

Manual

MOBOTIX SYNC

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MOBOTIX SYNC

The **Intelligent** Data Center

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About the Manual

This manual is intended for administrators and users of the MOBOTIX SYNC application.

The most recent version of this document is available at www.mobotix.com.

Before using SYNC it is recommended that you read through the entire manual at least once.

About MOBOTIX SYNC

MOBOTIX SYNC is a Back Office application which can centrally manage ANPR reads transmitted from ALPR cameras performing access control, parking or traffic applications in any environment. Once set up, ALPR reads will be received and processed (e.g. checking for White lists, generating alarms, controlling barriers etc.) .

SYNC provides total control of vehicle traffic not only by recording vehicle movements through established control points, but also by automating access to restricted areas, issuing alerts for selected vehicles (using blacklists), generating reports with images and acting as the main application for real-time monitoring and control of vehicles across a site.

From the most basic management of a private car park to the control of traffic across a city, SYNC facilitates enforcement management, access control to restricted areas, average speed control of a vehicle between two points and average speed data transmission to LED Signs, etc.

Order Information

| Product Name | Order Code |
|------------------------------------|-------------------|
| MOBOTIX SYNC Server | Mx-SYNC-S-BAS |
| MOBOTIX SYNC Camera Device License | Mx-SYNC-S-DEV |
| MOBOTIX SYNC Client | Mx-SYNC-S-CLI |
| MOBOTIX SYNC Grafana Plug-In | Mx-SYNC-P-GRA |

Technical Requirements

Minimum PC Requirements

- Windows 7 or higher
- 64 bits (x64) processor at 1GHz or higher
- 4GB Ram
- 20GB HDD Space
- Microsoft.NET Framework 4.5.2 or higher

Database Requirements

- Postgres (included)
- SQL (to be utilized in large scale deployments, license not included)

NOTE! Postgres is the included database manager and does not need any additional components.

Product Features

Supported Products

The following MOBOTIX products support MOBOTIX SYNC meta-data reporting:

Certified Apps

- VaxALPR
- VaxALPR MMC
- VaxALPR ADR
- VaxOCR Container
- VaxOCR AIN
- VaxOCR UIC
- VaxOCR Genesis

MOBOTIX MOVE

- All MOBOTIX MOVE models equipped with VaxALPR support MOBOTIX SYNC meta data reporting.

MOBOTIX SYNC Server

- Store meta-data and attached images generated by MOBOTIX Certified Apps (e.g. Vaxtor ALPR / OCR Apps) or other compatible data sources
- 4 camera device licenses included
 - additional camera device licenses via additional license on demand
- Monitor incoming license plates / meta-data (e.g. plate reads) in real time
- Search and filter existing license plates / meta-data based on content such as Plate, Country, Camera, Zone, Make, Model, Color, Direction, etc.
- Download and export customized license plate lists and search results

- Management of cameras includes:
 - camera zones
 - manage and synchronize denied & granted license plate list
- assign actuators (incl. camera I/Os)
- manage data retention policies separately for images and meta-data
- supports GDPR measures with dedicated reports and data deletion
- granular user and group permissions
- login management including LDAP integration
- audit trail of all interactions on the system including actions made by cameras
- Send notifications (e.g. via E-Mail)

MOBOTIX SYNC Camera Device License

- 1 camera device license per additional camera device
- Enables adding camera devices to the server/client on demand

NOTE! *4 camera device licenses included in the server base license

MOBOTIX SYNC Client

- redundant operation and data storage for applications with discontinuous connection to the server (e.g. mobile applications)
- active server connection enables continuous data synchronization
- licensed camera devices assigned to the server

MOBOTIX SYNC Grafana Plug-In

- visualization and consolidation of incoming meta-data in customized dashboards including:
 - statistic insights
 - data queries
 - annotations
 - create and manage alerts / post-actions
 - exports

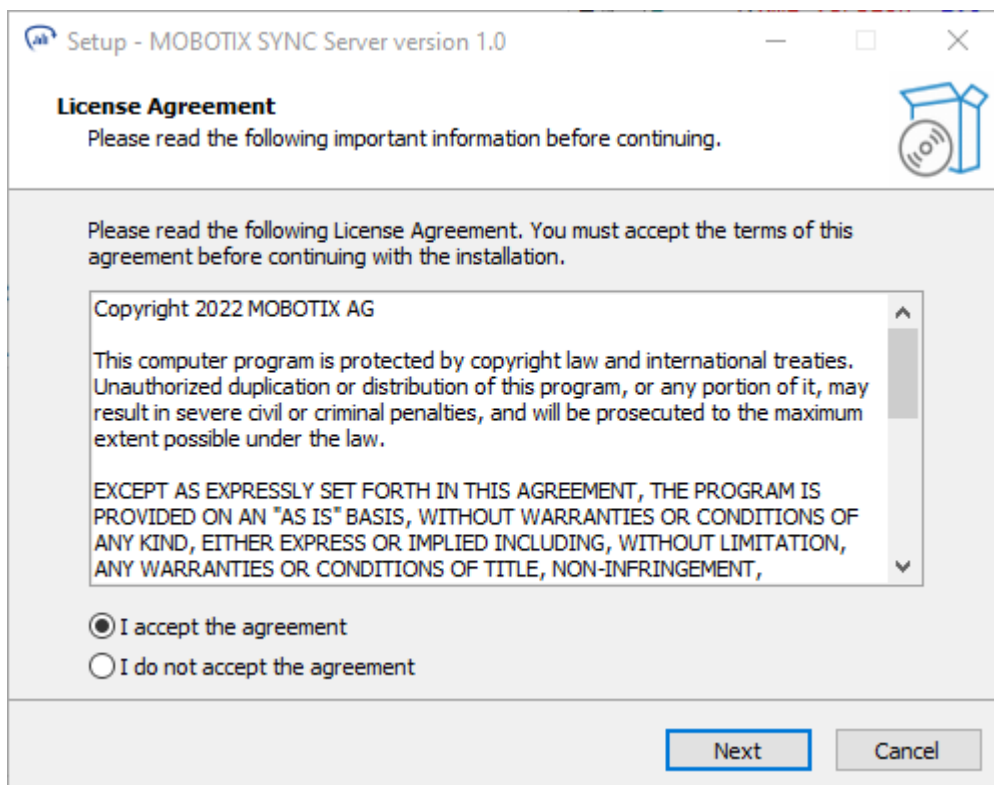
Software installation

NOTE!

In case of an update installation, all previously installed components are uninstalled before their current version is installed.

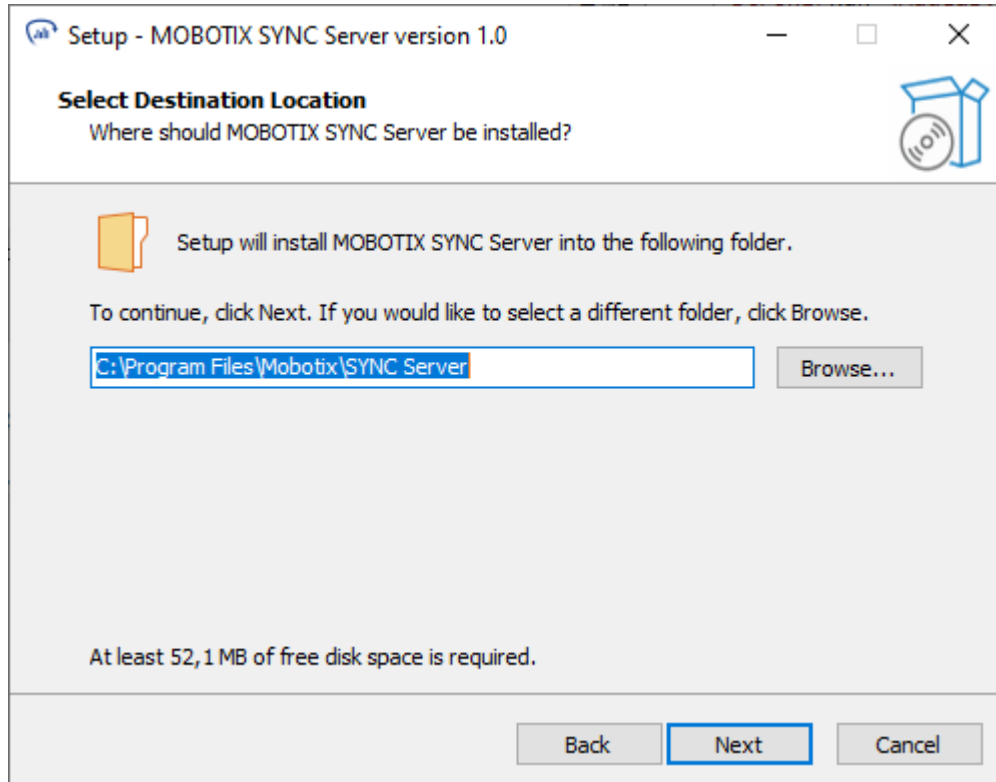
Therefore it's strongly recommended not to deselect the previous installed components.

- Run **MOBOTIX_SyncServer_64-setup.exe** as an administrator. In the first window accept MOBOTIX's License Agreement and click **Next**.



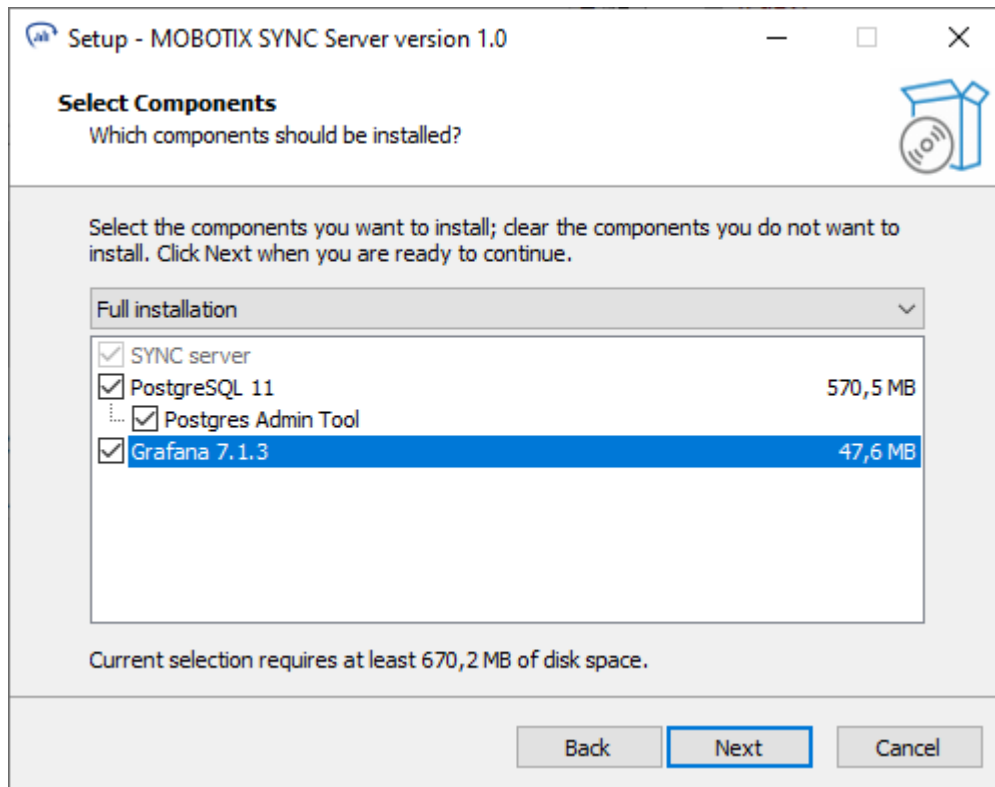
- Within the next dialog you can define where to install the application. Click **Next**.

NOTE! If you do not have to apply internal rules, we recommend to use the default path to minimize the risk of duplicate data storage (e.g. in case of new installations / updates).

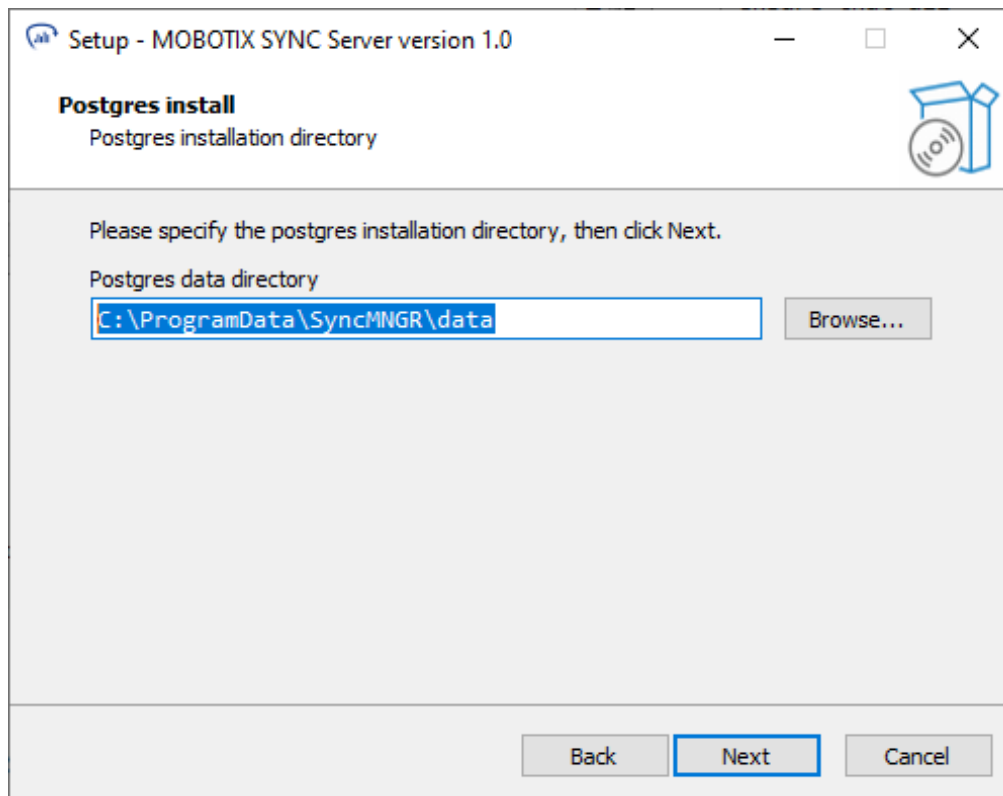


- Select the required software components and click **Next**.

NOTE! We strongly recommend to select the “Full Installation” profile. This way you ensure that all components required for the complete function of MOBOTIX SYNC are available at any time.

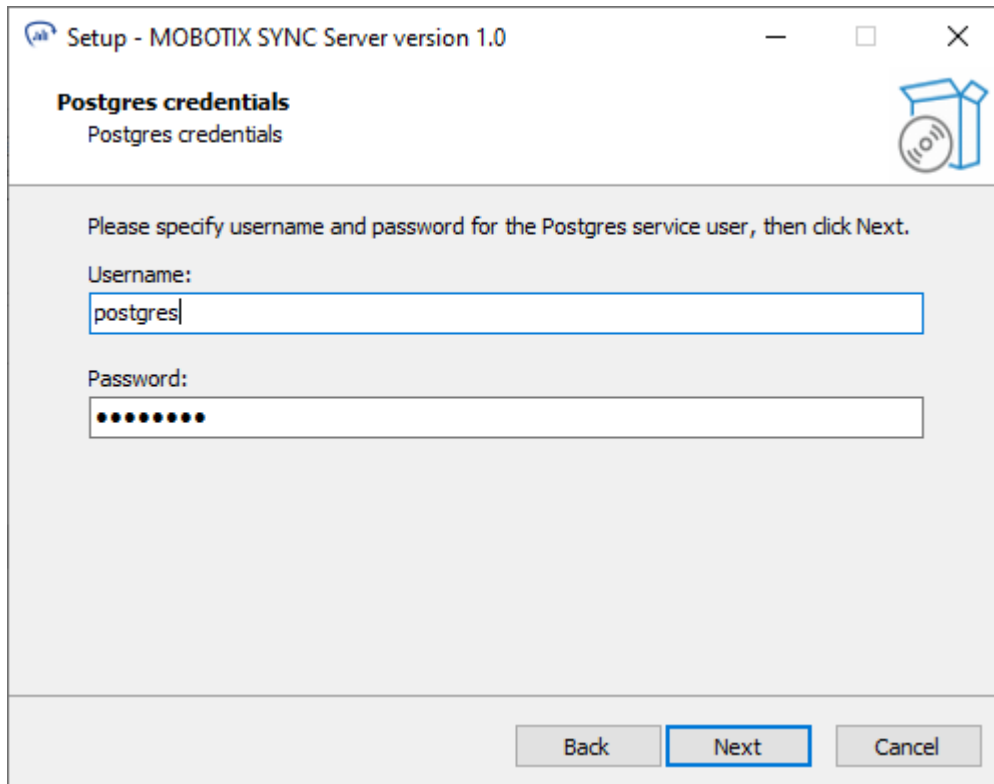


- Leave the default postgres installation path and click **Next**.



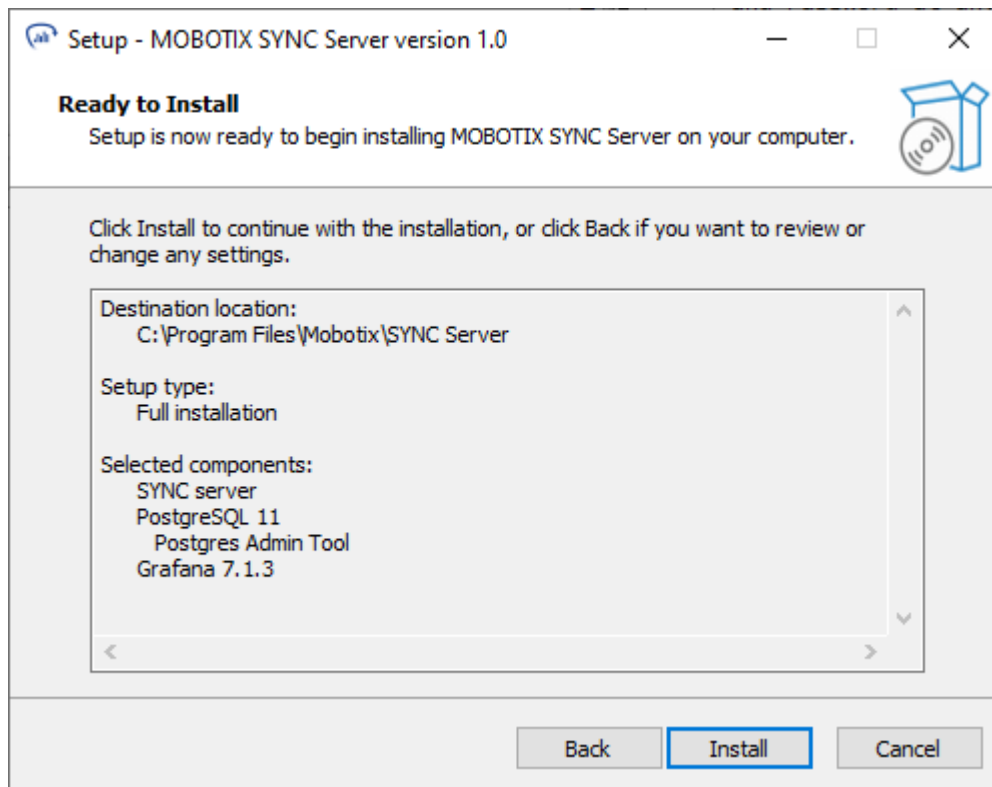
- **CAUTION!** Make sure that you can remember the Username and Password at any time. These data are needed in case of a new installation of the MOBOTIX SYNC (e.g. for troubleshooting purposes) and possibly also for updates in order to be able to continue using the already existing database.

Enter Username and Password for the Postgres service user. Click **Next**:

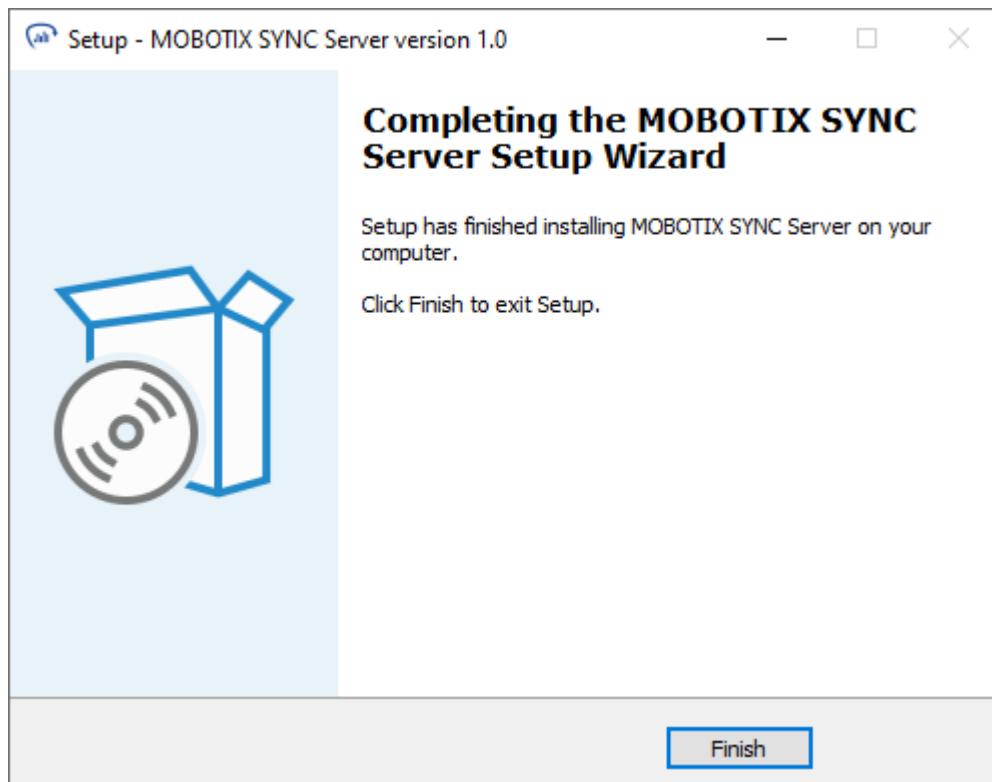


The screenshot shows a Windows-style window titled "Setup - MOBOTIX SYNC Server version 1.0". The window has a title bar with standard minimize, maximize, and close buttons. The main content area is titled "Postgres credentials" and contains the following text: "Please specify username and password for the Postgres service user, then click Next." Below this text are two input fields: "Username:" with the text "postgres" entered, and "Password:" with a masked password represented by ten black dots. At the bottom of the window, there are three buttons: "Back", "Next" (which is highlighted with a blue border), and "Cancel".

- Click **Install** to start the installation:



- Once the installation is complete, click Finish.



A new service called **SyncMNGR** will be installed and automatically started.

NOTE! If you want to start the **SyncMNGR** service and thus also the MOBOTIX SYNC application manually, you can adjust the behavior of the service in the services settings of the Windows operating system.

The Application

After installation, MOBOTIX SYNC can be accessed by the URL <http://serverip:8080/SYNC>, where serverip is the IP address of the machine where SYNC is installed.

NOTE! If the server is running on your local machine use 127.0.0.1/8080/SYNC or localhost:8080/SYNC

Basic Configuration

NOTE! You must restart the service to apply any changes.

This configuration can be changed by editing the file config.xml stored in the directory C:\ProgramData\SynchMNGR and adding to it a new SYNC Port tag.

Example (using SQLite database):

```
<Config>
  <SslPort>9898</SslPort>
  <BindAddress>*</BindAddress>
  <EnableSsl>False</EnableSsl>
  <ApiKey>29bb7fac5eed46edb4fb2833db89ecec</ApiKey>
  <AuthenticationMethod>Forms</AuthenticationMethod>
  <Helix6Port>30000</Helix6Port>
</Config>
```

Valid tags and values for config.xml file

| Field | Description | Mandatory |
|---------------|----------------------|-----------|
| BindAddress | Default value: * | M |
| Helix6BaseUrl | Default value: /SYNC | Op |

| Field | Description | Mandatory |
|-----------------------|---|-----------|
| Helix6BasePort | Default value: 8080 | Op |
| Helix6BaseEnvironment | Default value: MOBOTIX | Op |
| Helix6BaseDB | Valid values: SQLserver Postgres SQLite. Default value: SQLite | Op |

if Helix6BaseDB equal SQLite

| | | |
|-----------------|-------------------|----|
| DBAdminUser | Default value: "" | Op |
| DBAdminPassword | Default value: "" | Op |

if Helix6BaseDB equal Postgres

| | | |
|--------------------|-----------------------|---|
| PostgresDBName | Example: mxmetavision | M |
| PostgresDBHost | Example: 127.0.0.1 | M |
| PostgresDBUser | Example: admin | M |
| PostgresDBPassword | Example: MOBOTIX | M |

if Helix6BaseDB equal sqlserver

| | | |
|-----------------------------|------------------------|---|
| SQLServerDataSource | Example: 192.168.0.236 | M |
| SQLServerUserId | Example: admin | M |
| SQLServerPassword | Example: mobotix | M |
| SQLServerInitialCatalog | Example: SYNC | M |
| SQLServerIntegratedSecurity | Default value: false | M |

If Helix6BaseDB equal to sqlite does not have any additional configuration parameters

| | | |
|-----------|----------------------|---|
| ApiKey | Valid API key | M |
| EnableSsl | default value: False | M |

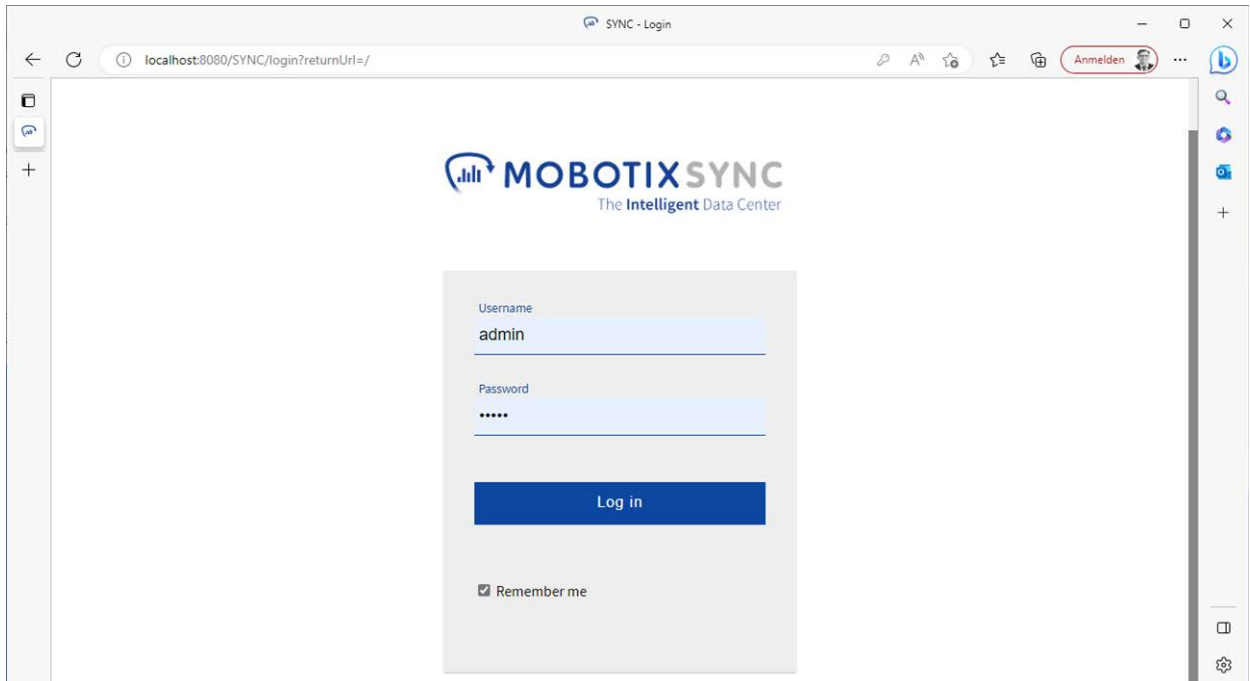
NOTE! If EnableSsl is True, review this article: <https://docs.microsoft.com/en-us/dotnet/framework/wcf/feature-details/how-to-configure-a-port-with-an-ssl-certificate>

| | | |
|----------------------|---|----|
| AuthenticationMethod | Valid values none Basic Forms Default value: Forms | M |
| LogLevel | Valid values: Info Debug Trace. Default value Info | Op |

NOTE! To apply your changes the "SyncMNGR" service must be restarted.

Login

After you have connected to the SYNC in your browser application, the login screen will be displayed.



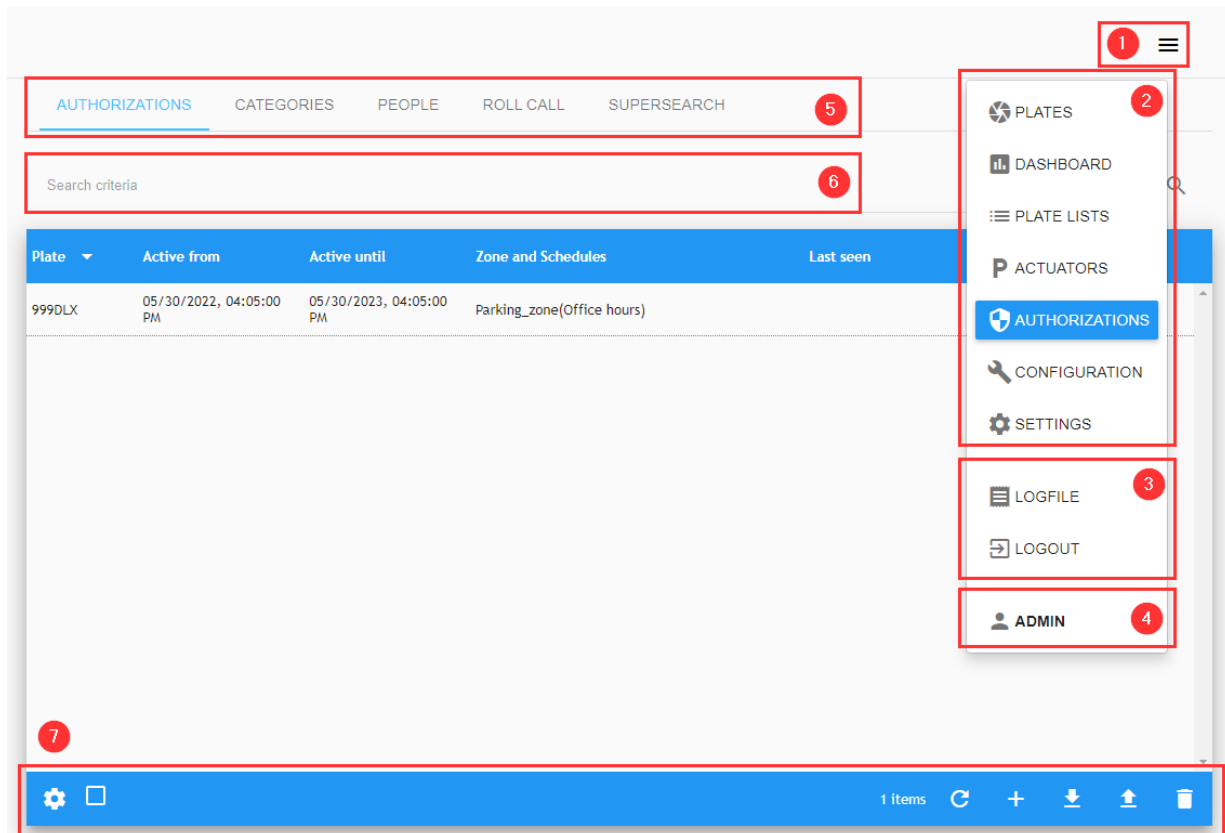
NOTE! The default username is **admin** with password **meinsm** when no other users have been added to the system.

We recommend to change the default login data as soon as possible to protect yourself from unauthorized access.

If you have already been given personalized access by an admin, use your personal login data to log in.

Optionally select the **Remember me** option so that the system saves your credentials for one week.

SYNC Application Layout



Main Menu

To access the main menu, click the main menu button ① .

- Here you can access the following features ② :
 - PLATES
 - DASHBOARD
 - PLATE LISTS
 - ACTUATORS
 - CONFIGURATION
 - SETTINGS
- Tools ③ :
 - LOGFILE (Click to view the SYNC log file(s).)

- LOGOUT
- Current user ④ (default: ADMIN)

Secondary Menus

The Secondary Menus ⑤ show more options for each Main Menu option:

- **DASHBOARD**
 - Dashboard
 - Dashboard Setup
- **PLATE LISTS**
 - Plates
 - List
- **ACTUATORS**
 - Actuators
 - Actuator Links
- **CONFIGURATION**
 - Zones
 - Cameras
 - Schedule
 - Sections
 - Capacity
- **SETTINGS**
 - Settings
 - Users
 - Audit
 - GDPR

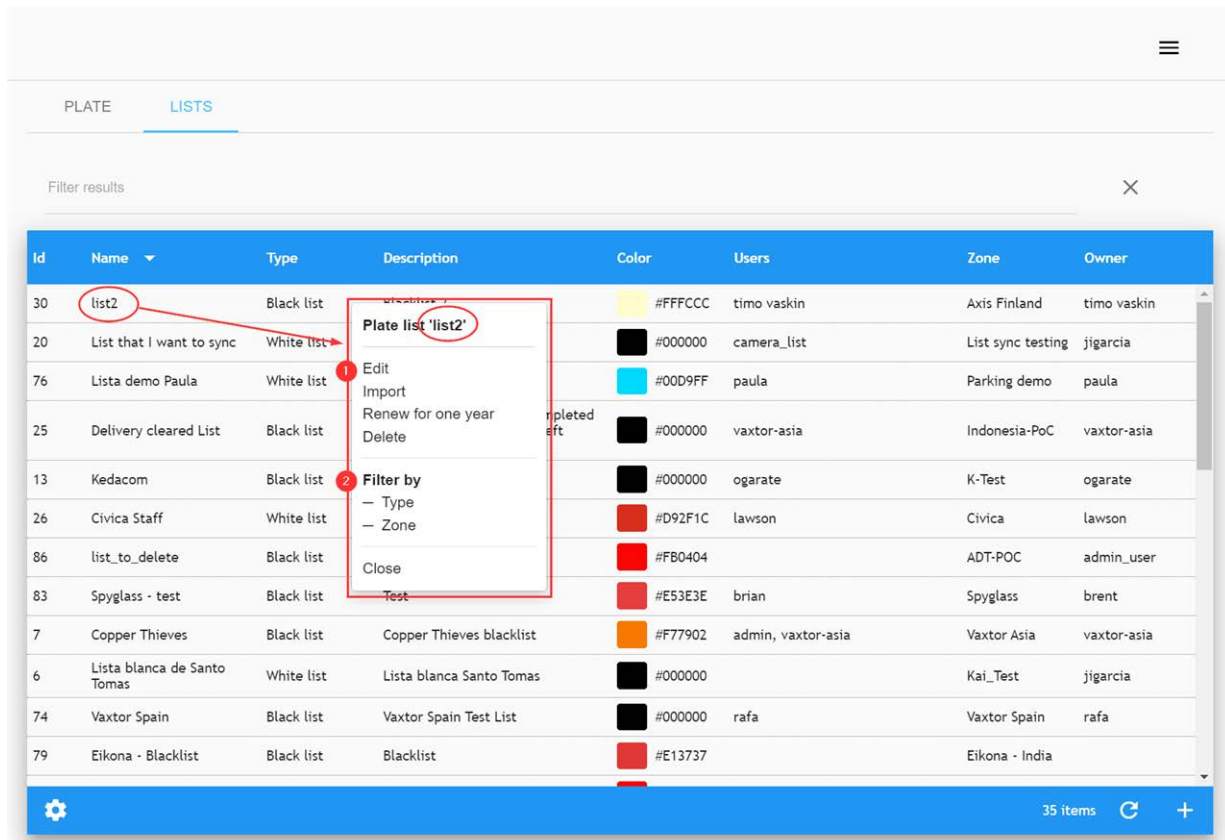
Search area

Some features have a search criteria ⑥ area where various fields can be searched.

Toolbar

Some menus have additional tools such as columns configuration, reload, create, download file, upload file, delete etc. These tools are displayed in the Toolbar ⑦ .

Contextual menu



To access the features associated with each list item, you can use the contextual menu by clicking the mouse over each list item.

The contextual menu has two areas:

- The actions area ① which includes item actions such as Edit, Delete etc.
The filter area ② which includes a comprehensive list of specific filters.



Example of the List Management secondary menu:

NOTE! Search options are available for PLATES, LIST/Plates and SETTINGS/Audit.

The screenshot shows a web application interface for managing a list of items. At the top, there is a search bar with the text "LIST:list1" and a search criteria field. Below the search bar is a table with columns: Plate, List, Active from, Active until, Description, Last detection, and Hit count. A context menu is open over the first row of the table, showing options like "List item 'YVY480'", "Edit", "Delete", "Filter by", and "Close". At the bottom, there is a toolbar with a settings icon, an items counter showing "41 items", and buttons for reload, add, download, and delete.

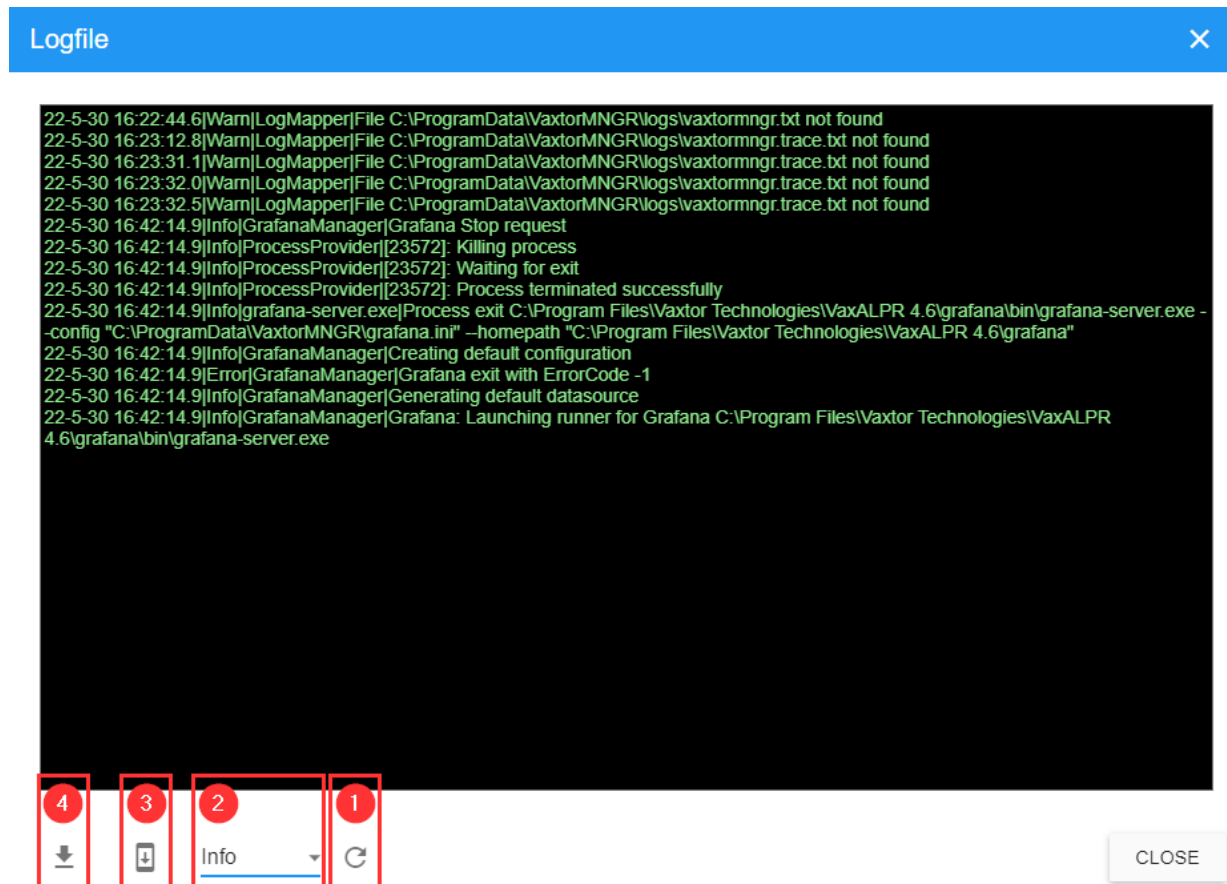
| Plate | List | Active from | Active until | Description | Last detection | Hit count |
|--------|-------|-------------------------|-------------------------|------------------|-------------------------|-----------|
| YVY480 | list1 | 07/06/2021, 11:00:00 PM | 07/30/2022, 11:00:00 PM | Test description | 06/15/2022, 12:26:49 PM | 411 |
| YVY480 | list1 | 07/06/2021, 11:00:00 PM | | Test description | 07/30/2021, 04:41:45 PM | 83 |
| YVY480 | list1 | 07/06/2021, 11:00:00 PM | | Test description | 07/30/2021, 04:41:45 PM | 83 |
| YKE862 | list1 | 07/06/2021, 11:00:00 PM | | Test description | 07/27/2021, 07:37:35 PM | 4 |
| YKE862 | list1 | 07/06/2021, 11:00:00 PM | | Test description | 07/27/2021, 07:37:35 PM | 4 |
| YKE862 | list1 | 07/06/2021, 11:00:00 PM | | Test description | 07/27/2021, 07:37:35 PM | 4 |
| OYT729 | list1 | 07/06/2021, 11:00:00 PM | 07/30/2021, 11:00:00 PM | Test description | 07/30/2021, 11:50:31 AM | 30 |
| OYT729 | list1 | 07/06/2021, 11:00:00 PM | 07/30/2021, 11:00:00 PM | Test description | 07/30/2021, 11:50:31 AM | 30 |
| OYT729 | list1 | 07/06/2021, 11:00:00 PM | 07/30/2021, 11:00:00 PM | Test description | 07/30/2021, 11:50:31 AM | 30 |
| OSK659 | list1 | 07/06/2021, 11:00:00 PM | 07/30/2021, 11:00:00 PM | Test description | 07/22/2021, 06:49:26 | 256 |

Description:

- Search button ① .
This button opens the Search dialogue box.
- Search Filters area ②
This search area allows you to quickly add search criteria. It includes a Clear search options button ③ .
- Table header ④ .
- Table data area ⑤ .
- List view configuration button ⑥ .
(see [How to customize screens for each user, p. 27](#))
- List tools area ⑦ . This could include:
 - An items counter **4 items** ,
 - Reload button  ,
 - Add item **+** button
 - Download button 
- Contextual Menu ⑧

Show Logfile Option

Users with administration rights, can review the MOBOTIX SYNC log file. To do this, click the LOGFILE menu option in the menu (see ③ in the [Main Menu](#), p. 23).




Description:

- Reload the latest log file ①
- Select file type ② . This depends on what you have configured (see [Configuration of Server](#), p. 102).
- Scroll to the end of the file ③
- Download the log file ④

How to customize screens for each user

The SYNC GUI can be configured to show only the data that each user wants to see.

The Application

To do this, in most tables you will see a settings icon  at the bottom left of the screen which allows you to configure the fields that you want to display. Click on the icon and a pop-up window will appear as shown below. In this example the Plate Lists/Plate column configuration is shown :

Config list columns - List item ✕

| Name | Show | Export | Width | Position |
|----------------|---------------------------------------|---------------------------------------|-------|----------|
| Id | <input checked="" type="checkbox"/> 4 | <input checked="" type="checkbox"/> 3 | 2 | 1 |
| Plate | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 10 | ^ v |
| List | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 10 | ^ v |
| Active from | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 15 | ^ v |
| Active until | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 15 | ^ v |
| Comments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 20 | ^ v |
| Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 20 | ^ v |
| Last detection | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 15 | ^ v |
| Hit count | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 10 | ^ v |


7 6 5

Description:

- Shows each item in the list display ④ ,
- Includes item in the export file ③
This column will be included only in tables with the export file option.
- Set column width ② ,
- Set column position ① ,
- Reload default configuration ⑦ ,
- Select all columns ⑥ ,
- Select all columns for Export ⑤ ,

The user can simply enable or disable any of the fields as required by using the sliders. These can be used for the PC web environment or when being accessed from tablet or mobile devices.


You can adjust the width of each column and modify its position on the grid.

At the bottom of the pop-up window you can restore the default values by clicking on the Default config  button or save your new configuration by pressing the Save button.

Plates Table

Click **PLATES** to display a list of license plates recently received.

| Capture date | Plate | Image | Status | Camera | Country | Direction | Speed |
|----------------------|---------|-----------------|---------|---------------|---------|----------------|-------|
| 16/06/2022, 09:29:38 | ZNZ6434 | Plate 'ZNZ6434' | Allowed | GreeceParking | GRC | Getting closer | -1 |
| 16/06/2022, 09:29:31 | IPX6745 | | Allowed | GreeceParking | GRC | Getting closer | -1 |
| 16/06/2022, 09:29:23 | PEN2456 | | Allowed | GreeceParking | GRC | Getting closer | -1 |
| 16/06/2022, 09:28:49 | ITI7188 | | Allowed | GreeceParking | GRC | Getting closer | -1 |
| 16/06/2022, 09:28:42 | PEN1008 | | Allowed | GreeceParking | GRC | Getting closer | -1 |
| 16/06/2022, 09:28:36 | HKT5031 | | Allowed | GreeceParking | GRC | Getting closer | -1 |
| 16/06/2022, 09:28:13 | HPH8681 | | Allowed | GreeceParking | GRC | Getting closer | -1 |
| 2022, 09:27:49 | PEH3930 | | Allowed | GreeceParking | GRC | Unknown | -1 |

NOTE! Any new plates received will NOT be displayed until you press the Play icon  , bottom right (See [Real-Time View](#), p. 41).

This is where plate reads from remote VaxALPR recognition systems appear showing the following default fields:

- **Capture:** Date and time that the plate was captured.
- **Plate:** The ASCII interpretation of the license plate.
- **Image:** The image of the license plate. (The 'Plate Patch')
- **Status:** This indicates whether the vehicle is "Authorized", "Pending", "Confirmed" or "Canceled". (These states are discussed later in the manual.)
- **Camera:** The name of the camera that detected the license plate.
- **Country:** Indicates the country of origin of the recognized plate (if known).
- **Direction:** Indicates the direction the vehicle was traveling. This can be: **Getting closer**, **Getting farther**", **Unknown** or **Stopped**.

- **Speed:** This field displays the instant speed or the average speed of the detected vehicle if available. If both measurements are available, the **instant speed** will be used (if known and configured).
- ... and various other configurable options such as OCR processing time, Multiplate rate etc.

Licence Plate Details

If you click on any of the plates in the list, the small associated [Contextual menu, p. 25](#) will appear.

If you then click the action Edit of the context menu (see ④ of the [Plates Table, p. 30](#)), the following pop-up window will appear with the associated meta-data of the reading including the source image and a small zoom tool to view the image in more detail.

Plates ×

Capture date
09/05/2022, 10:24:32

Camera
GreeceParking

Original plate
HKX2587

Original country
GRC

[PLATE IMAGES](#)

[DETAILS](#)

[ADD TO ...](#)



SAVE



This pop-up window includes the tabs PLATE IMAGES, DETAILS and ADD TO, and a common header with the with the most relevant data of the capture:

Plates ×

Capture date
09/05/2022, 11:44:55

Camera
GreeceParking

Original plate
ANZ8799

Original country
GRC

Plate Images Tab

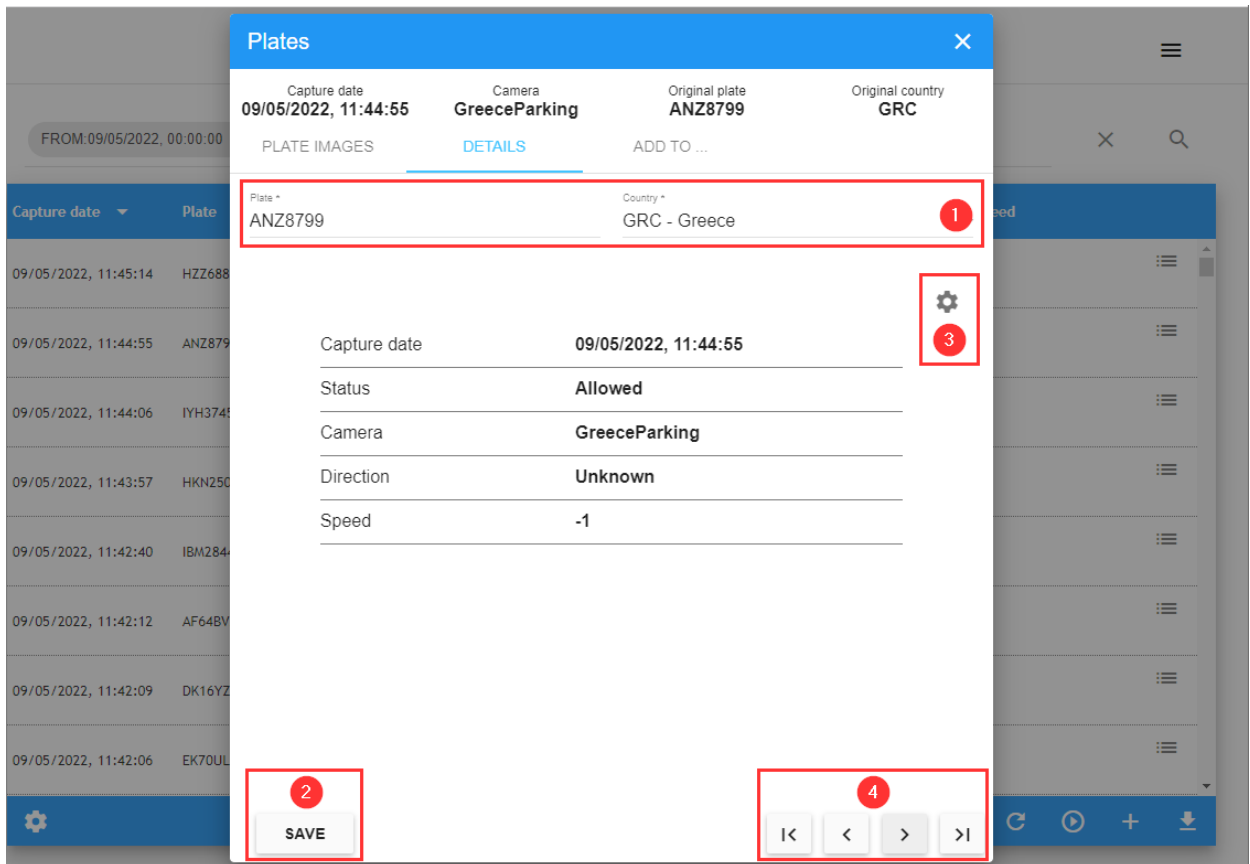
PLATE IMAGES allows you to view the different images provided by the cameras. (Some ALPR cameras can send both an ALPR image AND an environment/contextual image to MOBOTIX SYNC). These can be downloaded and locked to prevent them from being deleted by SYNC housekeeping tasks.



Description:

- Select the Main ALPR camera ① ,
- Select the Environment camera if present ② ,
- Download images ③ ,
- Lock current image ④ .
- To use the zoom ⑤ tool simply move the cursor over the image and the image will automatically zoom in on the area you are focusing on.

Details Tab



In the DETAILS tab you can make changes or correct the fields Plate and Original Country ① . Click the Save button ② to store the change.

Click the configuration button ③ to configure what fields to show.

In the lower right area of the pop-up there are navigation buttons ④ to move through the different records without leaving the pop-up window.

'Add to' Tab

In the tab ADD TO... you can:

- Associated the plate with a Owner (see Authorization section):

The screenshot shows the 'Plates' interface with the following details:

| Capture date | Camera | Original plate | Original country |
|----------------------|---------------|----------------|------------------|
| 09/05/2022, 11:44:55 | GreeceParking | ANZ8799 | GRC |

Navigation options: PLATE IMAGES, DETAILS, **ADD TO ...**

Add the plate 'ANZ8799' to...

AUTHORIZATIONS (circled in red) LISTS

Select a vehicle Owner and click [Add]

Owner
U

Demo, User

ADD

- Add the Plate to a Black or White list (see List section):

The screenshot shows the 'Plates' interface with the following details:

| Capture date | Camera | Original plate | Original country |
|----------------------|---------------|----------------|------------------|
| 09/05/2022, 11:44:55 | GreeceParking | ANZ8799 | GRC |

Navigation options: PLATE IMAGES, DETAILS, **ADD TO ...**

Add the plate 'ANZ8799' to...

AUTHORIZATIONS **LISTS** (circled in red)

Select a Plate list and click [Add]

Civila Stall

Copper Thieves

Delivery cleared List

Eikona - Blacklist

Eikona - Whitelist

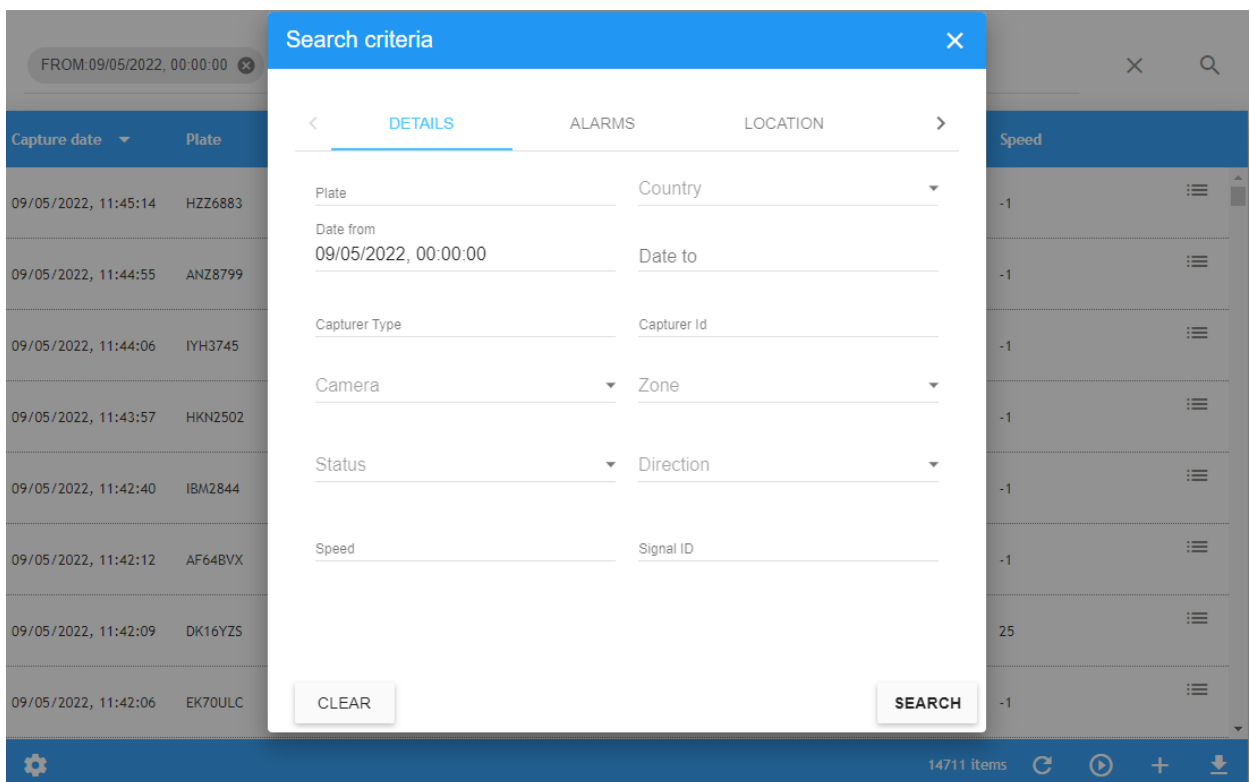
ISOBlackList

ADD

NOTE! To fast access to the Add to... click the action Add to in the context menu (see ⑤ of the [Plates table](#)).

Search Plates

In the upper right corner of the table there is a small magnifying glass icon (see ① of [Plate table](#)). When clicked, a popup window appears where you can define search criteria by selecting from various search filters.



The Search criteria window is divided into four sections:

- DETAILS
- ALARMS
- LOCATION
- INFO

DETAILS Search Tab

| Search criteria | Description |
|-----------------|---|
| Plate | <p>Here you can search through all the plates using the wildcards "*" and "?" to refine the search (you can also use _ in place of ? and % in place of *):</p> <ul style="list-style-type: none">■ "*" replaces any number of characters (including no characters).■ "?" replaces a single character in the search |
| Country | <p>Filter the results by the country of origin of the plate selected from a combo box from the configured countries.</p> |
| Date from | <p>In this field, you can search from any date simply by clicking in the field. A pop-up window appears where you can select the start date + time of the search.</p> |
| Date to | <p>As in the previous field, you can search for plates up to a specific date again by clicking in the field. The pop-up window appears where you can select the To date + time and then press [OK]</p> |
| Capture Type | <p>Filter the results by a specific Capturer type</p> |
| Camera ID | <p>Filter the results by a specific Camera ID.</p> |

| Search criteria | Description |
|-----------------|---|
| Camera | Filter the results by a particular camera selected from a combo box from the configured cameras for the current user. |
| Zone | Filter the results by zone from a combo box from the configured zones for the current user. NOTE: Cameras can be allocated to a zone – e.g. a car park with several entrances so a search would produce a list of vehicles currently in that zone. |
| Status | Filter the results by the selected vehicle status from a combo box including: OK, Pending, Confirmed, Cancelled, Exported, Prescribed, NoAuth, SanctionPending, NoAuthExceed, Ignored |
| Direction | Filter the results by the selected vehicle direction from a combo box including Unknown, GettingCloser, GettingFarther, Stopped |
| Speed | Available as an add-on. Only vehicles moving faster than the selected speed will be shown. |
| Signal ID | Filter the results by a specific Signal ID. |

ALARMS Search Tab

| Search criteria | Description |
|-----------------|--|
| Filter by alarm | Filter the results if plates have triggered an alarm, not triggered an alarm or Both |
| Exit filter | Filter the result if Vehicle has exited, not exited, or Both |

LOCATION Search Tab

| Search criteria | Description |
|-------------------|--|
| Minimum latitude | Filter the results if the capture latitude is great or equal than the value |
| Maximum latitude | Filter the results if the capture latitude is less or equal than the value |
| Minimum longitude | Filter the results if the capture longitude is great or equal than the value |
| Maximum longitude | Filter the results if the capture longitude is less or equal than the value |

INFO Search Tab

| Search criteria | Description |
|-----------------|--|
| Make * | Filter the results by vehicle Make |
| Model * | Filter the results by vehicle Model |
| Colour * | Filter the results by vehicle Colour |
| Category | Filter the results by the specified vehicle Category |
| Classification | Filter the results by the specified vehicle Classification |
| Region | Filter the results by the specified Camera ROI |

(*) These are only available with the optional MMC add-on which attempts to analyze images and report the Make, Model & Colour.

Filter Plates

The SYNC PLATES page includes a quick way to use filters by adding your own search criteria as a text string (area ② of the [Lists Table, p. 48](#)) into the search filter bar. You can add or remove search filters, also you can use the Filter by option in the context menu (see ③ of the [Lists Table, p. 48](#)).

The search filter syntax is: Token:FilterValue, where:

| Token | filterKey | filterValue |
|------------------|-----------|---|
| CAMERA | camera | Camera ID or camera name |
| COUNTRY | country | Three letter Country code |
| DIRECTION DIR | direction | Unknown, GettingCloser, GettingFarther, Stopped |

Plates Table

| Token | filterKey | filterValue |
|--------------|--------------|---|
| PLATE | plate | p.e. M4616WZ |
| STATUS | status | OK, Pending, Confirmed, Cancelled, Exported, Prescribed, NoAuth, SanctionPending, NoAuthExceed, Ignored |
| ZONE | zone | Zone ID or Zone name |
| CAPTURERID | capturerId | Capturer ID |
| CAPID | | |
| CAPTURERTYPE | capturerType | Capturer Type |
| CAPTYPE | | |
| ALARM | alarm | true or false |
| MAXLATITUDE | maxlatitude | Max latitude (double) |
| MAXLAT | | |
| MINLATITUDE | minlatitude | Min latitude (double) |
| MINLAT | | |
| MAXLONGITUDE | maxlongitude | Max longitude (double) |
| MAXLON | | |
| MINLONGITUDE | minlongitude | Min longitude (double) |
| MINLON | | |
| DATEFROM | dateFrom | DateTime format dd/MM/yyyy hh:mm:ss , example: 08/01/2018 10:22:29 |
| FROM | | |
| DATETO | dateTo | DateTime format dd/MM/yyyy hh:mm:ss , example: 08/01/2018 10:22:29 |
| TO | | |
| SPEED | speed | Speed (integer) |
| SIGNALID | signalId | Signal ID (integer) |
| VEHICLEMAKER | vehicleMaker | Vehicle marker (text) |
| VEHICLEMODEL | vehicleModel | Vehicle model (text) |
| VEHICLECOLOR | vehicleColor | Vehicle colour (text) |
| VEHICLECLASS | vehicleClass | Vehicle class |
| CATEGORY | category | Category |
| REGION | region | Region |

| Token | filterKey | filterValue |
|-------|-----------|-----------------------------|
| ALARM | alarm | If it is an alarm (boolean) |
| EXIT | exit | If it is an exit (boolean) |

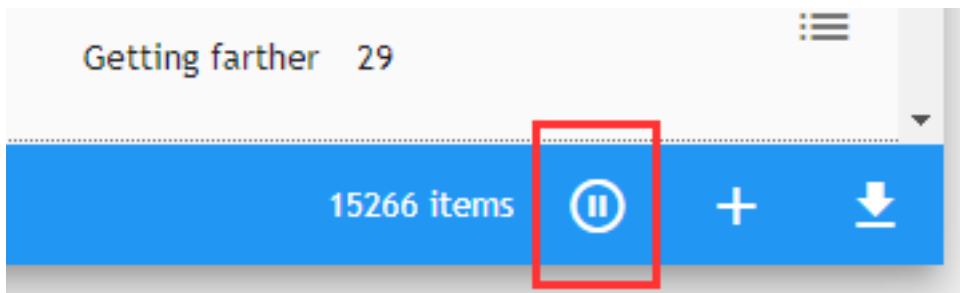
NOTE! To clear the search criteria use button [X] located at the right of the Filter bar.

Real-Time View

Click the Play button (button ③ of [Plates Table, p. 30](#)) to see plate reads as they arrive in real time.

When this option is enabled all the plate reads received from the ALPR readers will be displayed immediately in the main screen with the most recent at the top.

If you want to stop the real time view, you must click the pause button that replaced the play button. This can be useful if you want to search or examine plates received without them scrolling as new plates arrive..



NOTE! This only works if the current user has been authorized.

Do this by selecting CONFIGURATION then select the ZONES main Tab. Click on the appropriate zone and select which users receive real time events for this zone. Do this by selecting the appropriate user from the users list and double click on the user name to move it across to the right-hand box (assigned users). This user now can see the view with real-time information. Alternatively, single click and use the arrow icons in the center.

NOTE! The reason this is not set as a default is there may be a massive amount of information being received from many readers which would overload the system.

Download Plates

To download a Plate list, click the download button (button ⑦ of [Plates Table, p. 30](#)) at the bottom-right of the plate list page:

Before downloading consider:

- The columns to include into the .csv file. Using the columns configurator (button ⑧ of [Plates Table, p. 30](#)) you can select which columns to be included (for additional details, see [How to customize screens for each user, p. 27](#)).
- The number of plates in your current search (area ⑩ of [Plates Table](#)), in this example nearly 15,300. Keep this to a reasonable number by using more Search Filters to avoid a massive download that could lock your system up.

Two files are downloaded: a .csv file containing a list of plates from the search results and a corresponding .zip file containing all of the images of the vehicles. The files appear at the bottom of the screen and are downloaded to your Windows download directory.

The Downloaded file is a CSV format file (with ; as a separator). It includes a header and selected columns from this list:

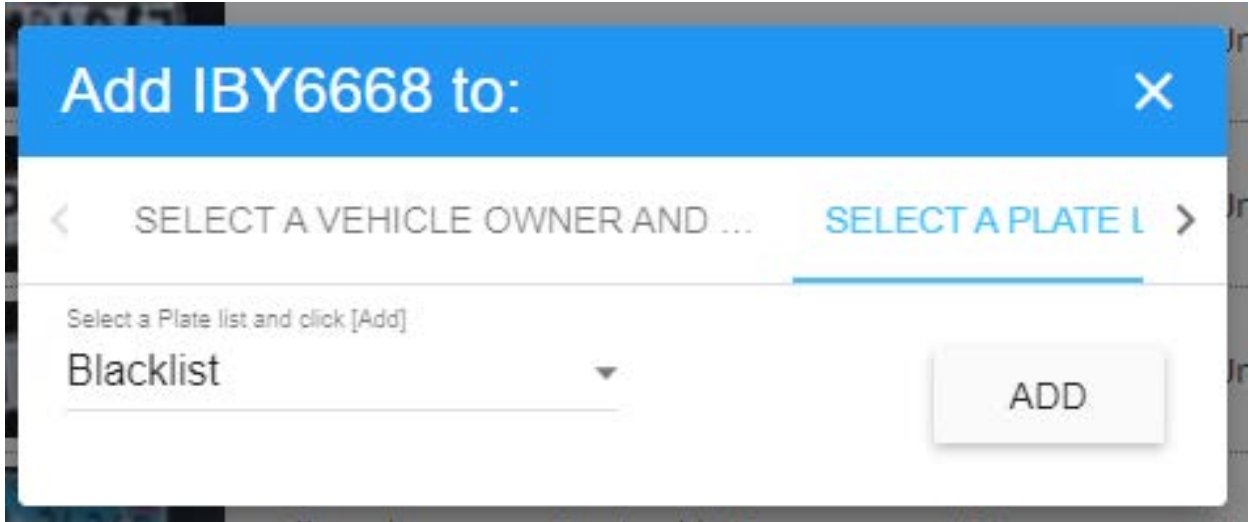
| Field | Type | Example |
|---------------------|--------------------|--|
| id | Integer | 1 |
| camerald | Integer | 1 |
| zoneld | Integer | 1 |
| cameraName | String | Camera #1 |
| latitude | Float | 12.1234 |
| longitude | Float | 12.1234 |
| plateNumber | String | M4616WZ |
| originalPlateNumber | String | M4616WZ |
| country | String | ESP |
| originalCountry | String | ESP |
| takenOn | DateTime as String | 2017-12-19T11:38:33.12Z |
| status | Status | OK, Pending, Confirmed, Canceled, Exported, Prescribed, NoAuth, SanctionPending, NoAuthExceed, Ignored |
| direction | VehicleDirection | Unknown, GettingCloser, GettingFarther, Stopped |

| Field | Type | Example |
|-------------------|-----------------|-------------------------|
| speed | Integer | 0 |
| confidence | Integer | 89 |
| envlImageIds | List of Integer | [12300, 12302, 12303] |
| ocrImageId | Integer | 12301 |
| signaled | Boolean | false |
| avgDigitsHeight | Integer | 16 |
| multiplateRate | Integer | 2 |
| processingTimeOCR | Float | 72.817330121994019 |
| captureId | Integer | 1 |
| captureType | String | |
| isAlarm | Boolean | false |
| kamikazeAlarm | Boolean | false |
| timeInZoneAlarm | Boolean | false |
| blacklistAlarm | Boolean | true |
| alarmListIds | List of Integer | [20, 21] |
| speedAlarm | Boolean | false |
| prowlingAlarm | Boolean | false |
| vehicleMaker | String | BMW |
| vehicleModel | String | M5 |
| vehicleColor | String | UNKNOWN |
| crostime | Float | 0 |
| hasExit | Boolean | false |
| signalId | String | 1 |
| authorized | Boolean | false |
| category | String | |
| vehicleClass | String | |
| region | String | |

Add a Plate to a List

If you are working with Lists, you can associate the current Plate to a List (see [LISTS: Black and White Lists, p. 48](#)), simply click on the action Add to of the context menu (see ⑤ of [Plate Table, p. 56](#)).

Then, the following popup window will appear:

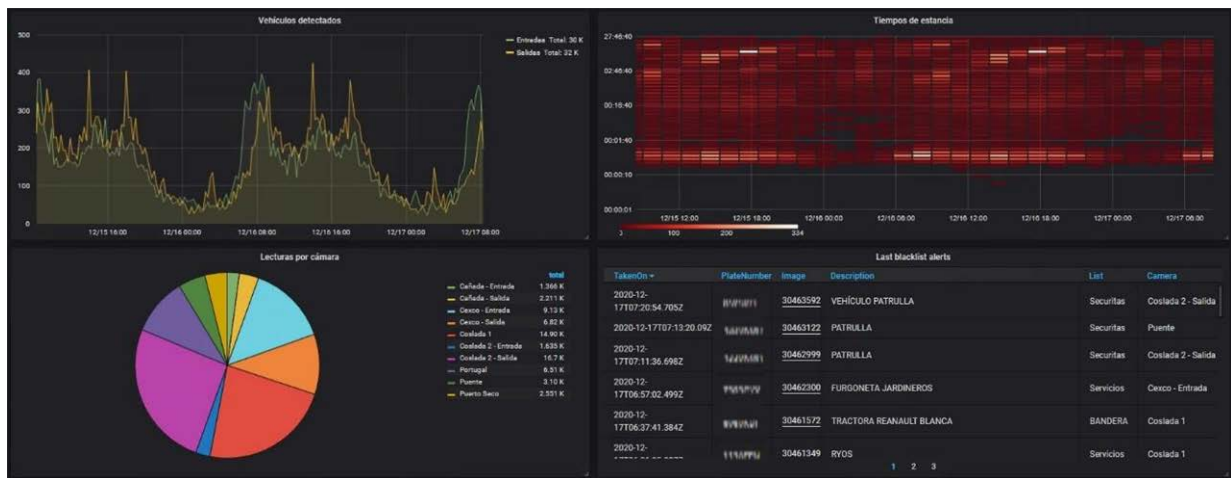


For additional information, see ['Add to' Tab, p. 34](#).

DASHBOARD: Grafana Plugin

MOBOTIX SYNC fully integrates Grafana Dashboards, an open-source analytics and monitoring solution for databases. The Dashboard allows you to query and visualize the metrics of your applications and also, depending on your requirements, issue messages to a selection of pre-defined messenger services as a post-process.

It works with the data stored within MOBOTIX SYNC to provide tailored reports like traffic volume, area capacities and many more incorporating map views in case the data set was accompanied by GPS data.



MOBOTIX offers you the possibility to design dashboards according to your individual requirements and make them available to you through its Professional Service. For further information contact your local MOBOTIX contact or visit the MOBOTIX homepage (www.mobotix.com).

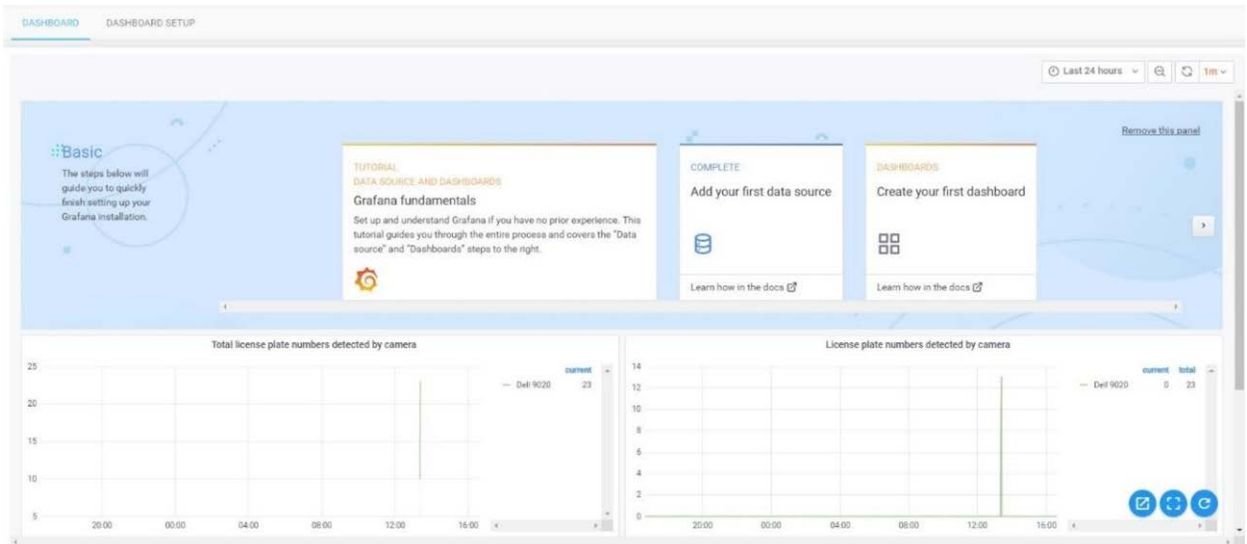
After switching to the Dashboard view, you will see a default dashboard.

Furthermore, we refer to helpful tutorials and application help for the successful design of your own dashboards.

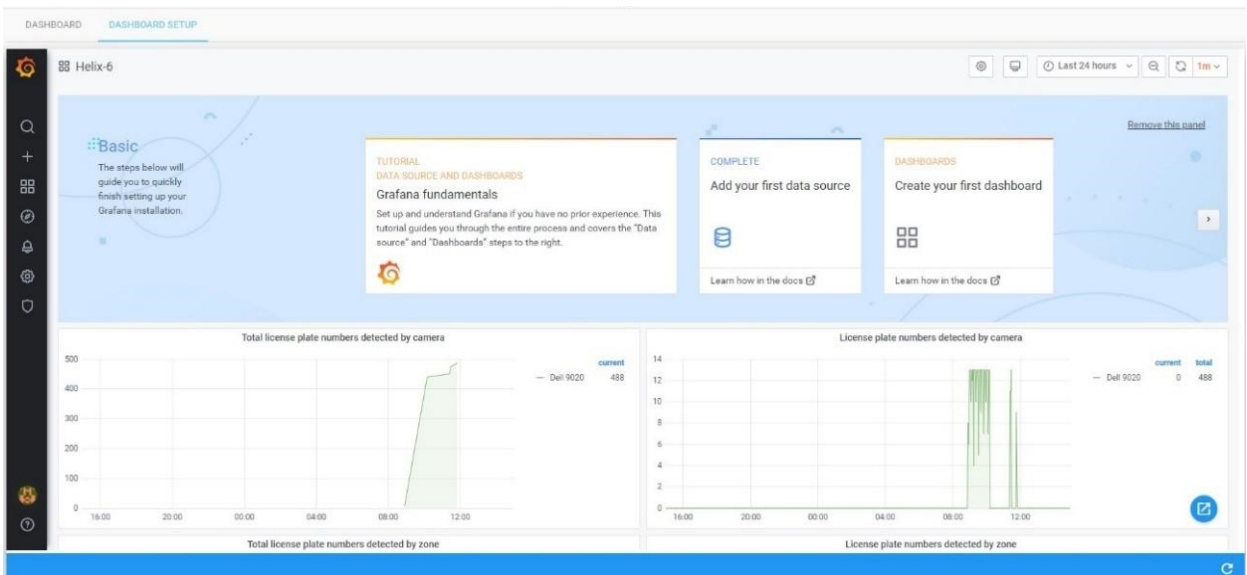
These are external contents, which are provided by Grafana free of charge and are continuously extended and maintained.

Selecting DASHBOARD causes the main menu to be displayed:

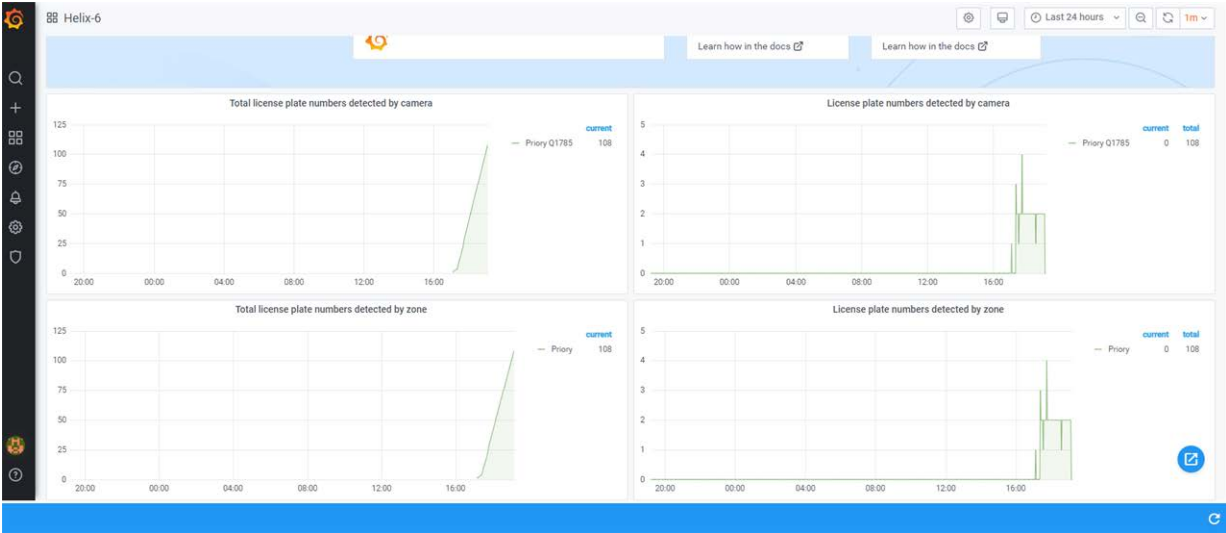
DASHBOARD: Grafana Plugin



Click on **DASHBOARD SETUP** to start connecting your data.

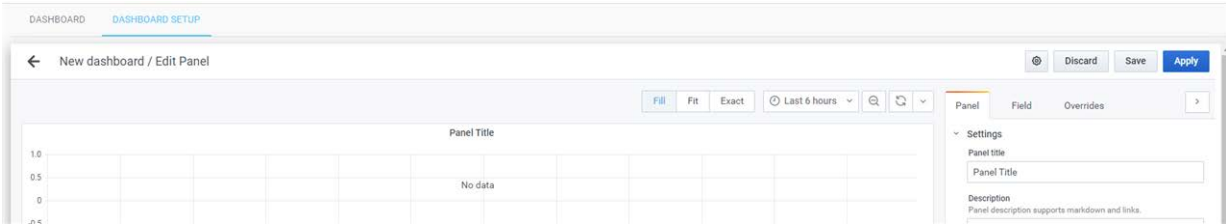


A default dashboard will be loaded with four simple graphs from your connected ALPR cameras.



Click on the [+] in the left hand column to create a new folder if required, to save your dashboards into.

Next create a dashboard and add a new panel. The new blank panel will appear:



LISTS: Black and White Lists

Selecting LISTS from the Main dropdown Menu allows the user to create multiple whitelists or blacklists. Vehicles (plates) that appear on a whitelist are always authorized to enter an associated zone and can trigger an Actuator (relay). Vehicles on a blacklist will create an alarm in the system if the plate is detected in an associated zone. When a zone is a parent of another zone, the lists are always inherited.

Note that when setting up Actuator Links (see later), you can select the Event Type which includes Authorized and Blacklist. A vehicle in a Blacklist can therefore trigger a relay (e.g. to sound an audible alarm). A Whitelist plate is always authorized and so you should select **Authorized** to trigger the actuator in this case.

Lists Table

This area shows all lists created. You can add, edit or delete any of them.

| Id | Name | Type | Description | Color | Users | Zone | Owner |
|----|-----------------------------|------------|--------------------------|---------|---------------------------|----------|---------|
| 6 | Lista blanca de Santo Tomas | White list | Lista blanca Santo Tomas | #000000 | | Kai_Test | jgarcia |
| 69 | OvationTest | Black list | | #FF0000 | fb4, ovation | Kai_Test | |
| 2 | Blacklist | Black | | #F70202 | admin, dan, demo, mobotix | Kai_Test | demo |
| 12 | TestListKai | Black | | #1EF12C | jason | Kai_Test | |
| 21 | Test Actuator List Kai | White | Park 1 | #33DD27 | kaicamera65 | Kai_Test | |

In the main window of this menu you can see the name of the list, the type of list, description, a color marker code of the list, the user and zone associated with it and also the owner.

There are toolbar icons to import the list from a file, to renew the from-to dates of the list and finally an icon to delete the list (see below for more details).

Note that the Columns displayed can be configured by pressing the Settings icon (bottom left).

Search Filters

SYNC includes a fast way to search a List by adding search criteria as a text string (see ⑥ of the [Lists Table, p. 48](#)). To enable this, a Filter to the Results can be added or removed. You can also use the Filter by option in the context menu (see ⑦ of the [Lists Table, p. 48](#)). Search filter syntax is: Token:FilterValue, where:

| Token | filterKey | filterValue |
|---------------------|-------------|-----------------------|
| ID | id | List ID |
| NAME | name | List name |
| TYPE | type | blacklist whitelist |
| DESCRIPTION DESC | description | Description |
| ZONE | zone | Zone ID or list name |

NOTE!

To clear the search criteria use button [X] located at right of the filter bar.

The ZONE filter must include an exact value (ID or list name) because it is a relation, not a List attribute.

Add a new list

At the bottom right of the screen there is a [+] button (see ① of [Lists Table, p. 48](#)) to add a new list to the system.

This opens a pop-up window with various options listed below:

The screenshot shows a 'Plate list' configuration window with the following fields and controls:

- 1** Name * (text input)
- 2** Description * (text input)
- 3** Zone * (text input)
- 4** Is Virtual (toggle switch, currently off)
- 5** Type * (text input)
- 6** Color (color picker, currently black)
- 7** Users (user selection interface with 'Available' and 'Assigned' lists)
- 8** Owner (dropdown menu)

A 'SAVE' button is located at the bottom right of the form.

Description:

- **Name** ① : Insert a name for the list.
- **Description** ② : Insert a description of the list.
- **Zone** ③ : Insert the zone associated with the list.
- **Is Virtual** ④ : This kind of list will just be stored in memory, not into the database. If the application is stopped, this list will be removed from memory.
- **Type** ⑤ : Set the list to be a blacklist or whitelist.

Color ⑥ :

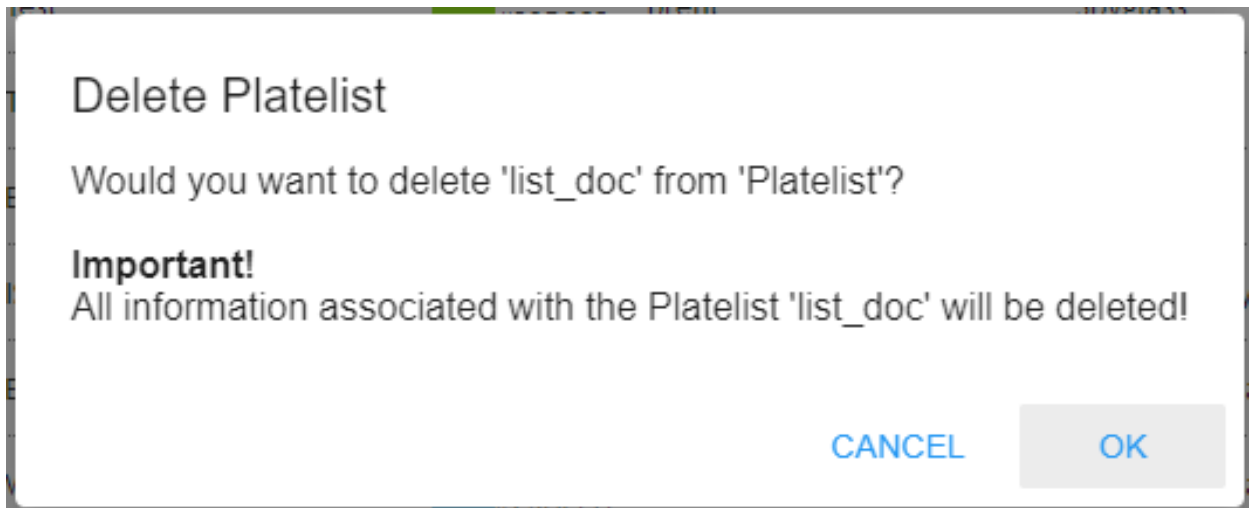
Choose a reference color for the new list. Once clicked, you will see a color palette where you can select a color using the cursor. The field will automatically display the associated RGB hexadecimal color code.

- **Users ⑦** : Defines the user who will receive events linked to the list.
- **Owner ⑧** : This field is automatically filled with the user who created the list.

Delete a list

To delete a list, simply click on the action Delete in the contextual menu (see ② of [Lists Table](#), p. 48).

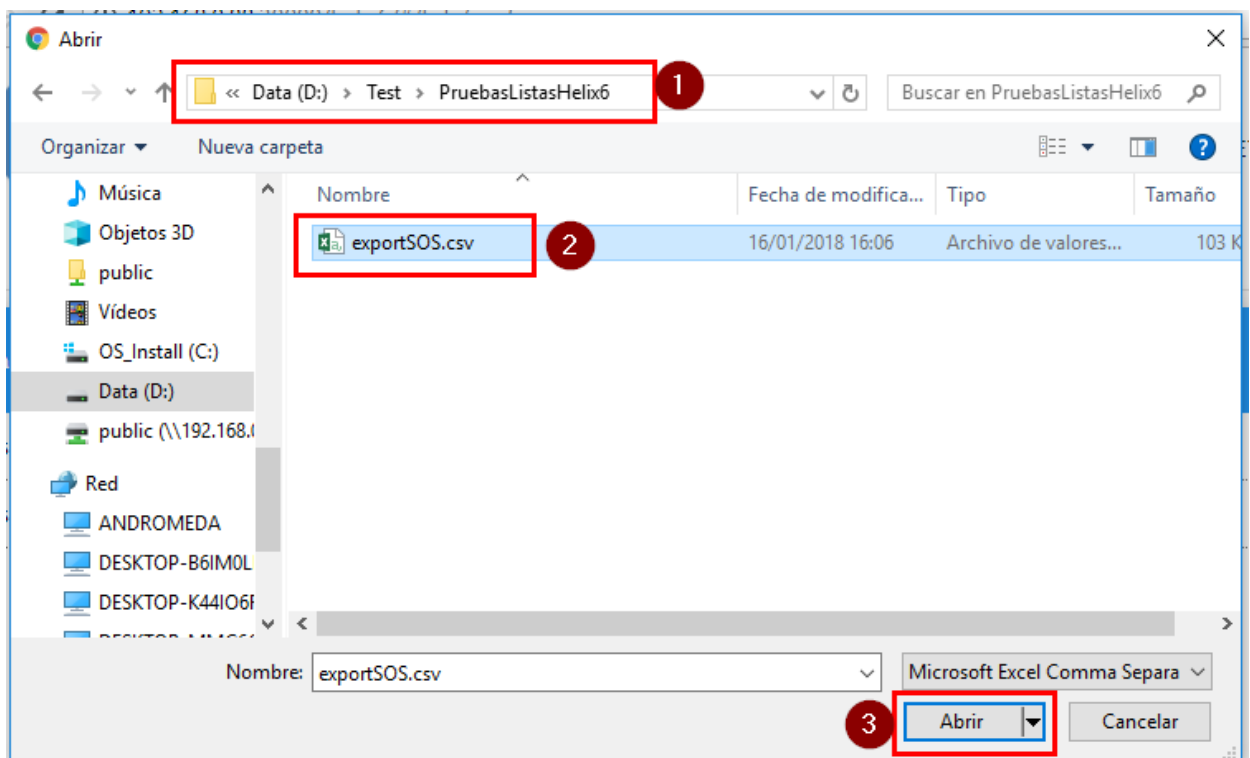
Once this button is pressed, a confirmation window will appear asking you if you want to delete the list.



If you are sure, press the "OK" button and the list will then be deleted, otherwise Cancel.

Import a Plate List from a CSV file

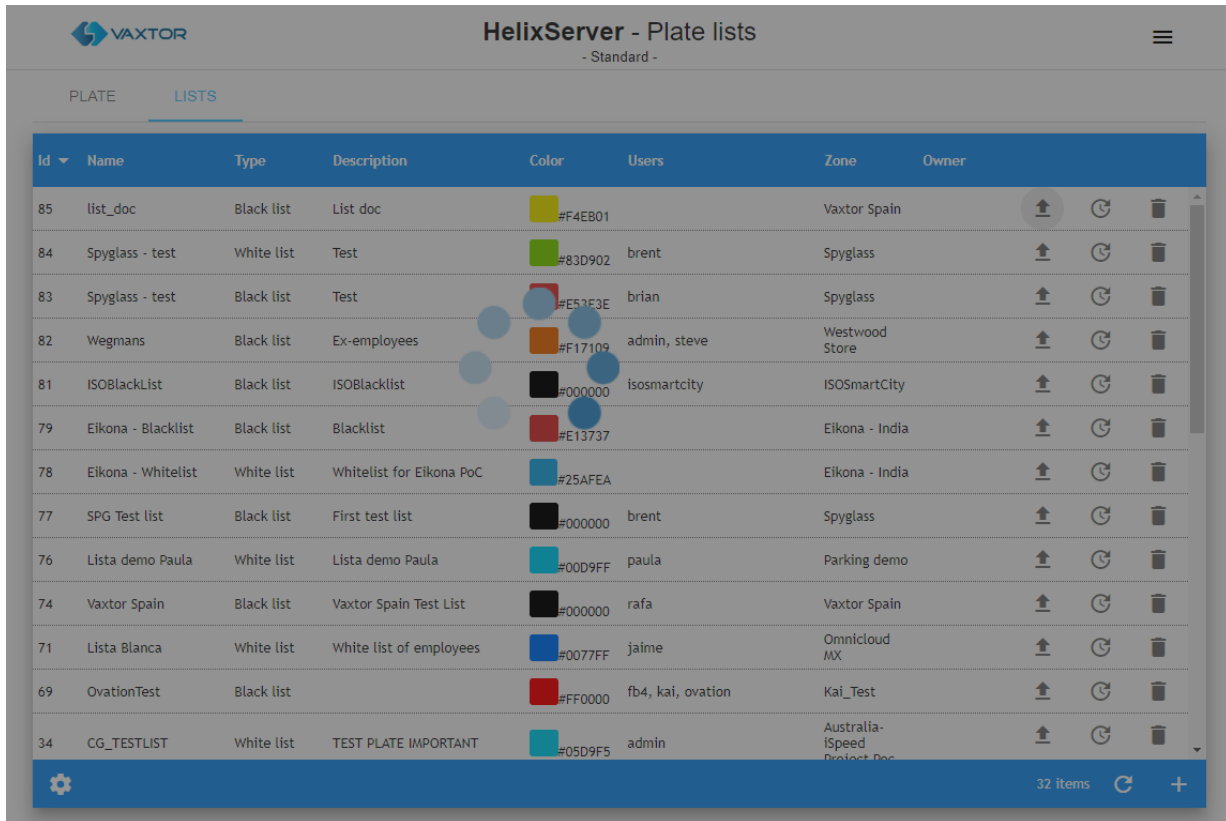
To import a plate list from a CSV file, simply click the action Import in the contextual menu (see ④ of [Lists Table](#), p. 48). A selection file window is opened:



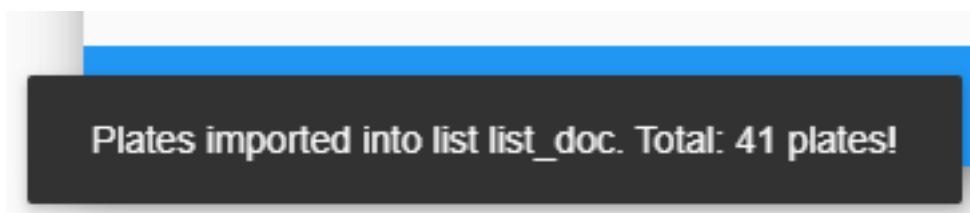
Description

- Select folder ①
- Select file ②
- Open file ③

Select a folder and file and click Open. File opening times will vary depending on the size of the files.



Finally, a Toast message (one that will automatically disappear) is displayed (at the bottom left corner of the window) showing how many Plates have been imported:



NOTE! You can then review the imported data in the List list items screen (see next section).

The CSV file format is defined as follows:

| Field | Type | Example |
|--------------|--------------------|-------------------------|
| plate * | String | 0933BFF |
| activefrom * | DateTime as String | 2017-01-01T00:00:00.00Z |

| Field | Type | Example |
|---------------|--------------------|--------------------------------|
| activeuntil * | DateTime as String | 2017-12-31T23:59:59.00Z |
| Comments * | String | Comments |
| Description * | String | Description |
| Hitcount | Integer(\$int32) | 5 |
| lastDetection | DateTime as String | 2017-12-19T11:38:33.12Z |

(*) Required

So, for example, a file might contain the following data:

plate;activefrom;activeuntil;comments;description

ABC123;2019-01-01T00:00:00.00Z;2020-01-01T00:00:00.00Z;Comment 1;description 1

XYZ234;2019-01-01T00:00:00.00Z;2020-01-01T00:00:00.00Z;Comment 2;description 1

LAW345;2019-01-01T00:00:00.00Z;2020-01-01T00:00:00.00Z;Comment 3;description 1

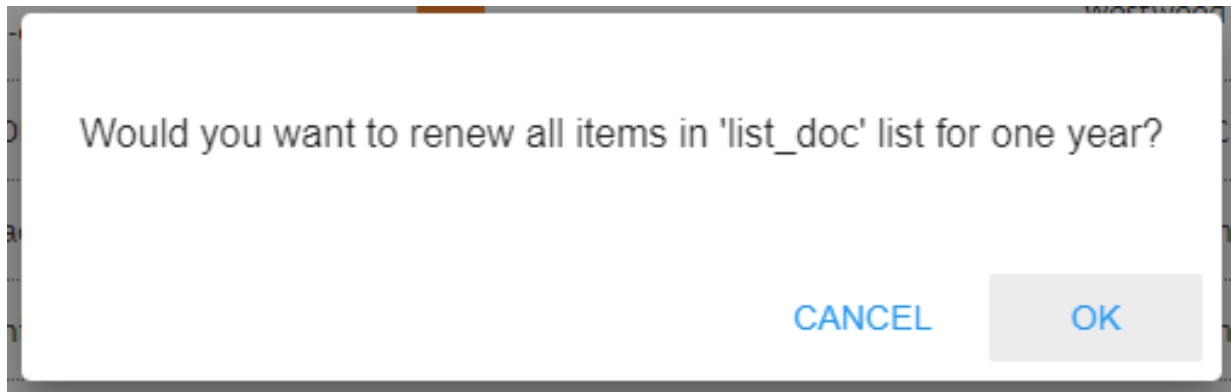
NOTE!

- The CSV file must include a header with column names.
- The CSV file uses a semicolon (;) as a column field separator.
- The CSV header must include plate, activefrom, activeuntil, Comments and Description columns.
- **DateTime fields are UTC time in ISO-8601 format - encapsulated in the String format:** "YYYY-MM-DDTHH:MI:SS.SSZ" with HH in 24h format.

NOTE! Fields hitCount and lastDetection help when exporting or importing lists from different SYNC installations.

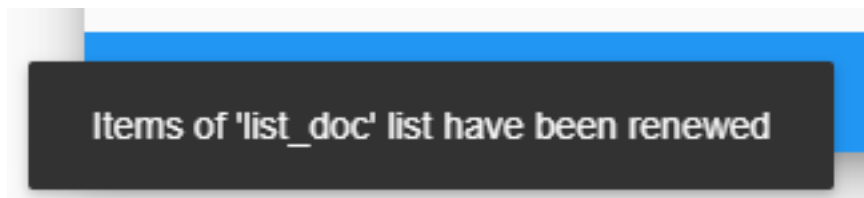
Renew the List

To renew the list for one year, click the action Renew for one year in the contextual menu (see ⓘ of [Lists Table, p. 48](#)). Then, this pop-up windows is opened:



If you are sure, press the [OK] button and the list will then be renewed, otherwise Cancel.

Finally, a Toast message is displayed (at the bottom left corner of the window) showing the renewing confirmation:



Edit a List Item

To edit a list, simply click the action Edit in the contextual menu it (see ⑤ of [Plate Table, p. 56](#)), this pop-up window is opened:

Plate list [X]

Name *
TestListKai

Description *
Test

Zone *
Kai_Test [v] Is Virtual

Type *
Black list [v] Color [Green]

Users

Availables
adaking
admin
admin_user
adt-poc
adtel
agdcamera
agustin
ahack
...

Assigned
jason
kai

Owner
kai [v]

SAVE

NOTE! For more details, see section [Add a new list](#), p. 49.

Plate Table

In LISTS, PLATES, you can see all of the individual plates and their associated lists that have been setup.

You can see each list's details, when it was added and its validity period, the vehicle plate, how many times it has been detected in the validity period, the last sighting, the description of the list and also a small trash can icon to delete individual plates.

PLATE LISTS

LIST:Policia Search criteria X 1

| Plate | List | Active from | Active until | Description | Last detection | Hit count | 6 |
|---------|---------|-------------------------|-------------------------|---|----------------|-----------|--------------------------|
| 7590JVJ | Policia | 06/10/2020, 12:00:00 AM | 06/10/2021, 12:00:00 AM | Delta 2 | | 0 | <input type="checkbox"/> |
| 7590JVJ | Policia | 06/10/2020, 12:00:00 | | 0 AM Delta 2 | | 0 | <input type="checkbox"/> |
| 7590JVJ | Policia | 06/10/2020, 12:00:00 | | 0 AM Delta 2 | | 0 | <input type="checkbox"/> |
| 6564HZR | Policia | 06/12/2020, 11:46:57 | | 7 AM Detectado en 12/06/2020 10:35:55 por la cámara Calafell 2 | | 0 | <input type="checkbox"/> |
| 6564HZR | Policia | 06/12/2020, 11:46:57 | | 7 AM Detectado en 12/06/2020 10:35:55 por la cámara Calafell 2 | | 0 | <input type="checkbox"/> |
| 6564HZR | Policia | 06/12/2020, 11:46:57 | | 7 AM Detectado en 12/06/2020 10:35:55 por la cámara Calafell 2 | | 0 | <input type="checkbox"/> |
| 1111BBB | Policia | 09/24/2020, 12:00:00 AM | 09/25/2020, 12:00:00 AM | hhkjh | | 0 | <input type="checkbox"/> |
| 1111BBB | Policia | 09/24/2020, 12:00:00 AM | 09/25/2020, 12:00:00 AM | hhkjh | | 0 | <input type="checkbox"/> |
| 1111BBB | Policia | 09/24/2020, 12:00:00 AM | 09/25/2020, 12:00:00 AM | hhkjh | | 0 | <input type="checkbox"/> |

2

4

5

Filter by

- Plate
- List

9

Close

10

3

8

7

9 Items + ↓ 🗑️

Search Criteria

In the upper right corner of the table there is a small magnifying glass icon ① . If you click on it a popup window will appear where you can select from the following search criteria:

Description:

- **List type** ① : This option limits the search to the selected list type: Blacklist or Whitelist
- **List** ② : the results by list or multiple lists.
- **Date from** ③ : Shows only the plates detected since the selected date.
- **Date until** ④ : Shows only the plates detected up until the selected date.
- **Plates** ⑤ : The plate number of a specific vehicle. *
- **Description** ⑥ : Filter by the description. *
- **Active** ⑦ : Show only the plates that are active, inactive or both at this moment.
- **Located** ⑧ : Show plates that have been detected at least once, never detected or both.

* Wildcards are allowed.

Search Filter

SYNC includes a fast way to search a List by adding search criteria as a text string (see ② of [Plate Table, p. 56](#)). To enable this, includes a Search Filter where Search Filters can be added or removed, also you can use the Filter by option in the context menu (see ⑨ of [Plate Table, p. 56](#)). The Search filter syntax is: Token:FilterValue, where:

| Token | filterKey | filterValue |
|---------------------|-------------|--|
| LISTIDS LIST | listIds | List ID or List name, separated with comma (,) |
| TYPE | type | blacklist or whitelist |
| ACTIVE | active | true or false |
| PLATE | plate | p.e. M4616WZ |
| LOCATED | located | true or false |
| DATEFROM FROM | dateFrom | DateTime format dd/MM/yyyy hh:mm:ss , example: 08/01/2018 10:22:29 |
| DATETO TO | dateTo | DateTime format dd/MM/yyyy hh:mm:ss , example: 08/01/2018 10:22:29 |
| DESCRIPTION DESC | description | Description |

NOTE! To clear the search criteria use button [X] located at right of the filter bar.

Add a Licence Plate to a List

Click on the [+] symbol located at the bottom right corner of the screen (see ③).

The screenshot shows the 'HelixServer - Plate lists' interface. A 'List item' pop-up form is open, allowing users to add a new record. The form contains the following fields:

- 1. Plate *
- 2. Description *
- 3. List *
- 4. Active from *
- 5. Active until *
- 6. Comments

A 'SAVE' button is located at the bottom right of the form. The background shows a table of plate records with columns for Plate, List, Active from, Active until, Description, and a numeric value.

Description:

- Plate ①
The licence plate to add to the list.
- Description ②
Add a description in this field.
- List ③
Select a list to add the plate to.
- Active from ④
Starting date of the plate in the list. (validity period)
- Active until ⑤
Finish date of the plate in the list.
- Comments ⑥
Freeform text comment to be associated with the plate.

NOTE! All fields in this pop-up menu marked with an asterisk are required.

To add a record, press the [Save] button. The window will close automatically and the record will be added.

Edit Plate a List Item

To edit a list, simply click on the action Edit of the context menu (see ④ of Plate Table, p. 56), this pop-up window is opened:

List item ✕

| | |
|----------------------|----------------------|
| Plate * | Hit count |
| OSI659 | 256 |
| Description * | |
| Test description | |
| List | |
| list_doc ▾ | |
| Active from * | Active until * |
| 06/07/2021, 23:00:00 | 30/07/2021, 23:00:00 |
| Last detection | |
| 22/07/2021, 06:49:26 | |
| Comments | |
| | |


SAVE

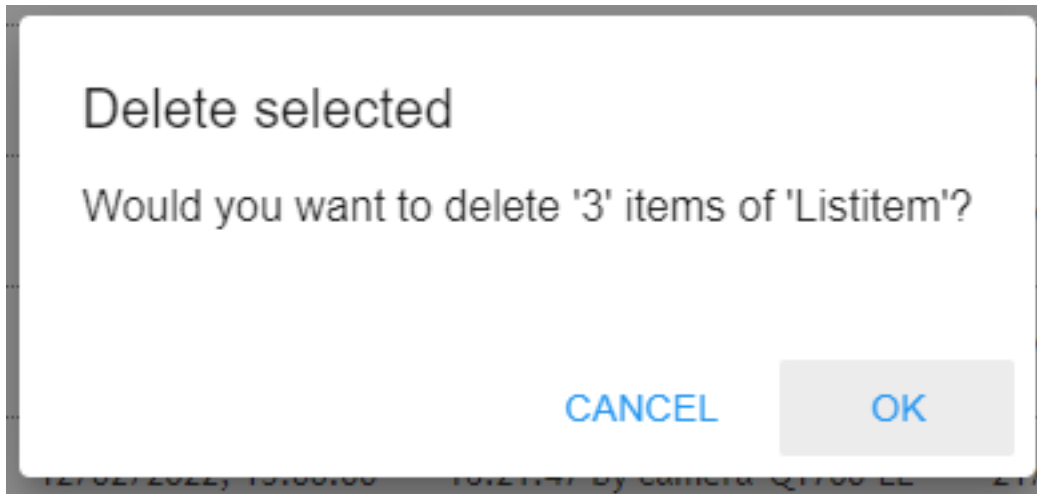
NOTE! For more details see [Add a Licence Plate to a List, p. 59](#).

Delete a Plates Item

To delete Plate list items, the action Delete of the context menu or use the multiple delete option, selecting the associated checkbox (see ⑤ of Plate Table, p. 56).

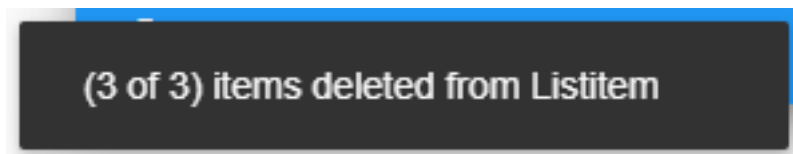
| Plate | List | Active from | Active until | Description | Last detection | Hit count | |
|--------|----------|----------------------|----------------------|-------------------|----------------------|-----------|-------------------------------------|
| KPG133 | list_doc | 06/07/2021, 23:00:00 | 11/05/2023, 11:24:31 | Test description | 30/07/2021, 10:55:45 | 38 | <input type="checkbox"/> |
| IKT498 | list_doc | 07/09/2021, 02:00:00 | 11/05/2023, 11:24:31 | Interesting plate | 29/09/2021, 20:30:53 | 78 | <input checked="" type="checkbox"/> |
| HNF633 | list_doc | 06/09/2021, 23:00:00 | 11/05/2023, 11:24:31 | auto | 07/09/2021, 12:06:09 | 1 | <input checked="" type="checkbox"/> |
| GZX505 | list_doc | 06/07/2021, 23:00:00 | 11/05/2023, 11:24:31 | Test description | 30/07/2021, 16:27:45 | 65 | <input checked="" type="checkbox"/> |
| GKI924 | list_doc | 06/07/2021, 23:00:00 | 11/05/2023, 11:24:31 | Test description | 24/07/2021, 01:04:07 | 7 | <input type="checkbox"/> |

Once the checkbox or checkboxes are selected, press the delete button  of [Plate Table, p. 56](#) and a confirmation window will appear asking you if you want to delete the list items.




If you are sure, press the [OK] button and the list will then be deleted, otherwise Cancel.

Finally, a Toast message is displayed (at bottom left corner of the window) showing the deleting confirmation:



Export all Plates in Lists

To export all of the plates, first choose which fields are to be exported by pressing the Settings icon  of [Plate Table, p. 56](#)). You will see a list of available fields and as we have already seen, we can select which should be displayed on the screen, – but we can also use the ‘Export’ slider to add them to the .csv output file.

Config list columns - List item
✕

| Name | Show | Export | Width | Position |
|----------------|-------------------------------------|-------------------------------------|-------|----------|
| Id | <input type="checkbox"/> | <input type="checkbox"/> | 5 | ▼ ^ |
| Plate | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 10 | ▼ ^ |
| List | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10 | ▼ ^ |
| Active from | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 15 | ▼ ^ |
| Active until | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 15 | ▼ ^ |
| Comments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 20 | ▼ ^ |
| Description | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 20 | ▼ ^ |
| Last detection | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 15 | ▼ ^ |
| Hit count | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 10 | ▼ ^ |

↻
✓
✓

SAVE

Select the CSV File Download icon (see ③ of [Plate Table](#), p. 56) to start the export.

NOTE! For more details about available columns to download, see section [Export all Plates in Lists](#), p. 62.

The exporter tool will use the active search filters, in order to download just the required list items. The exported file, named exportListitem.csv, will be saved to the standard Download folder – and is shown at the bottom of your screen.

Opening as flat text shows the file:

Plate;ActiveFrom;ActiveUntil;Comments;Description;HitCount;LastDetection

VY480;2021-07-06T21:00:00.000+00:00;2022-07-30T21:00:00.000+00:00;this is where we would put more information about this plate.;Test description;388;2022-05-10T07:10:51.946+00:00

YKE862;2021-07-06T21:00:00.000+00:00;2021-07-30T21:00:00.000+00:00;;Test description;4;2021-07-27T17:37:35.847+00:00

LISTS: Black and White Lists

OYT729;2021-07-06T21:00:00.000+00:00;2021-07-30T21:00:00.000+00:00;Unpaid parking ticket.;Test description;30;2021-07-30T09:50:31.810+00:00

...

ACTUATORS

An actuator, otherwise known as a relay, is normally an opto-isolated device used for triggering external devices such as car park barriers or traffic lights.

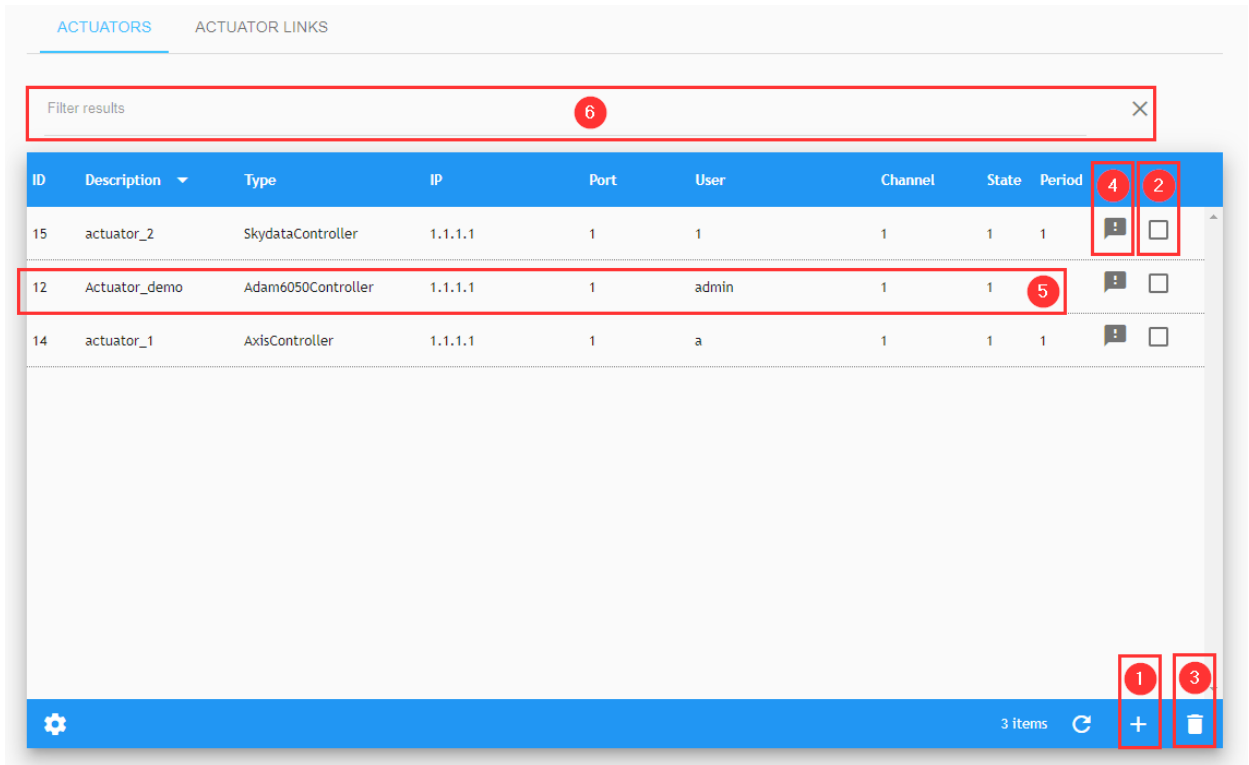
MOBOTIX MOBOTIX SYNC can be configured to trigger an actuator on various conditions such as a plate being in a Blacklist, – or a plate being authorized (see later).

NOTE! When setting up Actuator Links (see later) you can select the Event Type which includes Authorised and Blacklist. A vehicle in a Blacklist can therefore trigger a relay. A Whitelist plate is always authorized and so you should select **Authorised** to trigger the actuator in this case.

Various standard devices are supported but the most common is the ADAM 6000 series from Advantech. The 6266 model for example is IP controlled and has four separate output channels meaning that four devices can be controlled from each unit. The advantage of an IP relay device is that it can be sited remotely from SYNC. It could even be in a different City and a centralized SYNC Back Office is then able to remotely open barriers.

NOTE! If the device is not on the same local network then a fixed IP should be used to remotely address it.

ACTUATORS Table



Before attempting to add an actuator to the system, check by using the relay manufacturer’s software that it is connected and functioning correctly.

Filter Actuators

The Filter result area (see ④ of the [Filter Actuators, p. 66](#)) allows you to filter the current listed Actuators. To enable this, a Filter to the Results can be added or removed. In addition you can use the Filter by option in the context menu (see ③ of the [Filter Actuators, p. 66](#)). The filter syntax is:

Token:FilterValue where:

| Token | filterKey | filterValue |
|-------------|-------------|------------------------------|
| ID | id | List ID |
| DESC | description | Actuator description |
| DESCRIPTION | | |
| TYPE | type | Based on/actuator/validtypes |

Add a new Actuator

Click Edit ① of the context menu of the [Add a new Actuator, p. 67](#), to add a new actuator. A window will appear where you can set up the device.

Description:

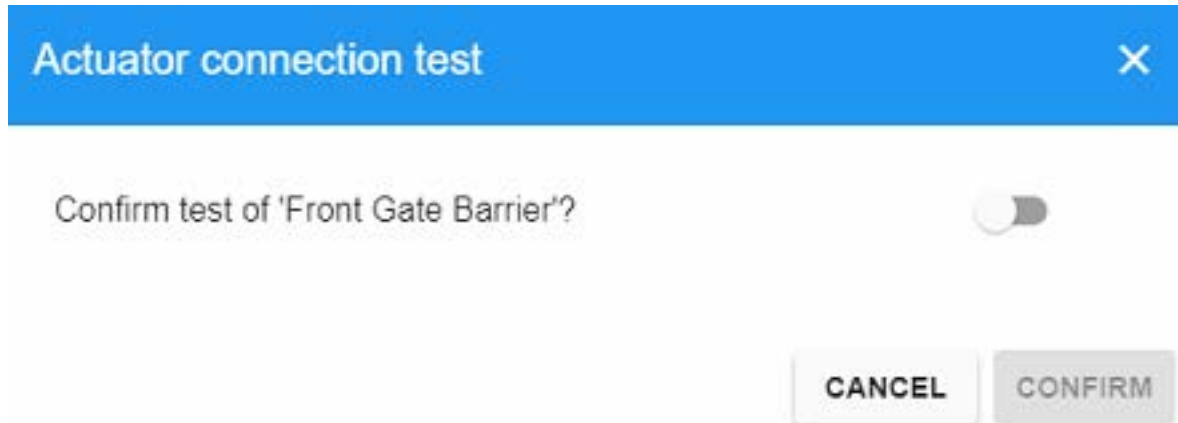
- Enter a descriptive name ① for the device being controlled
- Select the type of device ② from the dropdown list of supported actuators.
- IP address ③
- Port number ④
- Username ⑤ *
- Password ⑥ *
- State ⑦ : 0 or 1, this is what you want the device to be switched to
- Period ⑧ : in Milliseconds is the relay latch time. (the time that the relay is closed for). In the case of the Adam relay you can set this time directly by accessing the relay via its IP address or utility software. Most barriers operate on a minimum pulse time of 200ms
- Channel ⑨ : is the relay number within the device. In the case of the 6266 it can be set from 1 to 4 to trigger each relay within the device.

NOTE! (*) Username and Password to access the device. The default Adam password is: 00000000

Test an Actuator

Once added you can test the relay by clicking Actuator connection text ⑥ of the context menu of the [ACTUATORS Table, p. 66](#).

A window appears asking you to confirm the test. Use the slider and then click CONFIRM. A success or failure message is then displayed.



Edit an Actuator

To edit an Actuator, simply click Edit ⑤ of the context menu of [Edit an Actuator, p. 68](#), this pop-up window is opened:

Actuator
✕

| | |
|---|--|
| Description * <input style="width: 95%;" type="text" value="1234ABC"/> | Type * <input style="width: 95%;" type="text" value="Adam6052Controller"/> |
| IP * <input style="width: 95%;" type="text" value="192.168.0.49"/> | Port * <input style="width: 95%;" type="text" value="80"/> |
| User * <input style="width: 95%;" type="text" value="admin"/> | Password <input style="width: 95%;" type="password" value="..."/> ✓ |
| State * <input style="width: 95%;" type="text" value="1"/> | Period * <input style="width: 95%;" type="text" value="1"/> |
| Channel * <input style="width: 95%;" type="text" value="1"/> | |

SAVE

For more details see [Add a new Actuator, p. 67](#).

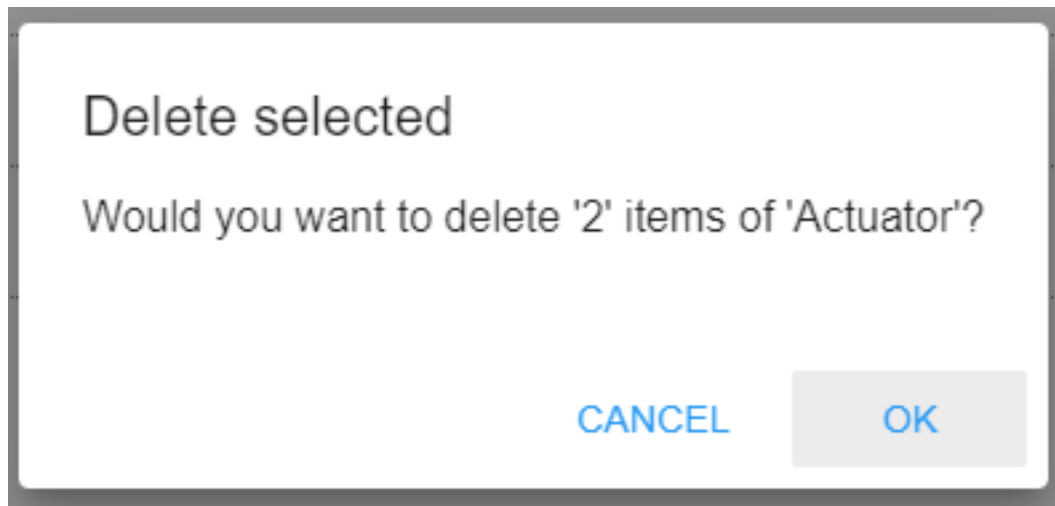
Delete an Actuator

To delete an Actuator, click Delete ⑦ of the context menu of the [ACTUATORS Table, p. 66](#)

Alternatively use the multiple delete selecting the actuator to delete, a confirmation window will appear asking you if you want to delete the actuator:

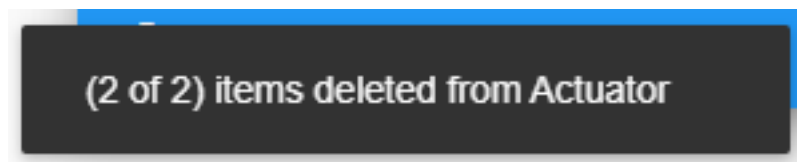
| ID | Description | Type | IP | Port | User | Channel | State | Period | |
|----|---------------|--------------------|---------|------|-------|---------|-------|--------|-----|
| 15 | actuator_2 | SkydataController | 1.1.1.1 | 1 | 1 | 1 | 1 | 1 | ⓘ ✓ |
| 12 | Actuator_demo | Adam6050Controller | 1.1.1.1 | 1 | admin | 1 | 1 | 1 | ⓘ ☐ |
| 14 | actuator_1 | AxisController | 1.1.1.1 | 1 | a | 1 | 1 | 1 | ⓘ ✓ |

And click the ③ button of the [ACTUATORS Table, p. 66](#). Then a confirmation window is opened:

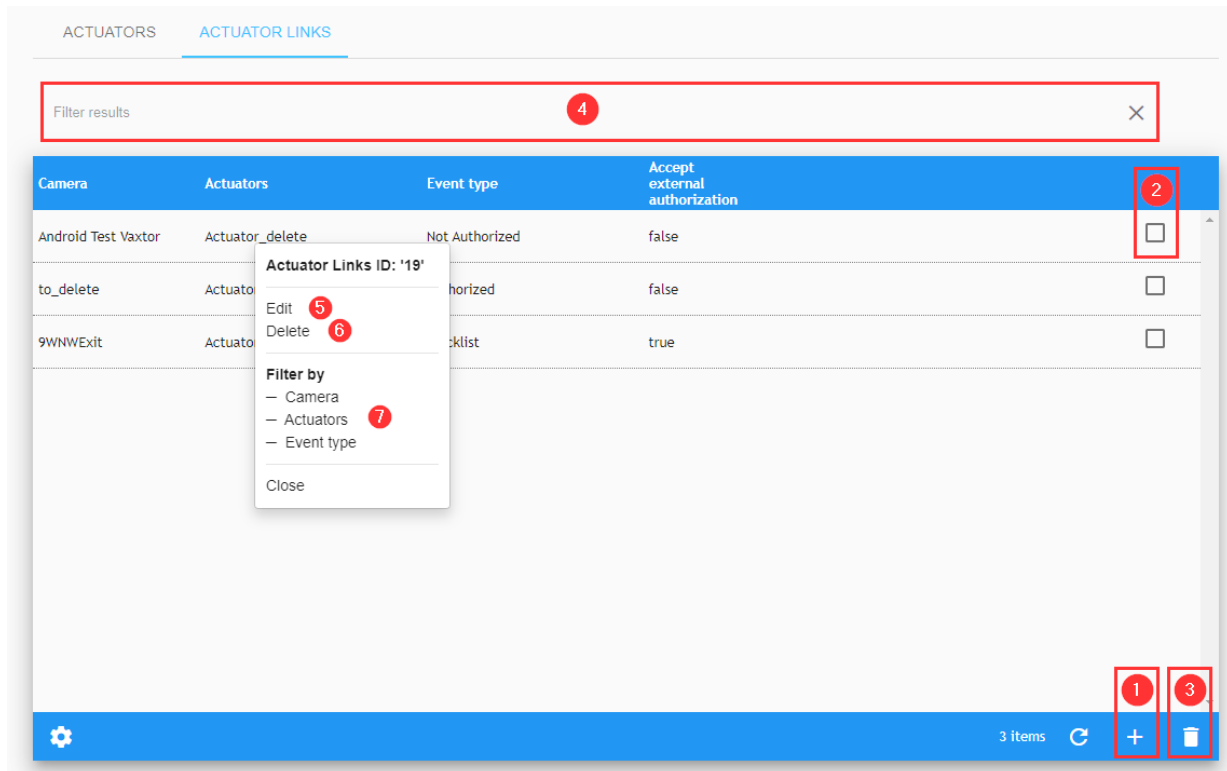


If you are sure, press the [OK] button and the Actuator will then be deleted, otherwise Cancel.

Finally, a Toast message is displayed (at bottom left corner of the window) showing the deleting confirmation:



ACTUATOR LINKS tab



Filter Actuator links

The Filter result area (see ④ of the [ACTUATOR LINKS tab](#), p. 71) allows users to filter current listed Actuator links. To enable this, a Filter to the Results can be added or removed, also you can use the Filter by option in the context menu (see ⑦ of the [ACTUATORS Table](#), p. 66). The filter syntax is: Token:FilterValue where:

| Token | filterKey | filterValue |
|--------------------|-----------|---------------------------------|
| ID | id | Actuator link id |
| CAMERA | camera | Camera id or Camera name |
| ACTUATOR | actuator | Actuator id or Actuator name |
| EVENT EVENTTYPE | eventtype | Event type |

Add a new Actuator link

Click on the plus icon (see ① of the [ACTUATOR LINKS](#) tab, p. 71), to add a new actuator link. A window will appear where you can set up the device.

The screenshot shows a configuration window titled "Actuator Links". It contains four numbered red circles indicating key fields: 1. "Camera *" (text input), 2. "Actuators *" (dropdown menu), 3. "Event type *" (text input), and 4. "Accept external authorization" (toggle switch). A "SAVE" button is located at the bottom right.

Description

- Camera ① : select from the configured Cameras (see [CAMERAS](#) Tab, p. 80)
- Actuator ② : select from the configured Actuators (see [ACTUATORS](#), p. 65)
- Event type ③ *
- Accept an external authorization ④

(*) Event type could be:

- Authorized
- Blacklist
- Not Authorized +
- Not Authorized - Capacity Exceed +
- Capacity is full +
- Capacity not full +

(+) if Access Control is licensed)

Edit an Actuator link

To edit an Actuator, simply click the action Edit ⑤ of the context menu (see [Edit an Actuator](#), p. 68).

Actuator Links ✕

Camera *

9WNWExit ▼

Actuators *

Actuator_demo ▼

Event type *

Authorized ▼

Accept external authorization

SAVE

Delete an Actuator link

To delete an Actuator, click the action Delete ② of the context menu of [ACTUATOR LINKS tab, p. 71](#) or use the multiple Actuator links delete option.

| Camera | Actuators | Event type | Accept external authorization | |
|--------------------|---------------|-------------------|-------------------------------|-------------------------------------|
| 9WNWExit | Actuator_demo | Capacity not full | false | <input checked="" type="checkbox"/> |
| 9WNWExit | Actuator_demo | Authorized | true | <input type="checkbox"/> |
| Android Test Nacho | Actuator_demo | Capacity is full | false | <input checked="" type="checkbox"/> |

CONFIGURATION

This section allows the user to view, create, modify and delete the zones, cameras, schedules, sections and capacity counting areas. For some configuration examples for the most common scenarios see [Configuration Examples](#).

ZONES tab

In SYNC, a zone is a user-defined area that may include other zones and/or cameras. When a plate is sent to SYNC by an ANPR camera, that plate is assigned to the zone in which the camera has been configured.

SYNC will process each plate according to the zone’s rules, checking if the vehicle is authorized, has generated an alarm, etc. It is possible for a zone to inherit the schedules of its parent zone.

For samples see [Configuration Examples](#).

Zones Table

| ZONES CAMERAS SCHEDULE SECTIONS CAPACITY | | | | | | | |
|--|---------------------|--------|--------------------|-----------|--|-----------|--------------------------|
| USER:rafa Filter results | | | | | | | |
| Id | Name | Parent | Inherit Schedules? | Schedules | Users | Town Code | |
| 51 | Cosco | | No | | axis experience, cosco, eticoparking, minuteman, rafa | | <input type="checkbox"/> |
| 37 | Sice | | | | jgarcia, rafa, sice | | <input type="checkbox"/> |
| 41 | Clovis | | | | admin, anthonylee, lawson, rafa, testuser | | <input type="checkbox"/> |
| 116 | Palos Garza | | | | lawson, palos, rafa | | <input type="checkbox"/> |
| 18 | Campus1 | | | | admin, axis experience, jgarcia, karen, lawson, minuteman, rafa, vaxtor-asia, veronica | | <input type="checkbox"/> |
| 119 | Malaysia iSpeed PoC | | No | | malaysia-poc, rafa, vaxtor-asia | | <input type="checkbox"/> |
| 43 | Clovis Police | | No | | clovis, jgarcia, rafa | | <input type="checkbox"/> |
| 33 | Civica | | No | | alan, anthonymclellan, jgarcia, lawson, rafa | | <input type="checkbox"/> |
| 44 | ART CA | | No | | rafa, shane | | <input type="checkbox"/> |

27 items

Filter Zones

SYNC includes a quick way to search a Zone by adding search criteria as a text string (see ④ of the [Zones Table, p. 74](#)). To enable this, a Filter to the Results can be added or removed, also you can use the Filter by option in the context menu (see ⑦ of the [Zones Table, p. 74](#)). Search filter syntax is: **Token:FilterValue**, where:

| Token | filterKey | filterValue |
|-------|-----------|-------------|
| ID | id | Zone ID |
| NAME | name | Zone name |

NOTE! To clear the search criteria use button [X] located at right of the filter bar.

Create a Zone

To add a new Zone, press the button ① of the [Zones Table, p. 74](#). A pop-up window will appear in which you can define the following parameters.

The screenshot shows the 'Zones' configuration window. It contains the following elements:

- 1** Name * (text input)
- 2** Use authorization rules (toggle switch)
- 3** Parent (dropdown menu, currently 'No parent')
- 4** Schedules (text input)
- 5** Town Code (text input)
- 6** Users (list of users: admin, q1700-le-uk-off, demo, q1700-le-ny, jgarcia, xtivity, jaime, dan)
- 7** Speed limit * (text input, value 0)
- 8** Prowling minutes * (text input, value 0)
- 9** Prowling times detected * (text input, value 0)
- 10** Alarm toggles: Speeding alarm, Prowling alarm, Kamikaze alarm, ADR (Dangerous Goods) alarm (all are currently off)
- SAVE button (bottom right)

Description:

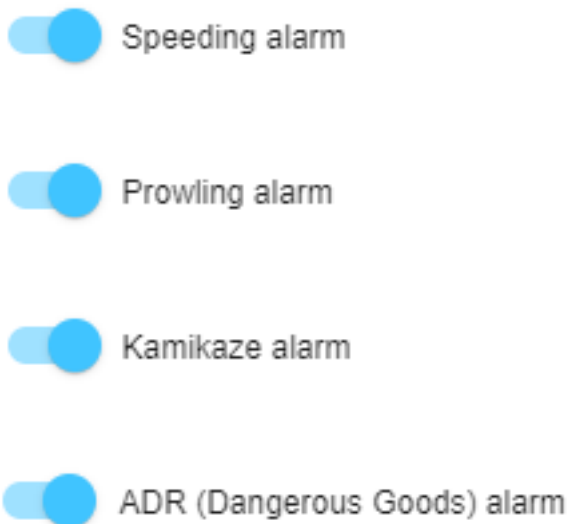
- **Name** ① : Name for the zone.
- Use Authorization rules ② :
- **Parent** ③ : Select the parent zone (if any). Once a parent zone is selected it can inherit any schedule set.
- **Schedules** ④ : Select the schedules that apply to this zone. If a zone has no schedules associated with it, then all the vehicles are authorized by default.
- **Town code** ⑤
- **Users** ⑥ : Select which users can see this zone and receive real time events generated by it. *
- **Speed limit** ⑦
- **Prowling minutes** ⑧

- **Prowling times detected** ⓘ
- **Alarms** ⓘ **

(*) Users:

- Enable users to view cameras in a zone or receive alarms for that zone etc. by selecting the appropriate user from the users list and double clicking on the user to move it across to the right-hand box (assigned users).
- This user can now view any real-time information for that zone.
- The reason this is not set as a default is there may be a massive amount of information being received from many readers which would overload the system.

() Alarms:**



- **Speeding alarm:** If activated, an alarm will be generated if a vehicle goes over the preset speed limit.
- **Prowling alarm:** (Frequent Visitors) If activated, an alarm will be generated if the same vehicle is detected x times in that zone within y minutes/hours/days (where x & y are user defined).
- **Kamikaze alarm:** If activated, an alarm will be generated if a vehicle is travelling in the opposite direction to that specified. (see 9.2.1 Add a camera where you can enter the expected direction)
- **ADR (Dangerous Goods) alarm:** If activated, an alarm will be generated if the detected vehicle includes an ADR tag.

Edit a zone

To edit a Category, simply click to the action Edit ⑤ of the context menu of the [Zones Table](#), p. 74.

Zones
✕

Name *
 Use authorization rules

Parent

Schedules

Users

| Availables | | Assigned |
|---|--------------|---|
| adaking admin_user adt-poc adtel agdcamera agustin ahack alan ... | >> << | admin fb4 georgios jigarcia kai kaicamera65 ogarate ovation ... |

Speed limit *
 Speeding alarm

Prowling minutes *
 Prowling alarm

Prowling times detected *
 Kamikaze alarm

ADR (Dangerous Goods) alarm

SAVE

|<
<
>
>|

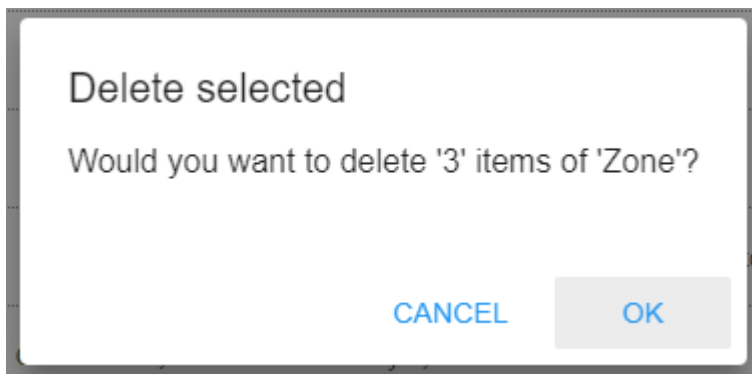
Delete a Zone

To delete a Zone, simply click to the action Delete ⑦ of the context menu of the [Zones Table](#), p. 74, or use the multiple Zone delete option:

| Name | Parent | Inherit Schedules? | Schedules | Users | |
|------------------|--------|--------------------|----------------------|--------------------------------|-------------------------------------|
| OK Office | | No | Office hours, 24 x 7 | vaxtor-asia | <input type="checkbox"/> |
| Trigg Industries | | No | | rafa, sam7007 | <input type="checkbox"/> |
| to_delete_3 | | No | | | <input checked="" type="checkbox"/> |
| to_delete_2 | | No | | | <input checked="" type="checkbox"/> |
| to_delete_1 | | No | | | <input checked="" type="checkbox"/> |
| Test-ALPR India | | No | | rafa, startologic, vaxtor-asia | <input type="checkbox"/> |

← this Zone has a camera associated!

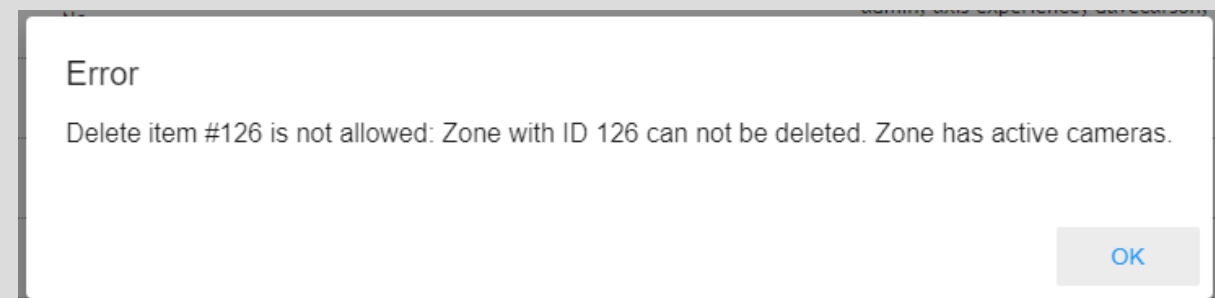
Once the checkbox or checkboxes are selected, press the delete button (see ③ of the [Zones Table](#), p. 74), and a confirmation window will appear asking you if you want to delete the list items:



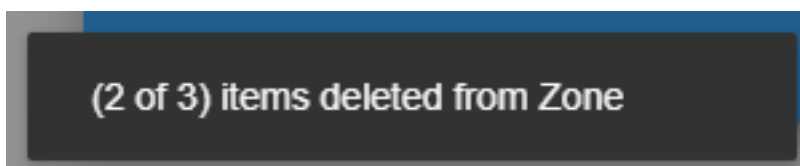
If you are sure, press the [OK] button and the list will then be deleted, otherwise Cancel.

NOTE!

If a zone has a camera associated, an error message is displayed:



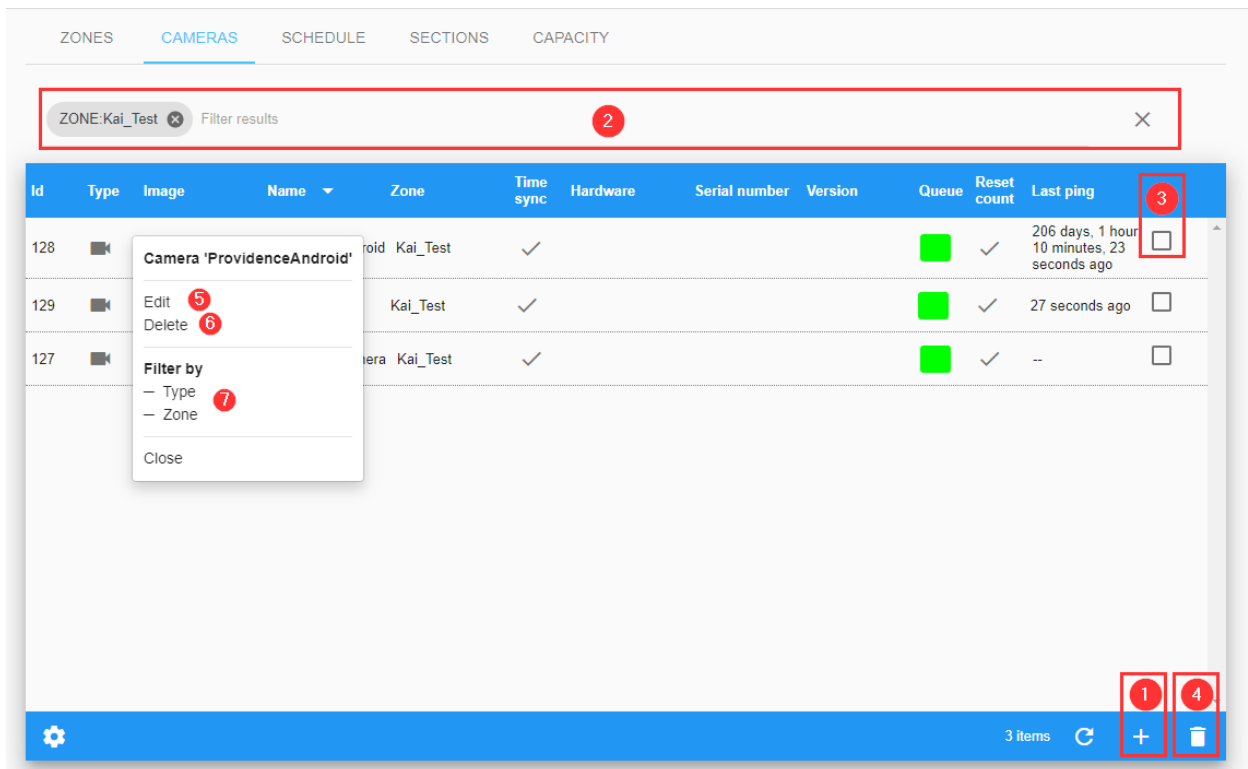
Finally, a Toast message is displayed (at bottom left corner of the window) showing the deleting confirmation. In this case, two Zones have been deleted:



CAMERAS Tab

This area shows all active cameras defined in MOBOTIX SYNC including environment (color contextual) cameras.

Cameras Table



Filter Cameras

SYNC includes a quick way to filter a Camera by adding search criteria as a text string (see ② of the [Cameras Table, p. 80](#)) or using the fast Filter by options in the context menu (see ⑦ of the [Cameras Table, p. 80](#)). To enable this, a Filter to the Results can be added or removed. Search filter syntax is: **Token:FilterValue**, where:

| Token | filterKey | filterValue |
|----------------|-----------|----------------------|
| ID | id | Camera ID |
| CAMERA NAME | name | Camera name |
| TYPE | type | Camera type |
| ZONE | zoneld | Zone ID or Zone name |

NOTE!

1. To clear the search criteria use button [X] located at right of the filter bar.
2. The ZONE filter must include an exact value (ID or list name) because it is a relation, not a camera attribute.

Add a Camera

To add a new camera to the system, press the button ① of the [Cameras Table, p. 80](#).

Camera
✕

DETAILS
SYNCED INFORMATION

1 Plate Reader Id *

2 Region of Interest Id *
0

3 Name *

4 Type *
Reader

5 Zone *

6 Address

7 Overlay

8 Capturer

9 Grace hours
0

10 Report type
Both

11 Expected vehicle direction *
Unknown

SAVE

Description:

- Plate Reader Id ① This is a unique identifier defined by the plate reading software (VaxALPR On Camera, VaxALPR for PC, VaxALPR for Android etc.).
- Region of interest ID ②
- Name ③ User defined name to help identify the camera.
- Type ④ Camera type:
 - **Reader:** Select this option if the camera is an ANPR camera.
 - **Environment:** Select this option if the camera is linked to a plate reader but is not the camera capturing the plate. i.e. this is a (color) contextual camera. (Use the same Plate Reader Id as this is the associated color contextual camera for the IR camera setup in VaxALPR)
- Zone ⑤ Select the area in which you want to register the camera.
- Address ⑥ User defined address of the camera.

- Overlay ⑦ User defined text to appear as a watermark on the saved image (top left)
- Capturer ⑧ User defined name for this server. This field is used in the replication process (when servers are being linked).
- Grace hours ⑨ This is the time interval between camera health checks.
- Report type (10) Select when SYNC should store the result.
 - **Freeflow:** Store the plate only if it has been detected in freeflow mode.
 - **Signaled (Triggered):** Store the plate only if it has been detected due to an external trigger.
 - **Both:** Store the plate if either of the above occur (so always store the plate).
- Expected Vehicle Direction (11) Alarms can be generated if a plate is traveling the wrong way. VaxALPR attempts to determine the direction of each plate read and passes this onto SYNC. Values can be:
 - Getting closer. Plates are expected to approach the camera.
 - Getting farther. Plates are expected to be moving away from the camera.
Note that if the camera is positioned very low for example, i.e. below the height of a plate, then the direction can be misreported.

Synced Information Tab

Remote cameras can be monitored by MOBOTIX MOBOTIX SYNC and certain information can be synchronized between the camera and the SYNC.

Camera
✕

DETAILS
SYNCED INFORMATION

12 Longitude

13 Latitude

14 Serial number

15 Camera brand

16 Camera model

17 Remarks

18 Reset count *
0

19 Download config

20 Update frame timeout *
43200

21 Update frame quality *
20


22 Enable maintenance alarms



SAVE

- Longitude (12) and latitude (13) The GPS coordinates where the camera is located. If defined on the camera, all the plates read by this camera will be assigned to this location.
- Serial number (14) Camera serial number.
- Camera brand (15) Camera brand
- Camera model (16) Camera model
- Remarks (17) Additional remarks
- Reset count (18) This shows how many times the cameras or software has restarted. This can be reset to zero here.
- Download config (19)
- Update frame timeout(20)
- Update frame quality(21)
- Enable maintenance alarms (22)





Fields marked with an asterisk are required. Once you have filled in all the data click the "Save" button to save the changes.

Edit a Camera

To edit a Camera, simply click to the action Edit  of the context menu of the [Cameras Table](#), p. 80.

 Camera ProvidenceAndroid


STATUS
DETAILS
SYNCED INFORMATION

| | |
|---|---|
| Plate Reader Id * 128 | Region of Interest Id * 0 |
| Name * ProvidenceAndroid | Type * Reader  |
| Zone * Kai_Test  | Address |
| Overlay | |
| Capturer | Grace hours 0 |
| Report type Both  | Expected vehicle direction * Unknown  |

SAVE


|<

<

>

>|

Delete a Camera

To delete a Camera, simply click to the action Delete  of the context menu of the [Cameras Table](#), p. 80. Or use the multiple Cameras delete option.

SCHEDULE Tab

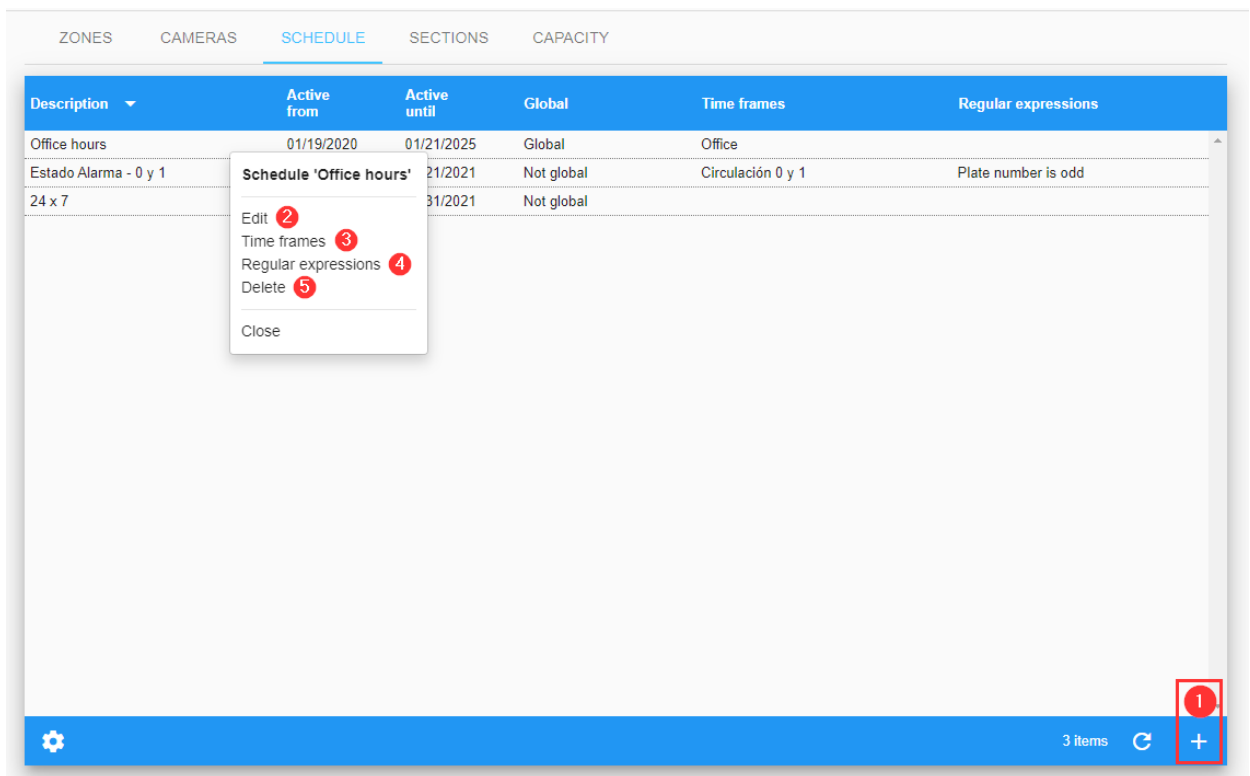
A schedule defines the authorized date ranges for each plate captured.

If the capture date of the plate is within a schedule, then the authorization rules defined for that schedule are applied.

Only three exceptions are applied:

- If a zone has no schedules linked to it, then all the vehicles are authorized.
- If a vehicle is on a whitelist linked to the zone, then that vehicle is always authorized in that zone.
- If a schedule is global, then all the vehicles detected in that schedule are authorized.

Schedule Table



Edit or Create a new Schedule

Press the add (+) button ① at the bottom right of the [Edit or Create a new Schedule, p. 86](#). A pop-up window will appear in which you can define the following parameters.

The screenshot shows a 'Schedule' configuration window. It features a blue header with the title 'Schedule' and a close button 'X'. The main content area contains four fields: 'Description *' (1), 'Active from *' with 'Date from' (2), 'Active until *' with 'Date to' (3), and a 'Global' toggle switch (4) labeled 'Not global'. A 'SAVE' button is located at the bottom right.

- Description ① : User defined description for the schedule.
- Active from ② : Enter the date from which the schedule will be activated.
- Active until ③ : Enter the end date for the active schedule.
- Global ④ : Indicate whether the schedule is global or not.

NOTE! To edit a Schedule, click the action Edit ② in the context menu

Delete a Schedule

To delete a Schedule, click on the action Delete ⑤ in the context menu of the [Schedule Table, p. 86](#). Once pressed, a confirmation window will appear. A schedule cannot be deleted if it has been associated with a zone.

Linking Time Frames to a Schedule

Usually schedules need to be more flexible than just a start and end date. Different times frames can be defined and associated with a schedule.

Once you have created your schedule, click the action Timeframe ③ in the context menu of the [Schedule Table, p. 86](#) to access the Time frames window.

Here you can select the different preconfigured Time frames, or create a new one by pressing the add button (+) located at the bottom right of the window.

Time Frame Table

The screenshot shows the 'SCHEDULE' tab in a configuration interface. At the top, there are tabs for 'ZONES', 'CAMERAS', 'SCHEDULE', 'SECTIONS', and 'CAPACITY'. Below these is a header for 'Time frames of 'Office hours':'. On the right side of this header, there are two buttons: a refresh button (6) and a 'SAVE' button (5). The main area contains a table with the following columns: 'Description', 'Start', 'Stop', 'Days of week', and 'Months'. The table lists four time frames: 'Office' (checked), 'First seven days of each month', 'Circulación 0 y 1', and 'Always'. A context menu is open over the 'Office' row, showing 'Edit' (2), 'Delete' (3), and 'Close' options. A red box (4) highlights the checkbox for the 'Office' row. At the bottom right of the table, there is a blue bar containing a gear icon, the text '4 items', a refresh icon, and an add (+) button (1).

| Description | Start | Stop | Days of week | Months |
|---|----------|-------|--------------|--------------|
| <input checked="" type="checkbox"/> Office | 07:00 | 18:59 | -MTWTF- | JFMAMJJASOND |
| <input type="checkbox"/> First seven days of each month | 00:00 | 23:59 | SMTWTFS | JFMAMJJASOND |
| <input type="checkbox"/> Circulación 0 y 1 | 00:00 | 23:59 | -MT--- | JFMAMJJASOND |
| <input type="checkbox"/> Always | 01:00:00 | 23:59 | SMTWTFS | JFMAMJJASOND |

Add or Modify Time Frames

Press the add (+) button ① at the bottom right of the [Add or Modify Time Frames, p. 88](#). A pop-up window will appear in which you can define the following parameters.

Time frames
✕

Description * 1

Ignore year: No 2

Start 3

Year * 4 ▼ Day ▼ Hour ▼ Minute ▼

Stop 4

Year * 4 ▼ Day ▼ Hour ▼ Minute ▼

Days of week 5

All

Months 6

All

SAVE

Description:

- Description ① : User defined description.
- Ignore year ② : Select this option if you want the timeframe to be valid for any year.
- Start ③ : Start values for the time frame.
- Stop ④ : Finish values for the time frame.
- Day of the week ⑤ : Days of the week when this timeframe will be active.
- Months ⑥ : Months when this timeframe will be active.

NOTE!

When you have finished setting the new Time frame press the "Save" button and you will return to the list.

Modifying preconfigured Time Frames is NOT recommended.

To modify a Time frame, click the action Edit ② in the context menu.

Assign a Time Frame

To assign the new timeframe to the schedule (see the [Time Frame Table, p. 88](#)): enable it ④ and press **Save** ⑤ . Otherwise, click ⑥ to return without changes.

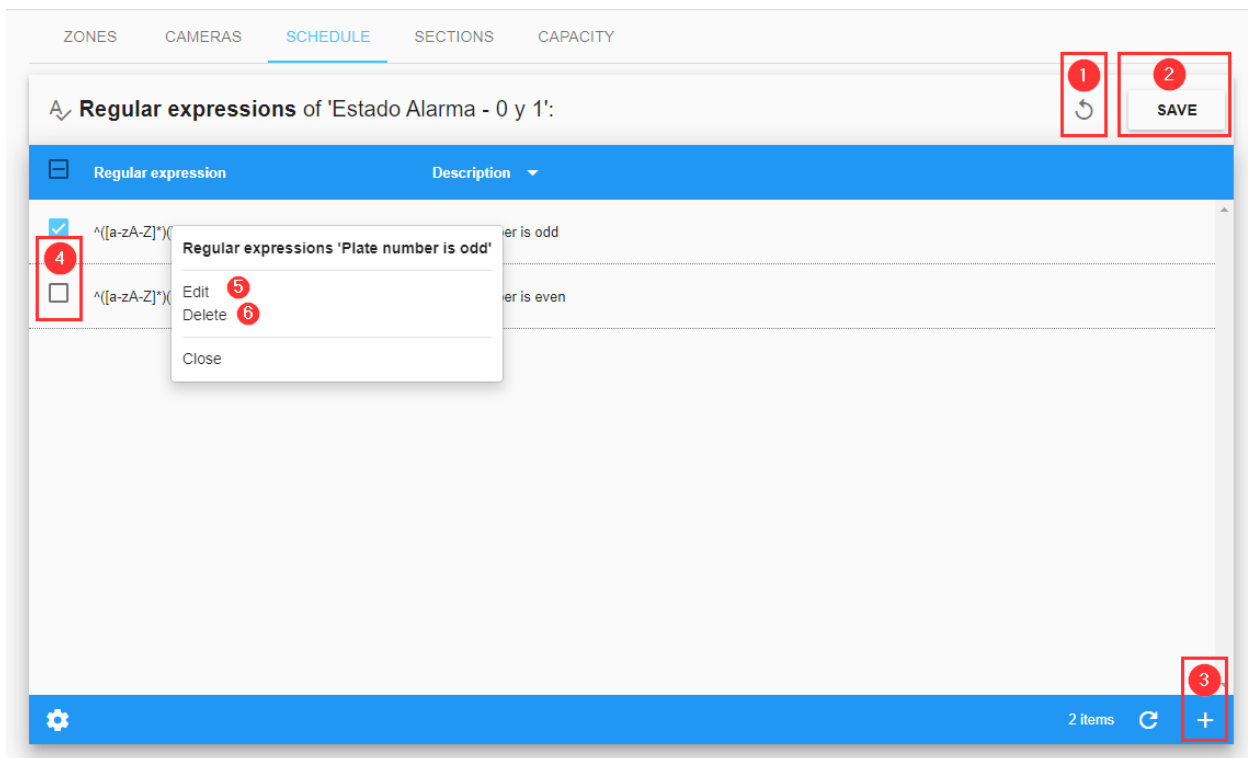
Delete a Time Frame

To delete a Time frame, click on the action Delete of the context menu. A confirmation window will appear to delete the selected entry. A Time frame cannot be deleted if it is associated with a Schedule.

Linking Regular Expressions to a Schedule

Once you have created your schedule, click the action Regular Expressions ③ in the context menu of the [Regular Expressions Table, p. 90](#) to access the Regular Expressions window.

Regular Expressions Table



Once inside this menu, you can select previously configured Regular expressions, or create a new one by pressing the add button (+) ③ at the bottom right of the [Regular Expressions Table, p. 90](#).

Add or Modify Regular Expressions

Regular expressions
✕

Description * ①

Plate number is odd

Regular expression * ②

`^ ([a-zA-Z]*) (\d*) (0|1) $`

A Regular Expression is a mathematical formula or logic expression used for say selecting odd plates (sometimes used in city congestion schemes) or ones containing certain character combinations.

To edit fields:

- Description ① : User defined description.
- Regular Expression ② : Fill with an appropriate Regular Expression formula.

NOTE! To modify a Regular expression, click the action Edit ⑤ in the context menu

Assign a Regular Expression.

When you have finished setting the new 'Regular Expression', press the "Save" button ② , you will return to the list.

To assign the new 'Regular Expression' to the Schedule (see the [Regular Expressions Table, p. 90](#)) enable it ④ and press **Save** ② . Otherwise, click ① to return without changes.

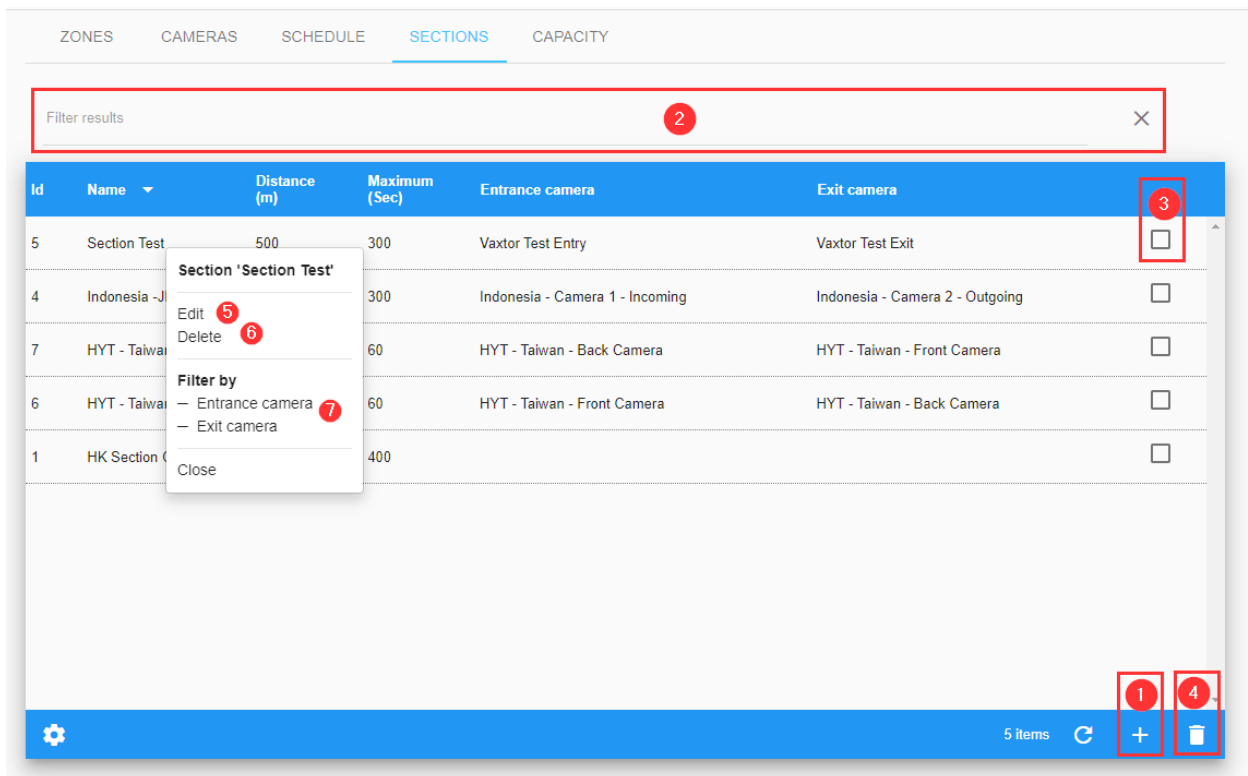
Delete a Regular Expression

To delete a 'Regular Expression', click the action Delete ⑥ in the context menu of the [Regular Expressions Table, p. 90](#). Once pressed, a confirmation window will appear. A Regular expression cannot be deleted if it is associated with a Schedule.

SECTIONS Tab and Average Speed Alerts

Lengths of road between any two cameras may be defined as a section. This could be part of a road network, part of a large car park or even a long entrance lane into an industrial estate where speed is to be monitored.

Section Table



Filter Sections

SYNC includes a quick way to filter a Section by adding search criteria as a text string (see ② of the [Section Table, p. 92](#)). To enable this, a Filter to the Results can be added or removed. Search filter syntax is: **Token:FilterValue**, where:

| Token | filterKey | filterValue |
|-------|-----------|--------------|
| ID | id | Section ID |
| NAME | name | Section name |

| Token | filterKey | filterValue |
|----------|------------------|-------------------------|
| ENTRANCE | entranceCameraId | Section entrance camera |
| EXIT | exitCameraId | Section exit camera |

Add a Section

Press the add (+) button (see ① of the [Section Table, p. 92](#)) at the bottom right of the menu.

Section
✕

Name * 1

Distance (m) * 2

Maximum (Sec) * 3

Entrance camera * 4 ▼

Exit camera * 5 ▼

SAVE


Description:

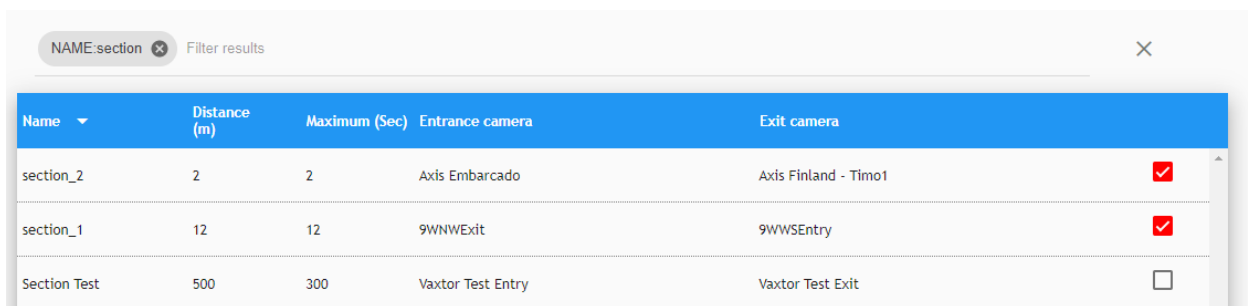
- Name ① : User defined name for the section of road.
- Distance ② : Distance between the entry camera and the exit camera of that section.
- Maximum ③ : Number of seconds to abort the calculation. If a vehicle takes longer than the specified number of seconds then the speed is not calculated. This can remove outliers.
- Entrance camera ④ : Entrance camera for the section.
- Exit Camera ⑤ : Exit camera for the section

NOTE!

- The length of the section (the distance between the two cameras) may be defined in meters and the maximum target time to complete the journey is in seconds. This can be considered as the average speed limit for the section. By setting these parameters then when a vehicle passes between the two defined cameras in less than the set time - an alert is generated and displayed on the user screen.
- The speed is stored against every vehicle passing the second camera and can be seen using the PLATES/SEARCH facility.
- Plates read by the first camera are shown with a speed of -1. Plates read can be searched by those generating alerts and these alerts can also be sent by email – see later in this guide.

Delete a Section

To delete a Section, click the action Delete  in the context menu of the [Section Table, p. 92](#). Once pressed, a confirmation window will appear. Also, you can use the multiple Sections delete option.



| Name | Distance (m) | Maximum (Sec) | Entrance camera | Exit camera | |
|--------------|--------------|---------------|-------------------|----------------------|-------------------------------------|
| section_2 | 2 | 2 | Axis Embarcado | Axis Finland - Timo1 | <input checked="" type="checkbox"/> |
| section_1 | 12 | 12 | 9WNWExit | 9WWSEntry | <input checked="" type="checkbox"/> |
| Section Test | 500 | 300 | Vaxtor Test Entry | Vaxtor Test Exit | <input type="checkbox"/> |

CAPACITY Tab - Vehicle Count

SYNC can track the capacity (vehicle count) within a defined area.

Capacity Table

The screenshot shows the 'CAPACITY' tab in the configuration interface. At the top, there are navigation tabs: ZONES, CAMERAS, SCHEDULE, SECTIONS, and CAPACITY. Below the tabs is a filter bar containing the text 'CAT:Not assigned' and a 'Filter results' button. A table lists capacity entries with columns: Id, Count, Name, Entrance cameras, Exit Cameras, Category, Max capacity, Ignore car direction, Reset time, Crosstime, and Virtual?. A context menu is open over the first row, showing options: Capacity 'Visitas Sur', Edit, and Delete. Below the menu, there are 'Filter by' options: Entrance cameras, Exit Cameras, and Category. At the bottom right, there are icons for settings (gear), refresh, add (+), and delete (trash). The table contains 8 items.

| Id | Count | Name | Entrance cameras | Exit Cameras | Category | Max capacity | Ignore car direction | Reset time | Crosstime | Virtual? |
|----|--------|--------------|----------------------|---------------------------------|--------------|--------------|----------------------|-------------------------|-----------|----------|
| 2 | 12/38 | Visitas Sur | Lawson - | Q-1700-LE North Carolina | Not assigned | 38 | Ignore | 02/04/2020, 12:00:00 AM | | False |
| 7 | 0/0 | Ind JM | | Vaxtor - Asia Camera 2 | Not assigned | 0 | Ignore | 12/03/2020, 06:00:00 PM | | False |
| 8 | 0/0 | Ind Hig | | Indonesia - Camera 2 - Outgoing | Not assigned | 0 | Ignore | 12/14/2020, 05:00:00 PM | | False |
| 12 | 10/25 | AX | | SO Demo | Not assigned | 25 | Does not ignore | 10/22/2021, 12:00:00 AM | | False |
| 13 | 0/50 | ME | | | Not assigned | 50 | Does not ignore | 12/13/2021, 12:00:00 AM | | False |
| 14 | 0/10 | Vaxtor Test | Vaxtor Test Entry | Vaxtor Test Exit | Not assigned | 10 | Does not ignore | 03/25/2022, 12:00:00 AM | | False |
| 9 | 0/1000 | Parking demo | Parking demo entrada | Parking demo salida | Not assigned | 1000 | Ignore | 05/07/2021, 12:00:00 AM | | False |
| 4 | 0/1552 | Campus1 | CP 02 Entry | CP 01 Exit | Not assigned | 1552 | Ignore | 03/31/2020, 06:00:00 AM | | False |

Filter Capacity

SYNC includes a quick way to filter Capacity by adding search criteria as a text string (see ② of the Capacity Table, p. 95) or using the fast Filter by options in the context menu (see ⑦ of the Capacity Table, p. 95). To enable this, a Filter to the Results can be added or removed. Search filter syntax is:

Token:FilterValue, where:

| Token | filterKey | filterValue |
|----------|-------------------|------------------------------|
| ID | id | Aforo ID |
| NAME | name | Aforo name |
| ENTRANCE | entranceCameraIds | Aforo entranceCameraIds |
| EXIT | exitCameraIds | Aforo exitCameraIds |
| CATEGORY | categoryId | Category ID or Category name |

Create a Capacity (Count) Area

Press the add (+) button (see ② of the [Capacity Table](#), p. 95) at the bottom right of the menu.

A pop-up window will appear where you can define the area:

Capacity
✕

Name * 1

Entrance cameras * 2

Exit Cameras 3

Max capacity * 4

0

Reset time * 5

00:00

Maximum time allowed (minutes) * 6

30

Max search time * 7

86400

Count * 8

0

Virtual? 9

Ignore car direction 10

Fire an alarm if maximum time is exceeded

Crosstime

Reset capacity

Deny if full

Ignore if not authorized

Category 11

Not assigned

SAVE

Description:

- Name ① : User defined name for the Capacity/Count area.
- Entrance camera ② : Entrance camera for the section.
- Exit Camera ③ : Exit camera for the section
- Max Capacity ④ : The maximum number of vehicles allowed in the Capacity/Count area.
- Reset time ⑤ : The time at which the count is automatically reset to zero. E.g. 23:00.
- Maximum time allowed ⑥ : by vehicle.
- Maximum search time ⑦ : by vehicle.




- Count ⑧ : Vehicles inside Capacity/Count area.
- Virtual? ⑨
- Flags ⑩
 - **Ignore Car direction:** The user can choose to ignore the direction of travel.
 - Fire an alarm if maximum time is exceeded.
 - Crosstime.
 - Reset capacity.
 - Deny if full.
 - Ignore if not authorized.
- Category ⑪

Delete a Capacity

To delete a Capacity, click the action Delete ⑥ in the context menu of the [Capacity Table](#), p. 95.

Once pressed, a confirmation window will appear.

Also, a multiple Capacity delete option is available.

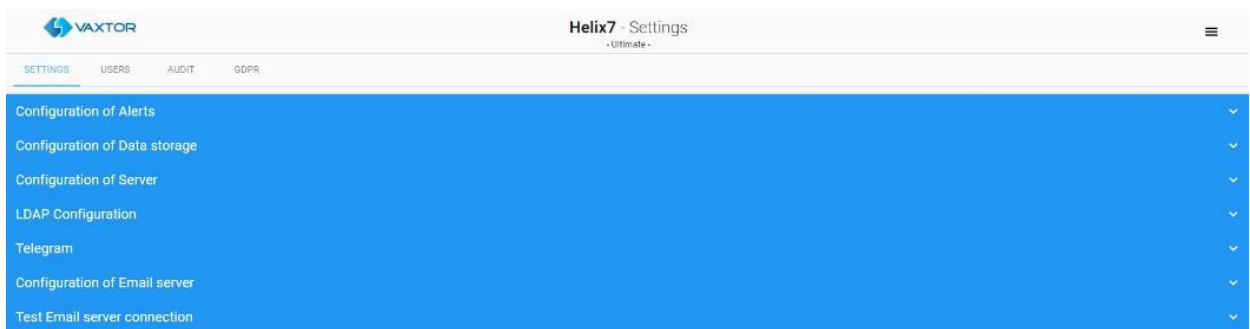
| Id | Count | Name | Entrance cameras | Exit Cameras | Category | Max capacity | Ignore car direction | Reset time | Crosstime | Virtual? |
|----|---|----------------------|--------------------------|--------------------------|--------------|--------------|----------------------|-------------------------|-----------|---|
| 2 |  12/38 | Visitas Sur | Lawson - P1455-LE 29mm | Q-1700-LE North Carolina | Not assigned | 38 | Ignore | 02/04/2020, 12:00:00 AM | | False <input type="checkbox"/> |
| 5 |  0/5 | ADR Capacity | CP 02 Entry | CP 01 Exit | ADR | 5 | Does not ignore | 04/03/2020, 12:00:00 AM | | False <input checked="" type="checkbox"/> |
| 7 |  0/0 | Indonesia - JMTO PoC | Vaxtor - Asia Camera 1 - | Vaxtor - Asia Camera 2 | Not assigned | 0 | Ignore | 12/03/2020, 06:00:00 PM | | False <input checked="" type="checkbox"/> |

SETTINGS

The settings area is only available for administrators. In this section, it is possible to view and modify the main settings for the server.

Do not modify the values in this section if you have not read and fully understood this manual.

SETTINGS Tab



Configuration of Alerts

SETTINGS
USERS
AUDIT

^
Configuration of Alerts

| | |
|---|--|
| Time between alert for the same vehicle (seconds) | <input type="text" value="0"/> |
| Send alerts by email | <input type="checkbox"/> |
| Email sender address | <input type="text" value="username@server.com"/> |
| Email sender name | <input type="text" value="Helix-6"/> |
| Blacklist alert email subject | <input type="text" value="Helix-6 Blacklist alert \$platenumber\$ - \$zone\$"/> |
| Blacklist alert email body | <input type="text" value="Blacklist plate \$platenumber\$ detected by camera \$cameraname\$ in zone \$zone\$ at \$timestamp\$.Hitcount \$"/> |
| Speed alert email subject | <input type="text" value="Helix-6 Speed alert \$platenumber\$ - \$zone\$"/> |
| Speed alert email body | <input type="text" value="Plate \$platenumber\$ detected by camera \$cameraname\$ in zone \$zone\$ at \$timestamp\$.Speed \$speed\$"/> |
| Prowling alert email subject | <input type="text" value="Helix-6 Prowling alert \$platenumber\$ - \$zone\$"/> |
| Prowling alert email body | <input type="text" value="Prowling plate \$platenumber\$ detected by camera \$cameraname\$ in zone \$zone\$ at \$timestamp\$.Count \$"/> |

| | |
|-------------------------------------|--|
| Kamikaze alert email subject | <input type="text" value="Helix-6 Kamikaze alert \$platenumber\$ - \$zone\$"/> |
| Kamikaze alert email body | <input type="text" value="Kamikaze plate \$platenumber\$ detected by camera \$cameraname\$ in zone \$zone\$ at \$timestamp\$."/> |
| Time in zone alert email subject | <input type="text" value="Helix-6 Time in zone alert \$platenumber\$ - \$timestamp\$ - \$zone\$"/> |
| Time in zone alert email body | <input type="text" value="Plate \$platenumber\$ detected by camera \$cameraname\$ in zone \$zone\$ at \$timestamp\$."/> |
| Must send OCR image | <input checked="" type="checkbox"/> |
| Must send environment images | <input type="checkbox"/> |
| Blacklist Levenshtein distance used | <input type="text" value="1"/> |

CANCEL
SAVE

Click on the blue bars to show or hide the options.

- Time between alerts for the same vehicle (seconds): Set the minimum time between blacklist alerts for the same vehicle.
- **Send alerts by email:** Enable this option to send emails to specified users when an alert is triggered by the system.
- **Email sender address:** Insert the sender's email address for all the alerts.
This is how it should appear in the received email message – and needn't be the actual email address used (smtp) as set up below.

- **Email sender name:** Enter the name of the sender that will appear in the sent emails.
- **Blacklist alert email subject:** Set the email subject for blacklist alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Blacklist alert email body:** Set the email body for blacklist alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Speed alert email subject:** Set the email subject for overspeed alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Speed alert email body:** Set the email body for overspeed alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Prowling alert email subject:** Set the email subject for prowling alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Prowling alert email body:** Set the email body for prowling alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Kamikaze alert email subject:** Set the email subject for Kamikaze alerts. It is possible to use special words that will be replaced by real-time information in the email. The allowed values are described in the appendix of this document.
- **Kamikaze alert email body:** Set the email body for Kamikazee alerts. It is possible to use special words that will be replaced by real-time information in the email. The allowed values are described in the appendix of this document.
- **Time in zone alert email subject:** Set the email subject for time in zone alerts. It is possible to use special words that will be replaced by real-time information in the email. The allowed values are described in the appendix of this document.
- **Time in zone alert email body:** Set the email body for time in zone alerts. It is possible to use special words that will be replaced by real-time information in the email. The allowed values are described in the appendix of this document.
- **Time in zone plate distance:** This is the plate match accuracy (Levenshtein distance) of a plate entering and leaving a zone for them to be considered the same plate.
Example: if the reader at the entrance reports 1234ABC and the reader at the exit reports 1235ABC and the distance is 1, then system will mark 1234ABC as out.
- **Must send OCR image:** Enable this option to append the OCR image to the emails.

- **Must send environment images:** Enable this option to append the environment images to the emails.
- **Blacklist Levenshtein distance used:** This is the Blacklist Match Accuracy which is the number of characters that may differ between the plate read and the plate on the blacklist to trigger an alert.

Configuration of Data Storage

SETTINGS USERS AUDIT

Configuration of Alerts

Configuration of Data storage

Storage folder for images

Must save images

Delete images after (days)

Process local plates

Delete plates after (days)

Configuration of Server

- **Storage folder for images:** SYNC will store all the images in the directory specified. The directory MUST already exist.
- **Must save images:** Enable this option if you want to save the images.
- **Delete images after (days):** SYNC will remove (purge) any image older than the amount of days selected here. Set this value to 0 if you want to disable this feature.
- **Process local plates:** Usually this option should be enabled. Disable this option only if SYNC should only process new plates inserted by the REST API.

Configuration of Server

Configuration of Server

API key

Reset API key

Maximum login tries (0 for unlimited)

Login disable time (minutes)

Audit days stored

Audit all users

Logout automatically after (minutes)

Encrypt local lists

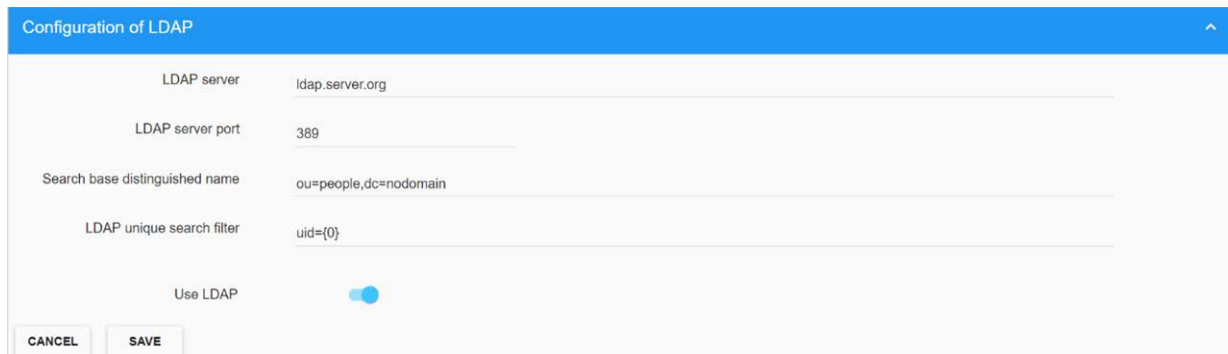
- **API Key:** Displays the master API Key assigned to the system.
- **Reset API key:** Enable this option to generate a new random API Key for the server.
- **Maximum login tries:** The maximum number of attempts to access SYNC before the account is locked. (incorrect login credentials)
- **Login disable time:** Set the number of minutes that an account is locked for after the maximum number of login tries has been exceeded.
- **Audit days stored:** Enter how many days the audit trail logs will be stored on the system.
- **Audit all users:** When enabled, all the actions of all the users are stored in the audit system. When disabled, only the actions of the users that have been selected for audit are stored.
- **Logout automatically after:** Set the number of minutes that a user can be idle before SYNC logs them out and they are requested to login again.
- **Encrypt local lists:** Select this option to encrypt all lists on the system using RSA 256 bit encryption. Note that the program currently uses a Postgres database which is already encrypted so this extra layer is not needed.
- **Password expiration:** Set the number of days before the user is requested to change their password.
- **Default time for quick add to list (hours):** There is a button to quickly authorize a plate on the system for an extra 2 hours. Set this value here - normally 24 hours.

Configuration of LDAP

SYNC can use a LDAP server (version 3) to authenticate users. When LDAP integration is active the user login is performed on the LDAP server.

If the authentication fails, the user will not be allowed to login to the system.

Only users with **Admin** rights will be logged in using the local credentials in cases where the LDAP authentication fails.



The screenshot shows a configuration window titled "Configuration of LDAP". It contains the following fields and controls:

- LDAP server:** ldap.server.org
- LDAP server port:** 389
- Search base distinguished name:** ou=people,dc=nodomain
- LDAP unique search filter:** uid={0}
- Use LDAP:** A toggle switch that is currently turned on (blue).
- Buttons:** CANCEL and SAVE.

- **LDAP server:** LDAP server domain name or IP address.
- **LDAP server port:** LDAP server port. 389 by default.
- **Search base distinguished name:** LDAP base search storage to be used when searching for users on the LDAP server.
- **LDAP unique search filter:** Filter used to find the desired user. This filter must find unique users based on the LDAP configuration.
- **Use LDAP:** Activate the LDAP integration

Configuration of Email server

Configuration of Email server

Enable SSL/TLS

SMTP port 25

SMTP host

Time out (seconds) 100

Must use default credentials

Password ?

Username

CANCEL SAVE

If you require the system to send out email alerts (as defined above for various alarm conditions) then you must set up and configure an email account for the system to use.

- **Enable SSL/TLS:** Enable this option if you want to enable SSL or TLS protocol.
- **SMTP port:** Enter the port number to use to connect to the server, default: 25.
- **SMTP host:** Enter the IP address or the host name of the SMTP server.
- **Time out:** Set the maximum time for sending the email, if the response to the request exceeds that time the system will not send the information.
- **Must use default credentials:** Enable this option to use the windows user credentials with the SMTP server.
- **Password:** SMTP user password.
- **Username:** SMTP username.

After enabling and completing all email configuration parameters, click the **Save** button and you will be asked to confirm the password:

The button changes from **Cancel** to **Confirm** when the password has been input correctly.

Remember to set up the receiving email address. This can be setup for each user – see [USERS Tab, p. 105](#).

Test Email server connection

To test the email server connection, enter a valid email address and click the **Save** button. If your configuration is correct then you will receive an email in your mailbox.

Test Email server connection ^

Email to send a test

CANCEL
SAVE

NOTE! Remember to set the permanent target email address up when you set up users (see [USERS Tab, p. 105](#)). Even the admin account should have one.

USERS Tab

This area shows the active users defined in SYNC. It is possible to view, add, modify or delete any user.

Users Table

SETTINGS USERS AUDIT GDPR

CLAIMS:Plates,Basic Filter results X

| Id | User name | First name | Last name | Privileges | Email | |
|----|-----------------|------------|-----------|---------------------------------------|--------------------------------|--------------------------|
| 2 | q1700-le-uk-off | | | Plates, Basic | | <input type="checkbox"/> |
| 4 | demo | | Cabrera | Basic, Lists, Authorizations | sergi@sanserg.com | <input type="checkbox"/> |
| 5 | q1700-le-uk-off | | | Basic, Plates | | <input type="checkbox"/> |
| 7 | xtivity | | Gradert | Basic, Authorizations, Lists, Cameras | rgradert@xtivitysolutions.com | <input type="checkbox"/> |
| 12 | dan | | Herdenson | Basic, Plates | dhenderson@griffonsecurity.com | <input type="checkbox"/> |
| 18 | q1798-le-argent | | | Basic, Plates | | <input type="checkbox"/> |
| 19 | jbayona | | | Basic, Lists, Plates | | <input type="checkbox"/> |
| 21 | karen | Karen | Hartley | Basic, Plates, Lists | KHartley@campusparc.com | <input type="checkbox"/> |
| 22 | veronica | | | Basic, Lists, Plates, Authorizations | | <input type="checkbox"/> |

⚙️
130 items
↻
+
🗑️

Filter Users

SYNC includes a quick way to filter the User list by adding filter criteria as a text string (see ④ of the [Users Table, p. 105](#)) or using the fast Filter by options in the context menu (see ⑦ of the [Users Table, p. 105](#)). To enable this, a Filter to the Results can be added or removed. Search filter syntax is:

Token:FilterValue, where:

| Token | filterKey | filterValue |
|--------------------|-----------|----------------|
| ID | id | User ID |
| USER USERNAME | username | User username |
| FIRST FIRSTNAME | firstName | User firstname |
| LAST LASTNAME | lastName | User lastname |
| EMAIL | email | User email |

Create a New User

Press the add (+) button (see ① of the [Users Table, p. 105](#)). A popup window will appear to create a new user.

The screenshot shows a 'Users' settings form with the following fields and controls:

- 1**: Username input field.
- 2**: 'Empty password' toggle switch.
- 3**: Password input field.
- 4**: 'Audited' toggle switch.
- 5**: 'Privileges' section containing:
 - 'Available' list: Actuators, Admin, AdminAuthorizations, AdminLists, Authorizations, Cameras, Lists, Maintenance.
 - 'Assigned' list: Basic.
- 6**: First name input field.
- 7**: Last name input field.
- 8**: Language dropdown menu (set to English).
- 9**: User ID input field.
- 10**: 'Pushbullet notifications' section containing:
 - Input field for 'Pushbullet Api Key'.
 - 'GET DEVICES' button.

A 'SAVE' button is located at the bottom right of the form.

Description:

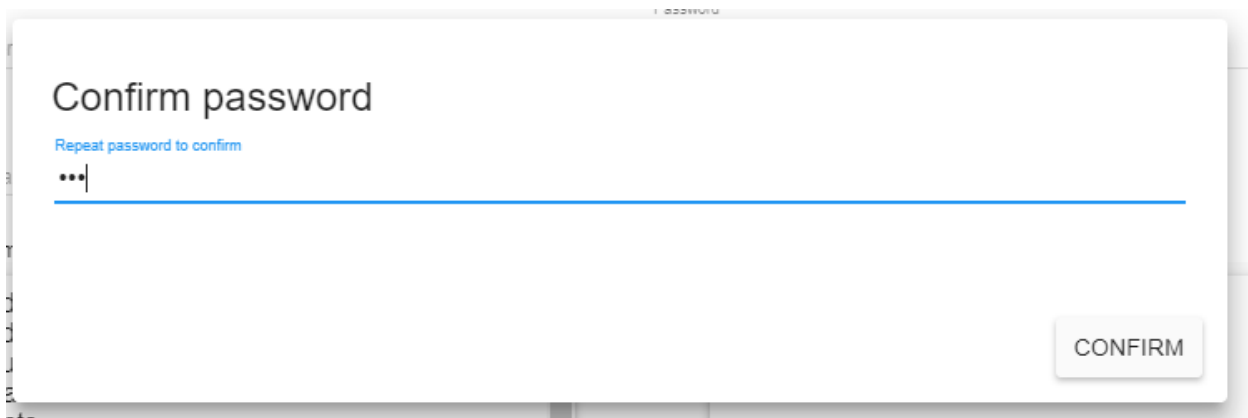
- Username ① : Username for the new user.
- Empty password ②
 - If enabled the user will not be able to login in the system and his password will be deleted. Apikey access will still work. This option has no effect if LDAP is enabled.
 - **Password:** Default password for the new user.
- Email ③ : Enter the user's email address. This email is used to receive system alerts and allows each user to receive their own email alerts.
- Audited ④ : Activate this option to add this user to the audit trail.

- Claims ⑤ : Set the privileges assigned to the user. Do this by double clicking on an item in the list to move it over to the user column (on the right)

Allowed privileges are:

- **Actuators:** The user can set up and configure actuators (relays).
 - **Admin:** Full privileges.
 - **Admin Lists:** The user can create, modify and delete any lists in the system.
 - **Authorizations:** The user can view, create, modify or delete authorizations.
 - **Basic:** The user can view data for zones, cameras, calendars, license plates and images. The user will only be able to see the information if it is also added for a user in the desired zone.
 - **Cameras:** The user can create and modify cameras.
 - **Lists:** The user can create, modify and delete only his own lists.
 - **Plates:** The user can modify plates read and protect images.
 - **Schedules:** The user can create, modify and delete schedules and time frames.
 - **Users:** The user can create, modify and delete users.
 - **Zones:** The user can create, delete and modify zones.
- First Name ⑥ : First name of the user.
 - Last Name ⑦ : Last name of the user.
 - Language ⑧ : User interface language.
 - User ID ⑨ : An optional ID normally used by the Police when plates are exported.
 - Pushbullet API Key ⑤ : Used with the Pushbullet software which is used for communicating with mobile devices. The system can be set up to send alarms to such a mobile device.

To create (or change) a new password, see below:



Confirm password


Repeat password to confirm

...

CONFIRM

NOTE! The button changes from **Cancel** to **Confirm** when the password has been entered correctly.

Delete a User

To delete a user, click the action Delete  in the context menu of the [Users Table, p. 105](#). Once pressed, a confirmation window will appear.

Also, a multiple User option is available.

| Id | User name | First name | Last name | Privileges | Email | |
|----|-----------------|------------|-----------|------------------------------|-------------------|-------------------------------------|
| 2 | q1700-le-uk-off | | | Plates, Basic | | <input checked="" type="checkbox"/> |
| 4 | demo | Sergio | Cabrera | Basic, Lists, Authorizations | sergi@sanserg.com | <input type="checkbox"/> |
| 5 | q1700-le-ny | | | Basic, Plates | | <input checked="" type="checkbox"/> |

AUDIT Tab

All the actions performed on the system are stored by default in the audit trail log. You can monitor exactly what each user is using the system for.

Audit Table

The screenshot shows the 'AUDIT' tab in the settings interface. At the top, there are navigation tabs: SETTINGS, USERS, AUDIT (selected), and GDPR. Below the tabs is a search bar containing 'USER: admin_user' and a search icon. A table of audit records is displayed with columns: Id, Timestamp, Source address, Action, Failed, and User. A 'Filter by' dropdown menu is open over the table, listing options: Action, Failed, User, Source address, Date from, Date to, and Close. At the bottom right, there is a status bar showing '66745 items' and a download icon.

| Id | Timestamp | Source address | Action | Failed | User |
|----------|-------------------------|----------------|--------------------------|--------|------------|
| 51937293 | 06/17/2022, 01:22:25 PM | 79.116.77.213 | GET /api/audit | No | admin_user |
| 51937280 | 06/17/2022, 01:22:25 PM | 79.116.67.213 | GET /api/user/all | No | admin_user |
| 51937276 | 06/17/2022, 01:22:25 PM | 79.116.65.213 | GET /api/user/all | No | admin_user |
| 51936947 | 06/17/2022, 01:22:25 PM | 79.116.77.213 | GET /api/audit | No | admin_user |
| 51936917 | 06/17/2022, 01:22:25 PM | 79.116.77.213 | GET /api/user/all | No | admin_user |
| 51936911 | 06/17/2022, 01:22:25 PM | 79.116.65.213 | GET /api/config/telegram | No | admin_user |
| 51936908 | 06/17/2022, 01:22:25 PM | 79.116.77.213 | GET /api/config/dgl | Yes | admin_user |
| 51936907 | 06/17/2022, 01:22:25 PM | 79.116.77.213 | GET /api/config/spf | Yes | admin_user |
| 51936906 | 06/17/2022, 01:22:25 PM | 79.116.67.213 | GET /api/config/smtptest | No | admin_user |
| 51936905 | 06/17/2022, 01:22:25 PM | 79.116.65.213 | GET /api/config/smtptest | No | admin_user |
| 51936902 | 06/17/2022, 01:22:25 PM | 79.116.77.213 | GET /api/config/alert | No | admin_user |

Search Audit Records

In the upper left corner (see ① of the [Audit Table](#), p. 110). When clicked, a pop-up window appears where you can choose from the following search filters:

Search criteria
✕

Action 1

Details 2

Date from 3

Date to 4

Source address 5

User 6
admin_user

Failed Yes No All 7

CLEAR

SEARCH

Description

- Action ① : SYNC action recorded.
- Details ② : Text details of the action are recorded.
- Date from ③ : Will show only the activity since the selected date + time.
- Date to ④ : Will show only the activity until the selected date + time.
- Source address ⑤ : IP address of the user that has performed a SYNC action.
- User ⑥ : User who has performed the SYNC action
- Failed ⑦ : Shows if the action failed or not.

Search Filters

SYNC includes a quick way to filter the Audit list by adding search criteria as a text string (see ④ of the [Audit Table, p. 110](#)) or using the fast Filter by options in the context menu (see ⑦ of the [Audit Table, p. 110](#)). To enable this, a Filter to the Results can be added or removed. Search filter syntax is: **Token:FilterValue**, where:

| Token | filterKey | filterValue |
|---------|-----------|---|
| ACTION | action | Action Example: ACTION:GET/api/user/all |
| DETAILS | details | Text included in the Details attribute. |

SETTINGS

| Token | filterKey | filterValue |
|------------------|---------------|--|
| FROM DATEFROM | dateFrom | DateTime format dd/MM/yyyy hh:mm:ss , example: 08/01/2018 10:22:29 |
| TO DATETO | dateTo | DateTime format dd/MM/yyyy hh:mm:ss , example: 08/01/2018 10:22:29 |
| FAILED | failed | True or False |
| USER USERID | userId | User id or Username |
| SOURCE | sourceAddress | Source address |

NOTE! To clear search criteria use button x located at the right of the Search Filter bar.

REST API

It is possible to communicate directly with MOBOTIX MOBOTIX SYNC via the REST API which facilitates functions such as pushing Blacklists or Whitelists directly into the Helix SQL databases (PUT) or receiving plate reads or images back (GET).

Definitions

API: Application Programming Interface.

This allows an external or remote piece of software to communicate directly with MOBOTIX SYNC.

REST - Representational State Transfer (sometimes written as ReST)

REST is an architectural style for providing standards between computer systems on the web., making it easier for systems to communicate with each other. REST-compliant systems, often called RESTful systems, are characterised by how they are stateless and separate the concerns of client and server.

So, a REST API defines a set of functions which developers can use to perform requests and receive responses via HTTP protocol such as GET and POST.

Because REST APIs use HTTP, they can be used by practically any programming language and are easy to test. It is a requirement of a REST API that the client and server are independent of each other allowing either to be coded in any language.

REST API

See separate manual: MOBOTIX MOBOTIX SYNC – API Definition – v1.7.1 or later.

The API documentation is available on the MOBOTIX Community website at <https://community.mobotix.com>.

APPENDIX

When configuring the alerts via email, there are several reserved words allowing you to customize the message:

\$timestamp\$ **Sequence of characters denoting the time and date the reading event occurred, the format is "yyyy-MM-ddTHH:mm:sszzz"**

\$platenumber\$ Returns the license plate number read.

\$cameraname\$ Indicates the name of the camera that made the recognition.

\$cameraid\$ Returns camera ID.

\$confidence\$ Provides the trust data of the read-in license plate.

\$charheight\$ Indicates the height of the character on the license plate.

\$latitude\$ Returns the latitude coordinates of the read plate.

\$longitude\$ Returns the longitude coordinates of the read plate.

\$speed\$ It returns the speed of the vehicle registered by the recognition system.

\$zone\$ Returns the area in which the plate was read.

\$zoneid\$ Return zone ID in which the plate was read.

\$description\$ Adds the alarm description in case of a blacklist trigger.

\$comments\$ Adds the comments of the alarm from a blacklist trigger.

\$hitcount\$ Shows the number of the hits for this plate on the blacklist.

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