled": true,
    "UseTimeStamps": true,
    "CreationTime": "2024-02-26T12:51:52.079Z",
    "Fps": 0,
    "AddHvc1TagForHvc": true
  },
  "State": "1 - InQueue",
  "Error": "0 - None"
}
```

## Response parameters

Parameter	Description	Format
Id	Archive export task ID	string(\$uuid)
ChannelId	Camera ID	string(\$uuid)
StartTimeUtc	The start date and time of the exported fragment. In UTC format	string(\$date-time)
EndTimeUtc	The end date and time of the exported fragment. In UTC format	string(\$date-time)
IsSoundEnabled	Export to a file with audio if the archive contains audio	boolean
UseTimeStamps	Include timestamps in the result MP4 file	boolean
CreationTime	The date and time when the archive export task was created. In UTC format	string(\$date-time)
Fps	FPS in the resulted MP4 file	number(\$double)
AddHvc1TagForHvc	Include the hevc tag for H.265 video in the exported file. This is required to play H.265 video on Apple devices	boolean
State	States of the archive export task: 1 - InQueue, 2 - InProcess, 3 - Cancelled, 4 - Error, 5 - Done, 6 - Expired	integer(\$int32)

<b>Error</b>	Description of the archive export task error: 0 - None, 1 - InternalServerError, 2 - NotEnoughSpace, 3 - FileLocked	integer(\$int32)
--------------	---	------------------

## DELETE /archive\_export/{taskId}

Cancel a single export task by its ID

`http://localhost:8080/webapi/archive_export/1`

### Parameters

Parameter	Description	Format
taskId	ID of the archive export task	string(\$uuid)

### Headers

Content-Type	Text/plain
--------------	------------

## GET /archive\_export/{taskId}/file

Download a file with a fragment of the archive for the camera, exported to an MP4 file

`http://localhost:8080/webapi/archive_export/1/file`

### Parameters

Parameter	Description	Format
taskId	ID of the archive export task	string(\$uuid)

### Headers

Content-Type	application/octet-stream
--------------	--------------------------

# REST API for working with the list of views

Through HTTP API the user can display the list of views.

## Requests

### GET /grid\_profiles

Display a list of views: screen grids with cameras placed in cells

`http://localhost:8080/webapi/grid_profiles`

#### Headers

Content-Type	application/json
--------------	------------------

#### Body (application/json)

```
{
  "Id": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
  "Name": "string",
  "GridType": "0 - GridTypeUnknown",
  "Cells": [
    {
      "Position": 0,
      "CameraId": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
    }
  ]
}
```

## Response parameters

Parameter	Description	Format
Id	View ID	string(\$uuid)
Name	View name	string
GridType	Grid types: 0 - GridTypeUnknown, 1 - GridType1, 2 - GridType2, 3 - GridType3, 4 - GridType4, 6 - GridType6, 7 - GridType7, 8 - GridType8, 9 - GridType9, 10 - GridType10, 12 - GridType12, 13 - GridType13, 16 - GridType16, 17 - GridType17, 20 - GridType20, 24 - GridType24, 25 - GridType25, 30 - GridType30, 36 - GridType36, 42 - GridType42, 49 - GridType49, 56 - GridType56, 64 - GridType64, 81 - GridType81, 100 - GridType100, 110 - GridType110, 150 - GridType150, 168 - GridType168, 182 - GridType182, 204 - GridType204, 224 - GridType224, 240 - GridType240, 256 - GridType256, 1006 - GridType3x2, 1007 - GridType1x4, 1008 - GridType4x2, 1009 - GridType262, 1010 - GridType2X4, 1011 - GridType5, 1051 - GridType5X1, 1111 - GridType12X11	integer(\$int32)
Position	Cell position in the grid	integer(\$int32)
CameraId	ID of the camera that is placed in the cell	string(\$uuid)

## GET /grid\_profiles/tree

Display a tree of views: screen grids with cameras placed in cells

[http://localhost:8080/webapi/grid\\_profiles/tree](http://localhost:8080/webapi/grid_profiles/tree)

### Headers

Content-Type	application/json
--------------	------------------

### Body (application/json)

```
{
  "Id": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
  "Name": "string",
  "Folders": [
    "string"
  ],
  "Profiles": [
    {
      "Id": "3fa85f64-5717-4562-b3fc-2c963f66afa6",
      "Name": "string",
      "GridType": "0 - GridTypeUnknown",
      "Cells": [
        {
          "Position": 0,
          "CameraId": "3fa85f64-5717-4562-b3fc-2c963f66afa6"
        }
      ]
    }
  ]
}
```



## Response parameters

Parameter	Description	Format
Id	View folder ID	string(\$uuid)
Name	View folder name	string
Folders	View tree folders	readOnly
Profiles	View tree node profiles	readOnly
Id	View ID	string(\$uuid)
Name	View name	string
GridType	Grid types: 0 - GridTypeUnknown, 1 - GridType1, 2 - GridType2, 3 - GridType3, 4 - GridType4, 6 - GridType6, 7 - GridType7, 8 - GridType8, 9 - GridType9, 10 - GridType10, 12 - GridType12, 13 - GridType13, 16 - GridType16, 17 - GridType17, 20 - GridType20, 24 - GridType24, 25 - GridType25, 30 - GridType30, 36 - GridType36, 42 - GridType42, 49 - GridType49, 56 - GridType56, 64 - GridType64, 81 - GridType81, 100 - GridType100, 110 - GridType110, 150 - GridType150, 168 - GridType168, 182 - GridType182, 204 - GridType204, 224 - GridType224, 240 - GridType240, 256 - GridType256, 1006 - GridType3x2, 1007 - GridType1x4, 1008 - GridType4x2, 1009 - GridType262, 1010 - GridType2X4, 1011 - GridType5, 1051 - GridType5X1, 1111 - GridType12X11	integer(\$int32)
Cells	List of view cells	readOnly
Position	Cell position in the grid	integer(\$int32)
CameraId	ID of the camera that is placed in the cell	string(\$uuid)

# REST API for getting page-by-page data output

Through HTTP API the user can output data for video analytics module requests on a page-by-page format.

Available for the following requests:

- **api/faces** and **api/faces-groups**
- **api/cars** and **api/cars-groups**

Versioning requests:

- api/... and api/v1/... - first version of requests (by default).
- api/v2/... - second version of requests, supports paginated data output.

## Requests

### GET

Output records from a specific database page

```
http://localhost:8080/api/v2/cars?page=2&size=30
```

#### Response parameters

Parameter	Description	Format
page	Database page number	integer(\$int32)
size	Number of rows on the database page	integer(\$int32)

Example: specifying the parameters **page** = 17 and **size** = 2 in the request means that the first 32 records from the list of records are skipped, and then records from 32 to 34 are displayed.

### Body (application/json)

```
{
  "items": [
    {
      "id": "56d44e53-13d3-c84b-b88a-d46a389df06d",
      "external_sys_id": "",
      "external_id": "",
      "first_name": "{}",
      "patronymic": "{}",
      "second_name": "{}",
      "additional_info": "",
      "modification_time": "2022-03-31T07:06:26.953Z",
      "creation_time": "2022-03-31T07:05:58.796Z",
      "force": false
    },
    {
      "id": "fe705eb2-4f76-47eb-92eb-178c0ccf7077",
      "external_sys_id": "",
      "external_id": "",
      "first_name": "Lucas",
      "patronymic": "Hades",
      "second_name": "Johnson",
      "additional_info": "Trusted",
      "modification_time": "2022-09-06T11:20:53.155Z",
      "creation_time": "2022-08-23T11:38:58.237Z",
      "force": false
    }
  ],
  "page": 1,
  "total_items": 3
}
```

### Response parameters

<b>Parameter</b>	<b>Description</b>
<code>items</code>	Array of records
<code>page</code>	Current page number
<code>total_items</code>	Total number of records in the database

# REST API for receiving reports from the unique visitor counting module

Through HTTP API the user can generate reports when the face recognition module Complete is enabled.

## Requests

### GET /api/unique\_visitor/report

Output the current values of the report indicators

```
http://127.0.0.1/api/unique_visitor/report?starttimeutc=18.06.2023+00:00:00&endtimeutc=20.06.2023+00:00:00&channel=8abc4352-176d-4b7e-8932-7a98cf4150b5,587bae55-8059-4d05-8577-cfbb487d77ec&uniqueonly=false&group=f65ad1b2-a9b0-4b2a-ac65-f06ecd2ae43b&login=root&password=&aggregate=false
```

### Parameters

Parameter	Description	Format
<code>starttimeutc</code>	The start date and time of the exported fragment. In UTC format	string(\$date-time)
<code>endtimeutc</code>	The end date and time of the exported fragment. In UTC format	string(\$date-time)
<code>channel</code>	Camera IDs, separated by commas, for which the report is generated	string(\$uuid)
<code>uniqueonly</code>	<b>Optional parameter.</b> The default value is false. If true, statistics will be shown for unique visitors, if false - for all visitors.	boolean
<code>group</code>	<b>Optional parameter.</b> The parameter specifies the group identifiers, separated by commas, that are excluded from the statistics.	string(\$uuid)
<code>aggregate</code>	<b>Optional parameter.</b> Default value is false. If true, total statistics for all channels will be displayed, if false, statistics will be displayed separately for each channel.	boolean

### Body (application/json)

```
{
  "Report": [
    {
      "ChannelId": null,
      "TotalVisitors": 243,
      "UniqueVisitors": 55,
      "GenderDistribution": {
        "Female": 21,
        "Male": 34
      },
      "AgeDistribution": {
        "Young": 6,
        "Adult": 28,
        "MiddleAged": 21,
        "Senior": 0
      },
      "EmotionDistribution": {
        "Positive": 9,
        "Neutral": 19,
        "Negative": 27
      }
    }
  ]
}
```

# REST API for working with camera licenses

## Requests

### GET /license

Return list of license usage by cameras linked to the server

`http://localhost:8080/webapi/license`

#### Headers

Content-Type	application/json
--------------	------------------

#### Body (application/json)

```
{
  "ProductType": "string",
  "IsTimeLimited": true,
  "TimeLimit": "2024-08-20T09:28:54.009Z",
  "Language": "string",
  "IsMaxClientsLimited": true,
  "MaxClients": 0,
  "VideoAnalystServer": true,
  "IsNetworkLicenseEnabled": true,
  "IsRestConfigurationEnabled": true,
  "IsActiveDirectoryAuthEnabled": true,
  "IsJuniorAdminEnabled": true,
  "IsMessengerEnabled": true,
  "IsVideoWallEnabled": true,
  "IsDuplicateArchiveEnabled": true,
  "IsArchiveThinningEnabled": true,
  "IsMonitoringEnabled": true,
  "IsPriorityPtzEnabled": true,
  "IsAlarmOnPlansEnabled": true,
}
```

```
"IsArchiveEpisodesFeatureEnabled": true,  
"IsLongTermDatabaseFeatureEnabled": true,  
"IsEchdIntegrationEnabled": true,  
"NonRegistratorChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"RegistratorChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"ReservedChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"SoundChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"PtzChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"PostTerminalChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"FaceDetectorChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"InteractiveSearchChannels": {
```



```
"OnServer": 0,  
"Used": 0,  
"Total": 0  
},  
"PlateRecognitionChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"PeopleCntChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"TrackingChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"HeatMapChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"QueueCounterChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"AbandonedObjectChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
"CrowdCountingChannels": {  
  "OnServer": 0,  
  "Used": 0,  
  "Total": 0  
},  
},
```

```
"FireAndSmokeChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"PersonalControlChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"LoudSoundChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"ObjectCounterModuleChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"EmergencyVehicleDetectionModuleChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"FallenPeopleDetectionModuleChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"OurPlatesModuleChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"AutoMarshalChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
}
```

```
},
"FishEyeChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"PeopleCnt3DChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"HardHatDetectionChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"ShelfFullnessDetectors": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"LightFaceRecognitionChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"CompleteFaceRecognitionChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"VisitorStatisticsFaceRecognitionChannels": {
  "OnServer": 0,
  "Used": 0,
  "Total": 0
},
"CameraBuiltInAnalystChannels": {
  "OnServer": 0,
  "Used": 0,
```

```

    "Total": 0
  }
}

```

### Parameters of response

Name	Description	Format
ProductType	Product Type	string
IsTimeLimited	License term status	boolean
TimeLimit	License term	string(\$date-time)
Language	Interface language	string
IsMaxClientsLimited	Remote monitoring workstations status	boolean
MaxClients	Remote monitoring workstations	integer(\$int32)
VideoAnalystServer	Video analytics server	boolean
IsNetworkLicenseEnabled	Floating licensing	boolean
IsRestConfigurationEnabled	REST API	boolean
IsActiveDirectoryAuthEnabled	Active Directory	boolean
IsJuniorAdminEnabled	Separation of rights into various levels of administration	boolean
IsMessengerEnabled	Internal chat for operators	boolean
IsVideoWallEnabled	Videowall	boolean
IsDuplicateArchiveEnabled	Archive duplication	boolean

<b>IsArchiveThinningEnabled</b>	Archive decimation with time	boolean
<b>IsMonitoringEnabled</b>	System status monitoring	boolean
<b>IsPriorityPtzEnabled</b>	Priority PTZ	boolean
<b>IsAlarmOnPlansEnabled</b>	Displaying alarm events on plans	boolean
<b>IsArchiveEpisodesFeatureEnabled</b>	Episode archive	boolean
<b>IsLongTermDatabaseFeatureEnabled</b>	Long-term database	boolean
<b>IsEchdIntegrationEnabled</b>	Integration with ECHD	boolean
<b>ChannelLicenseUsage.OnServer</b>	Number of uses	integer(\$int32)
<b>ChannelLicenseUsage.Used</b>	Number of uses	integer(\$int32)
<b>ChannelLicenseUsage.Total</b>	Number of uses	integer(\$int32)