USER MANUAL

FOR ZKTECO CAMERAS

VERSION 4.1

Brief Description:
User Manual for ZKTeco Cameras

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Contents

History:

Date	Creator	Details
11.03.2020	Luis Rodríguez	Initial Document
07.05.2021	Samuel Muñoz	Audit
07.03.2024	Eylan Zhang	New elements and adjustment for current UI

1. Overview

ZKTeco is a powerful LPR application developed, embedded in the cameras.

ZKTeco is the all in one product to plug and play, ready to read plates just out of the box.

It Includes an interface web application that allows you to manage different scenarios, avoiding extra hardware and software installations.

2. Installation Requirements

2.1. Camera requirements

It is recommended to have a minimum of 2GB of free space in the camera.
If this space is not available, it must be completed with a Micro SD.
The micro-SD should be formatted in **EXT4 format.**

SD requirements:

- Class: 10
- Read speed: 100MB/S
- Write speed: 60MB/S

List of compatible cameras:

DL-852Q28B-LP
BL-852Q38A-LP

2.2. Storage requirement

The preset values are supposed to have **40% JPEG compression** (the default system value).
In the following table, we can find an ***estimation of size*** requirements:

Size/Registers	1	1000	5000	10000	100000
640x480	13KB	12.7 MB	63.5 MB	127 MB	1.24 GB
800x600	20KB	19.5 MB	97.7 MB	195.3 MB	1.9 GB
1280x720	25KB	24.4 MB	122 MB	244.14 MB	2.38 GB
1600x904	70KB	68.35 MB	341.8 MB	683.6 MB	6.68 GB
1920x1080	110KB	107.4 MB	537,1 MB	1.05 GB	10.5 GB

Estimation with an affluence of 100 cars per day.

Size/GB	2	8	16	32	64
640x480	4.4 years	17.6 years	30.53 years	70 years	140 years
800x600	2.8 years	11.5 years	20.3 years	40.5 years	90 years
1280x720	2.27 years	9.1 years	10.8 years	30.7 years	70.3 years
1600x904	290 days	3.2 years	6.5 years	10.3 years	20.6 years
1920x1080	190 days	2 years	4.16 years	8.3 years	10.6 years

Estimation with an affluence of 1000 cars per day.

Size/GB	2	8	16	32	64
640x480	161 days	645 days	3.53 years	7 years	14 years
800x600	105 days	420 days	2.3 years	4.5 years	9 years
1280x720	83 days	335 days	1.8 years	3.7 years	7.3 years
1600x904	29 days	119 days	239 days	1.3 years	2.6 years
1920x1080	19 days	76 days	152 days	305 days	1.6 years

Estimation with an affluence of 10000 cars per day.

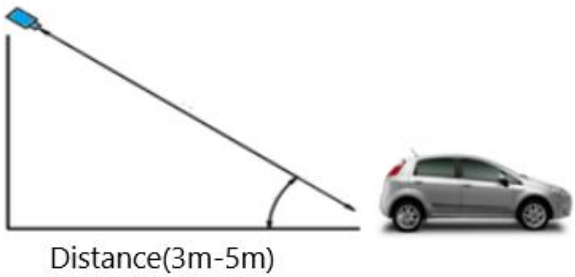
Size/GB	2	8	16	32	64
640x480	16 days	64 days	128 days	256 days	512 days
800x600	10 days	42 days	84 days	168 days	336 days
1280x720	8 days	33 days	66 days	132 days	264 days
1600x904	2 days	11 days	23 days	46 days	92 days
1920x1080	1 days	7 days	15 days	30 days	60 Days

2.3. License Plate Character size

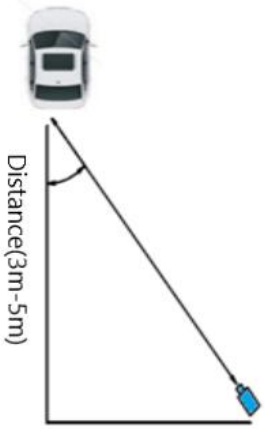
Characters on license plates must have an average height between 20 and 80 pixels, with 25 pixels being a good reference value. Less resolution may lead to character confusion in some countries. In addition, camera sensitivity affects it too. For countries in which there are different character sizes on their license plates, this fact must be kept in mind, so the small characters are included in the detection range.

2.4. Camera Positioning

Recommended vertical angles are approximately 20º. The maximum recommended value is 35º.



Recommended horizontal angles are approximately 20º. The maximum recommended value is 35º.



The angle between the plates and the X axis of the scene must be inferior to 25º.

Recommended Parametrization

It should be mentioned that the following recommendations and specifications are general and may vary depending on the brand and model of the selected camera and the country in which it is to be installed.

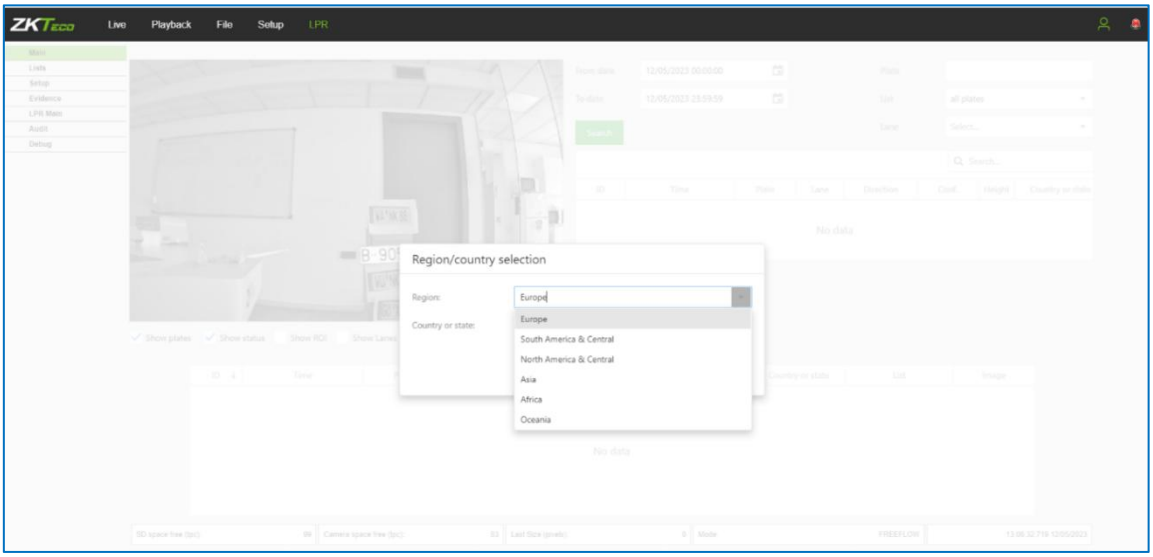
Common Scenario

Common scenario: 1 lane
Sensor size: VGA o 1 MP
Height of camera on pole: 1 - 1.5meters

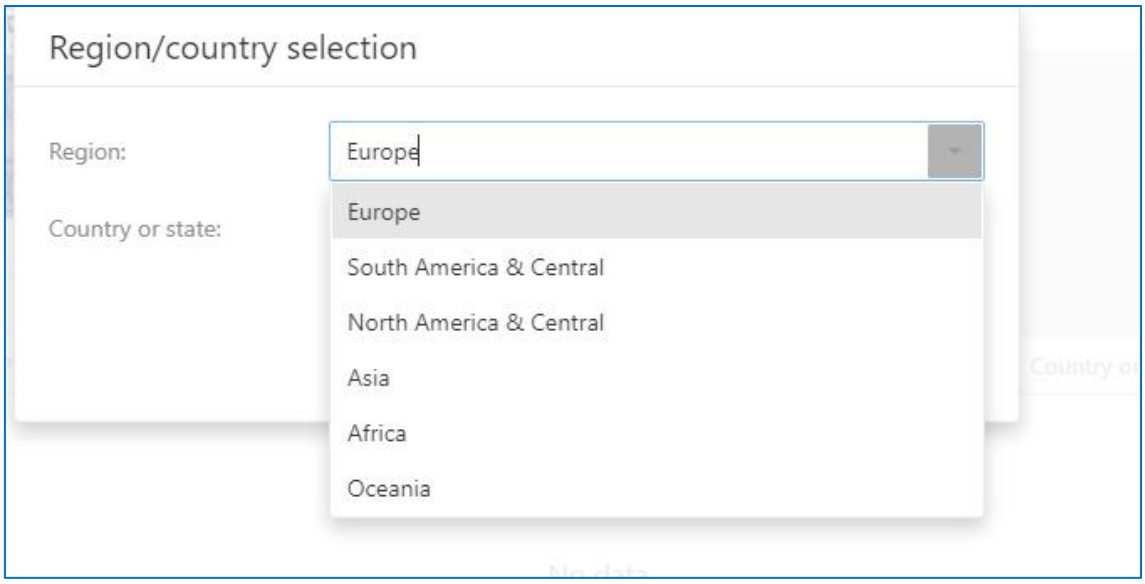
3. Access to ZKTEco

3.1. First access (selection country)

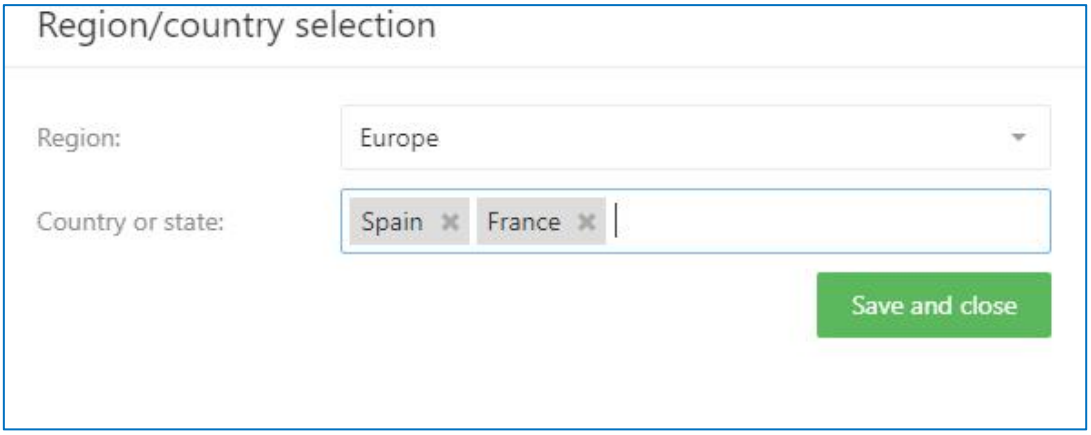
Upon first access to the web ZKTeco, the system will ask us for the region and country.
The country selection is mandatory to define the country(ies) of license plates to read.



First select the Region:



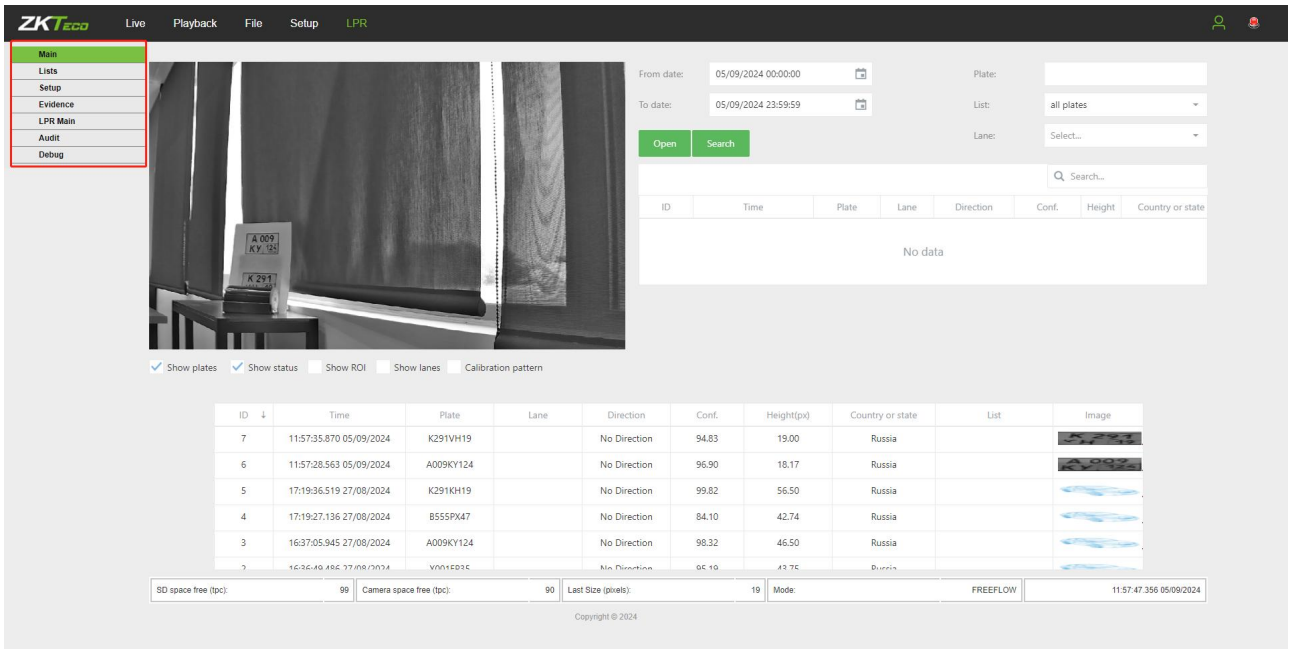
Now select the countries in the region. Multiple selection is available.



4. Web View

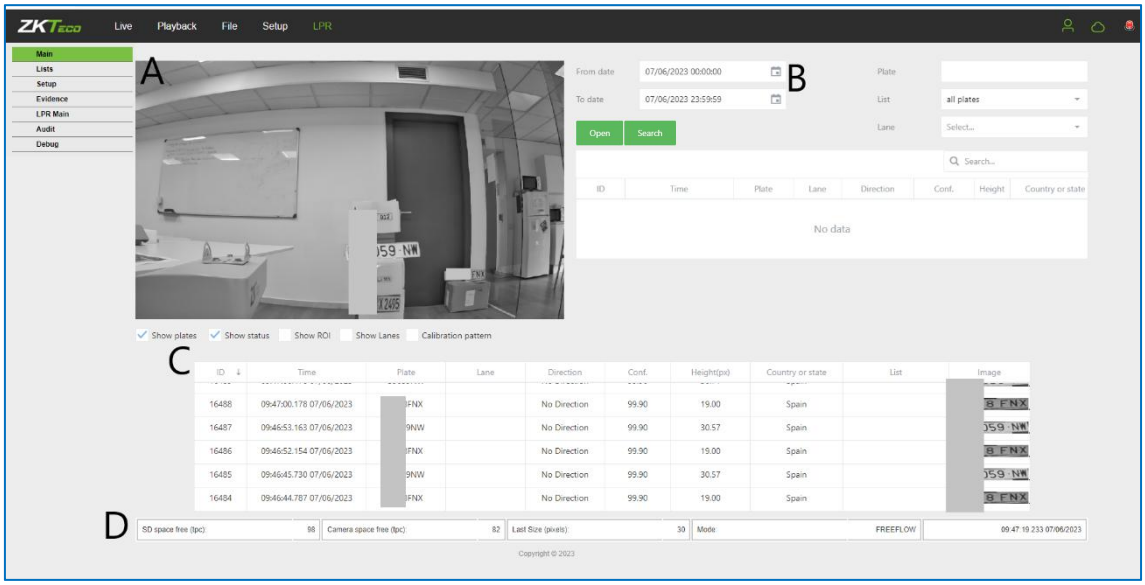
4.1. Tab

The top left of the screen has a tab menu marked with a red rectangle, which is the MENU toolbar with all the available options.



4.2. Main Tab

The main tab shows the camera's live view. (This tab is divided into 4 different areas.) We have divided it into 4 parts: the Monitor Panel (labeled A), the Review Panel (labeled B), the Results Panel (labeled C), and the Info Panel (labeled D).



Monitor Panel: Live image what the camera is streaming. Under the live streaming image, there are five checks:

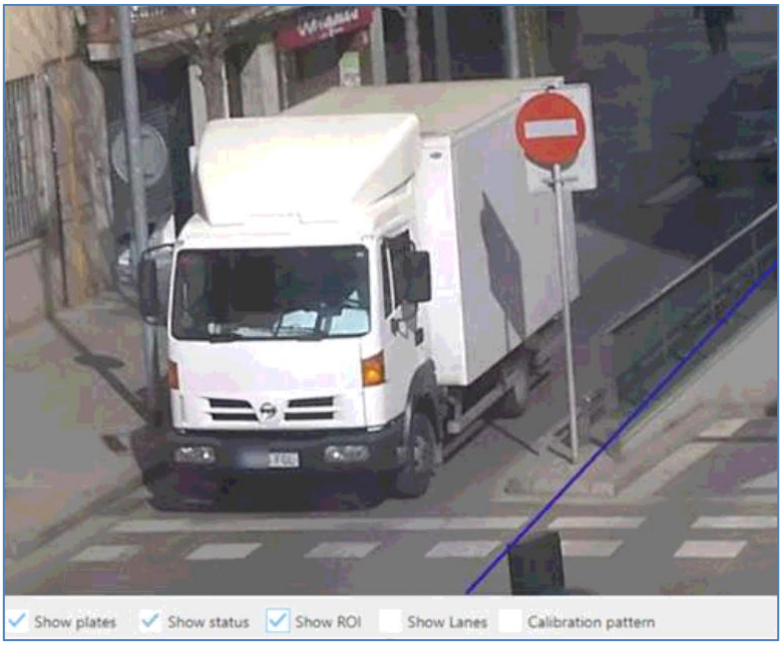
Show plates: When this option is selected and the info panel is active, it shows all the information of saved plates.

Show status: When this option is selected and the result panel is active, it shows the total results of attributes.

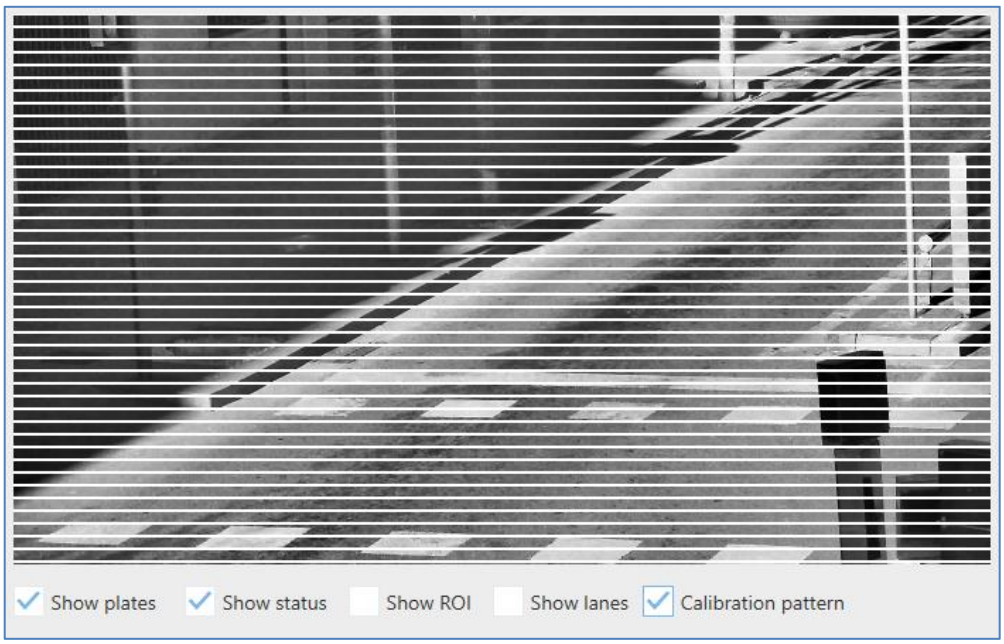
Show ROI: When you select this check box, you can see a red square indicating the ROI (region of interest) defined in the parameters. This area is the only section of the image where the engine will try to find plates.


Show plates
Show status
Show ROI
Show Lanes
Calibration pattern

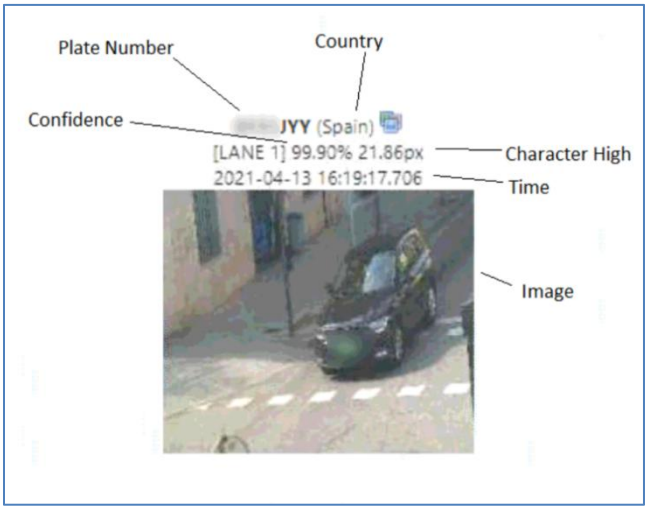
Show lanes: When you select this check box, you can see a blue line defining the lanes we have configured in the parameters. The plates on the left side of the screen are captured in lane 1, and the plates on the right side of the screen are captured in lane 2.



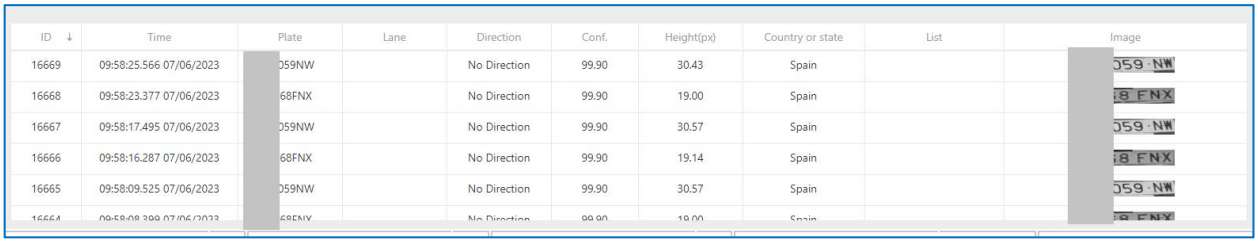
Calibration pattern: When you select this check box, you can see white lines indicating the minimum character size. The vertical space between lines is 25 pixels; the plate number must be higher than this space.



Results Panel: It shows the latest results; we highlight the last result with a blue outline. The results will provide:



The results can be seen in list mode above.

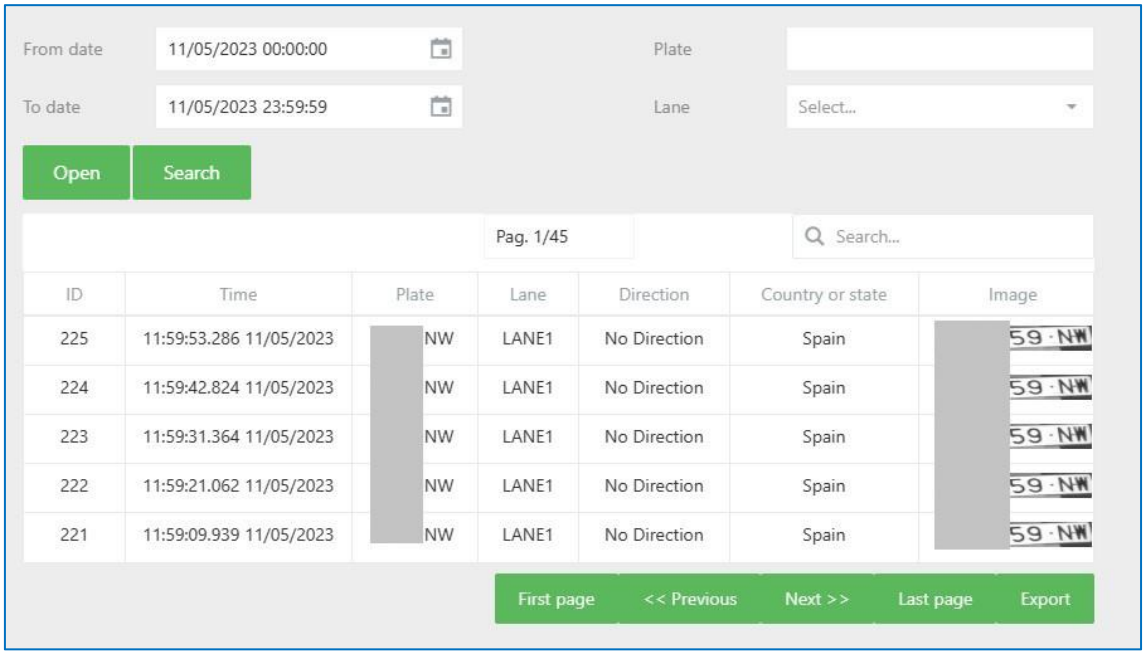


ID	Time	Plate	Lane	Direction	Conf.	Height(px)	Country or state	List	Image
16669	09:58:25.566 07/06/2023	[redacted]059NW		No Direction	99.90	30.43	Spain		
16668	09:58:23.377 07/06/2023	[redacted]68FNX		No Direction	99.90	19.00	Spain		
16667	09:58:17.495 07/06/2023	[redacted]059NW		No Direction	99.90	30.57	Spain		
16666	09:58:16.287 07/06/2023	[redacted]68FNX		No Direction	99.90	19.14	Spain		
16665	09:58:09.525 07/06/2023	[redacted]059NW		No Direction	99.90	30.57	Spain		
16664	09:58:08.399 07/06/2023	[redacted]68FNX		No Direction	99.90	19.00	Spain		

Info Panel: Information on the system status. The columns with the last change are those with the last updated value.

- SD space free (%): Percent of free space in the SD card.
- Camera free space (%): Percentage of free space in the camera.
- Last Size (pixels): Pixel size in the last result license plate captured.
- Mode: Mode of functionality. Values:
    - NO LICENSE: There is no license in the system.
    - STOPPED: The service is stopped.
    - MOTION: The service works in Motion Detection mode.
    - FREEFLOW: The service works in Free flow mode.
    - TRIGGER: The service works in Trigger mode

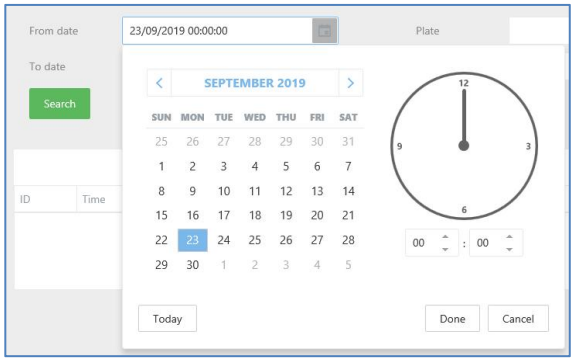
Review Panel: The review panel allows us to search, filter, and consult the results.



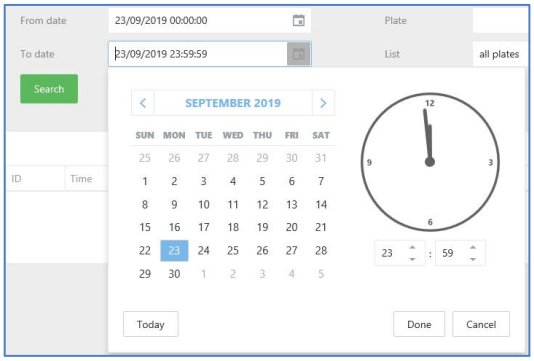
From Date: Select the date when you want to initiate the search.
To Date: Select the date when you wish to stop searching.
Plate: It allows users to search partially by entering a few numbers or letters on the license plate. This option will search all plates that coincide with the desired query.
List: It allows users to filter by lists, meaning it will show you all plates that belong to a list.
Direction: This filter allows you to select the direction of the vehicles, whether they're coming, going, or not.
Lane: This filter allows users to select the lane of the road (Lane 1 and Lane 2) if it is configured under LPR configuration.

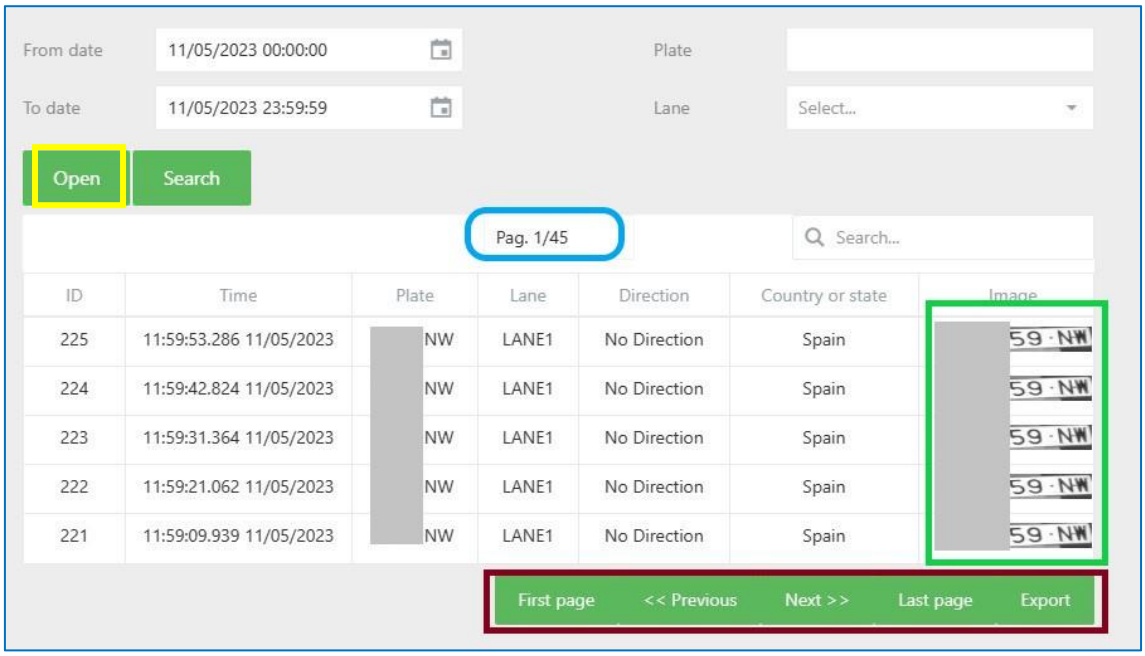
For example, if you wish to search for a specific plate by date, from 02/10 to 02/12.

From Date:

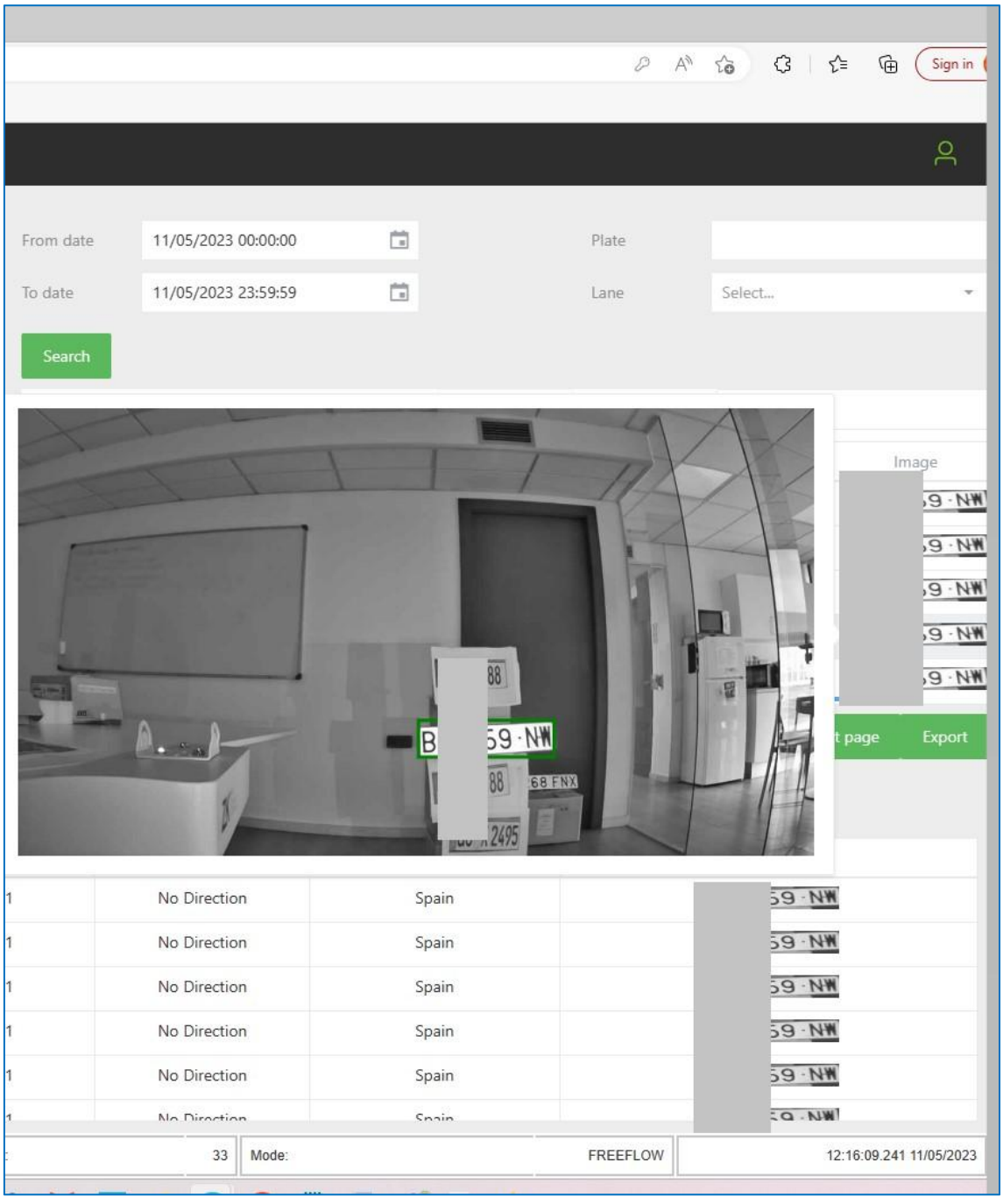


To Date:



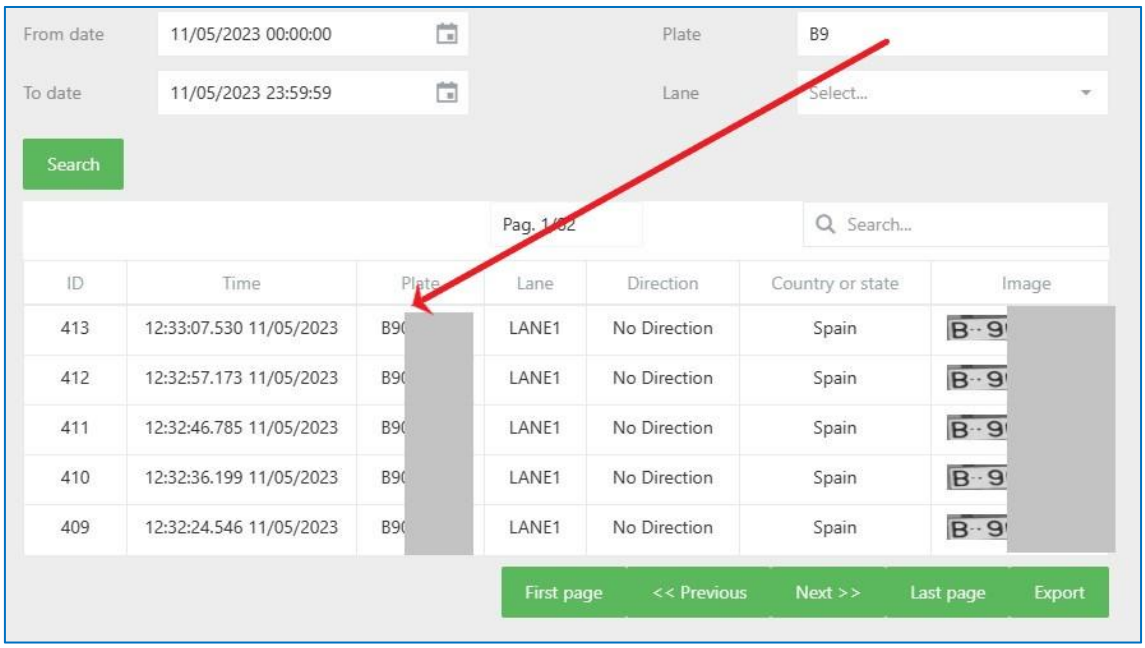


The red box corresponds to navigating between pages.
The blue box indicates the number of pages you are on.
The green box shows the license plate number images. If you move the mouse cursor over any image, you can obtain a larger image.
The yellow box, the relay signals can be output remotely from the web page by clicking on this “open” button.



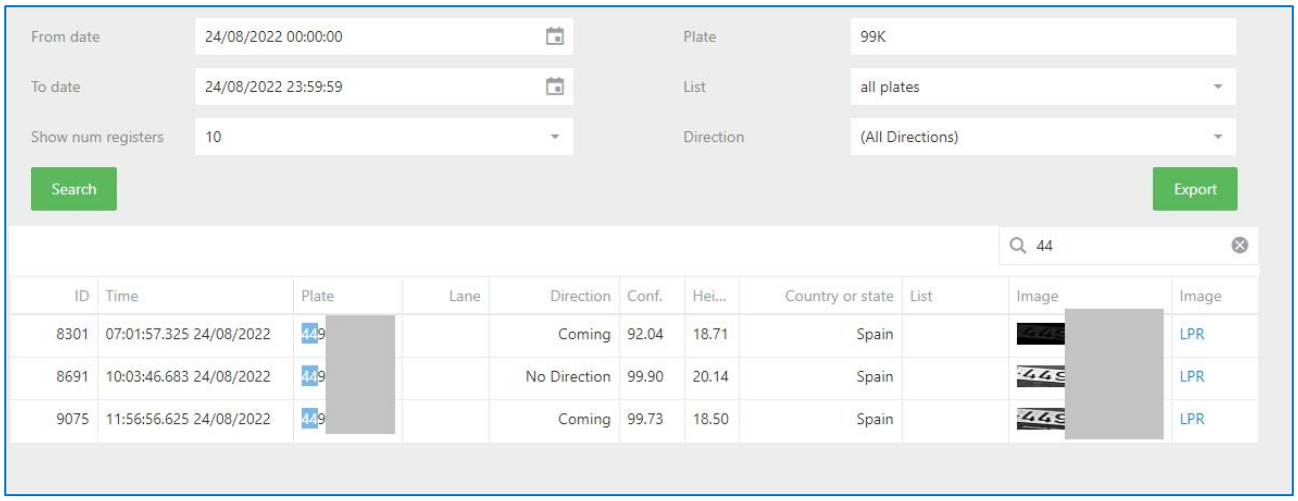
There is a download image option.

Searching for a license plate which we only remember a few letters or numbers. In this case, all you need to do is enter a part of the plate in the PLATE filter and search.



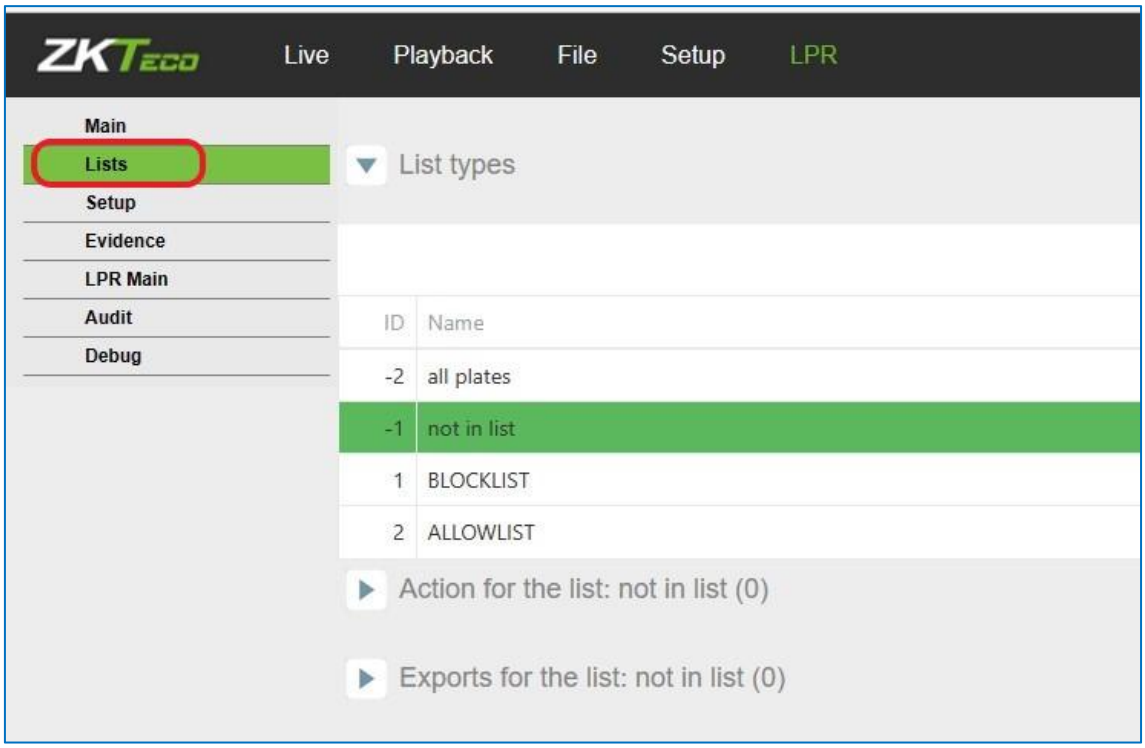
You can also search for license plates that are in a list.

You can use the Search filter to find a value inside the table:


From date
24/08/2022 00:00:00
Plate
99K
To date
24/08/2022 23:59:59
List
all plates
Show num registers
10
Direction
(All Directions)
Search
Export
44
ID
Time
Plate
Lane
Direction
Conf.
Hei...
Country or state
List
Image
Image
8301
07:01:57.325 24/08/2022
Coming
92.04
18.71
Spain
LPR
8691
10:03:46.683 24/08/2022
No Direction
99.90
20.14
Spain
LPR
9075
11:56:56.625 24/08/2022
Coming
99.73
18.50
Spain
LPR

4.3. Lists Tab

In this tab, you can create lists. A list is a group of license plates that will trigger an action. Neural Edge allows you to perform different actions on any list.
By default, there are four lists created: ALL PLATES, NOT IN LIST, BL0CKLIST, and ALLOWLIST. You can edit, delete, or add more lists.
After creating the name of the list, you can decide the Levenshtein distance of the list.



In the lists tab, we have the following options:

List: It shows all the lists created.

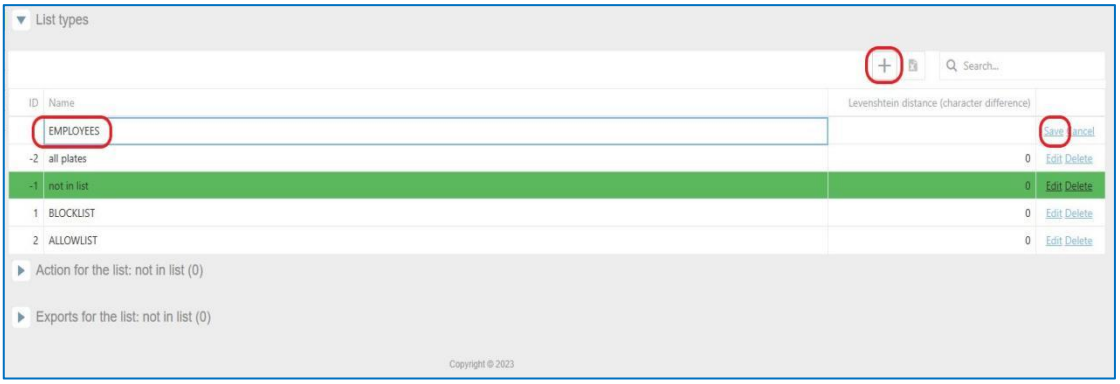
Action: It shows all the actions created by the list.

Export: It allows you to export a single list, or if all plates are selected, it creates a unique file with all the license plates that belong to that list.

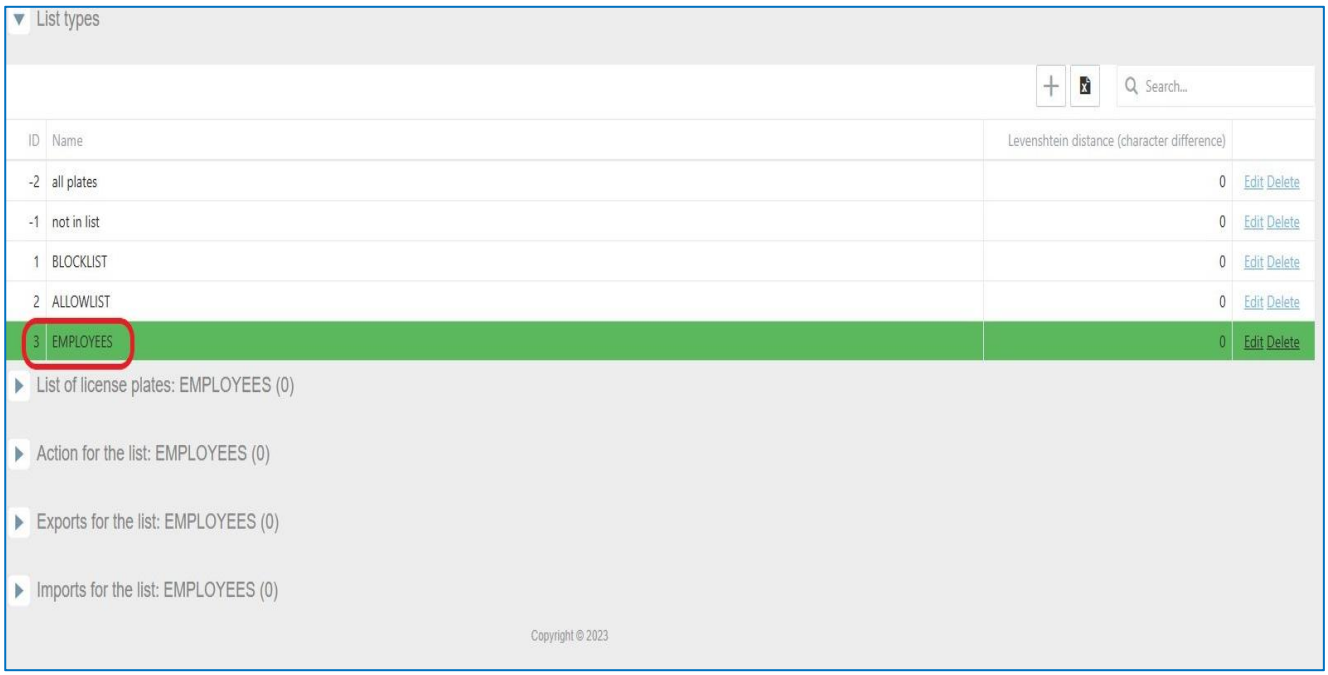
Import: It allows you to import a single list, or if all plates are selected, it creates a unique file with all the license plates that belong to that list.

Let's create a new list and call it “EMPLOYEES”.

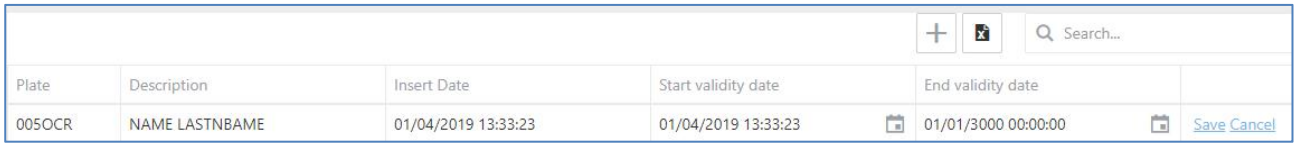
Click on the “+” button, enter the list name, and click on “Save”.



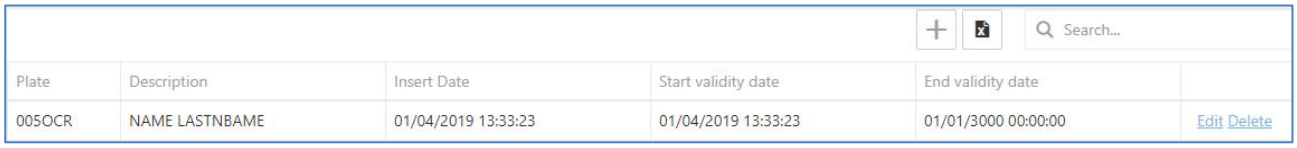
Now we are going to configure an action for this list, in other words, what we expect to happen if we read a license plate.
Click on “EMPLOYEES” list to see the options.



List of the license plates: EMPLOYEES
Add a new license plate, click on the “+” button and fill in the grid.



To edit or delete a license plate in that list, just click on the plate and then:



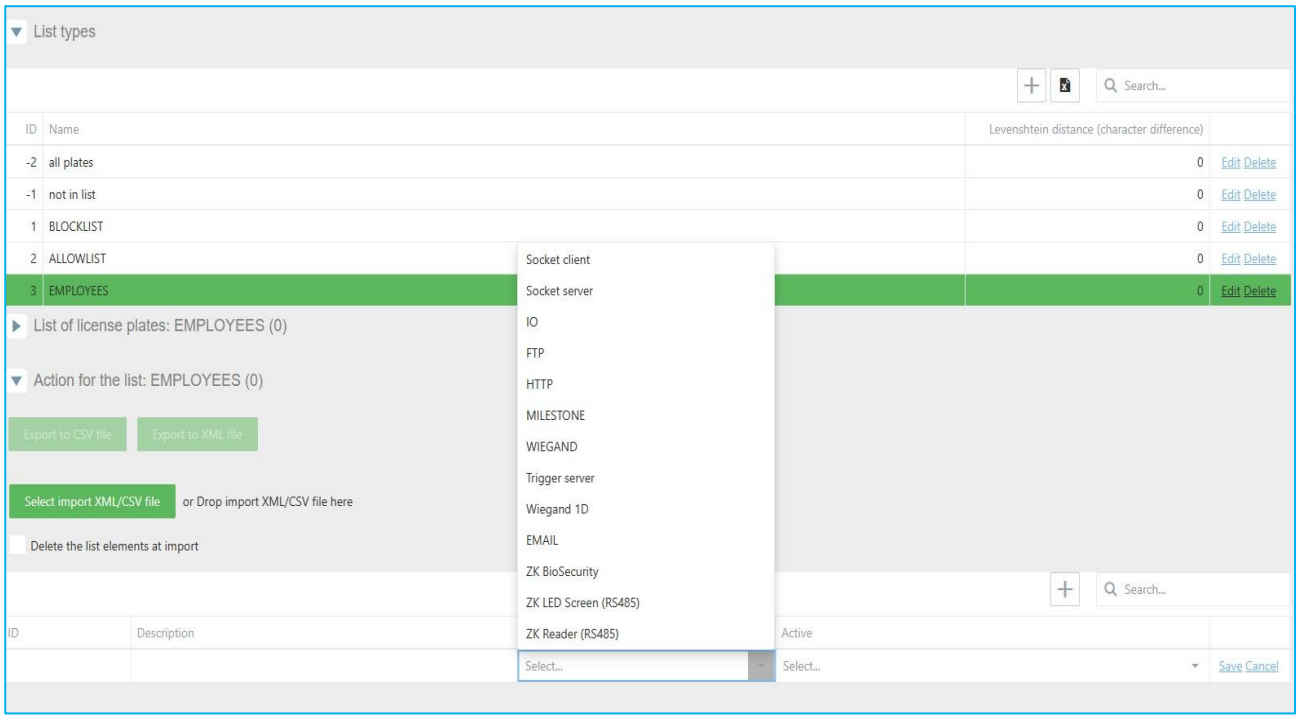
* In case the system works in trigger mode, and we want to execute a no-plate action, we must add NO_PLATE to the list.

Action for the list: Here are all the actions we can configure for each list:

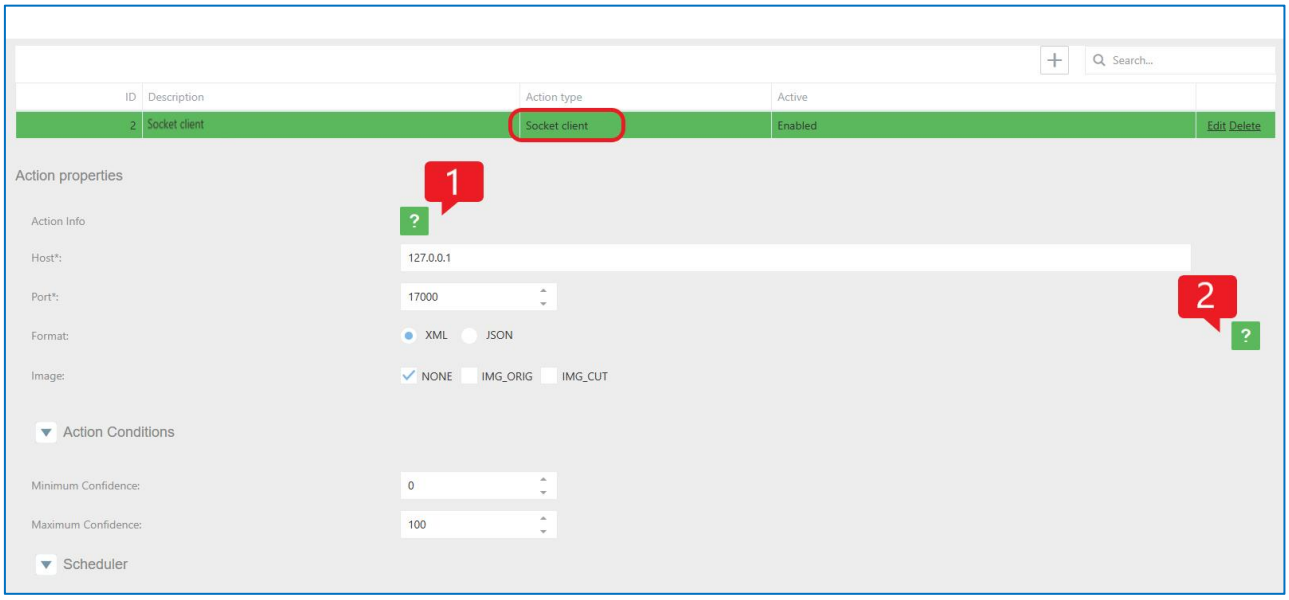
- **Socket Client**: Enables a socket connection to send messages as XML or JSON.
- **Socket Server**: Opens a port in the camera to listen to hosts for sending messages as XML or JSON.
- **IO**: Enables inbound and outbound digital signals in the camera.
- **FTP**: Stores the results in an FTP server.
- **HTTP**: Sends a request using HTTP or HTTPS protocols to a server.
- **MILESTONE**: Sends an analytic event to Milestone VMS.
- **WIEGAND**: Sends a signal to Wiegand middleware board.
- **Trigger Server**: Enables a port that sends the read response when a trigger message arrives.
- **Wiegand 1D**: Sends a request using this protocol to a server.
- **Email:** Sends an email.
- **ZK BioSecurity**: Sends an HTTP message with the plate information and image to a ZKTeco BioSecurity server.
- **ZK LED Screen (RS485):** Interacts with a ZKTeco LED Screen of 2 or 4 lines.
- **ZK Reader (RS485):** Interacts with a ZKTeco inBio controller (using RS-485 Bus).
- **Twin Camera:** Filters actions depending on the twin camera information.

A list can perform several actions, depending on the scenario and needs.

Having the Employees list selected, click on “Action for the list” and then click on the + button.


List types
Search...
ID
Name
Levenshtein distance (character difference)
-2 all plates 0 Edit Delete
-1 not in list 0 Edit Delete
1 BLOCKLIST 0 Edit Delete
2 ALLOWLIST 0 Edit Delete
3 EMPLOYEES 0 Edit Delete
List of license plates: EMPLOYEES (0)
Action for the list: EMPLOYEES (0)
Export to CSV file
Export to XML file
Select import XML/CSV file
or Drop import XML/CSV file here
Delete the list elements at import
Socket client
Socket server
IO
FTP
HTTP
MILESTONE
WIEGAND
Trigger server
Wiegand 1D
EMAIL
ZK BioSecurity
ZK LED Screen (RS485)
ZK Reader (RS485)
Search...
ID
Description
Active
Select...
Select...
Save Cancel

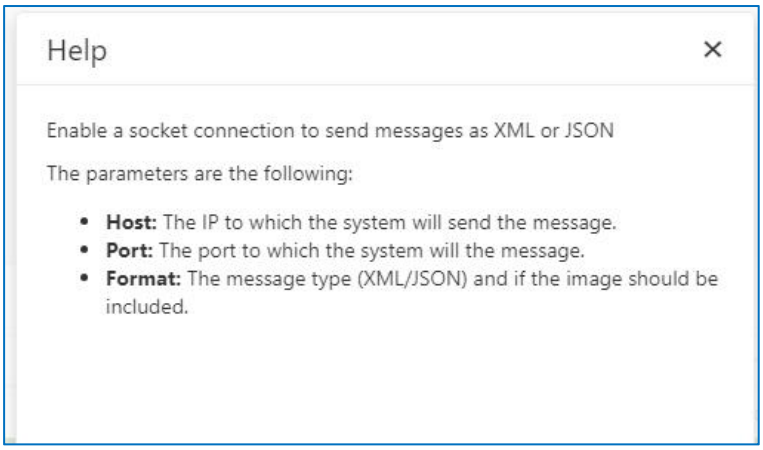
1. Configuring the ***Socket Client*** action because you want to send the results to another device, under the EMPLOYEES list, click on "Action for the list" and add a new action by pressing +," and then select "Action type = Socket Client."



Action Conditions: Set the minimum and maximum confidence filter to do the socket client action.

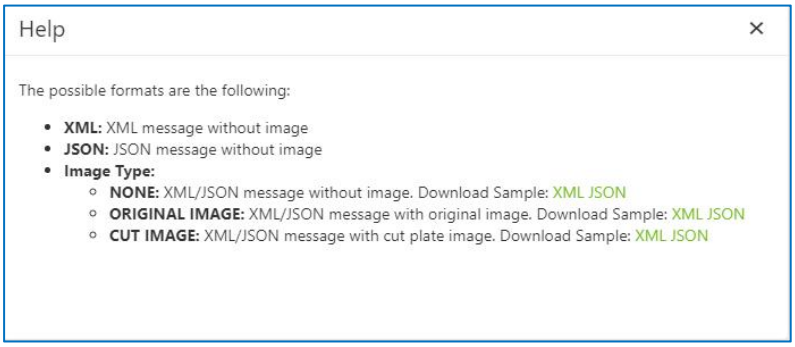
Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

Action Info: Click on  for more information.

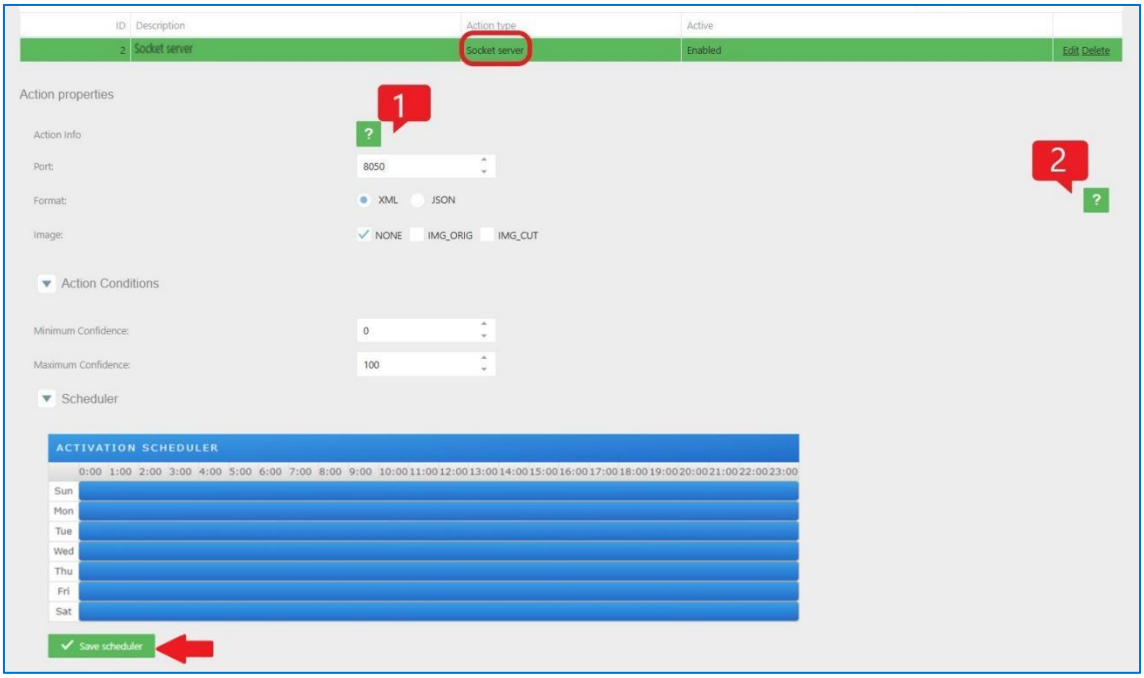


Select which message format you will use to send the information.

Click on  for more information about format type.



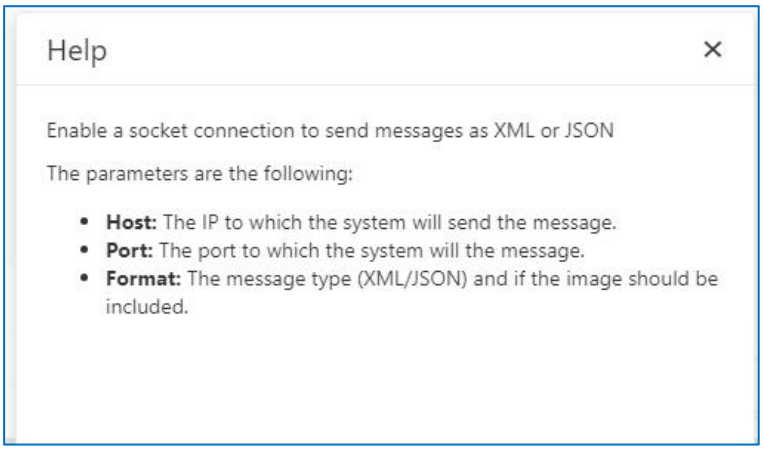
2. Configuring the ***Socket Server*** action will use the camera to receive messages from other devices. Click on “Action for the list” and add a new action pressing “+” and then select in “Action type = Socket Server”



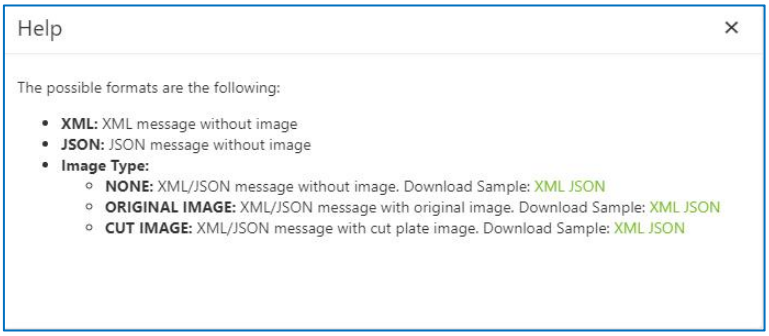
Action Conditions: Set the minimum and maximum confidence filter to do the socket server action.

Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

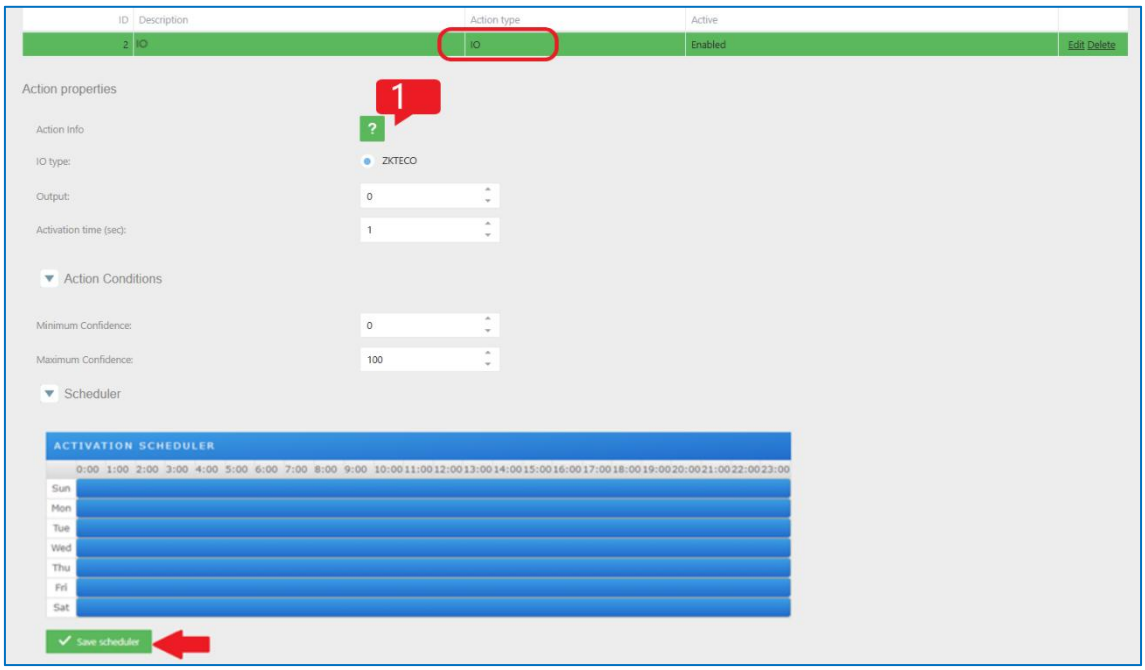
Action Info: Click on  for more information.



Click on  for more information about format type.

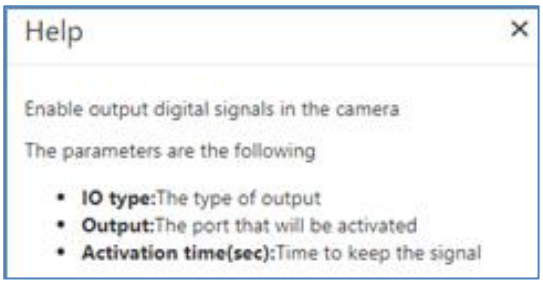


3. Configuring the ***IO*** action to open a gate for those plates that belong to the list EMPLOYEES Click on "Action for the list" and add a new action by pressing +," and then select "Action type = IO."



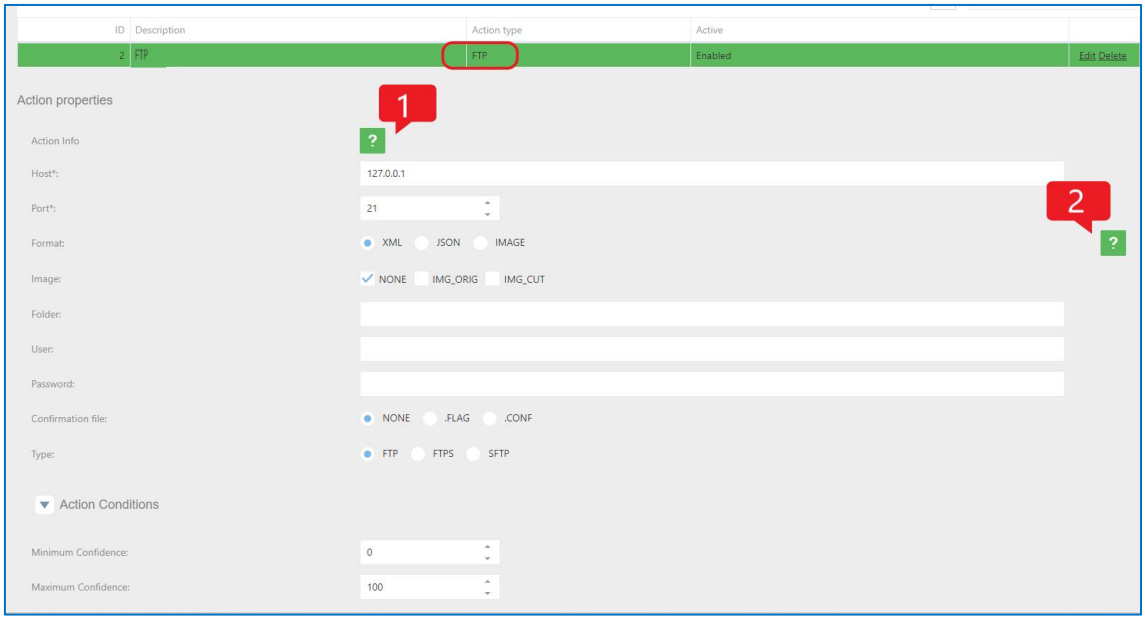
Action Conditions: Set the minimum and maximum confidence filter to do the IO action.
Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

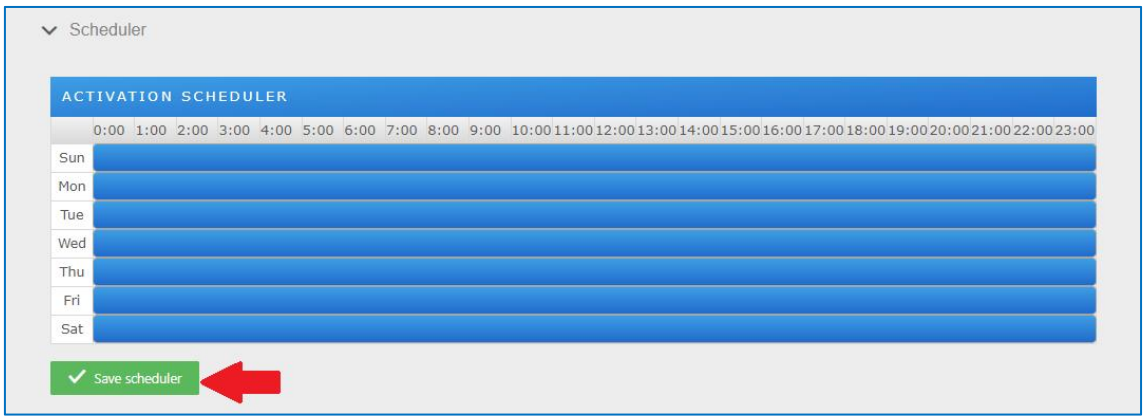
Click on  for more information about how to configure.



In this case, every time we read a license plate that is in the EMPLOYEES list, we send a signal to the camera I/O to open the gate.

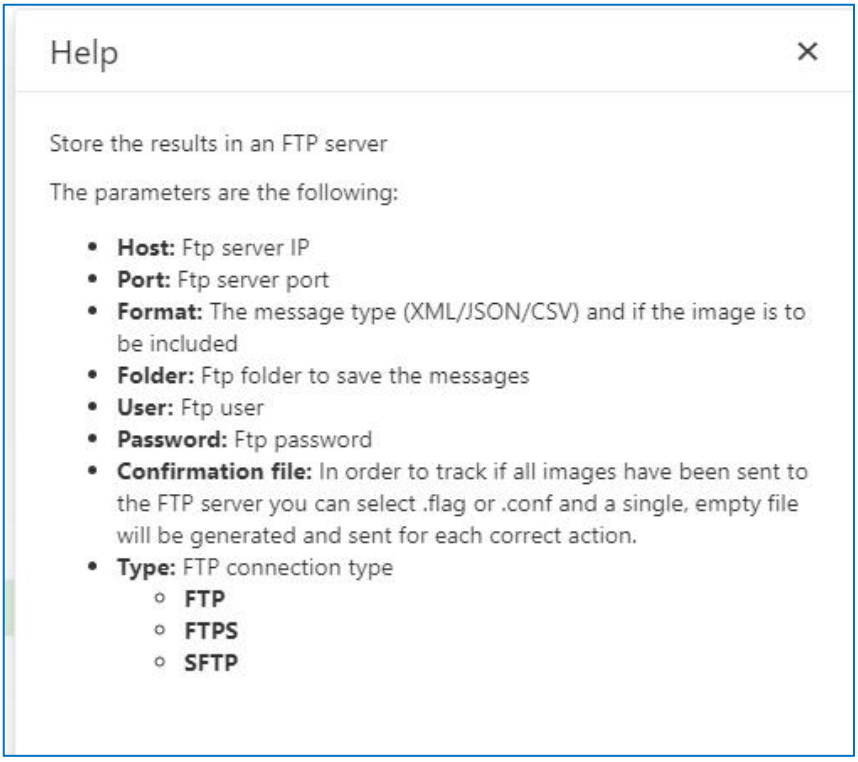
4. Configuring the ***FTP*** action to send an XML, JSON, or image to an FTP server under the EMPLOYEES list, click on "Action for the list" and add a new action by pressing "+" and then selecting "Action type = FTP".





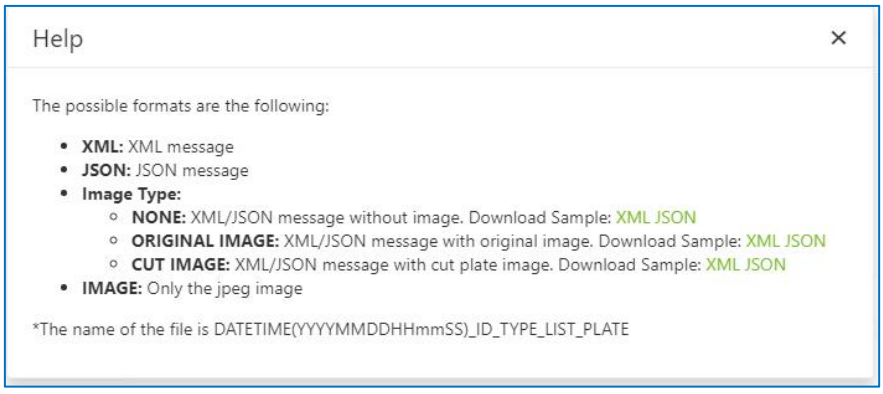
Action Conditions: Set the minimum and maximum confidence filter to do the FTP action.
Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

Click on  for more information about how to configure.



Select which message format you will use to send the information.

Click on  for more information about format type.



5. Configuring the ***HTTP*** action to send analytic events to a VMS under the EMPLOYEES list, click on "Action for the list" and add a new action by pressing +," and then select "Action type = HTTP."

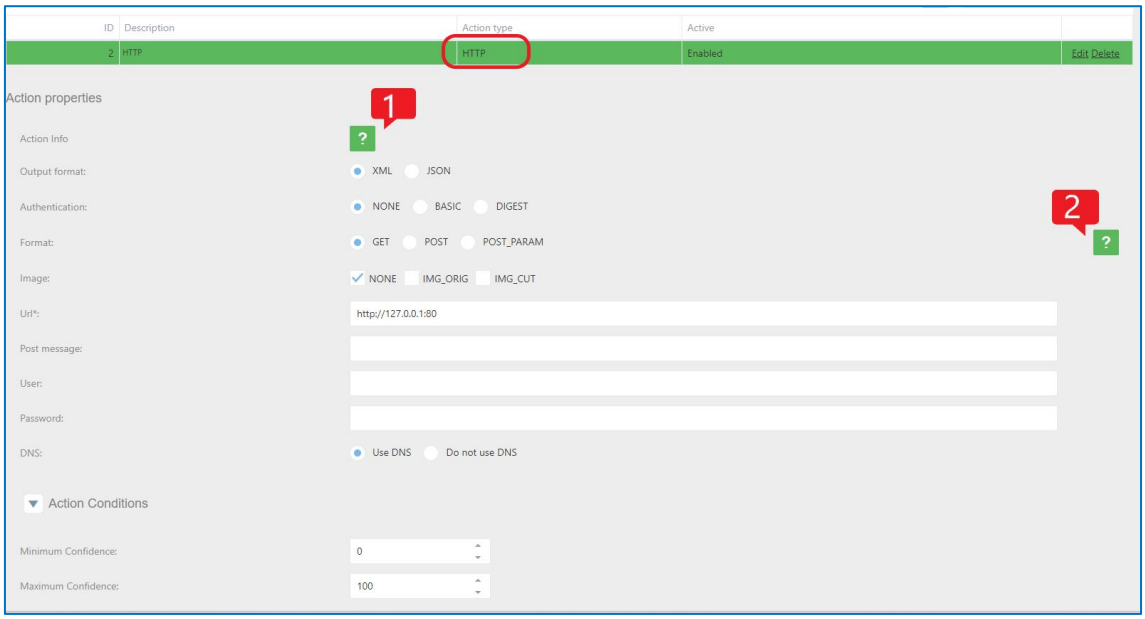
   You can use wildcards in the “Url” param to include some information in the http petition:

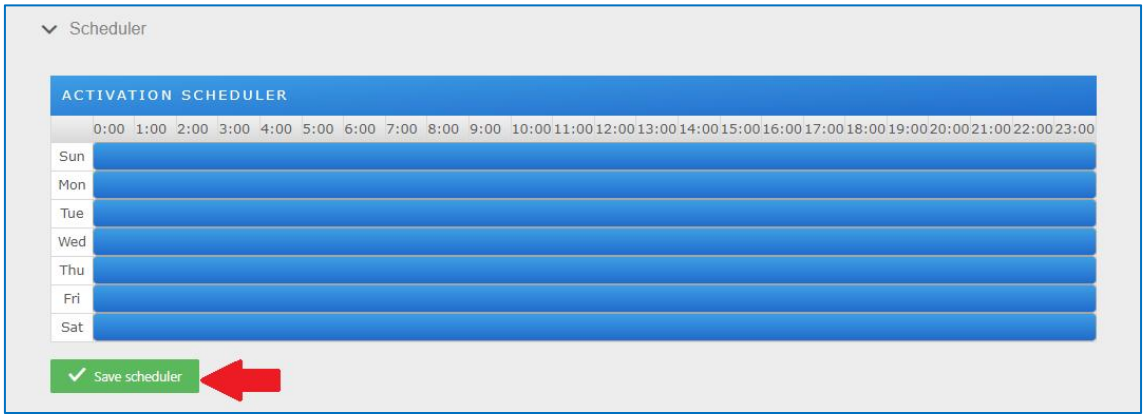
   #IDCOMP# Computer ID
   #IDRESULT# Result ID
   #IDCAM# Camera identifier
   #PLT# Plate number
   #DTE# Time stamp of the image captured.
   #CNF# Global confidence
   #IDLIST# List of list identifiers separated by []. [-1] not in list
   #IDNAME# List names
   #IDLAN# Lane identifier (1 or 2)
   #ENDLN# New line

   Examples:

   http://192.168.1.23:80?plate=#PLT#&time=#DTE#
   http://192.168.1.23:80?plate=0715GYC&time=2019-09-27T18:49:19.912

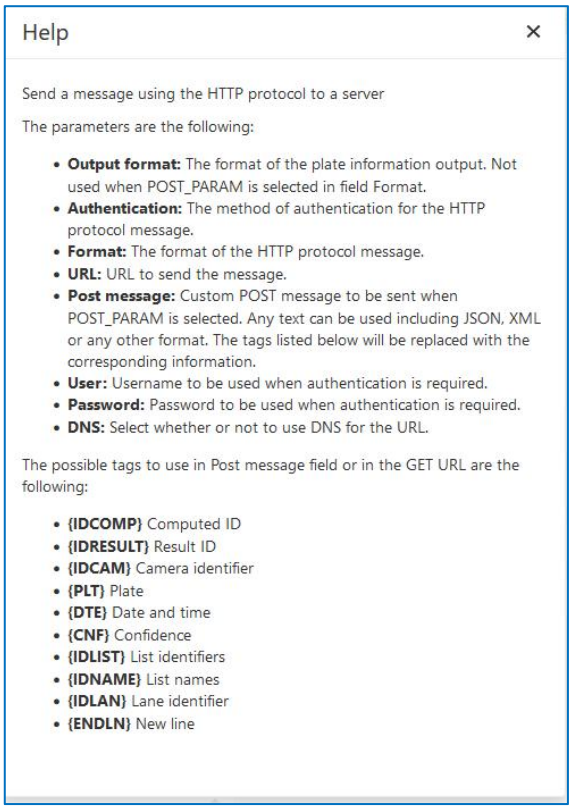
   http://192.168.1.34:8090?plate=#PLT#&cam=#IDCAM#&time=#DTE#&conf=#CNF#&lane=#IDLAN#&list=#IDLIST#
   http://192.168.1.34:8090?plate=0715GYC&cam=1&time=2019-09-27T18:52:49.929&conf=99.90&lane=2&list=[-1]





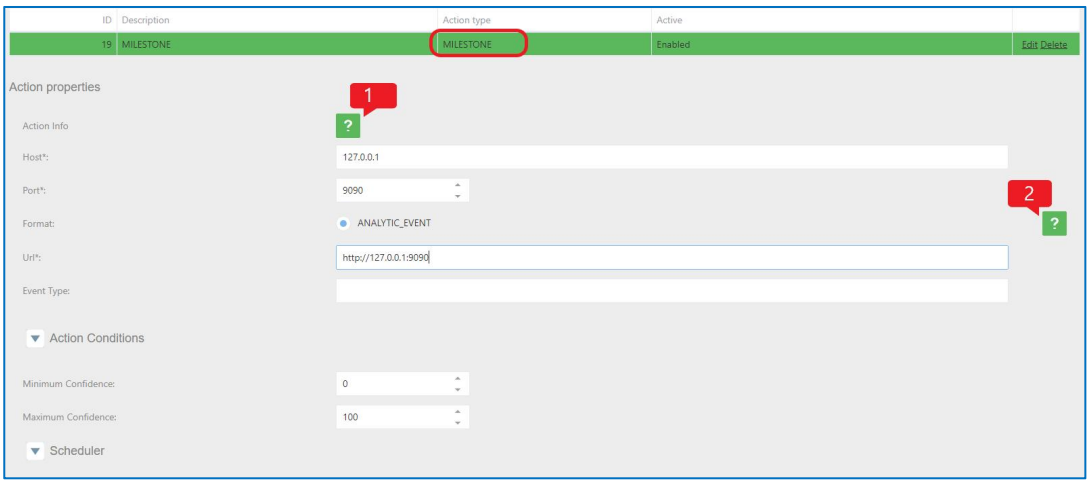
Action Conditions: Set the minimum and maximum confidence filter to do the HTTP action.
Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

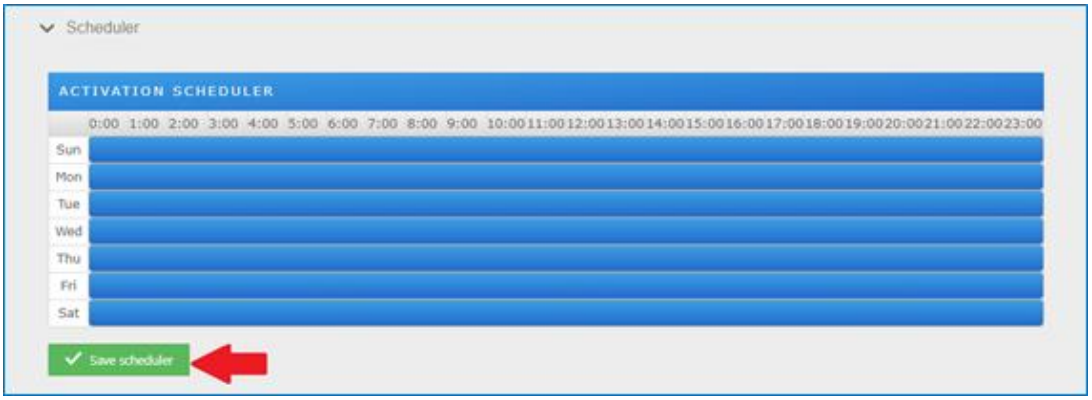
Click on  for more information about how to configure.



Click on  for more information about format type.

6. Configuring the ***MILESTONE*** action to send analytic events to a Milestone VMS under the EMPLOYEES list, click on "Action for the list" and add a new action by pressing "+" and then selecting "Action type = Milestone.".



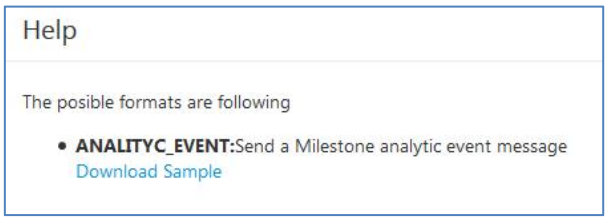


Action Conditions: Set the minimum and maximum confidence filter to do the Milestone action.

Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

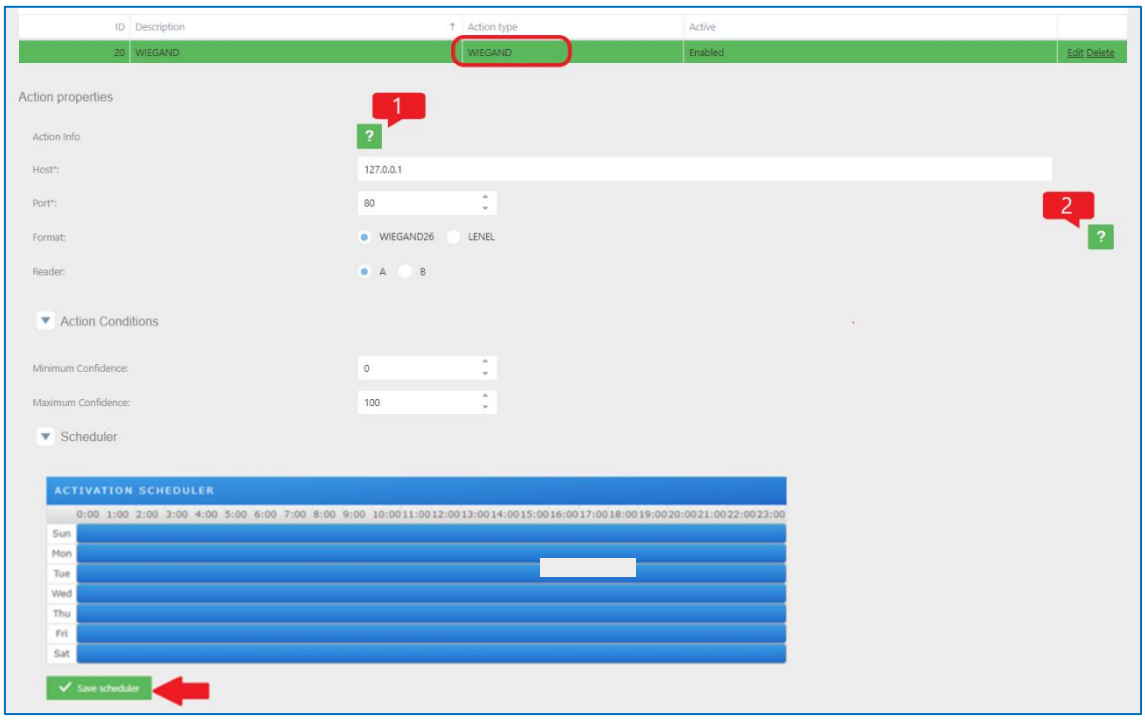
Click on  for more information about how to configure.

Click on  for more information about format type.



See chapter 4.4.1 to know more information about how to configure Milestone.

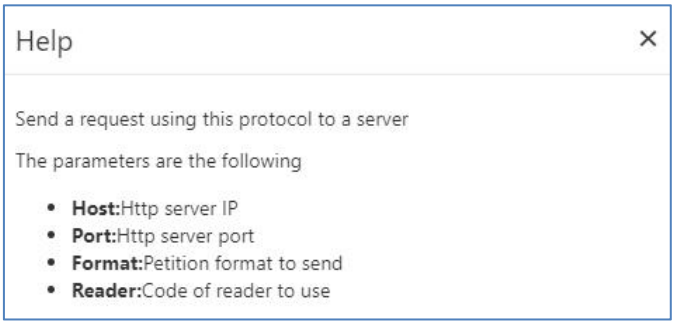
7. Configuring the **WIEGAND** action to send analytic events to a Wiegand middleware board under the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = WIEGAND”



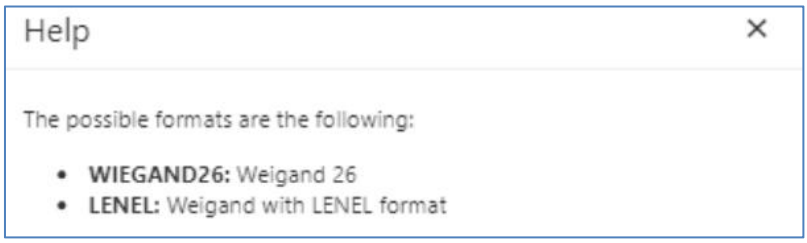
Action Conditions: Set the minimum and maximum confidence filter to do the Wiegand action.

Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

Click on  for more information about how to configure.



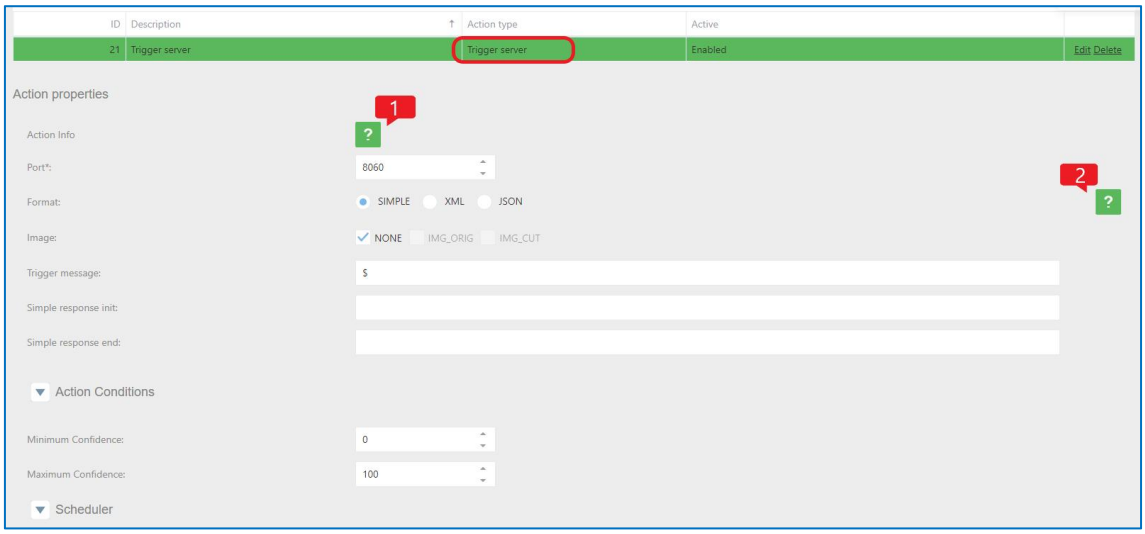
Click on  for more information about format type.



8. Configuring the **Trigger Server** action will use the camera to receive triggers from other devices and send a message under the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = Trigger Server”.

   This mode is designed to work with trigger mode. The client connects to the server socket and sends the message specified for "Trigger mode", Upon receiving this message (another message is discarded), it makes a trigger to the camera and takes a picture to process the engine. After the engine is processed, send a message with the format specified in the "Format response."

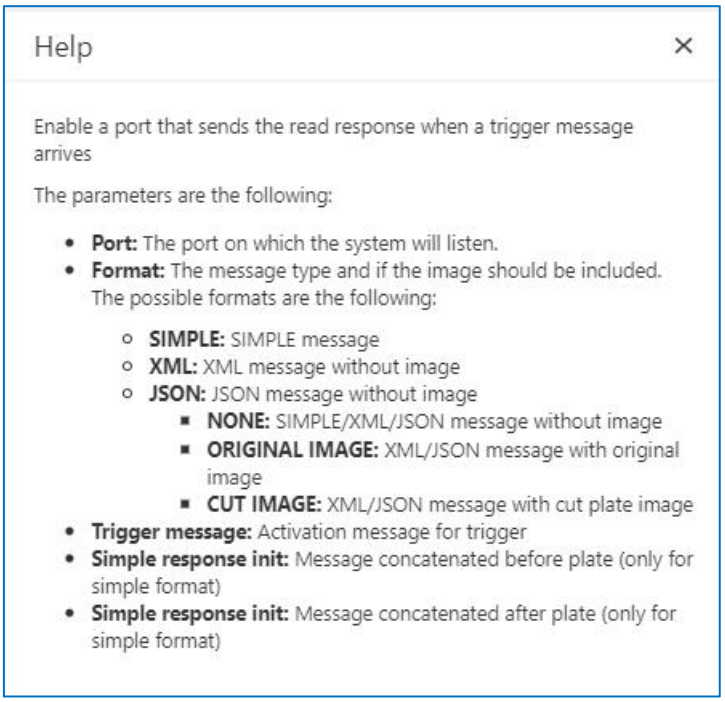
   SIMPLE: Just the plate number
   XML a message in format XML
   XML_IMG a message in XML format including the image in base64 format
   JSON a message in format JSON
   JSON_IMG a message in JSON format including the image in base64 format



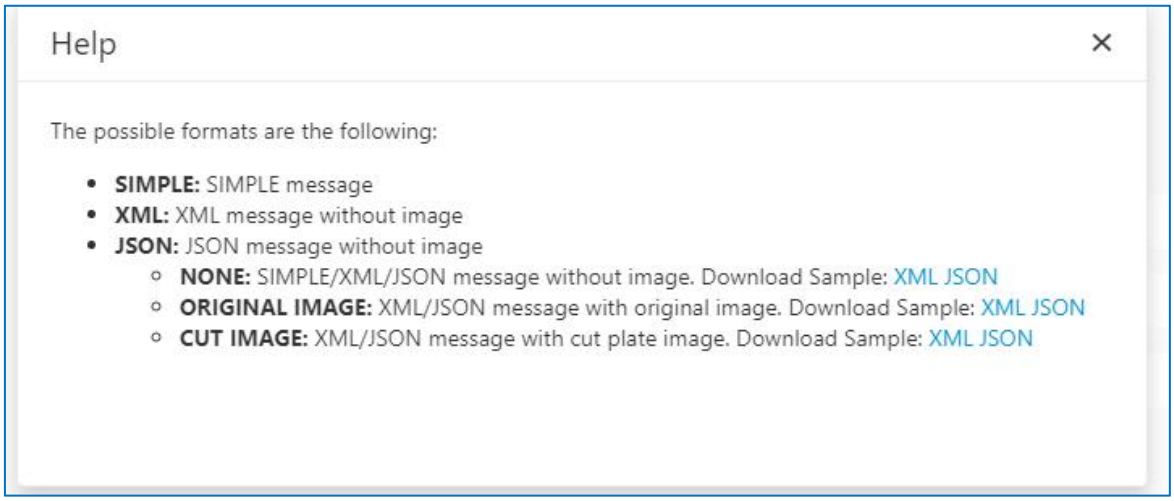
Action Conditions: Set the minimum and maximum confidence filter to do the Trigger Server action.

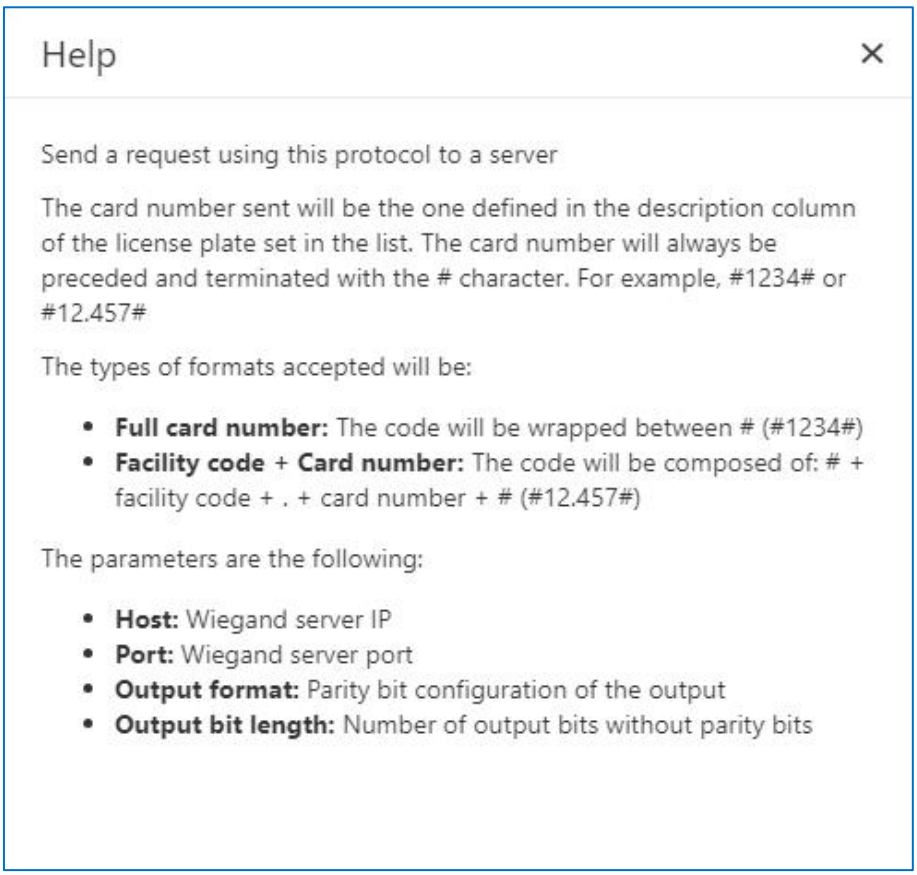
Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

Click on  for more information about how to configure.



Click on  for more information about format type.

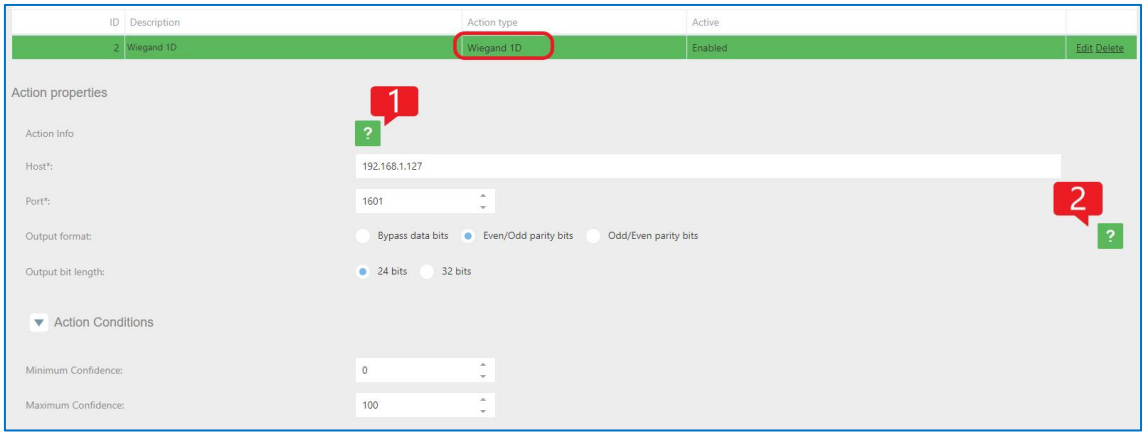


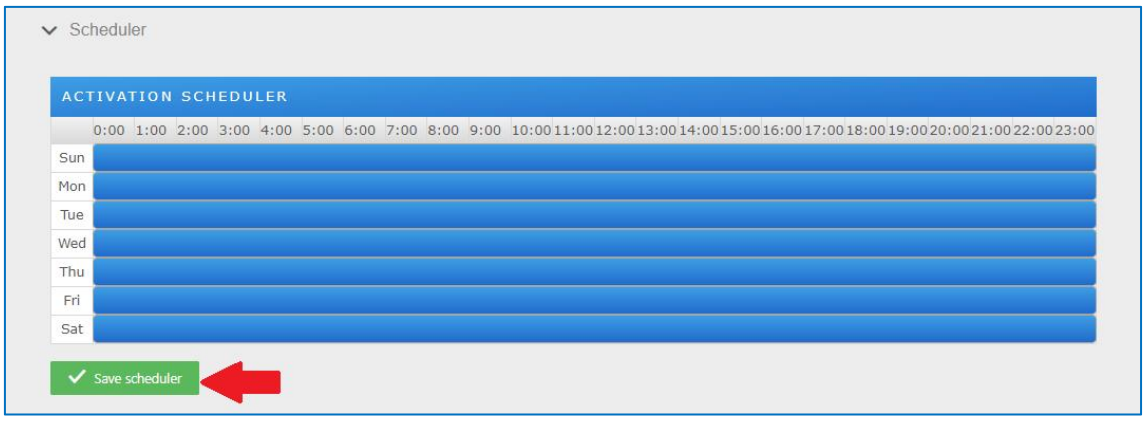


***Note:** Max 3 simultaneous connections are allowed.

***Recommended way of work:** Establish connection, send trigger message, read LPR result, and close connection.

9. Configuring the **Wiegand 1D** action to send a request using this protocol to a server under the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type **= Wiegand 1D**”.

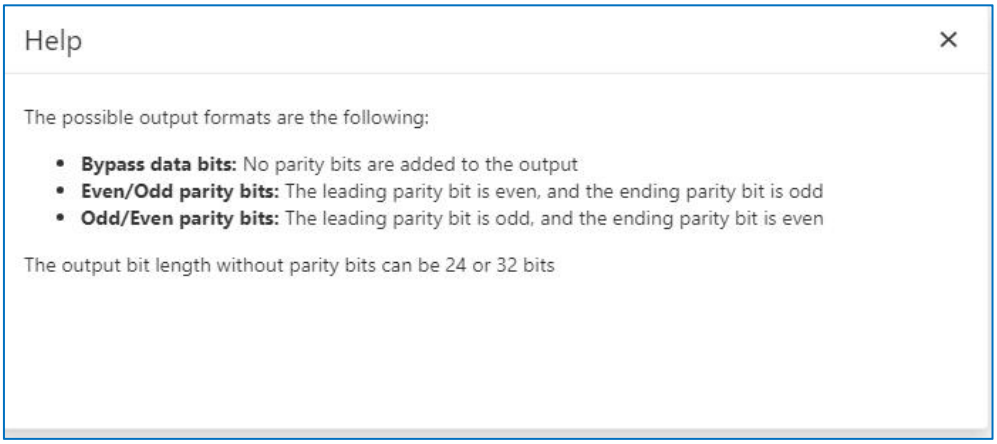




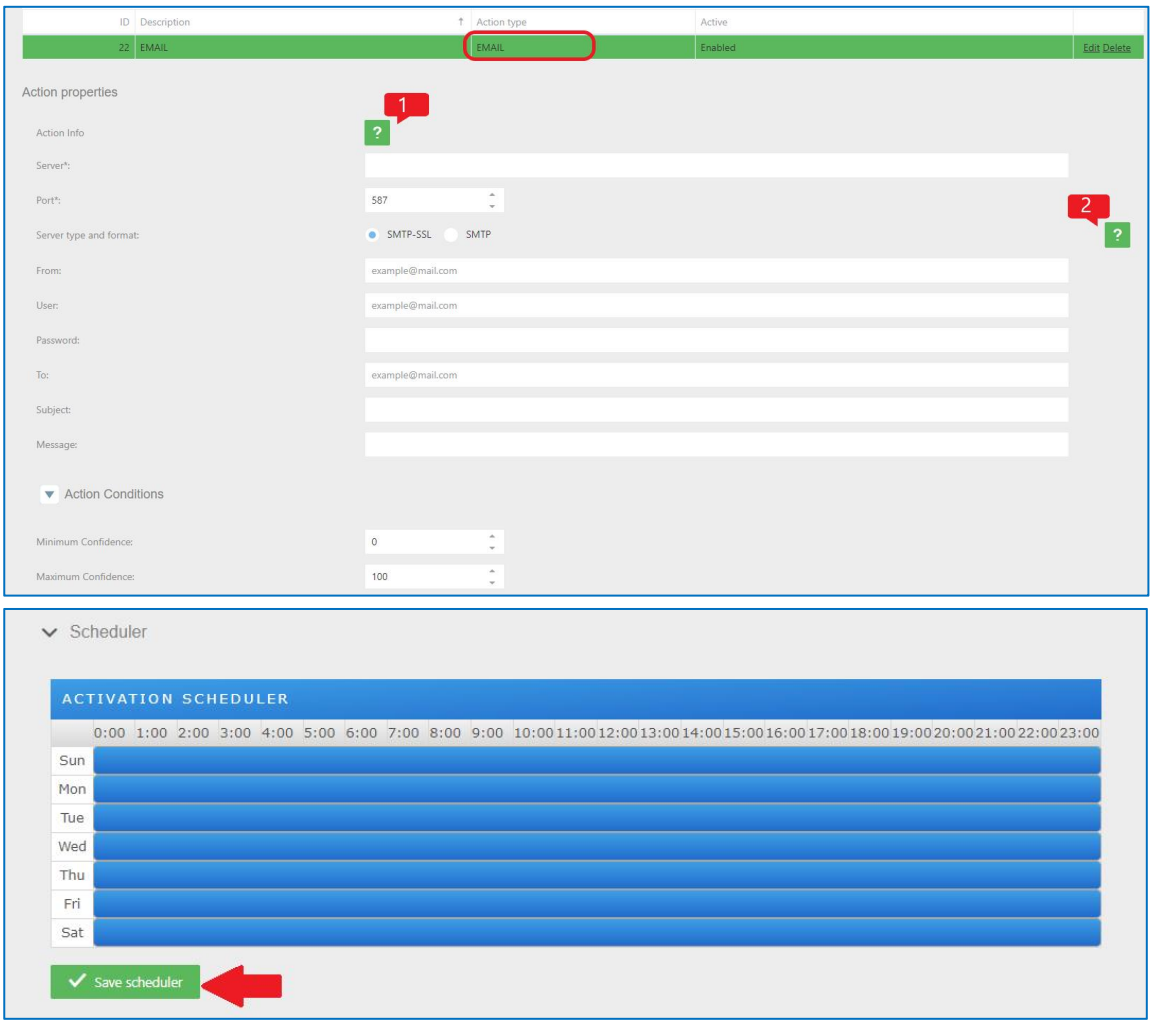
Action Conditions: Set the minimum and maximum confidence filter to do the action email.
Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

Click on  for more information about how to configure.

Click on  for more information about format type.

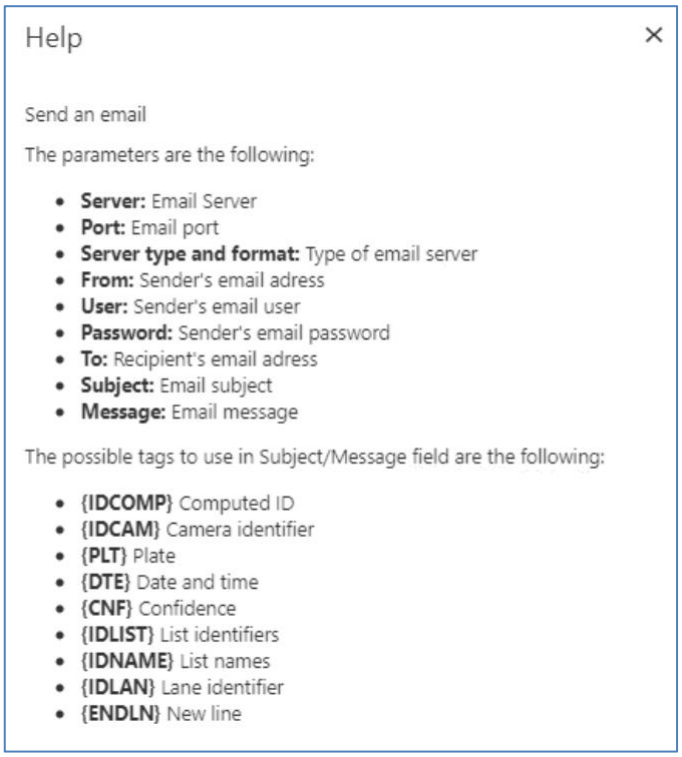


10. Configuring the **EMAIL** action to send messages under the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = EMAIL”.

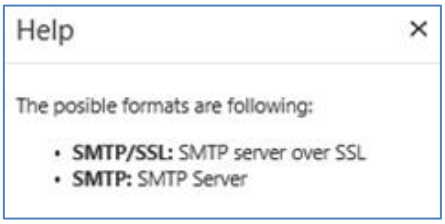


Action Conditions: Set the minimum and maximum confidence filter to do the email action.
Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

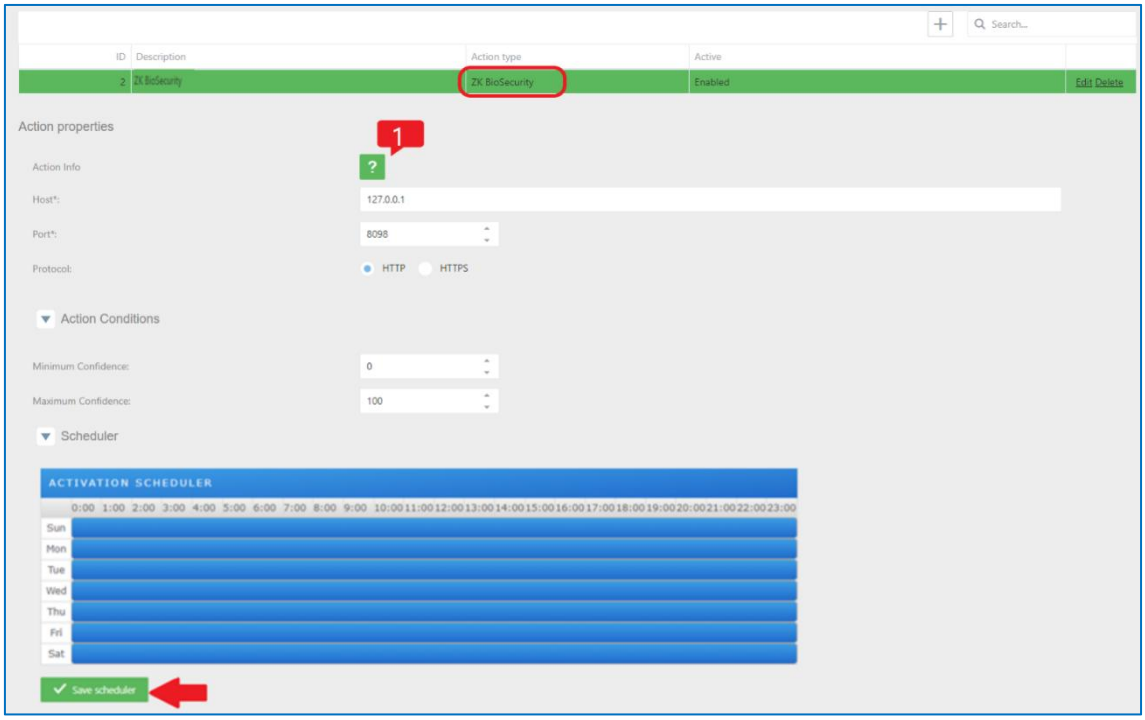
Click on  for more information about how to configure.



Click on  for more information about format type.



11. Configuring the **ZKTeco BioSecurity** action sends a HTTP message with the plate information and image to a ZKTeco BioSecurity server under the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = ZKTeco BioSecurity”.

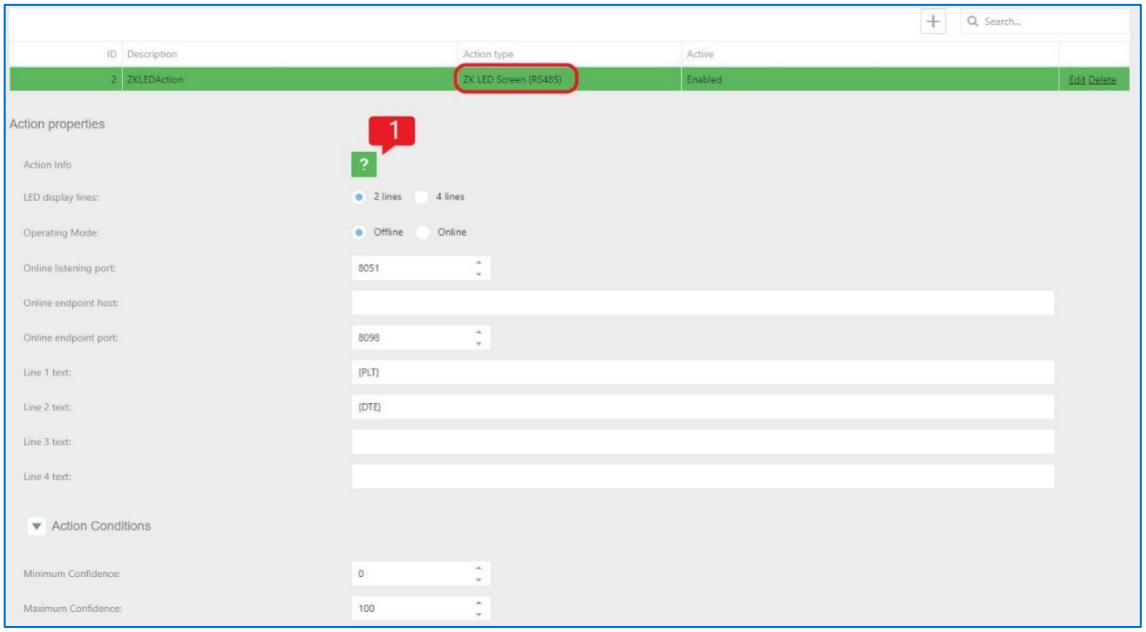


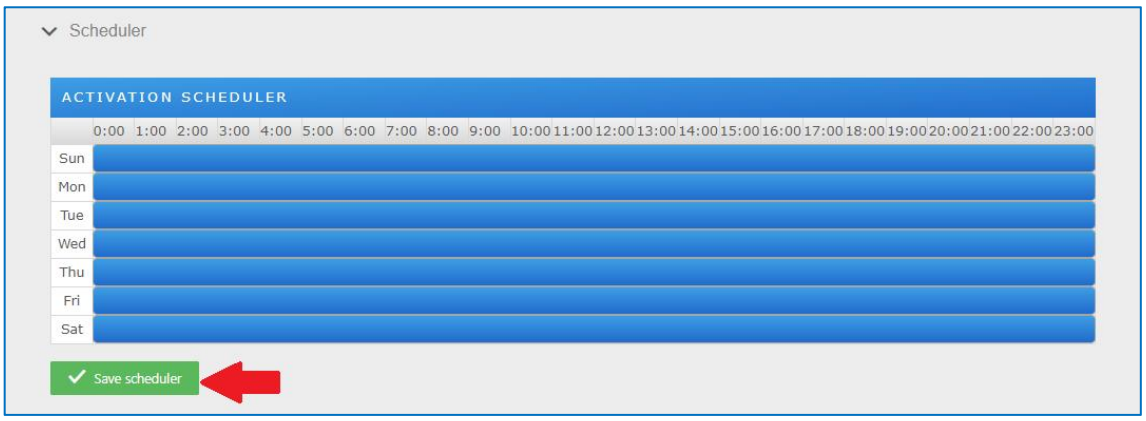
Action Conditions: Set the minimum and maximum confidence filter to do Came Protocol action.

Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

Click on  for more information about how to configure.

12. Configuring the **ZK LED Screen (RS485)** interact with a ZKTeco LED Screen of 2 or 4 lines under the EMPLOYEES list, click on "Action for the list" and add a new action pressing "+" and then select in "Action type = ZK LED Screen (RS485)".

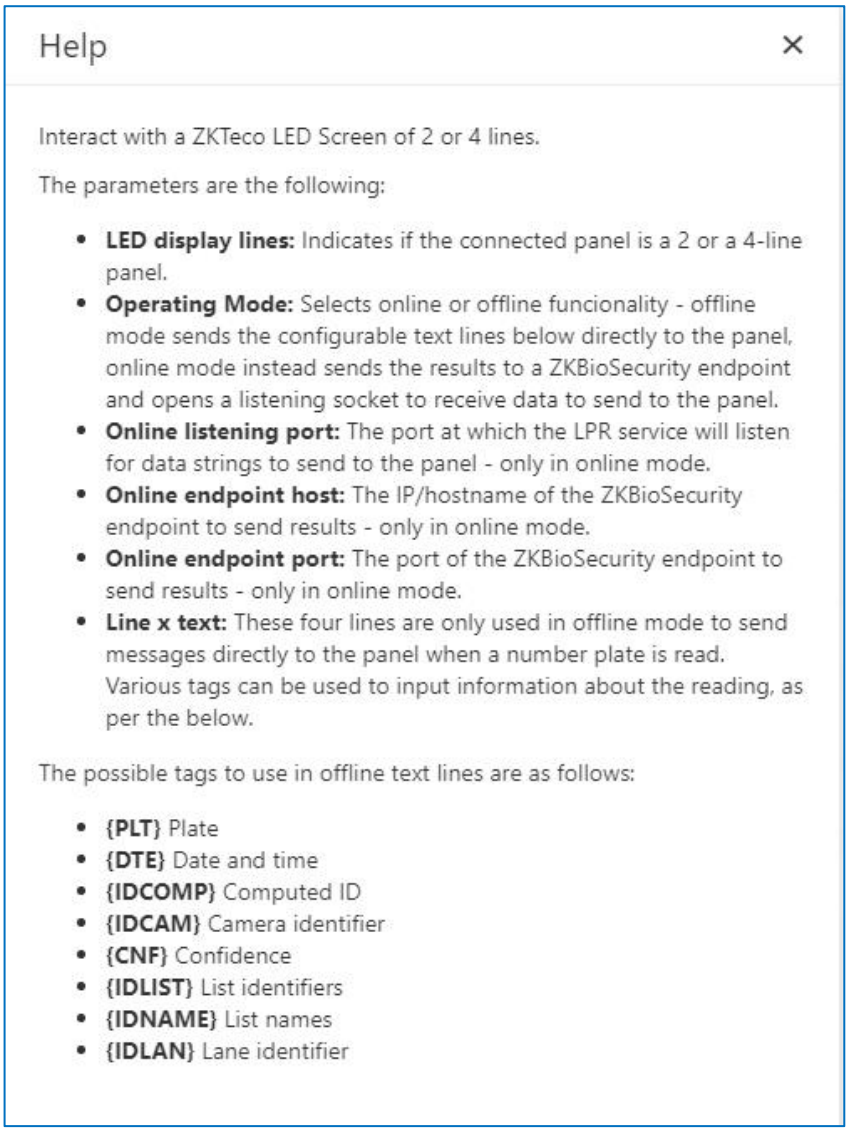




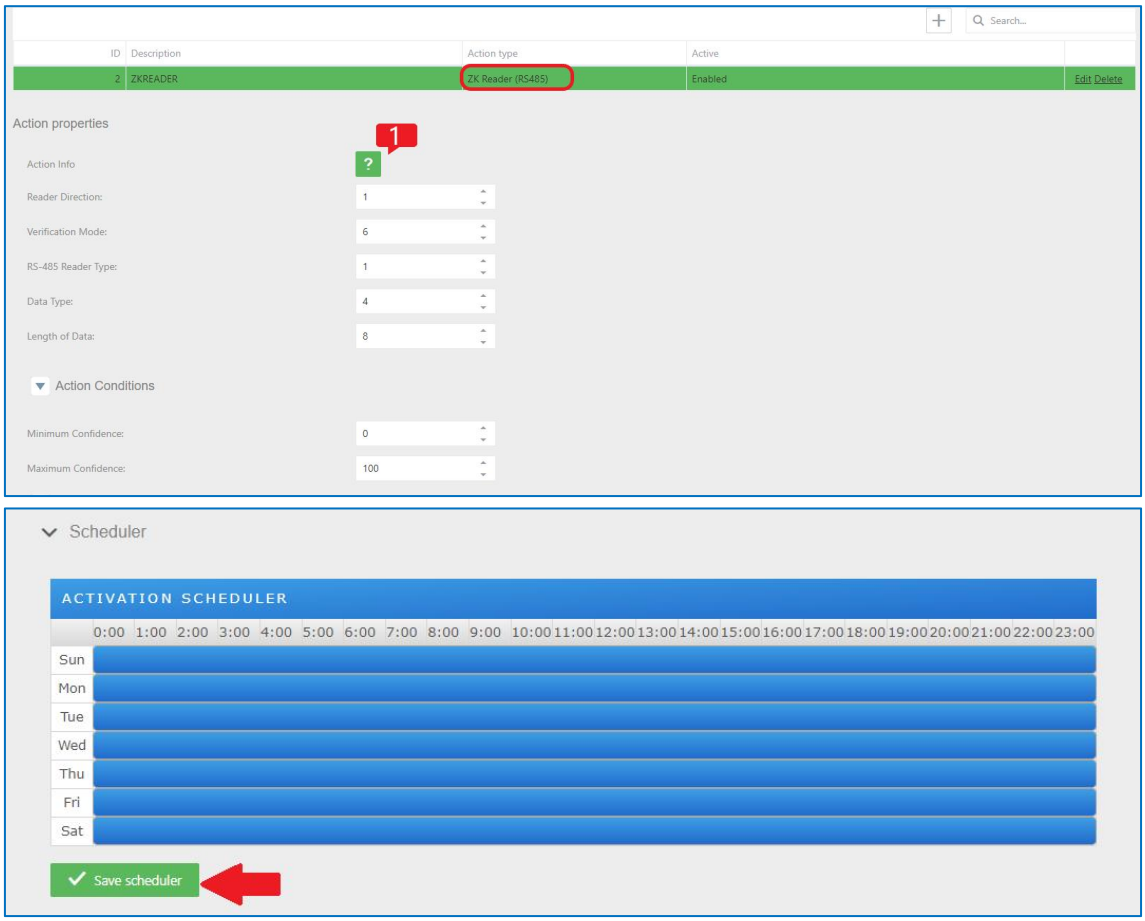
Action Conditions: Set the minimum and maximum confidence filter to do Came Protocol action.

Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

Click on  for more information about how to configure.


Help
Interact with a ZKTeco LED Screen of 2 or 4 lines.
The parameters are the following:
LED display lines: Indicates if the connected panel is a 2 or a 4-line panel.
Operating Mode: Selects online or offline funcionality - offline mode sends the configurable text lines below directly to the panel, online mode instead sends the results to a ZKBioSecurity endpoint and opens a listening socket to receive data to send to the panel.
Online listening port: The port at which the LPR service will listen for data strings to send to the panel - only in online mode.
Online endpoint host: The IP/hostname of the ZKBioSecurity endpoint to send results - only in online mode.
Online endpoint port: The port of the ZKBioSecurity endpoint to send results - only in online mode.
Line x text: These four lines are only used in offline mode to send messages directly to the panel when a number plate is read. Various tags can be used to input information about the reading, as per the below.
The possible tags to use in offline text lines are as follows:
{PLT} Plate
{DTE} Date and time
{IDCOMP} Computed ID
{IDCAM} Camera identifier
{CNF} Confidence
{IDLIST} List identifiers
{IDNAME} List names
{IDLAN} Lane identifier

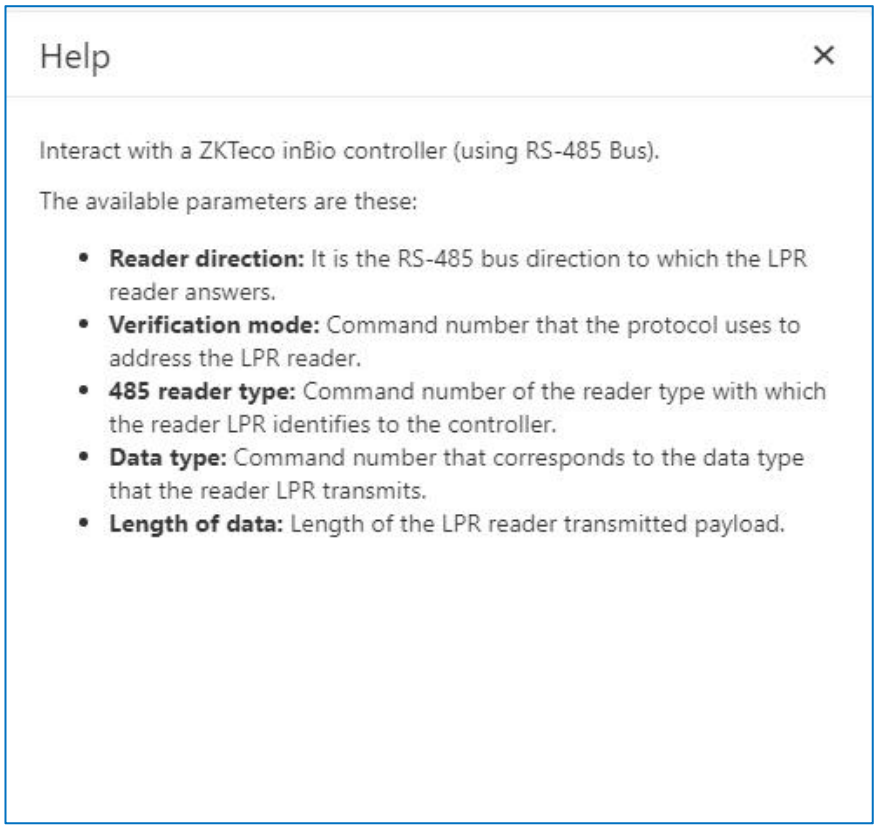
13. Configuring the **ZK Reader (RS485)** action to interact with a ZKTeco inBio controller (using RS-485 Bus) under the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = ZK Reader (RS485)”.



Action Conditions: Set the minimum and maximum confidence filter to do Came Protocol action.

Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

Click on  for more information about how to configure.



14. Configuring the action **Twin Cameras action** to filter results depending on the results provided by Twin camera under the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = Twin Camera”.

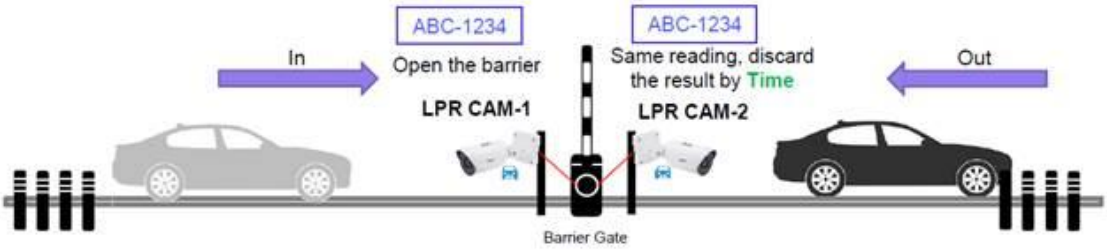
Filtering by twin cameras feature.
Design for one roadway with one gate.

User Scenario:

- Both directions are used alternatively
- It is necessary to open the barrier only for the direction, from where the vehicle comes.

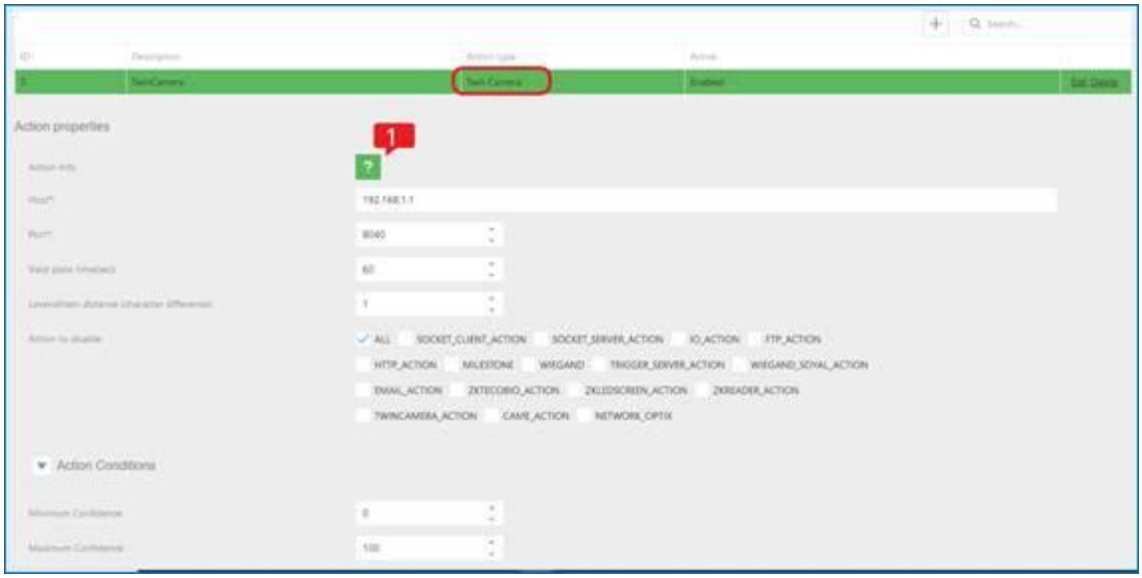
Expected Result:

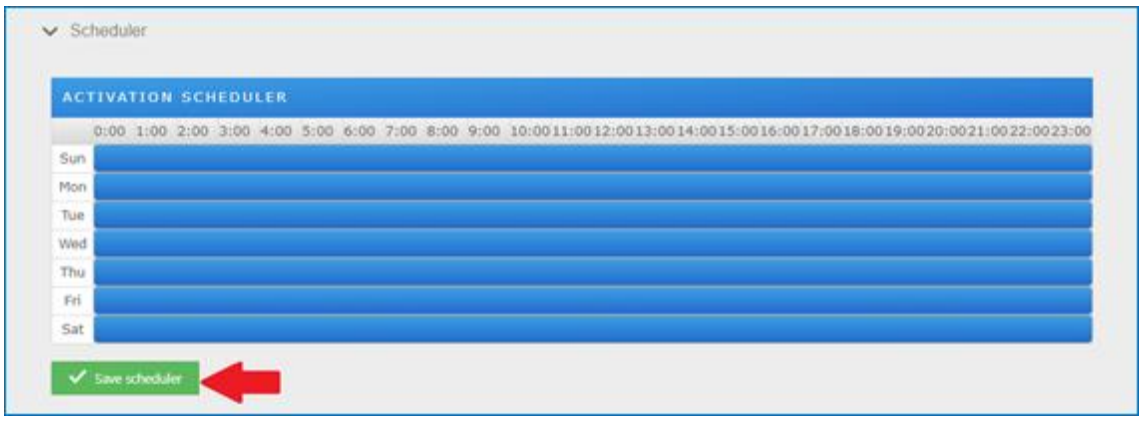
- Vehicle is coming “in” the barrier will be opened by the LPR CAM 1 (triggered by output from Camera no other logic). After the vehicle passes the barrier, the barrier should close.
- When the vehicle passes the LPR CAM 2, the LPR reading taken by LPR CAM 2 should be discarded, no longer trigger barrier open again.



Configuration:

- Host: IP address of the other Twin camera.
- Port: 8040, always use this value.
- Valid plate time (sec): Time period within the result won't be published.
- Levenshtein distance: Difference between license plate strings recognized to apply this filter.
- Actions to filter: Selector to indicate what action should be filtered.

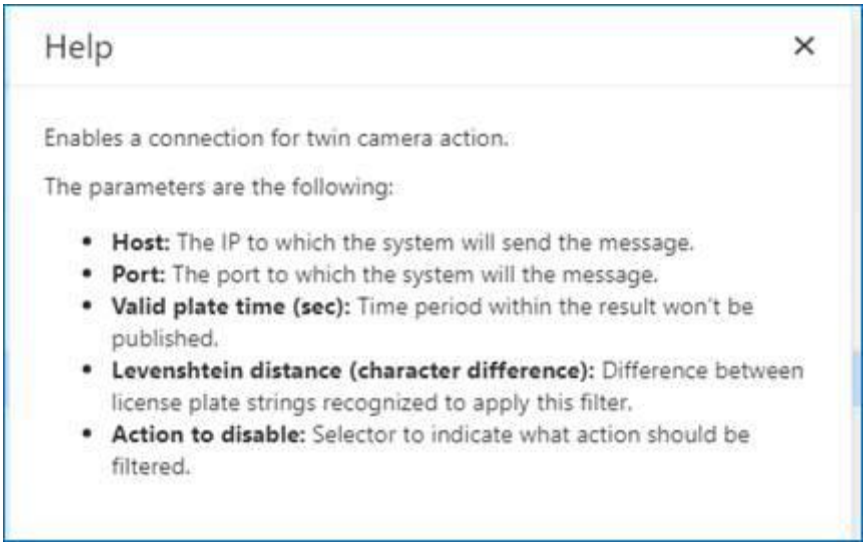




Action Conditions: Set the minimum and maximum confidence filter to do TWIN Camera action.

Schedule: Set the scheduler as needed and click on “SAVE SCHEDULER”.

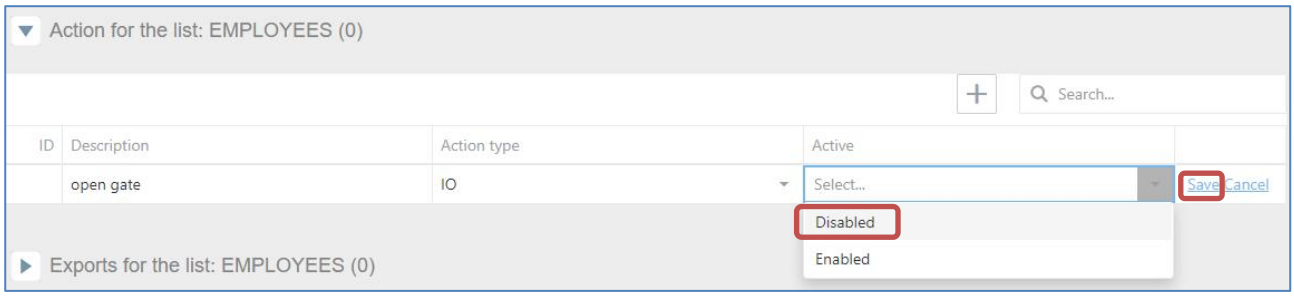
Click on  for more information about how to configure.



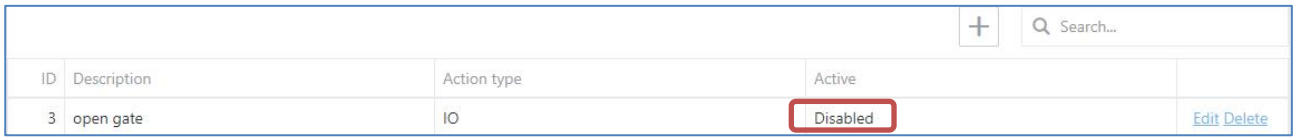
In case you don’t want to continue using an action in a list, you can modify it to disable or delete the action.

To disable it, click on the list, select the action, and then click on the edit option.

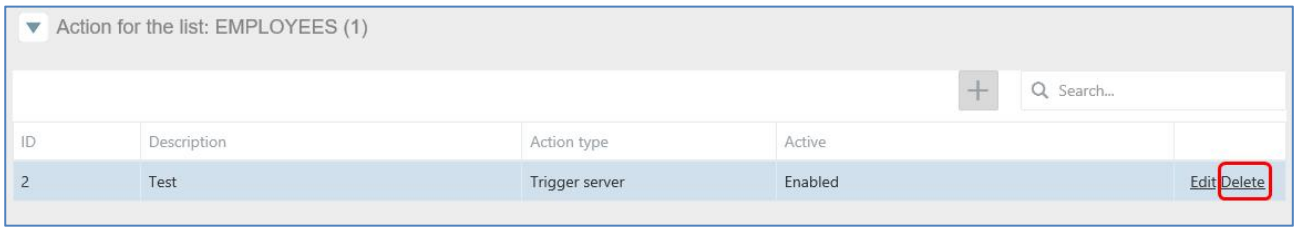
In Active, change it to Disabled, and then click on Save.

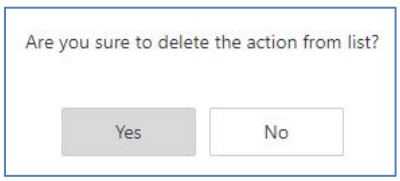


After this change, you will have the action disabled in case you need to use it later.



To delete an action, click on the action, click on the DELETE button, and then click on YES.





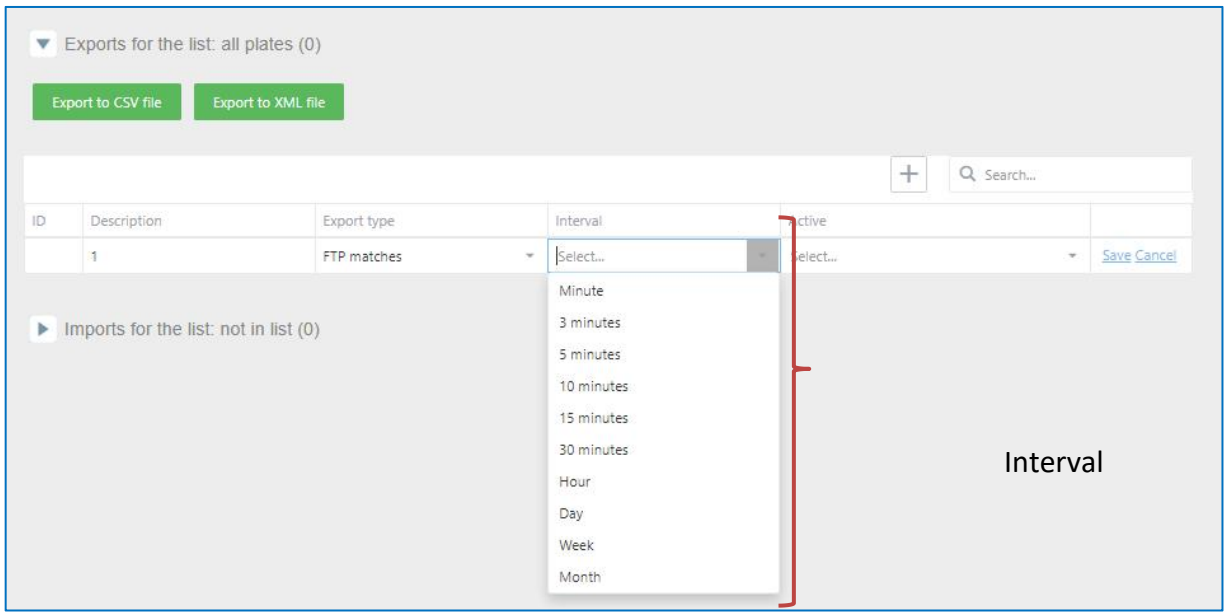
Exports for the list: Here are all the automatic exports we can configure for each list.

- FTP matches: Exports the matches of results to an FTP server.
- FTP list: Export the list to an FTP server.

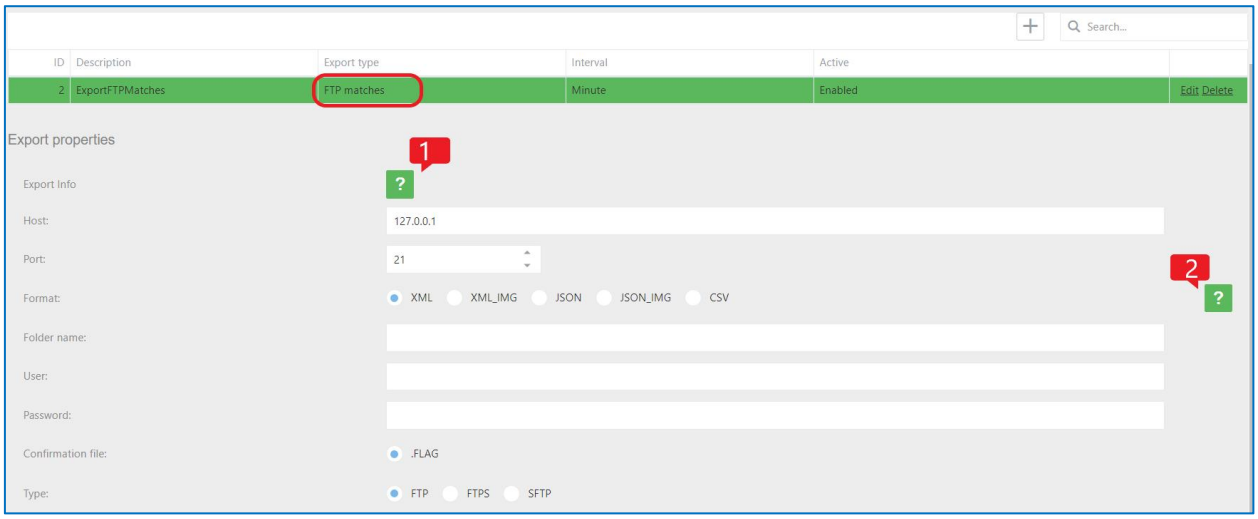
You can also download the selected list by pressing the button "Export to XML file" or "Export to CSV file."

A list can perform several exports, depending on the scenario and needs.
Having the Employees list selected, click on "Exports for the list" and then click on the + button to define the type and interval. The interval can be set as follows:

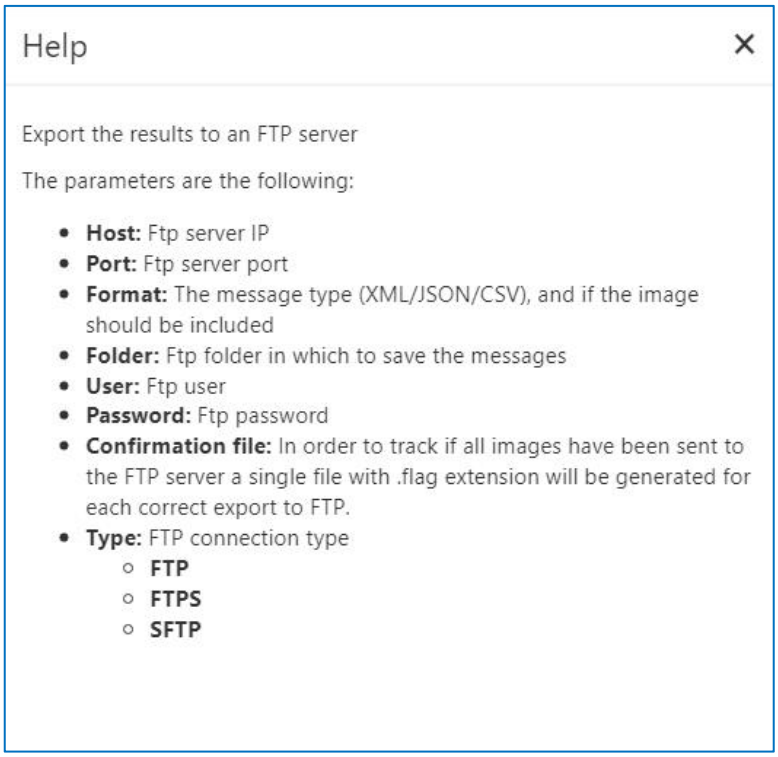
- *Minute:* Executes the task every minute.
- *Hour:* Executes the task every hour.
- *Day:* Executes the task once a day at 23:59:59.
- *Week:* Executes the task once a week, every Monday at 00:00:00.
- *Month:* Executes the task once a month, the first day of the month at 23:59:59.



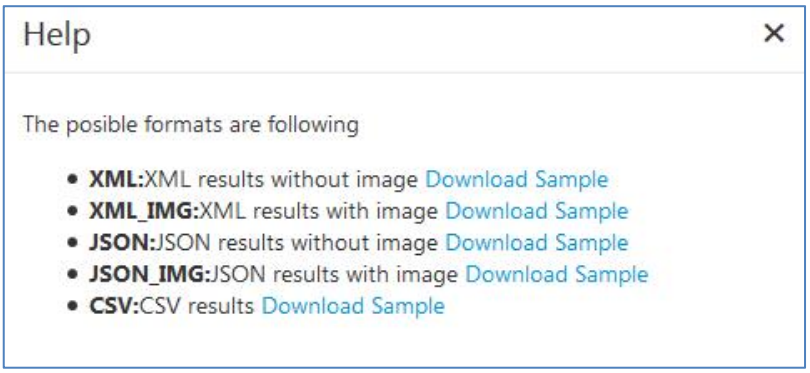
1. Configuring the export ***FTP matches*** to export the results to an FTP result under the EMPLOYEES list, click on "Export for the list" and add a new export by pressing "+" and then select "Export type = FTP matches".



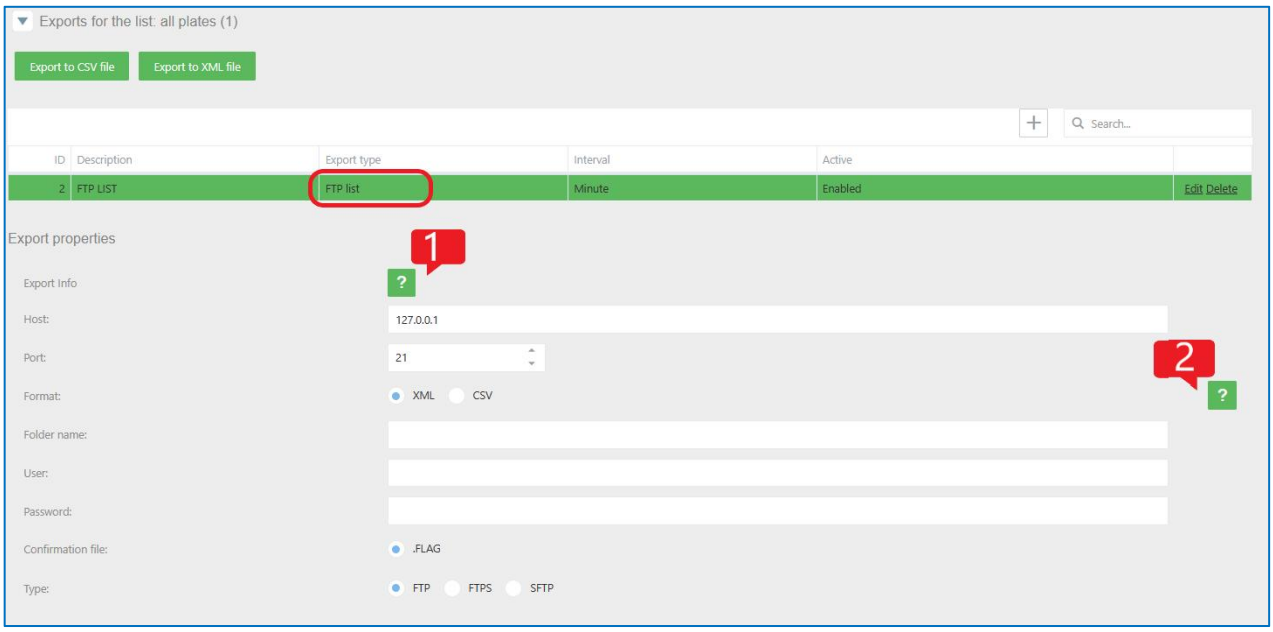
Click on  for more information about how to configure.



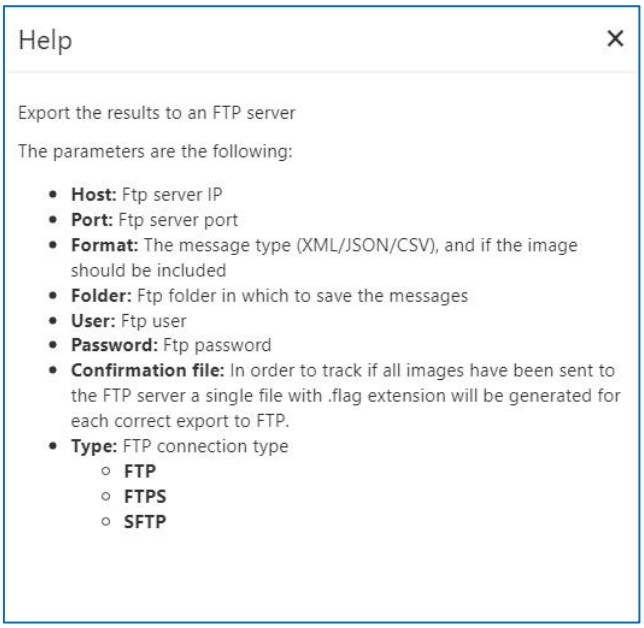
Click on  for more information about format type.


Help
The posible formats are following
XML:XML results without image Download Sample
XML_IMG:XML results with image Download Sample
JSON:JSON results without image Download Sample
JSON_IMG:JSON results with image Download Sample
CSV:CSV results Download Sample

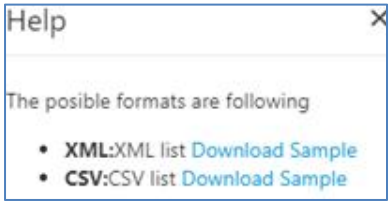
2. Configuring the export ***FTP lists*** to export the list locally under the EMPLOYEES list, click on "Export for the list" and add a new export by pressing "+" and then select "Export type = FTP list".



Click on  for more information about how to configure.

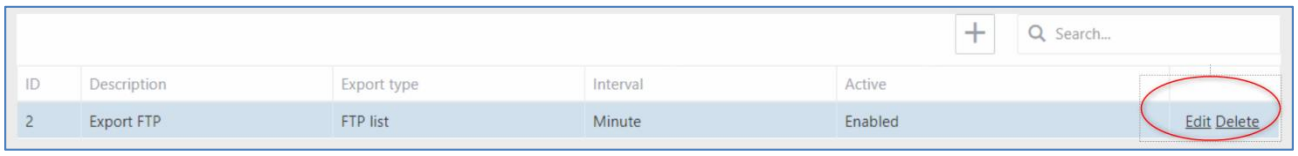


Click on for more information about format type.

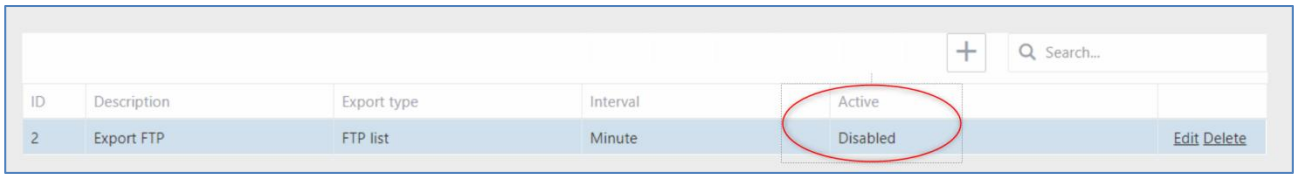


In case you don't want to continue to use export in a list, you are able to disable or delete the action.

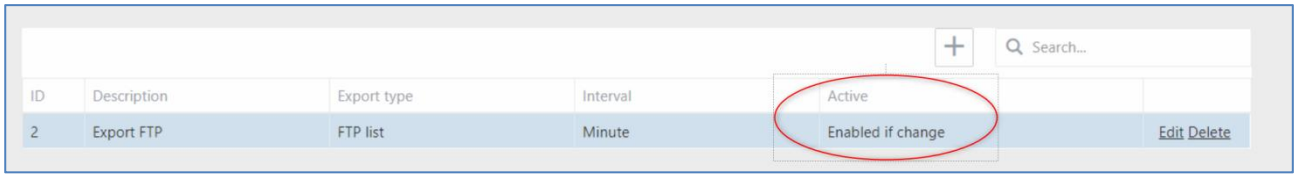
To delete, click on the list, select export, and then click on the delete option.



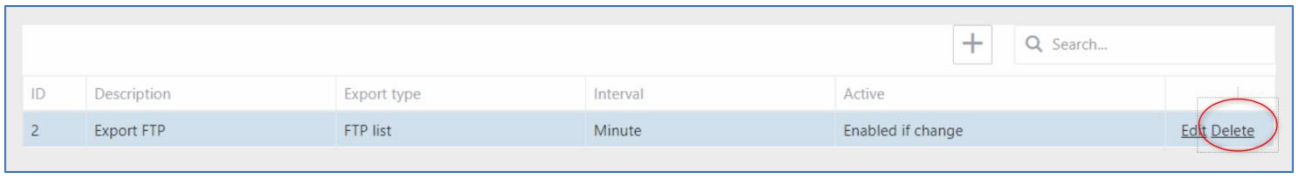
To disable it, click on the list, select the action, and then click on the edit option.
In Active, change it to Disabled, and then click on Save.



After this change, the action is disabled in case you need to use it later.
In the "Enable if change" state, only do the export if the export type is "Local list" or "FTP list" and export the list only if there is any change.



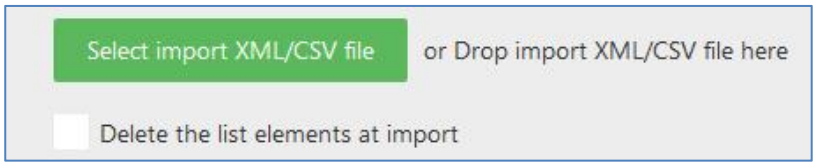
To delete an action, click on the action and click on the DELETE button and then YES.



Import for the list: Here are all the automatic imports we can configure for each list:

- FTP list: Import the list to an FTP server.
- SINCRO camera: Import the list from another camera.

You can also import the list manually by uploading an xml list file.



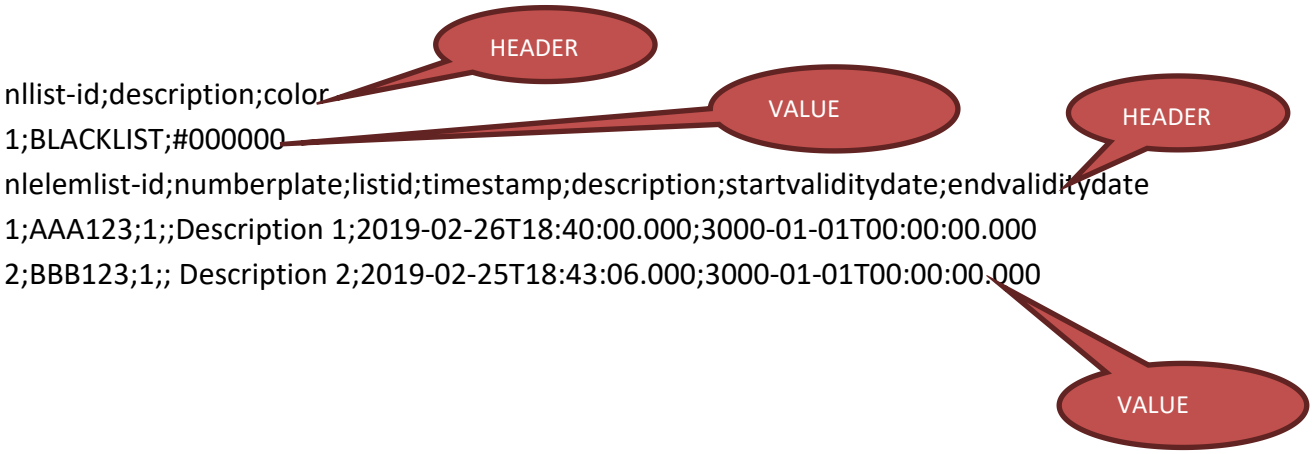
The format of the XML is the following:

```
<?xml version = "1.0" encoding = "utf-8" ?>
<grouplist>
<nllists>
        <nllist id="3" sendserver="0" dateserver="" reserve="" description="EMPLOYEES" color=""/>
</nllists>
<nlelemlists>
<nlelemlist id="1" sendserver="0" dateserver="" reserve="" numberplate="AAA123" listid="3" timestamp="" description="EMP 1" startvaliditydate="2000-01-01T00:00:00.000" endvaliditydate="3000-01-01T00:00:00.000"/>

<nlelemlist id="2" sendserver="0" dateserver="" reserve="" numberplate="BBB321" listid="3" timestamp="" description="EMP 2" startvaliditydate="2000-01-01T00:00:00.000" endvaliditydate="3000-01-01T00:00:00.000"/>

</nlelemlists>
</grouplist>
```

- Grouplist: the main element of the xml
- Nllists: The group of type of lists
- Nlist: The list type element, on:
    - Id= Id of the list
    - Sendserver = Always 0
    - Dateserver= Always “”
    - Reserve = Always “”
    - Description= The name of the list
    - Color = Always “”
- Nlelemlists: the group of the elements of the list
- Nlelemlist: the element in list, on:
    - Id= Id of the element
    - Sendserver = Always 0
    - Dateserver= Always “”

- Reserve = Always “”
- Numberplate= Plate number of the element
- Listid= Id of the list
- Timestamp= Always “”
- Description= Description of the plate number
- Startvaliditydate= Start date of validity period
- Endvaliditydate= End date of validity period

The format of CSV is the following:



nllist-id;description;color
1;BLACKLIST;#000000
nlelemlist-id;numberplate;listid;timestamp;description;startvaliditydate;endvaliditydate
1;AAA123;1;;Description 1;2019-02-26T18:40:00.000;3000-01-01T00:00:00.000
2;BBB123;1;; Description 2;2019-02-25T18:43:06.000;3000-01-01T00:00:00.000

The first block of HEADER-VALUE is the type of list which values are:

- nllist-id: Id of the list
- description: Description of the list
- color: Color of the list (NOT IN USE)

The second block of HEADER-VALUE are the elements of list which values are:

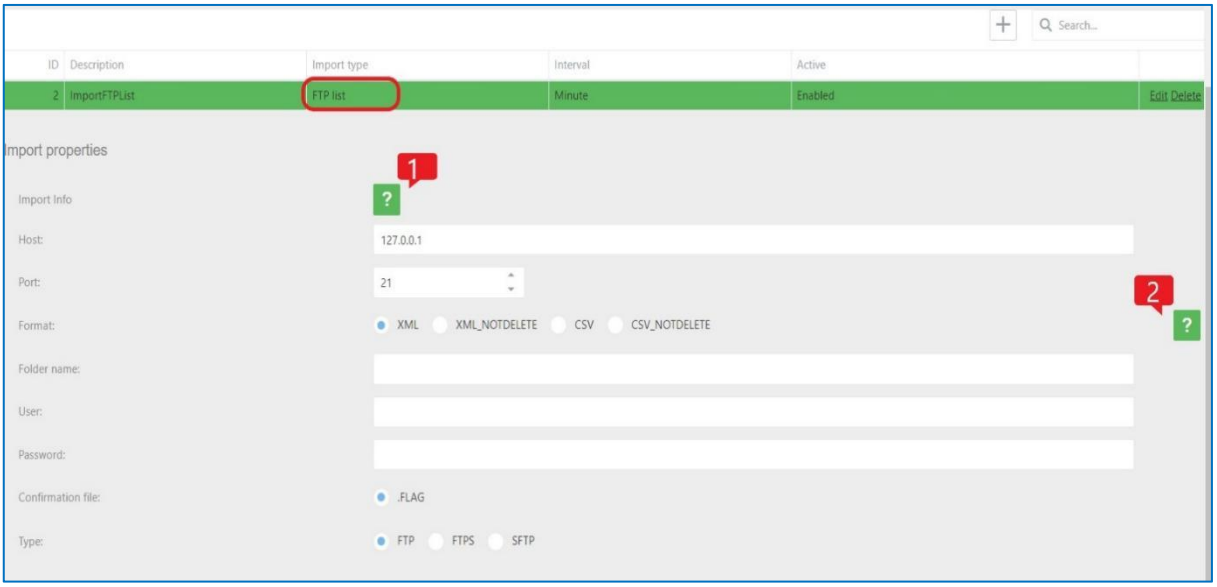
- nlelemlist-id: Id of the list element
- numberplate: Plate number
- listid: Id of list type

- timestamp: Always “”
- description: Description of the number plate.
- Startvaliditydate: Start validity date of the number plate.
- Endvaliditydate:End validity date of the number plate.

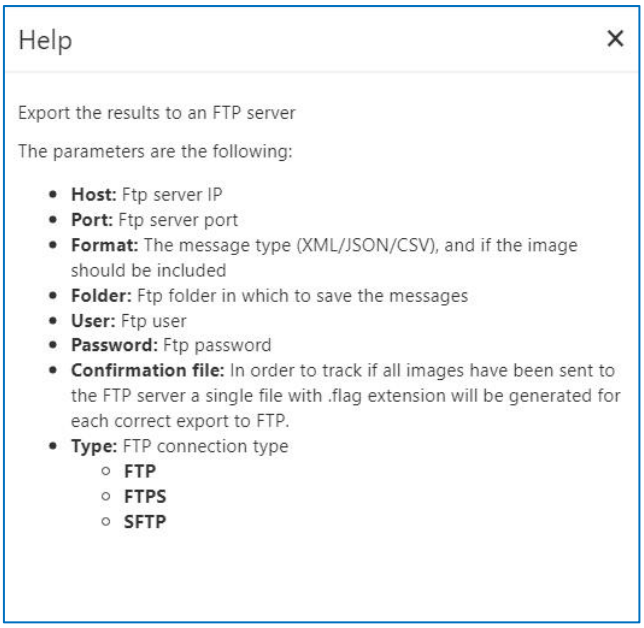
A list can perform several imports, depending on the scenario and needs.
Having the Employees list selected, click on "Imports for the list" and then click on the + button to define the type and interval. The interval can be set as follows:

- *Minute: Executes* the task every minute.
- *Hour: Executes* the task every hour.
- *Day: Executes* the task once a day at 23:59:59.
- *Week: Executes* the task once a week, every Monday at 00:00:00.
- *Month: Executes* the task once a month, the first day of the month at 23:59:59.

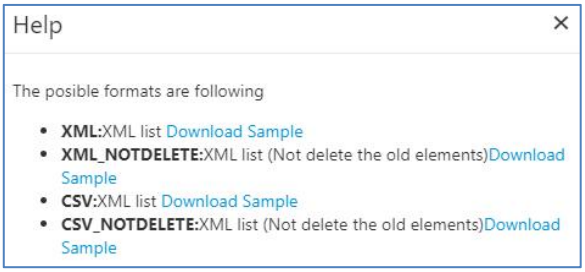
1. Configuring the import ***FTP list*** to import the list from an FTP result, under the EMPLOYEES list, click on "Import for the list" and add a new import by pressing "+" and then select "Import type = FTP list".



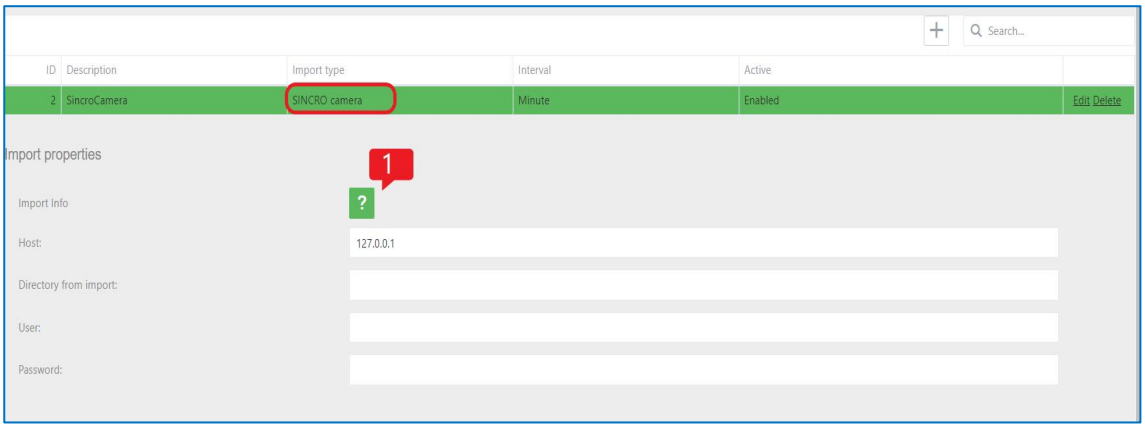
Click on  for more information about how to configure.



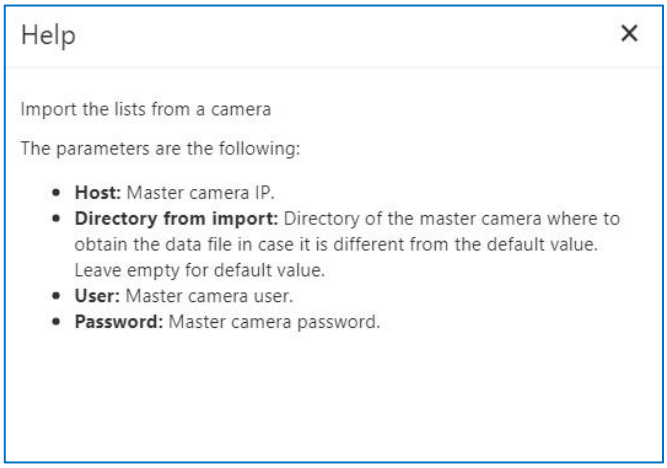
Click on  for more information about format type.



2. Configuring the import ***SINCRO camera*** to import the list from another camera, under the EMPLOYEES list, click on "Import for the list" and add a new import by pressing "+" and then select "Import type = SINCRO Camera".



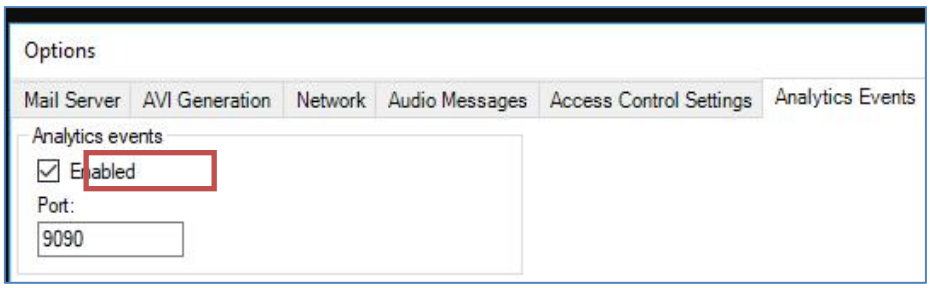
Click on  for more information about how to configure.



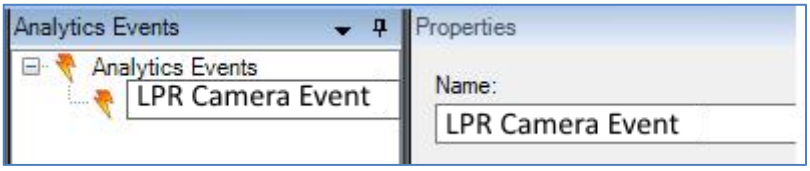
4.3.1 Configure Milestone

Once the Milestone action is configured, we need to set up the Milestone server to process our action. To do this, we follow the next steps:

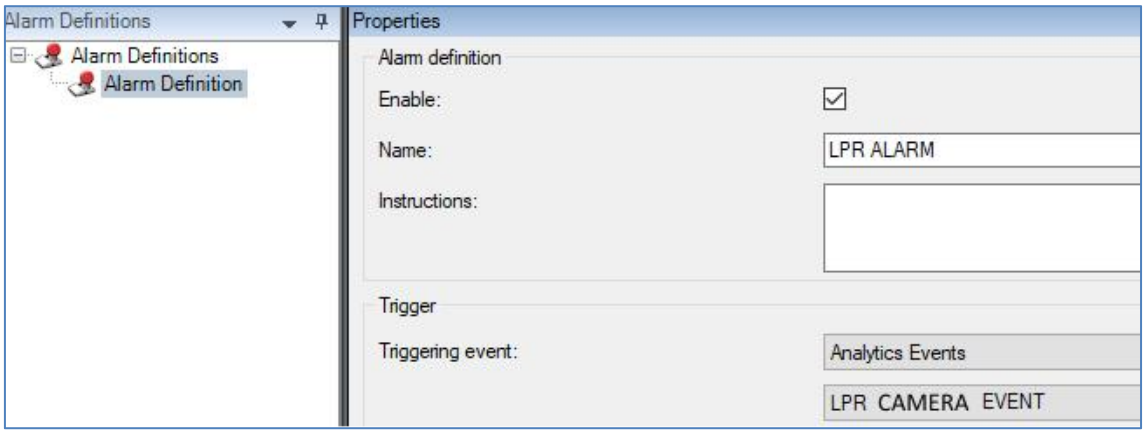
1- Enable analytic events.
   a. We click on Tool -> Options and select the "Analytics Event" tab. On this tab, we will activate the Analytics events.



2- Create an analytic event.
   a. We do a click at Rules and Events -> Analytics Events. And then press the right button to create a new analytic event. The name must be the same as that defined at Event Type of Action.

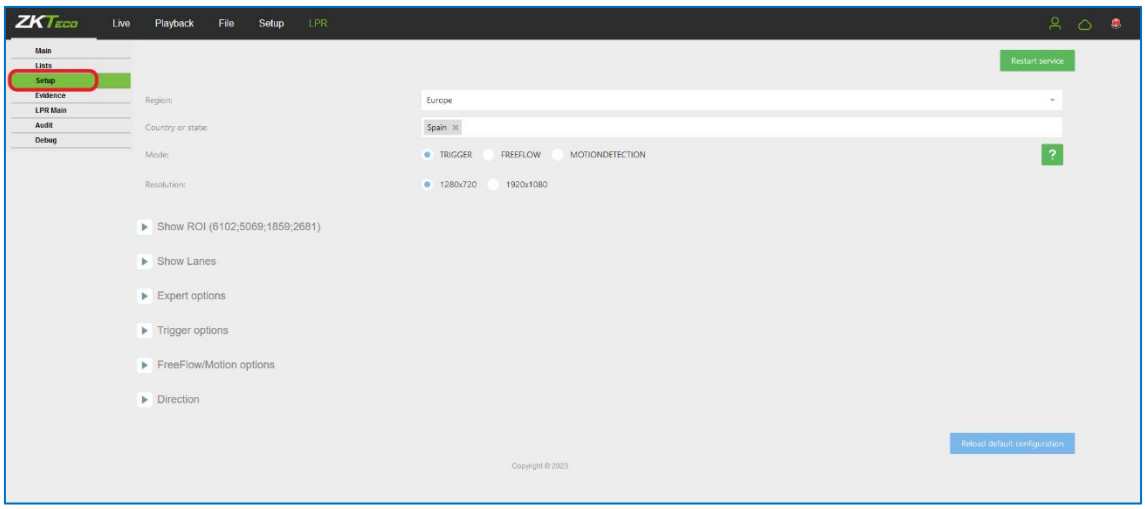


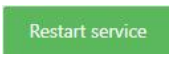
3- Create an alarm definition.
   a. We do a right-click at Alarm definition, and we create a new alarm definition on:
      i. Enable: This alarm is enabled on the system.
      ii. Name: The alarm name
      iii. Triggering event: We must select Analytic Events.
      iv. Triggering event source: We must select the before created analytic event.
      v. Source: We must select the camera on milestone system.



4.4. SETUP

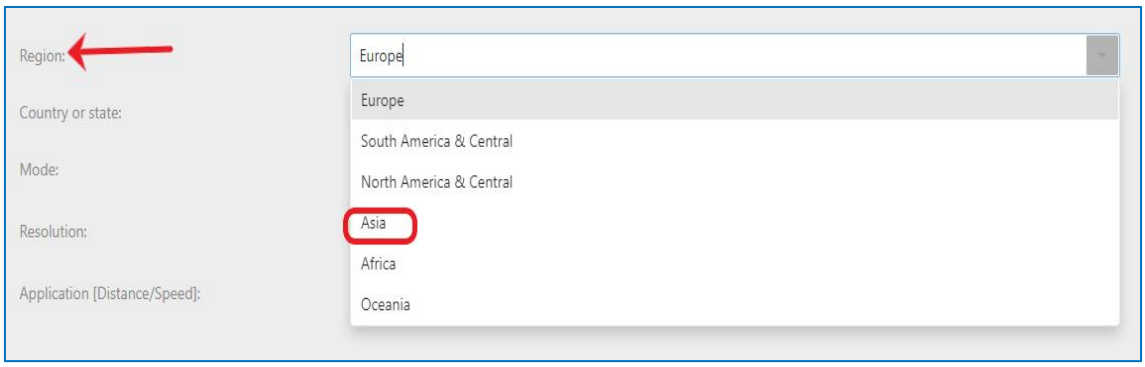
In this tab, we set the proper configuration for the camera depending on the scenario, where it will be located (indoor or outdoor), and the necessity (parking, control of access points, security, tolls, road offenses, etc.).



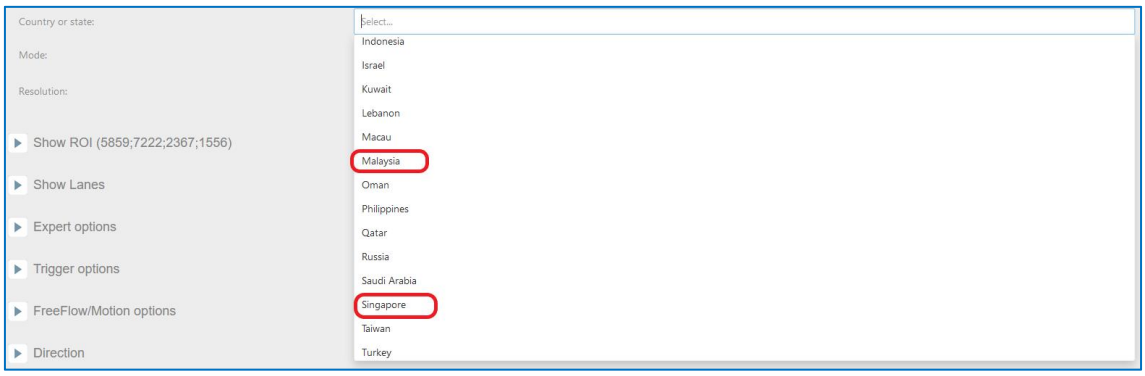
All the options after being modified require a service reset. 

Depending on which region you select it will list the countries in that region. If the country you are searching for isn't listed, please contact Neural Labs.
Let's configure Neural Edge to read plates from Malaysia and Singapore.

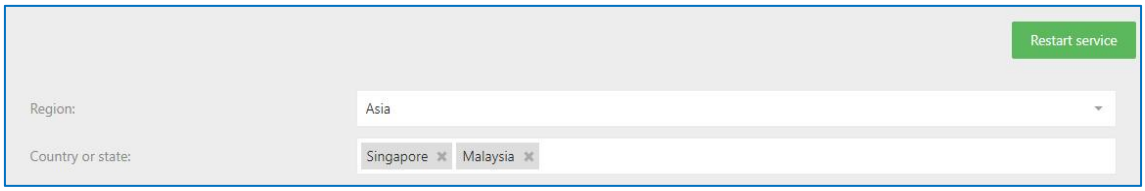
In Region, list and select ASIA.



In countries, search and select one by one the countries.



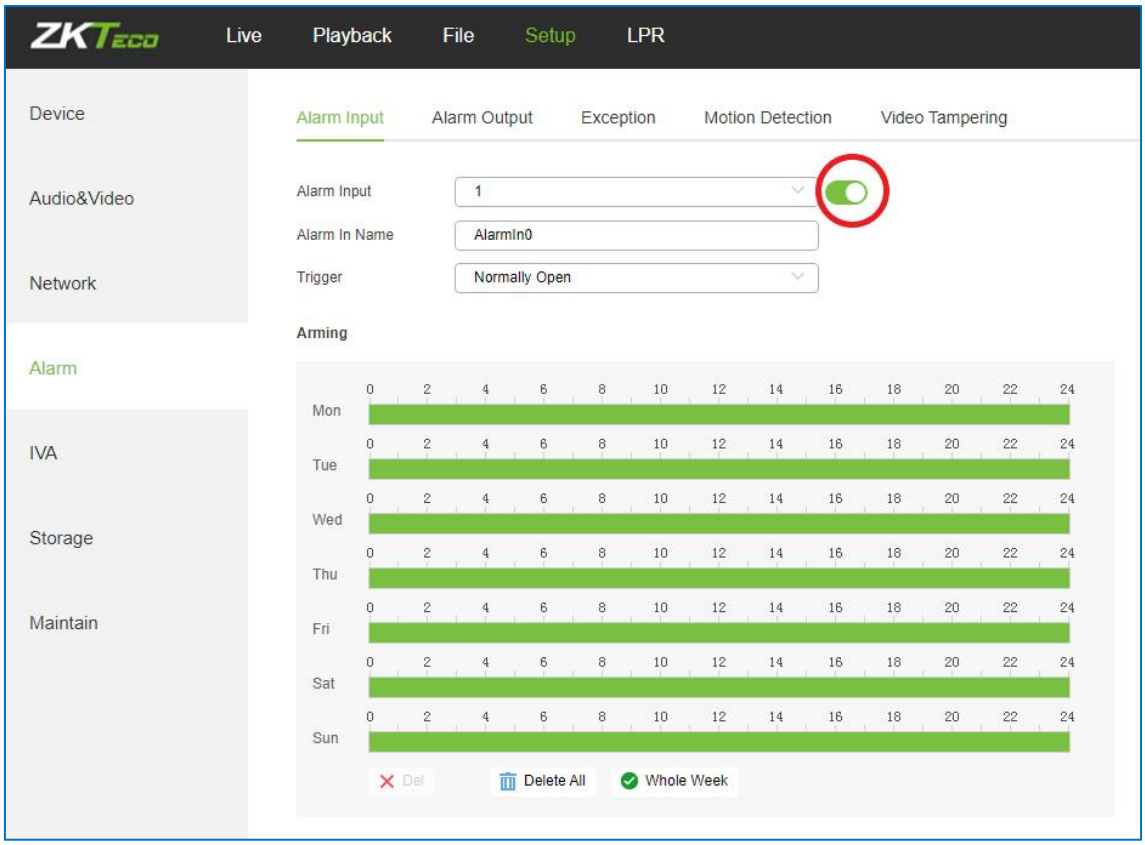
After selecting the countries, restart service by clicking on Restart service button. Now you are ready to read license plates for these two countries.



Next you need to select the camera function mode:

Trigger: The camera will read if a trigger is active, such as induction loop, laser, etc.

Trigger configuration prerequisites: The alarm input option should be enabled from the camera alarm configuration before sending digital input signal to the camera.

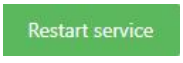


Free Flow: The camera is continuously processing all the images, which is not recommended unless there is a constant flow of vehicles.
Motion Detection (Set by default): The camera will read if it detects any change in the image.

You need to configure the camera resolution, which image size you need to process. This will depend on the distance from where you will read the license plate. This set up doesn't affect the camera resolution configuration because they are independent from each other.

Camera resolution set by default is: 1280x720

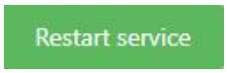
Show ROI: It lets you draw a *region of interest* in the image that part of the image you want to process and read.

Click on “Show ROI”, the wizard will guide you on how to draw it.
Draw 2 points into the road following the steps:
1.- Draw top left point.
2.- Draw bottom right point.
To reset ROI, click on “RESET ROI” button.
Click on the “RESTART SERVICE” button to take 

effect.

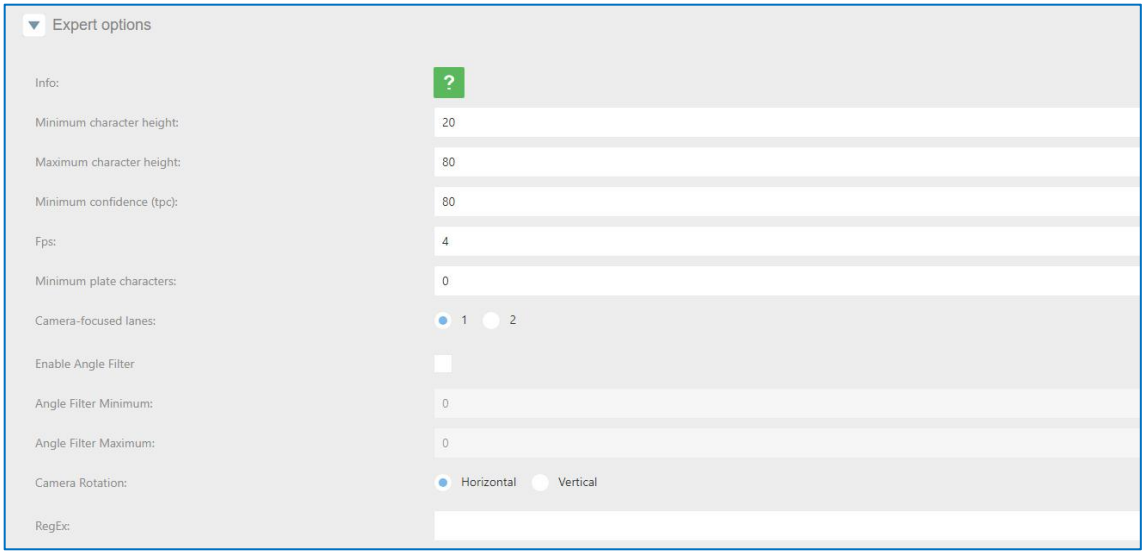
Show Lanes: It lets you draw a line to configure two lanes. Depending on how you draw the line, Neural Edge will consider which lanes are going to be.

Click on “Show Lanes”, the wizard will guide you on how to draw it.
Draw 2 points into the road following the steps:
1.- Draw top point.
2.- Draw bottom point.
To reset ROI, click on “Delete Lanes” button.
Click on the “RESTART SERVICE” button to take effect.



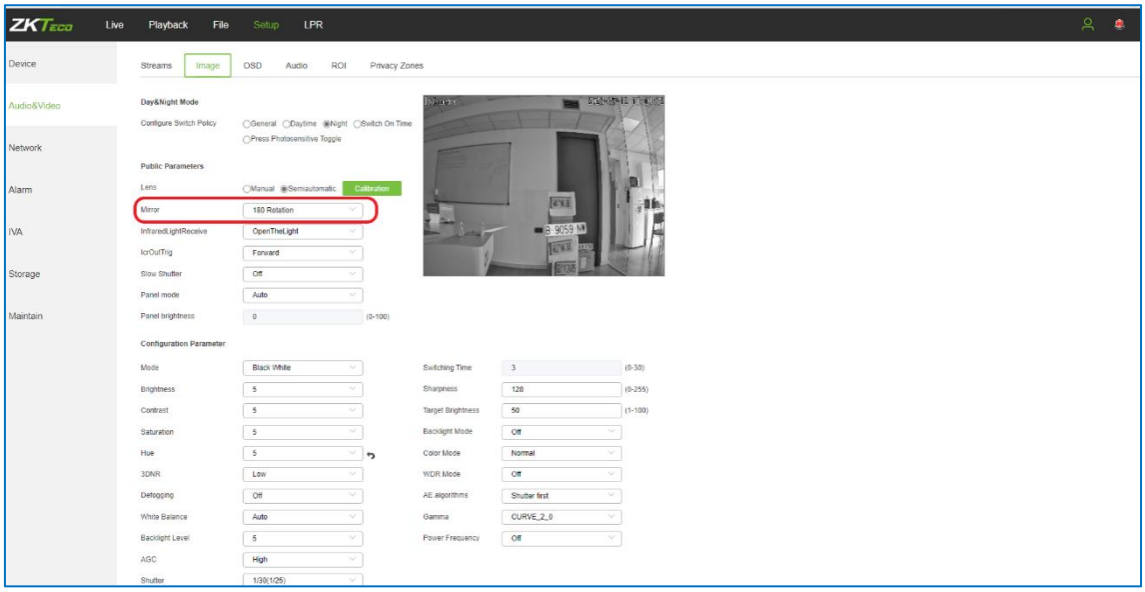
Neural Edge will read the license plate and indicate in which lane it was detected.

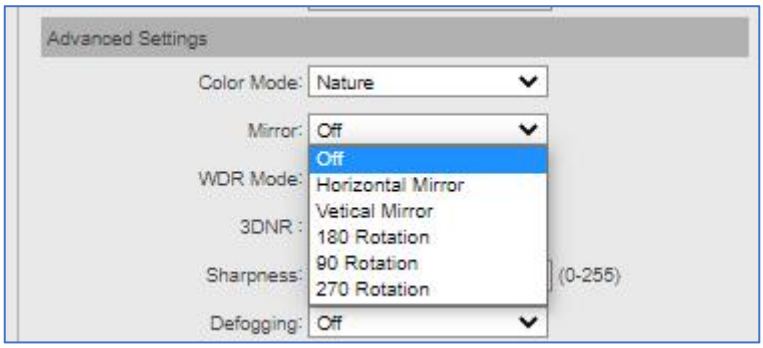
Expert Options: Here is the recommended configuration for best performance if Motion Detection (default configuration) is selected.



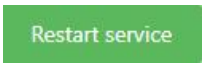
Minimum character height: Minimum character size in the reading of a license plate to consider it valid.
Maximum character height: Maximum character size in the reading of a license plate to consider it valid.
Minimum Confidence (%): Minimum reliability in the reading of a license plate to consider it valid. Reliability is a parameter returned by the engine for recognizing license plates (a value of 1–100, where 100 is the most reliable). The recommended value is 80.
Fps: Frames per second.
Minimum plate characters: Minimum number of characters in the reading of a license plate to consider it valid.
Camera-focused lanes: The number of lanes which traffic direction will be focused on to calculate.
Enable angle filter: it is the option to filter by maximum - minimum angle, if the angle is not in between the range, the reading is discarded. Its values can be negative.
Angle Filter Minimum: it is the maximum number of angle in reading that is accepted.
Angle Filter Maximum: it is the minimum number of angle in reading that is accepted.

Camera Rotation: it is an option to rotate the image of the camera. In this tab, Setup – Image Parameters you can choose the option that you need.





Regex: Plate exclusion filter. Discard a plate number result if it matches the regular expression.

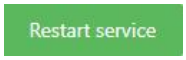
Click on the "RESTART SERVICE" button to take effect. 

Trigger Mode: Neural Edge is normally in an idle state. When a trigger command is received, it performs a variable number of captures, depending on configuration, and returns a result. Results from different triggering events are independent of one another; that is, if the same vehicle is still present on a second trigger command, the same license plate will be returned a second time. On every trigger, it performs captures until the number exceeds N Captures or the time exceeds Timeout.

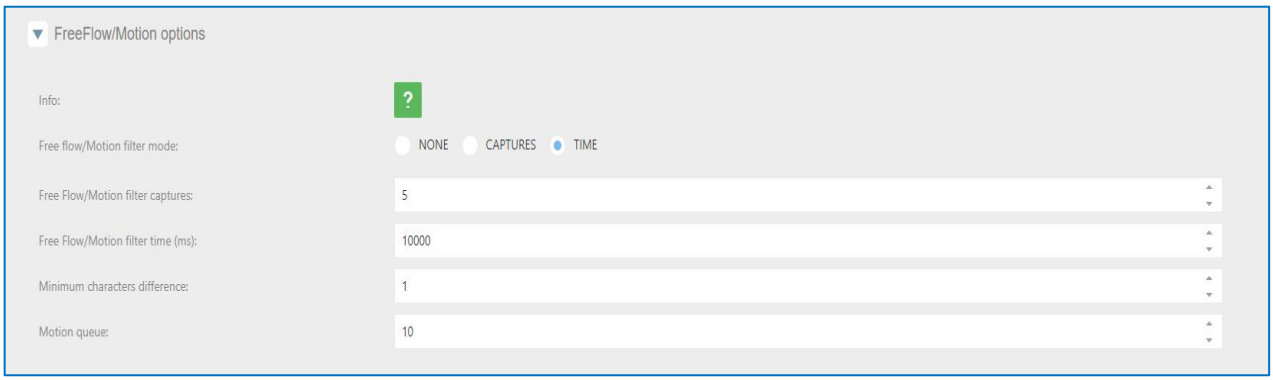
Trigger Captures: How many images do you want to process and read license plates to stop? <u>In order to use the capture option, the trigger timeout must be 0.</u>

Trigger Timeout: How many seconds do you want to process and read license plates to stop? <u>In order to use the timeout option, the trigger captures must be 50.</u>

Trigger IO Device: If selected, the Digital Input ports will be activated.
Trigger IO Port: Choose which digital input port you will use.

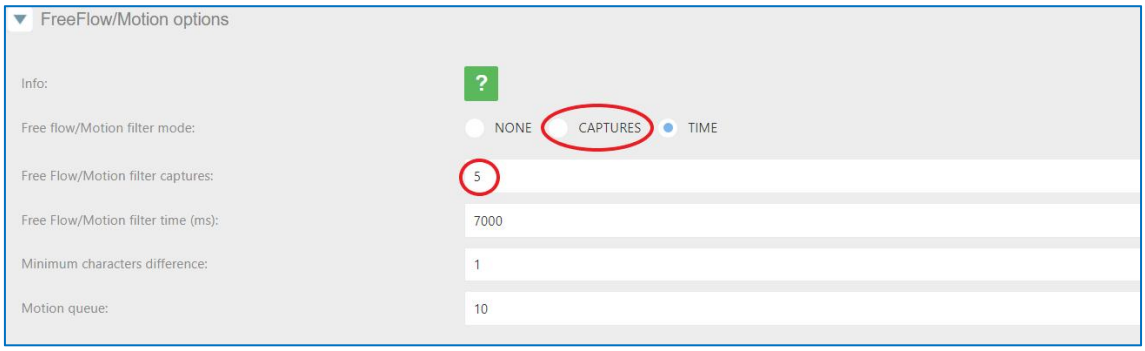
Click on the “RESTART SERVICE” button to take effect. 

FreeFlow/Motion options: Neural Edge continuously runs OCR on the receiving frames. Whenever a new vehicle enters the scene, a new result is sent through the notification socket.



In the FreeFlow/Motion option you can define repetition filters.
Free Flow/Motion filter captures: For a result to be considered valid, the last license plate read must not be among the last N recognized as valid. This filter is useful for traffic jams, where the cameras may be reading N license plates continually in a closed cycle.
Free Flow/Motion filter time (millis): Minimum time elapsed from the detection of the same license plate to it being accepted again in the system.
Minimum characters difference: The number of different characters to consider two plates different.
Motion queue: Is the number of images stored in a queue to process in MOTION mode.

For example, if you have the camera in a parking lot and there is a traffic jam, you don’t want to read the same license plate over and over. In that case, the best filter is for captures. Please do the following:
Having selected Free Flow mode, click on "Free Flow Options,", click on "Free Flow Filter Mode," and select the filter "Captures".



With this configuration, once a license plate is read, it won't be read again until another five different license plates have been read. The difference between plates must be greater than 1.

Direction: By enabling direction option under direction section, it shows vehicles directions. The direction of the vehicles can be filtered as "no direction", "coming" and "going". If this is option is disabled, every time directions of the vehicles are "no direction".

After all, changes are made, remember always to restart service, clicking on "restart service" button button.

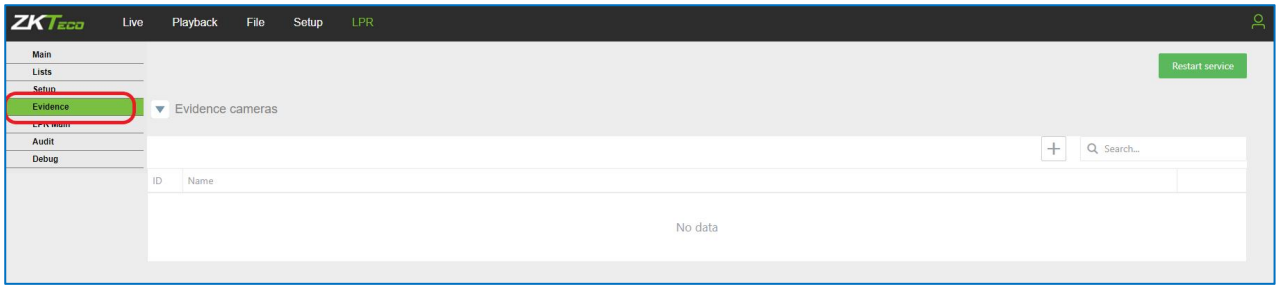
If you need to restart all configuration for this section, click Restart default configuration on button.

4.5. Evidence

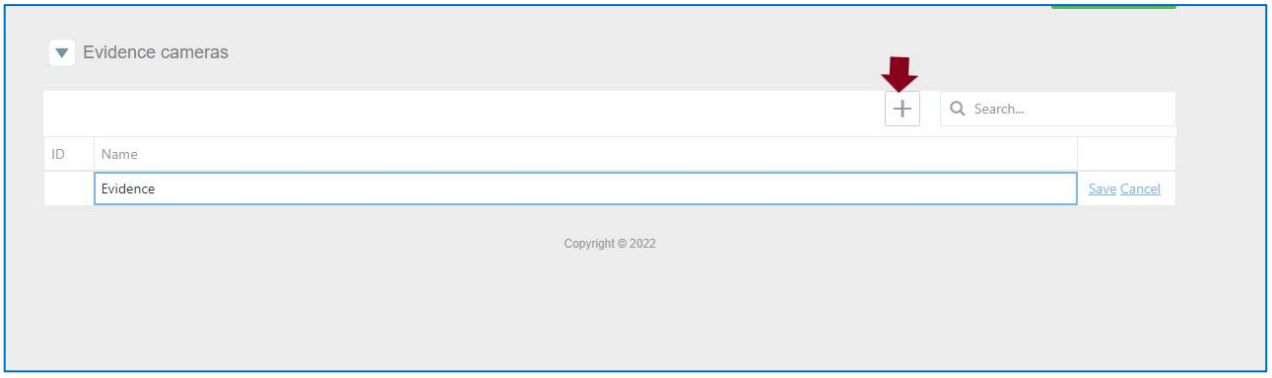
This feature allows users to capture evidence images in addition to the LPR image.

Therefore, the camera will capture 1 synchronized evidence snapshot for each evidence camera when a license plate is captured.

In this tab, configure the Evidence Camera:



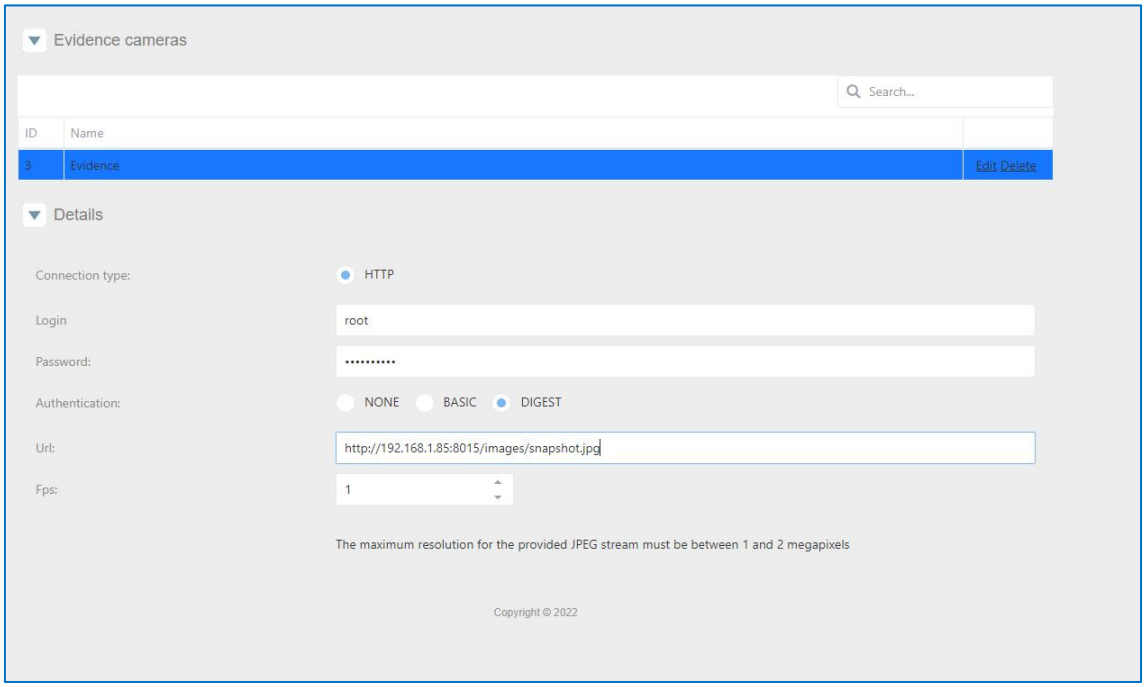
To add new evidence camera, click on "+" button, give it a name and click on "Save".



Details: here we set up the connection parameters to the evidence camera

Connection type: for the moment only HTTP connection.
Login: login user of camera.
Password: Password of camera.

Authentication: None, basic Digest
URL: URL **in jpg format** of the camera.
FPS: Maximum frames per second to process.



Real scenarios

Access control

Capture the state of a car when entering a car park to avoid fraud. By adding several evidence cameras on both sides of the entrance. (audit)

Capture the face of the driver for security reasons.

Capture the number of wheels in tooling for auditing.

How it works

The camera keeps capturing snapshots from the evidence cameras all the time.
When the camera reads a license plate, it takes the last captured image from each evidence camera. This way, evidence images are synchronized with the LPR image.

Suggestions

Limit the size of the snapshot image in the evidence camera setup. NOT in the URL with parameters.

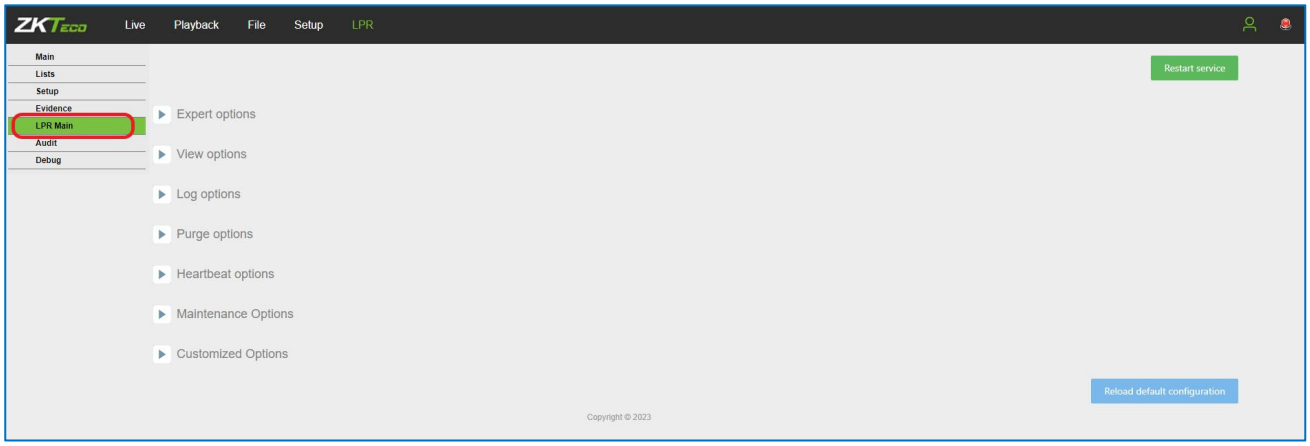
Typically, you must look for the jpeg streams and reduce it to 1 megapixel.

Do no setup more that 2 or 3 evidence cameras.

Click on the “RESTART SERVICE” button to take effect.

4.6. LPR MAIN

In this tab, configure general parameters:



Expert Options:

Save the image: If selected, it stores the full image in a folder.

Save the plate image: If selected, it stores only the license plate image in a folder.

Image quality: It stores the image with the configured compression here.

Store image on: It stores the image with the configured compression here.

Store image on: It stores data on an SD card or in the camera. We strongly recommend adding an SD card to the camera.

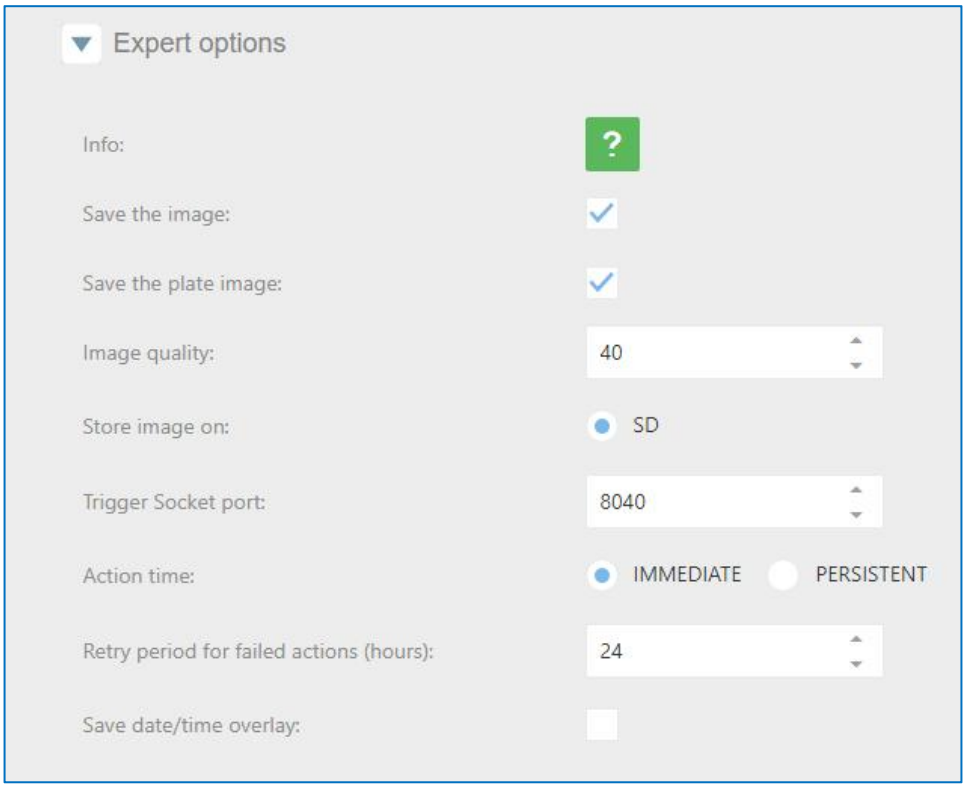
Trigger Socket Port: It enters the port we want to use for sending XML/JSON messages.

Action time:

- Immediate: The action will be queued in memory and executed.
- Persistent: The action will save in DB and will be execute it.

Retry period for failed actions (hours): If an action can be retried and it fails, the system will do it every minute until the Retry period is completed or the action succeeds. (Example of an action that can be retried: Email, other actions that can't be retried: IO

Save data / Time overlay: If selected, will overlay date and time in the image.



View Options:

View Type: It displays each detected vehicle in table or square view.

Date format: The date can be seen in three different formats on result and info panel of live page.

Time format: The time can be seen in two different formats on result and info panel of live page.

List field: The columns on result panel of live page can be filtered by these options.

Review field. The columns on result panel of the review page can be filtered by these options.

Log Options:

Log Level service: Let you determine the log level to register what is going on with Neural Edge. By default, is set to 2. Level 3 and 4 are for experts and debugging team.

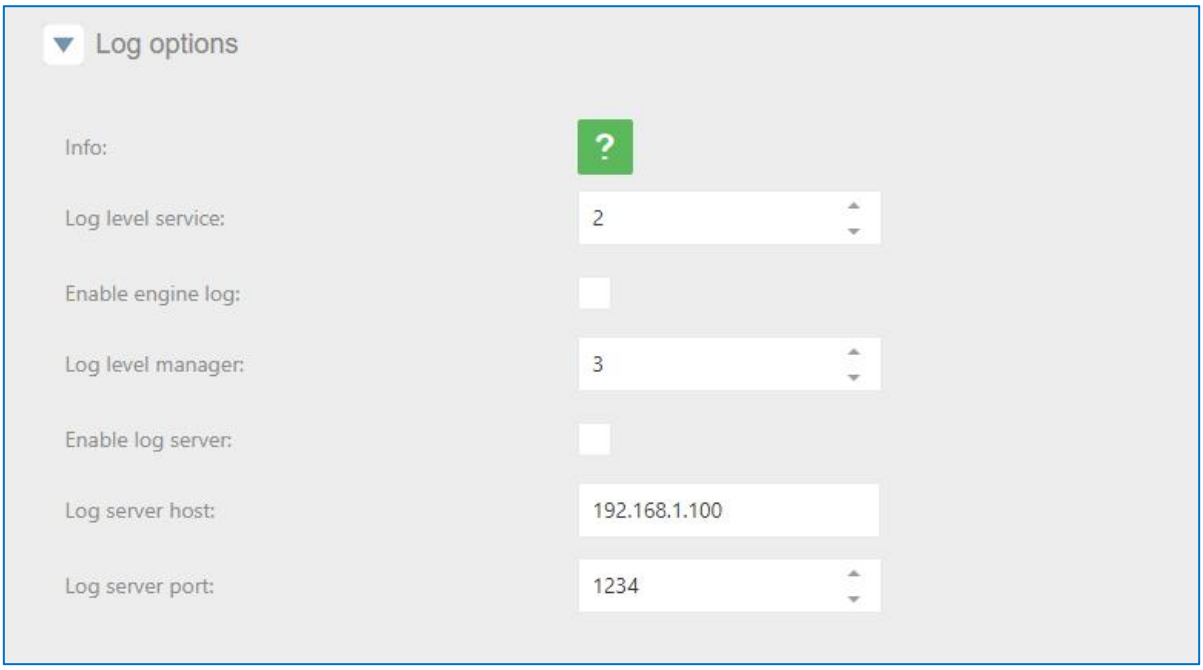
Enable Engine log: Select only if debugging mode is necessary, only for expert technicians.

Log Level manager: Let you determine the log level to register what is going on with the CGI. By default, is set to 2. Level 3 and 4 are for experts and debugging team.

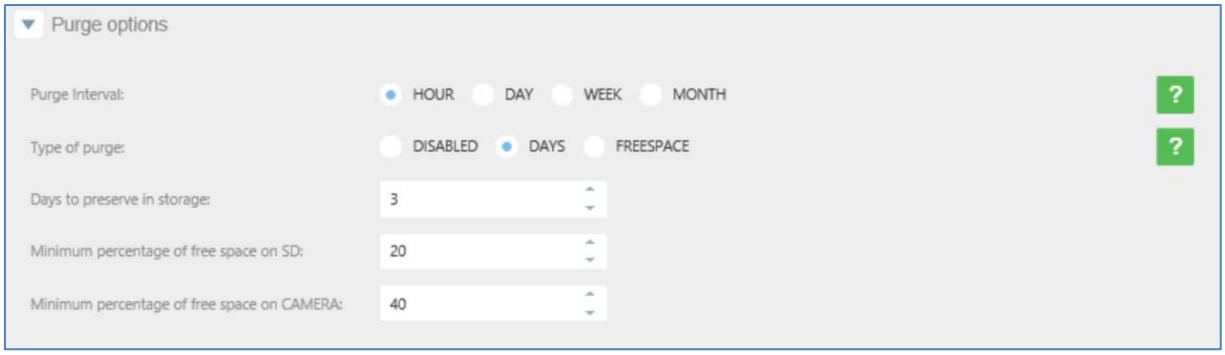
Enable log server: It Activate or deactivate the sending of logs to a server.

Log server host: IP to which the system will send the message.

Log server port: Port to which the system will send the message.



Purge Options: Here we will determine how many days or register of data we need to keep.



Purge Interval: Schedule when do you want to execute the purge.

Hour: It executes the task every hour.

Day: It executes the task once a day at 23:59:59.

Week: It executes the task once a week, every Monday at 00:00:00.

Month: It executes the task once a month, the first day of the month at 23:59:59.

Type of purge in database: Set how and what do you want to purge.

Disabled: It does not execute any purge.
Days: It purges by days, keeping data for the last days.
Freespace: It purges depending on the free space in the SD or in the camera.

Once you have defined when and what do you want to purge, you need to set the variables to execute the task.

Purge by days:

Delete database before (days): It keeps data from the last (XX) days and purges the rest.
Delete files before (days): It keeps files from last (XX) days and purge the rest.

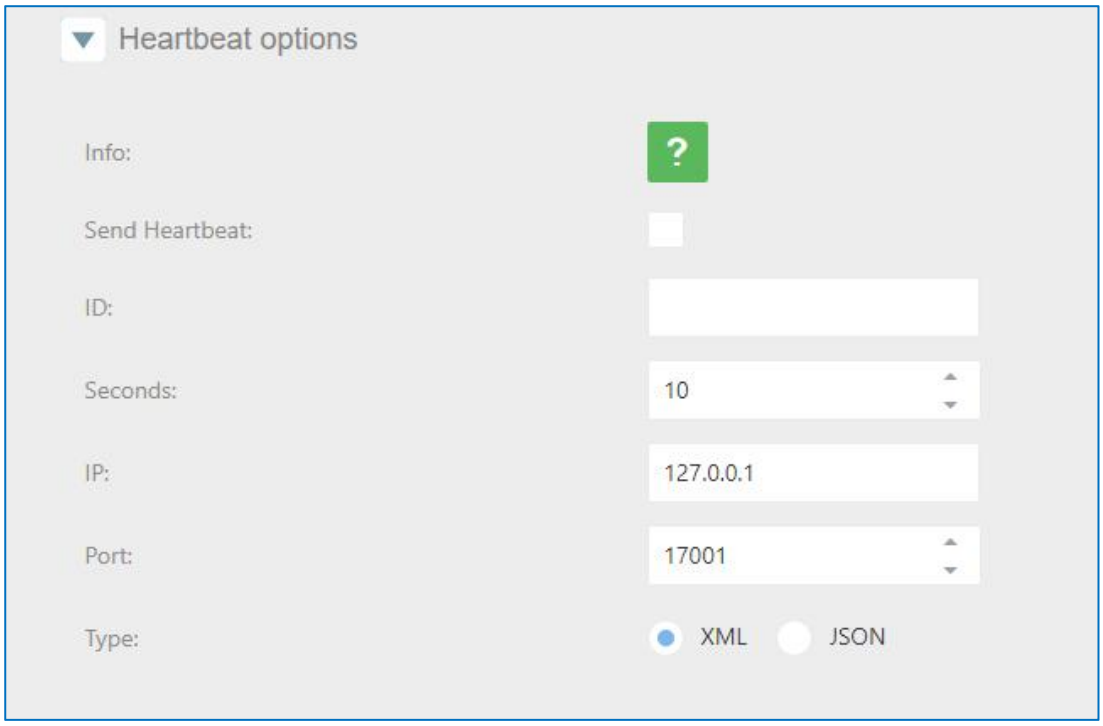
Purge by Free Space:

Delete files and database on SD below (percent): It deletes data in the database and files stored until free space on the SD is lower than configured.
Delete files and database on CAMERA below (percent): It deletes data in the database and files stored until free space in the camera is lower than configured.

Heartbeat options:

With this option we ensure the camera is alive and answering requests.

Send Heartbeat: This option toggles if the camera is sending heartbeats or not.
ID: You can set it for camera id. As a default the id is the name of the camera.
Seconds: Interval of second between heartbeats.
IP: Destination of message sent.
Port: Port destination (this port needs to be open on the destination computer).
Type: With this option you can select sending an XML or JSON message.


Heartbeat options
Info:
?
Send Heartbeat:
ID:
Seconds:
10
IP:
127.0.0.1
Port:
17001
Type:
XML
JSON

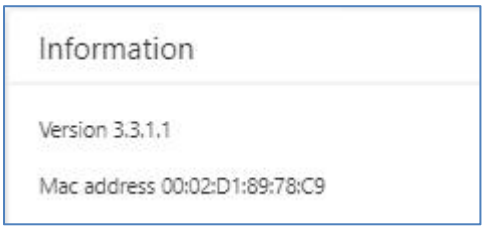
Maintenance Options:

In this section, you can upload files for camera configuration, licensing, update Neural Edge version, change the logo, and upload images for the path option shown in the Camera Configuration tab.

Upload File: It lets you upload a file.

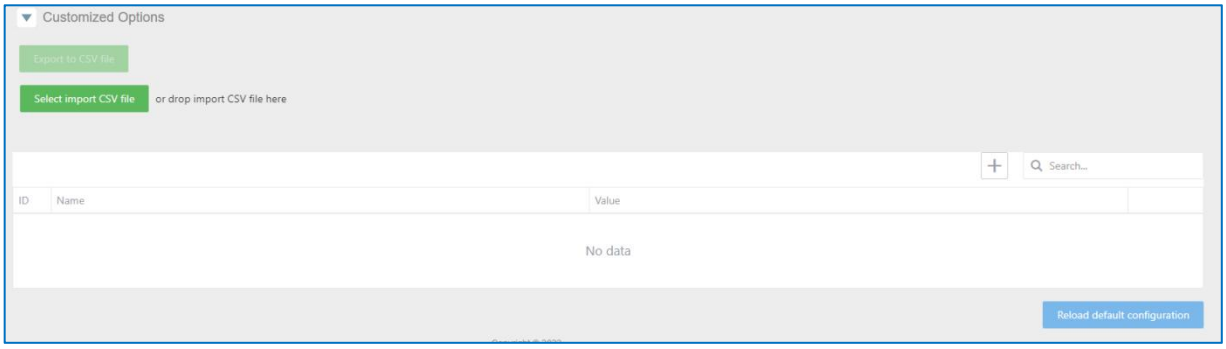
Revert last files: After applying changes with the uploaded files, if it doesn't work correctly, you can revert changes.

Show Info: It shows information about the version and camera MAC ADDRESS.



Reset the database: It allows us to clear the database.
Reset Counters: It allows us to reset all ANPR counters including Triggers Received, Frames Processed, Frames Discarded, Motion Detection and No Plates.
Export general config: It allows us to export(download) general configurations as CSV file.
Export database: It allows us to export(download) database.
Export VPAR Configuration: It allows us to export(download) VPAR configuration as zip file.
Import CSV General configuration: It helps us to import any general config CSV file.

Customized Options:
In this section you can add new fields, export, and import lists (The maximum number of fields is 10).
You can search by dates information the field you want.



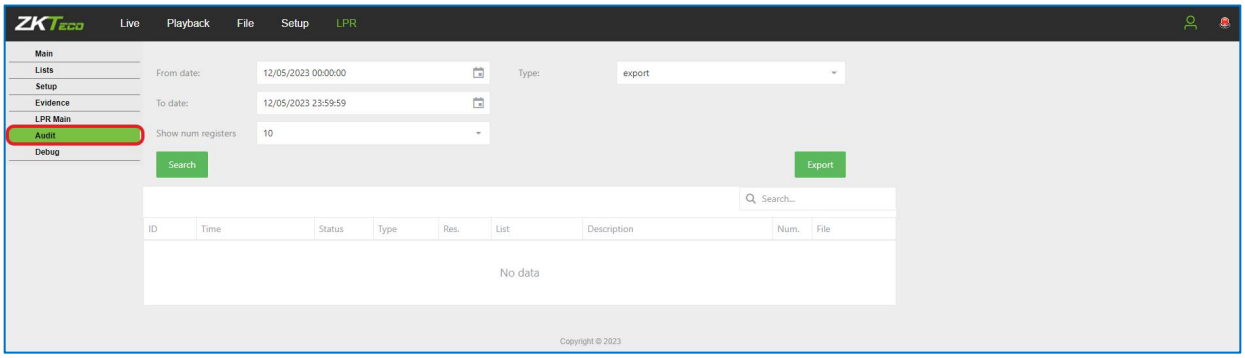
In case you want to revert, all changes are done, and want to get back to the default configuration, click on button. Restart default configuration

(Note: you cannot add only number as name, and you cannot add field with space as character either).

4.7. Audit Tab

The camera registers actions like export and import lists and actions executed depending on the list configurations.

In the Audit tab, you can search by dates for information related to these actions.



You can search in the stored actions by dates and by type of action.

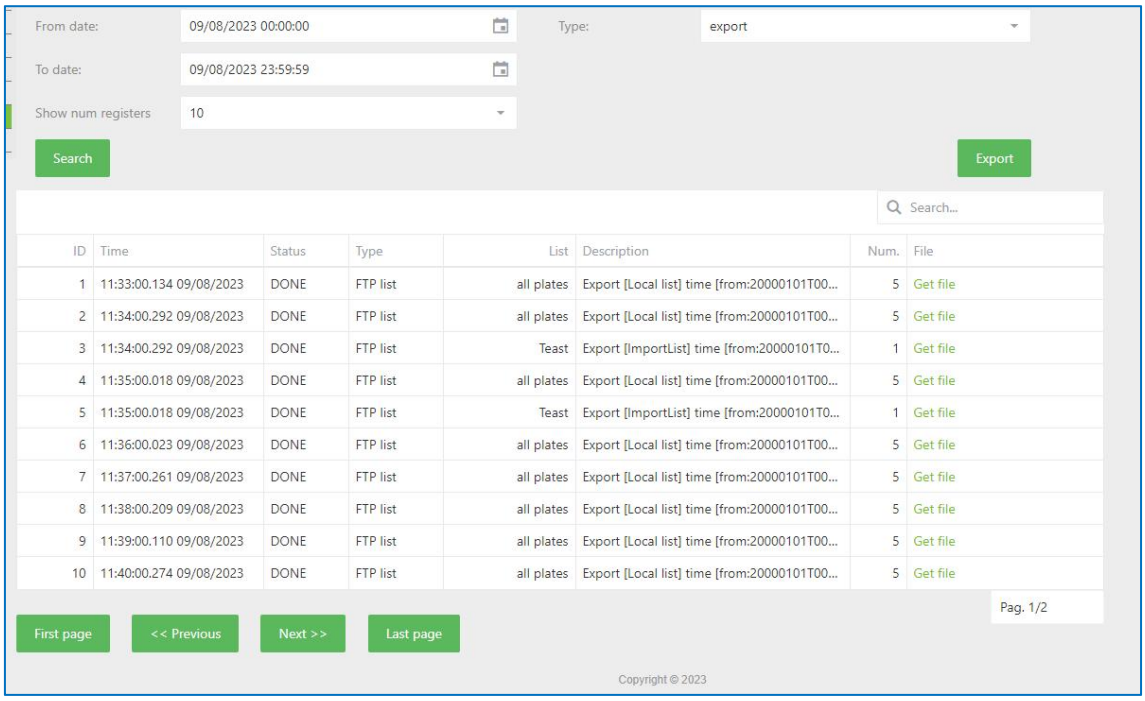
Export: It shows automatic exports done

Import: It shows automatic imports done.

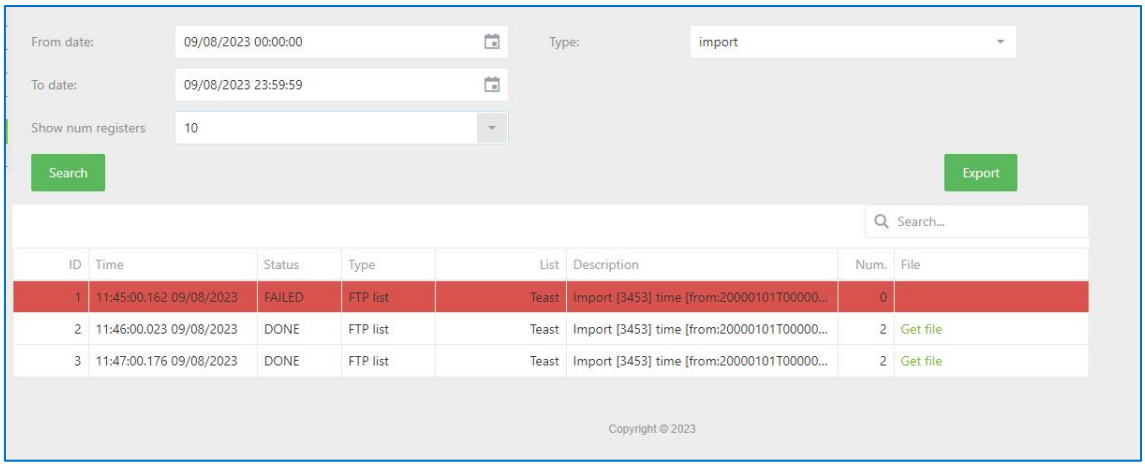
Action: It shows automatic actions triggered on the lists.

The result of the search can be exported and downloaded.

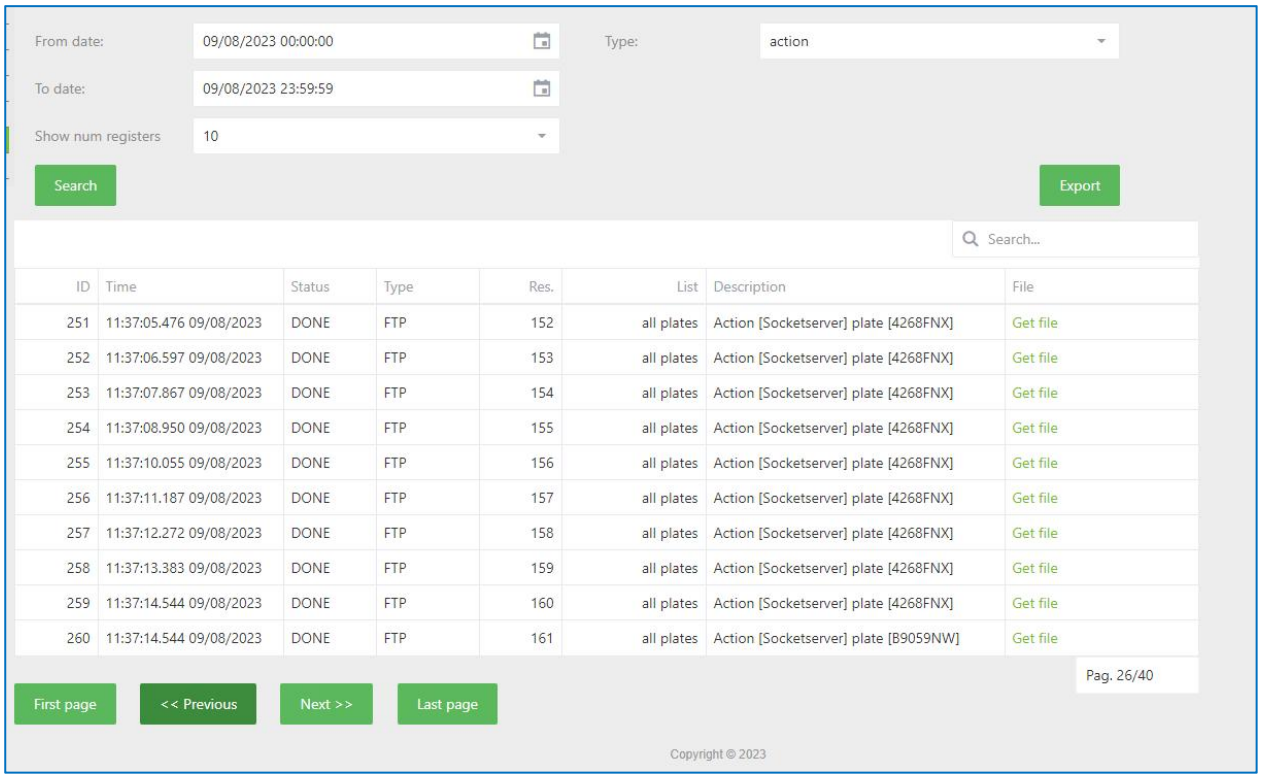
Exports example:



Imports example:

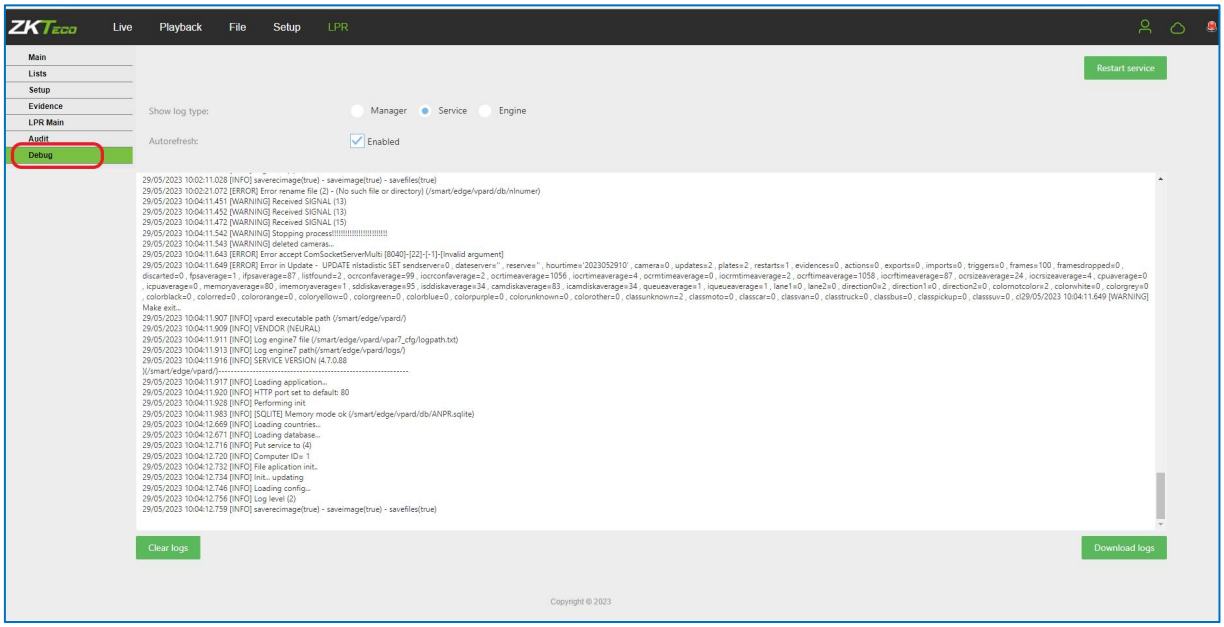


Actions example:



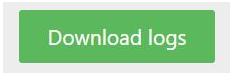
4.8. Debug Tab

In this TAB, the user can see /download different logs. Logs are activated and setup in General Configuration TAB.
These logs can be useful to help our technical team diagnose and solve application problems.



The type of log that the user wants to see must be selected by either the manager, service, or Engine.

By checking auto update, the application will refresh the selected log type.

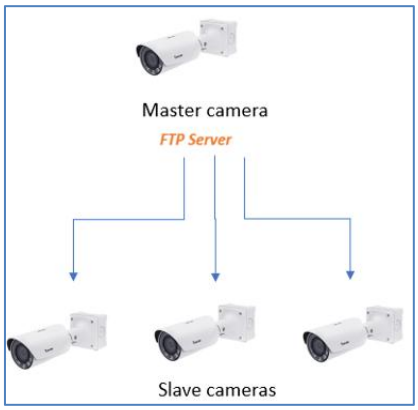
Sending logs to technical support may be needed. To do that click  in the bottom of the page.
Selected logs will be downloaded in compressed txt format.

5. Camera list synchronization

The ZKTeco Edge system allows a list system synchronized.
One of the cameras works like a master and the other cameras works like a slave.
The master camera uploads the file with the list content and the slave cameras downloads the file.
All the list and elements must be modified in the master camera, the changes will be updated automatically in the slave following the next instructions to configure the master and the slaves.
There is no limit for the number of slave cameras, the limit is on the FTP server and depends on the number of connections.
Can be synchronized all the lists or only one list.

5.1. Architecture 1

The camera is the FTP server. Must be activated (by default is disable the FTP server).



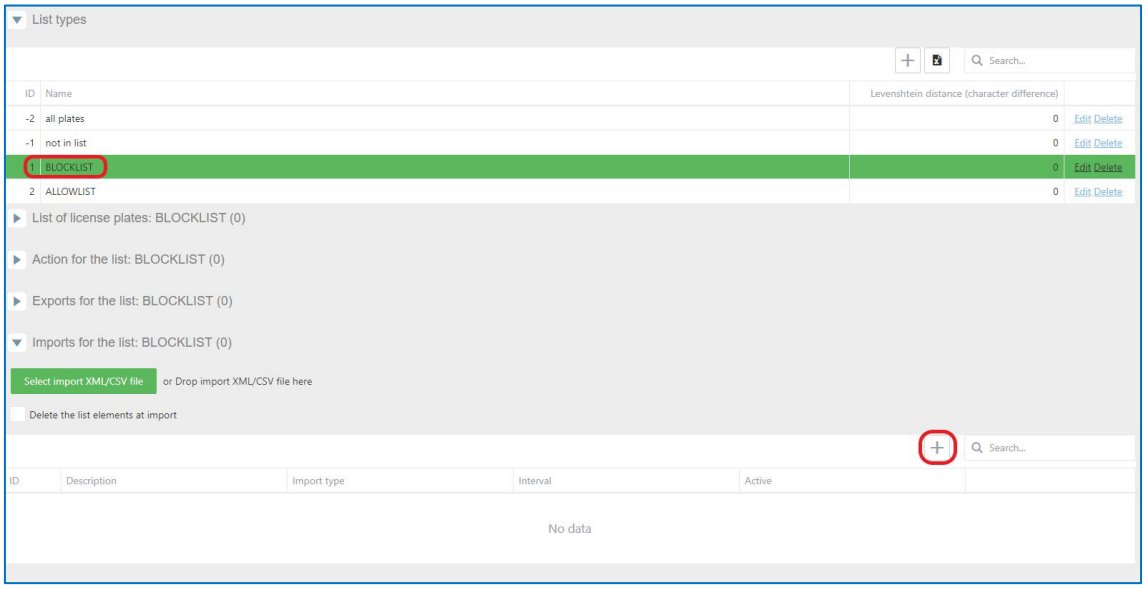
5.1.1. Master configuration

Activate the FTP server.
Access to the camera web interface:
Configuration/Network/FTP
Check “Enable FTP server” and click Save.

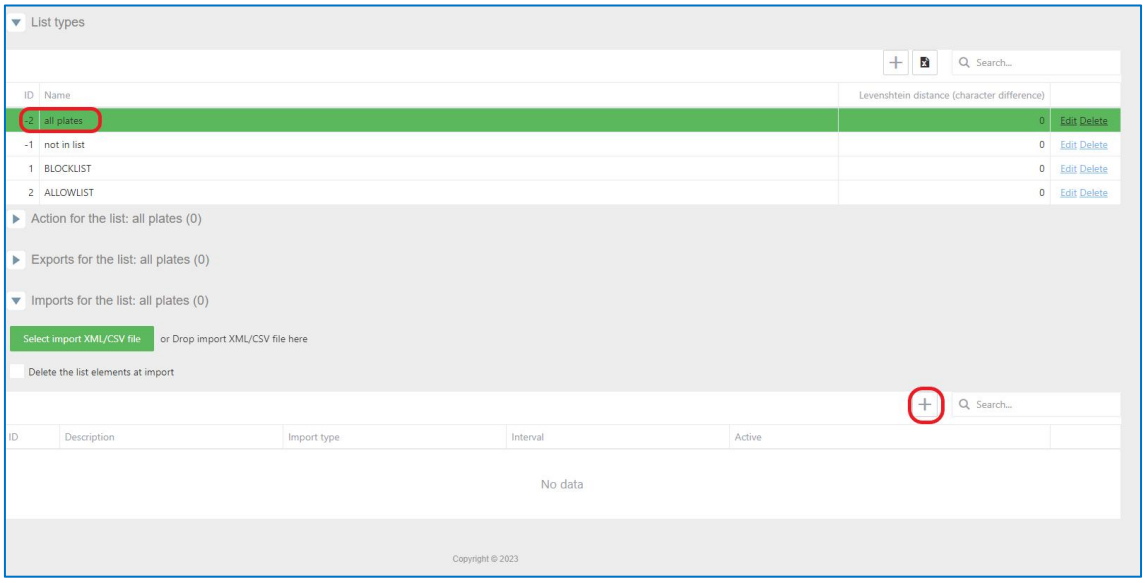
5.1.2. Slave configuration

Access the List Tab.

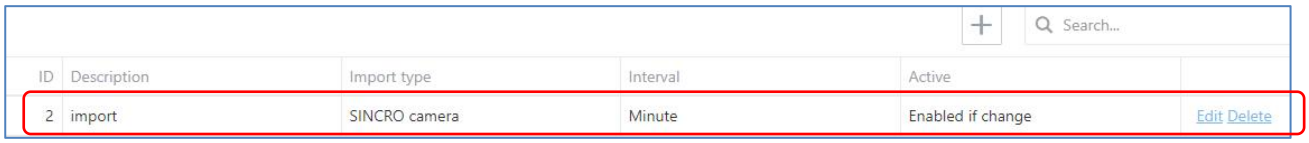
To configure only one list, select the list and make the import in the list.



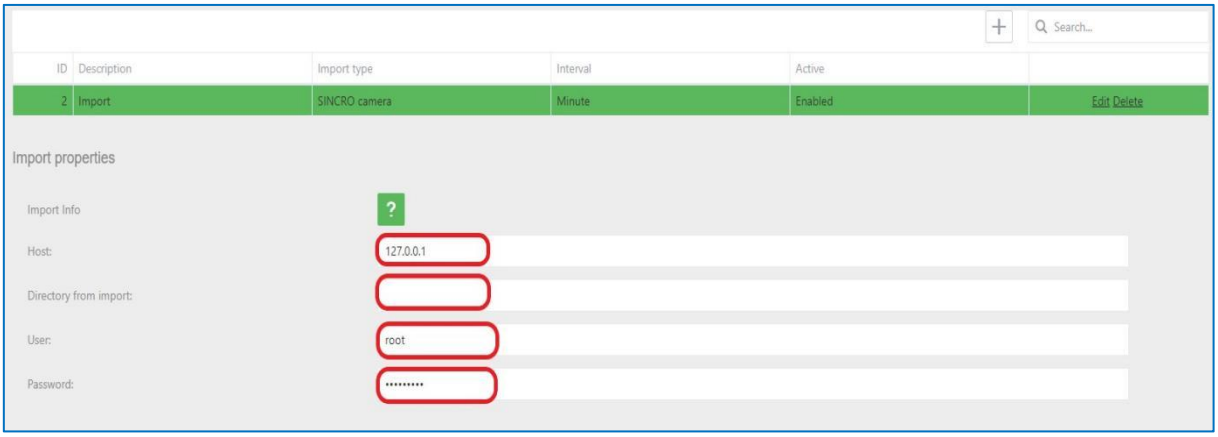
To configure all the list selects all plates.



Select an import for each minute (or desirable time) select the time enabled with the type SINCRO Camera and click Save.

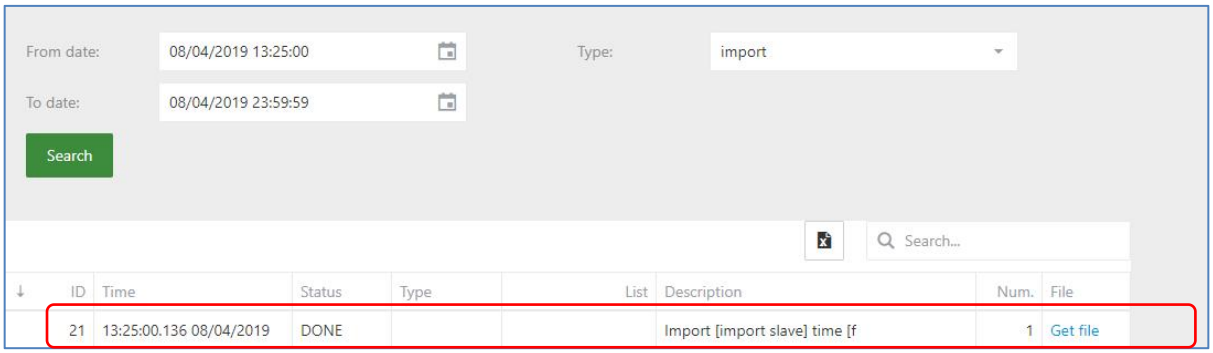


Configure the master camera credentials.



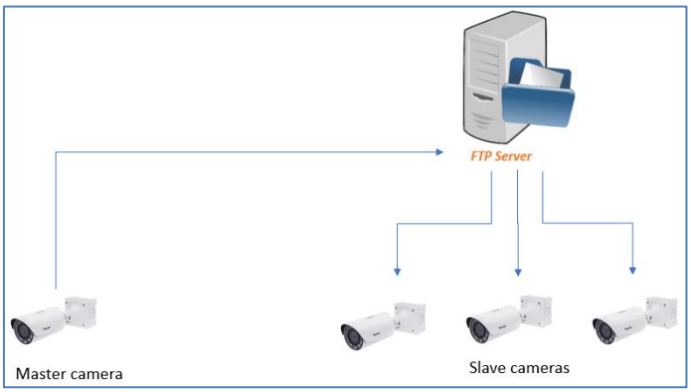
Host: Camera master IP
Directory from import: Directory of the master camera where to obtain the data file in case it is different from the default value.
User: Camera master user
Password: Camera master password

Can be checked in the Audit Tab.



5.2. Architecture 2

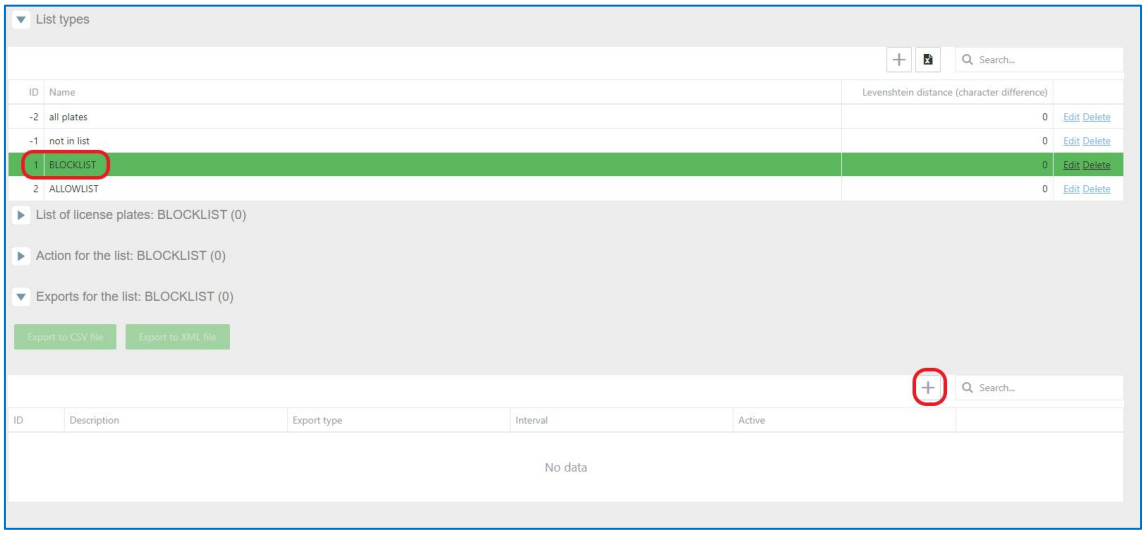
Using FTP server where store the list.



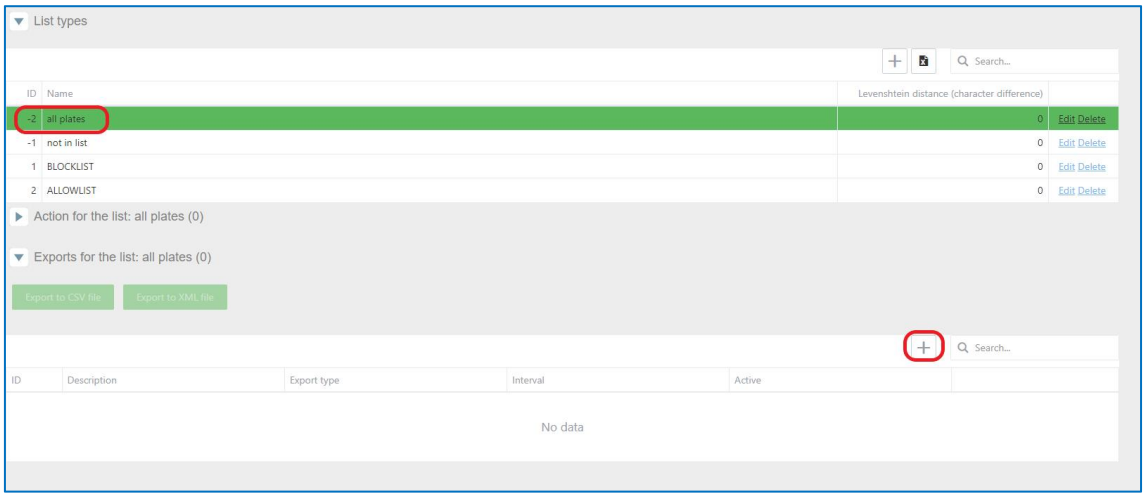
5.2.1. Master configuration

Access the List Tab.

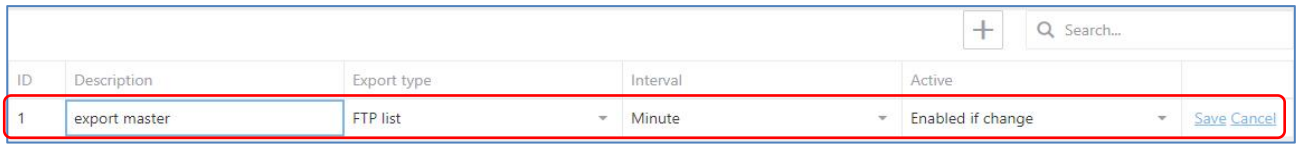
To configure only one list, select the list and make the export in the list.



To configure all the list, select all plates.

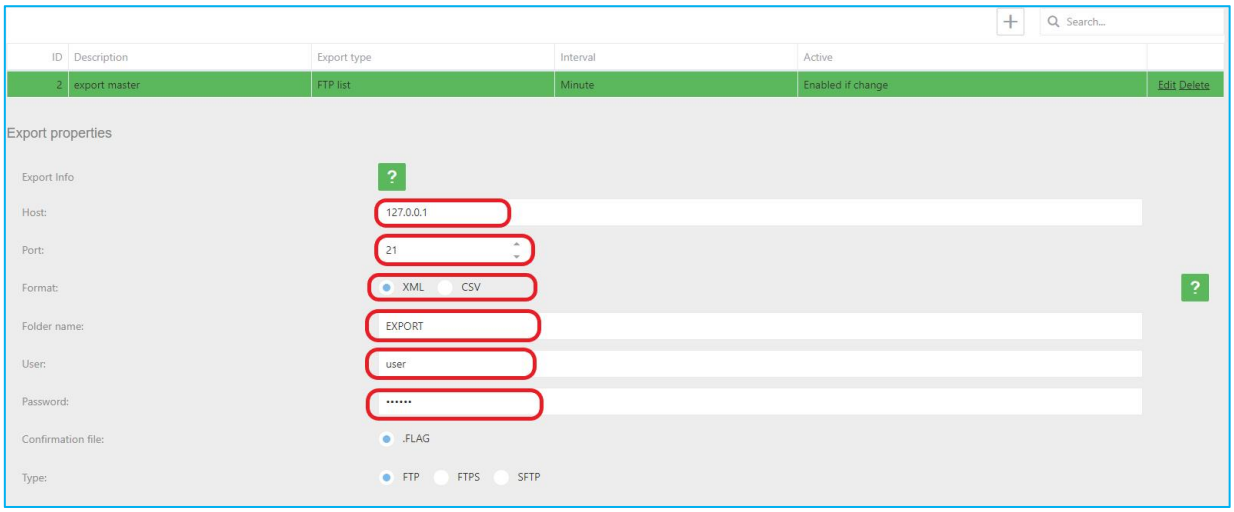


Create an export each minute enabled if change with the type of FTP list and click Save.

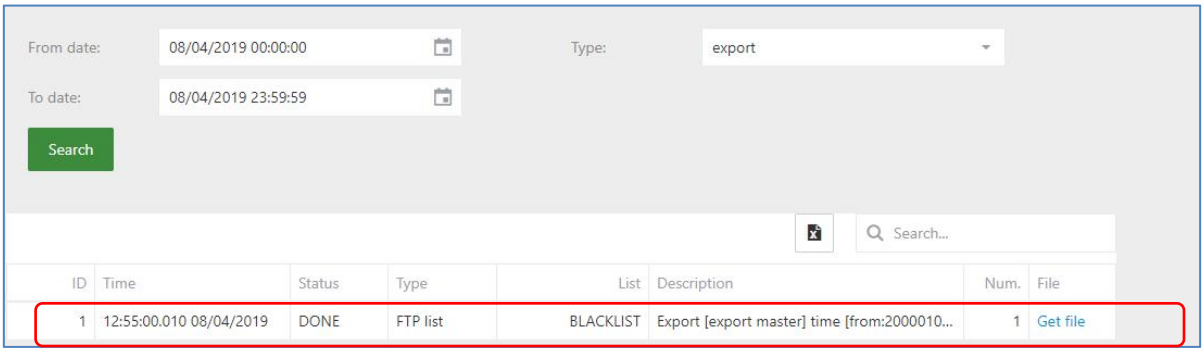


Configure the credentials of the FTP server and the format CSV or XML, which can be in the booth but must be the same in the slaves.

Just configured, the camera master is sending the file to the FTP server.



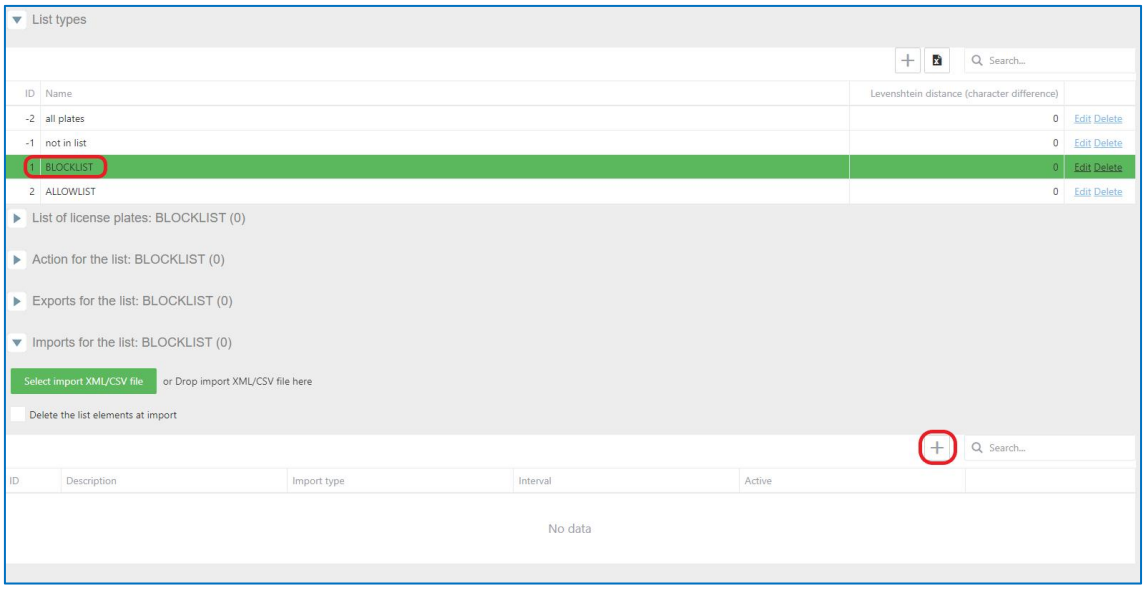
Can be checked in the Audit Tab.



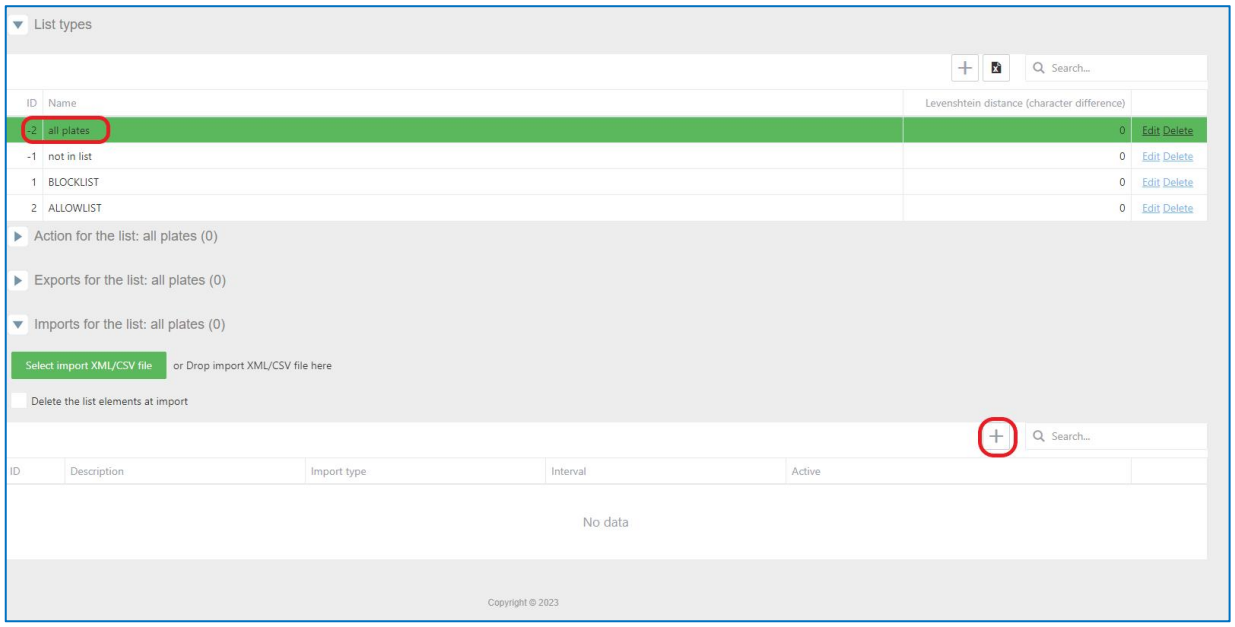
5.2.2. Slave configuration

Access the List Tab.

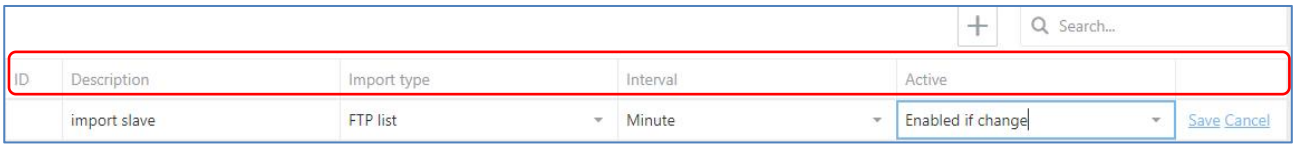
To configure only one list, select the list and make the import in the list.



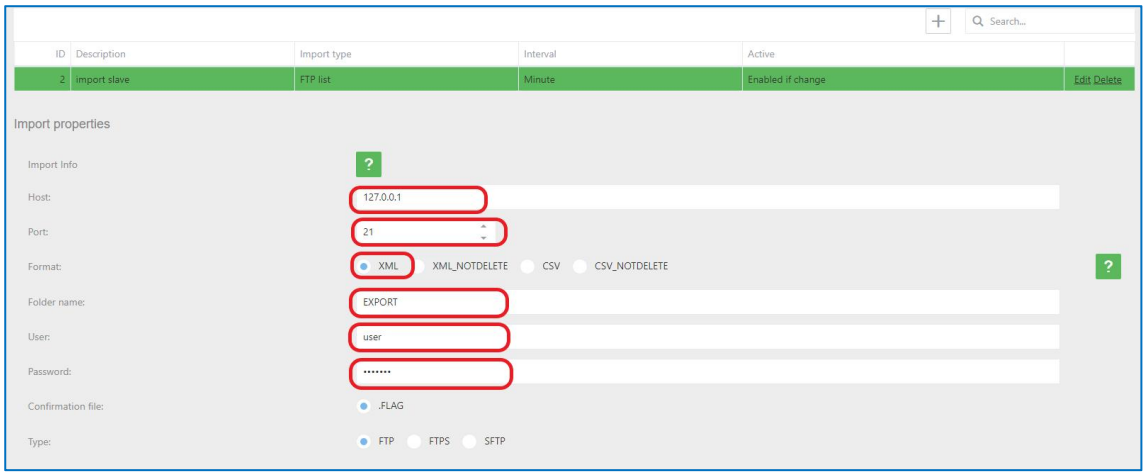
To configure all the list, select all plates.



Create an import for each minute (or desirable time), the time enabled if changed, with the type of FTP list, and click
Save.

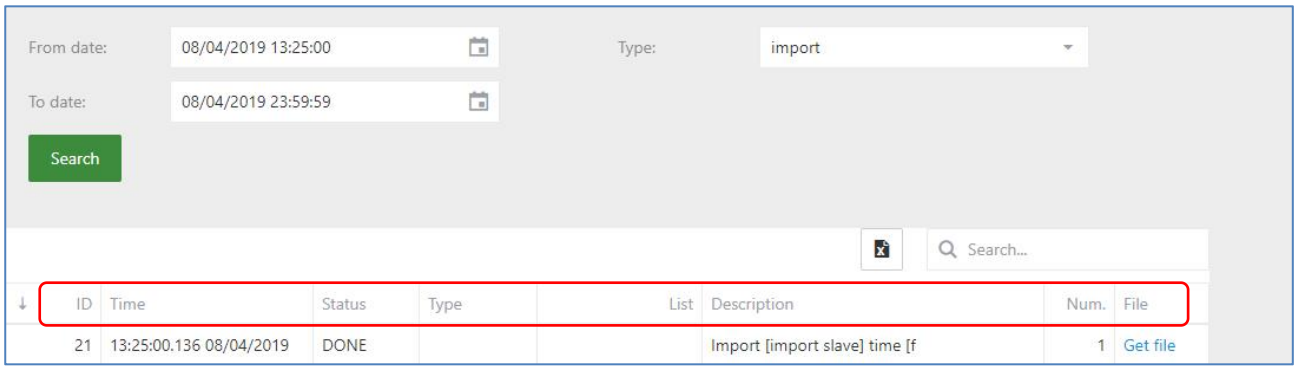


Configure the same credentials of the FTP server and the same format CSV or XML than the master configuration.



If the master selection type is XML, it can be selected as XML or XML_NOTDELETE. If your selection is XML, all the elements not included in each file downloaded will be deleted.
Just configured, the camera master is downloading the file from the FTP server.

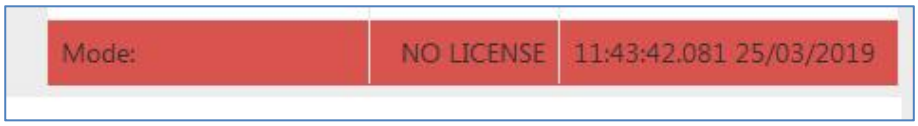
Can be checked in the Audit Tab.



6. Troubleshooting

6.1 Mode: NO LICENSE

If the camera is not licensed, we find that the mode will be “NO LICENSE” on live page.



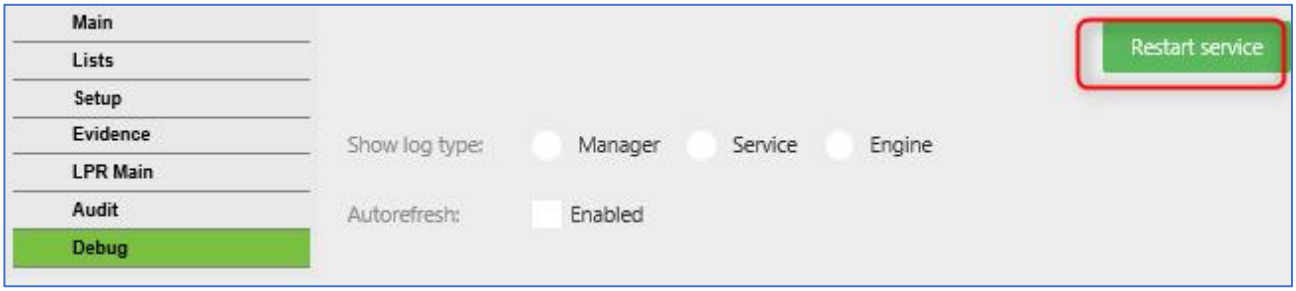
To solve this problem, please get in touch with support.

6.2 Mode: STOPPED

If the LPR service is stopped, we find that the mode will be “STOPPED” in live page.

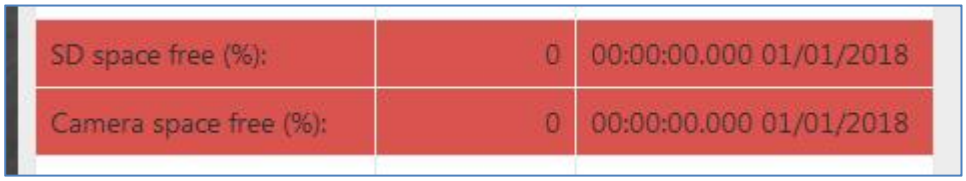
To solve this problem, we will have to reboot the service. You can reboot the service at:

- Logs page:



6.3 Not enough space on Camera or SD

If the camera or SD card does not have enough space, the system could fail.



If the space is below 20%, please review the purge option section.

6.4 The system does not recognize license plates.

If the system does not recognize license plate, please verify the following steps:

1. The region and country are the right ones. You can check this configuration at LPR configuration.

2. The license plate has a minimum size of 25 pixels. The user can use the calibration pattern on the live page to adjust the size of the license plate. The license plate must be between two lines.

3. If you the system has a defined ROI, verify that the license plate is inside the ROI area.

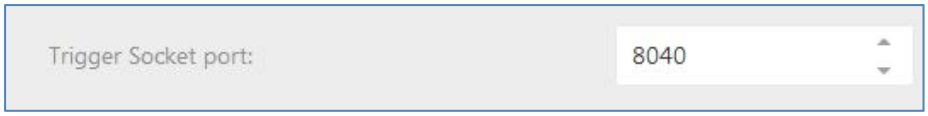
4. If the system is configurated for motion detection mode, please make sure there is a movement inside the image.

5. If the system has read a license plate and does not read it anymore, check the filters.

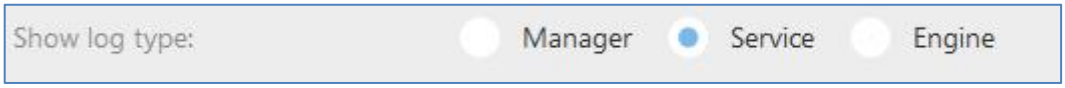
6. If the system is configurated for trigger mode, please check the following points:

    a. Check the mode of the camera (LPR CONFIGURATION):

b. Check the trigger socket port (GENERAL CONFIGURATION):



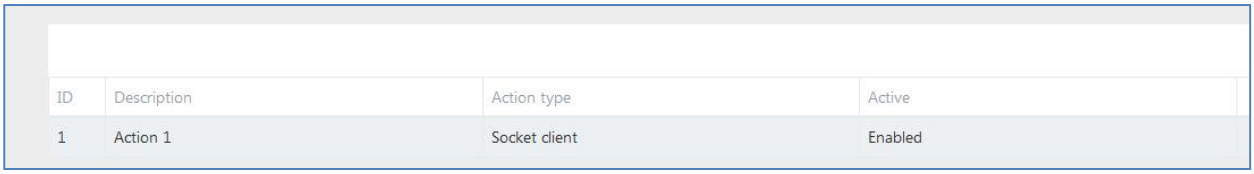
c. Check that the sender device has TCP/IP connection to the camera at the defined port. It can be checked via telnet.
d. If the message is received correctly, the system log must show the line:



6.5 Problem with ACTIONS

If the action is not executed, verify the following points:

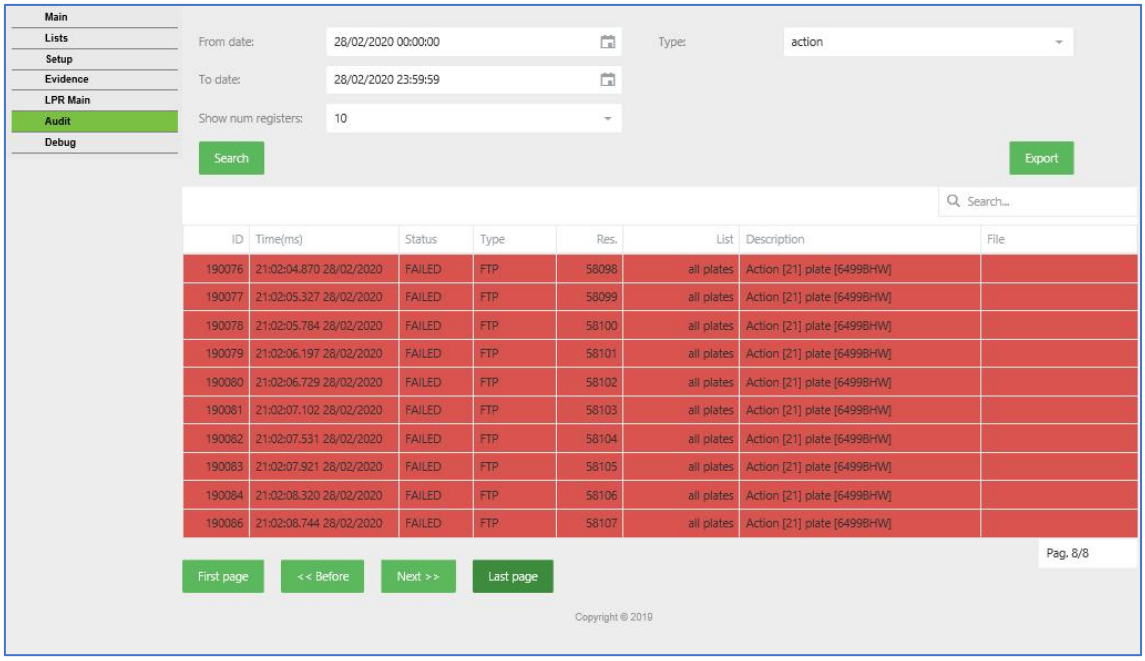
1) The action is enabled.



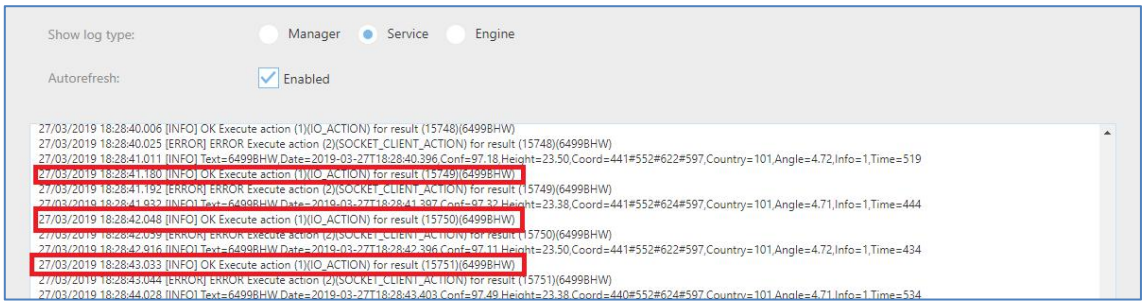
ID	Description	Action type	Active
1	Action 1	Socket client	Enabled

2) The detected plate is in the list that is defined in the action.
3) There is a defined action to “all plate” list.
4) The detected plate is not in any list, there is an action defined in “not in list” list.
5) The date of the detection corresponds to a valid time defined in the scheduler.

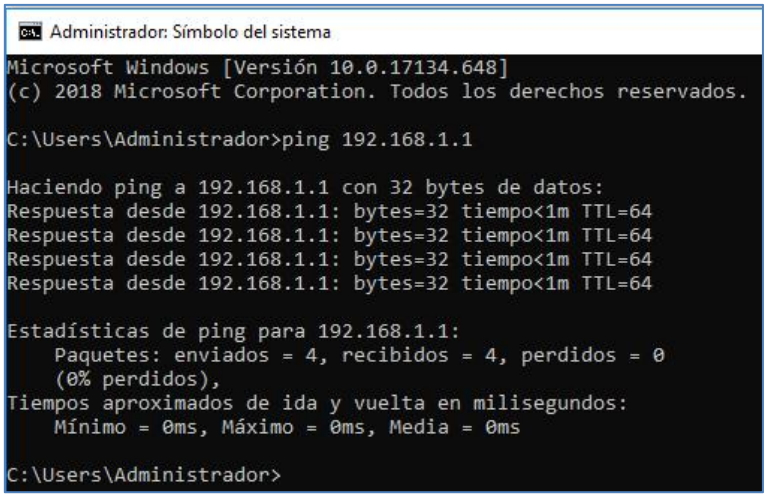
6) Check in Tab Audit if the action has been executed. If it is in red, an error was sent.



7) Check the logs to see if the action has been executed or not. Active Service and Enabled.



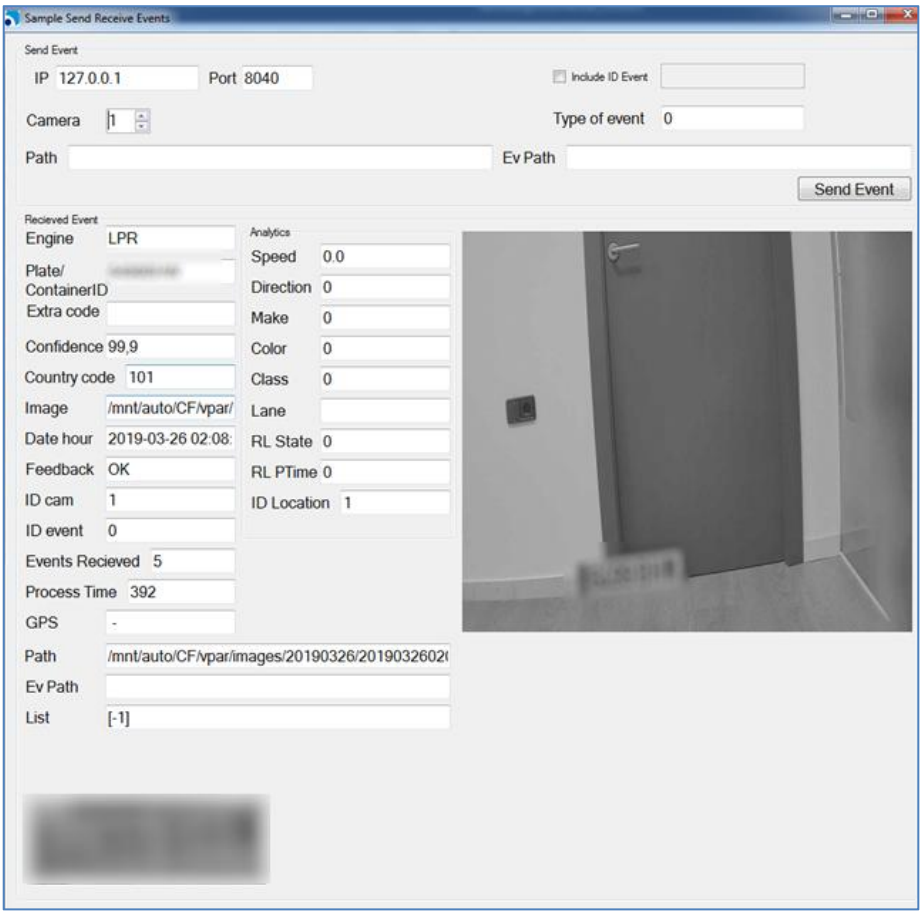
8) Check the connection with the host with a ping command.



6.5.1 Socket client

If the socket client action does not send the message, please check the following points:

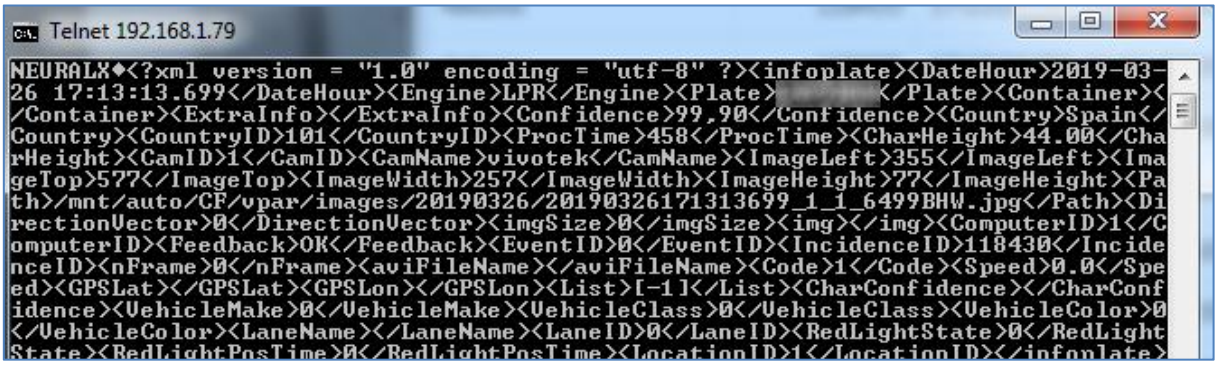
1) Check HOST and Port of defined action.
2) Check the HOST/PORT connection that the camera has connection to.
3) Check the new options for the image selection.
4) Download, install and open the sample test program on the client computer.
   - www.neurallabs.net/SendReceiveEvents/SendReceiveEvents_x64.zip
   - www.neurallabs.net/SendReceiveEvents/SendReceiveEvents_x86.zip
5) Check the IP from client computer, set port 17000 and read a plate.



6.5.2 Socket server / Trigger server

If the socket server action does not send the message, please check the following points:

1) Check the defined port.
2) Check the new options for the image selection.
3) Reboot the service if you have defined a new socket server action.
4) Open a telnet client to Camera IP and defined port, and check that the message is received.



6.5.3 IO

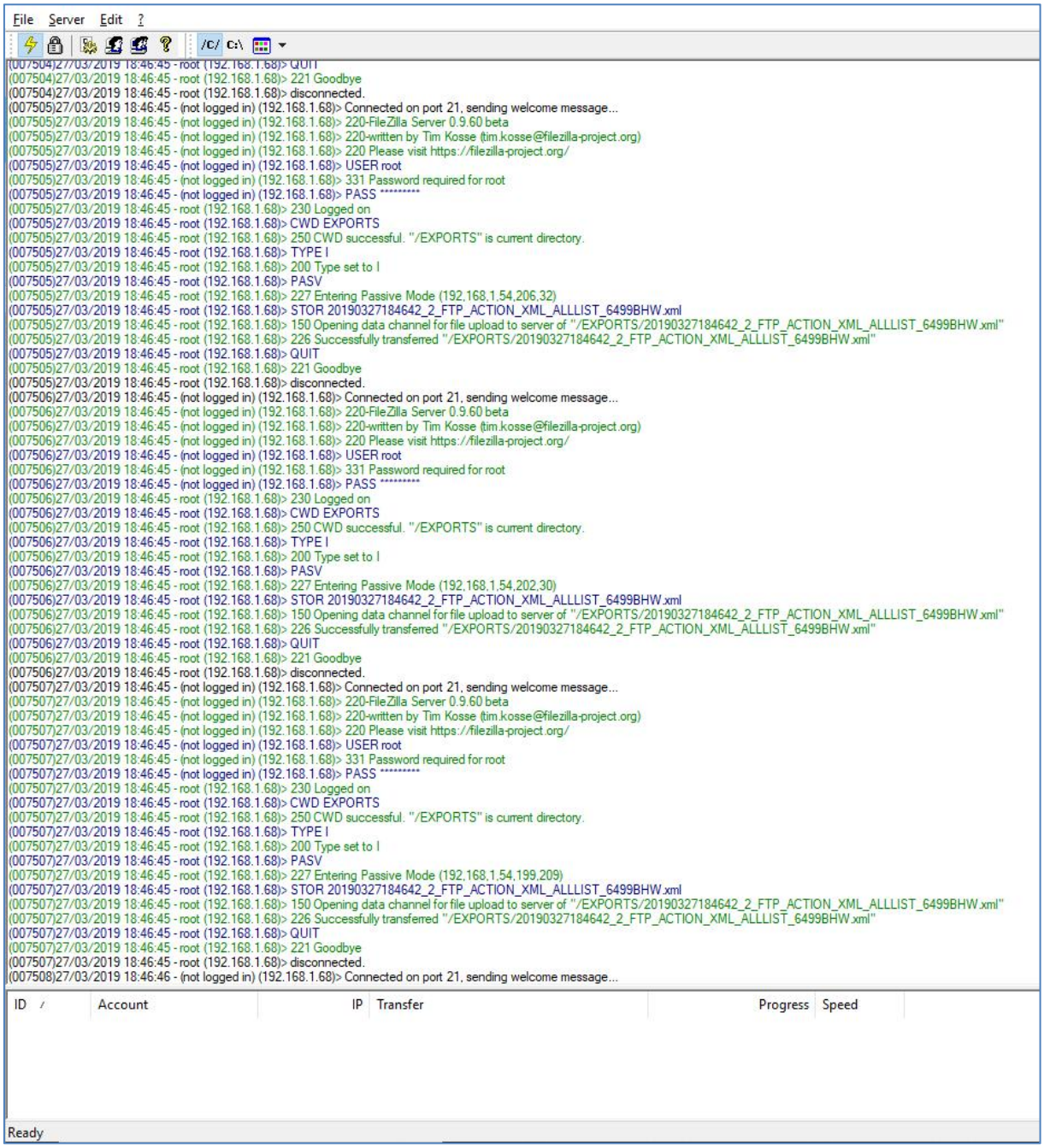
If the IO action does not send the message, please check the following points:

1) Check the defined port.
2) Check the defined time.
3) With a multimeter, connect to the selected port and check that the voltage changes from 0 to 5 V.

6.5.4 FTP

If the FTP action does not send the message, please check the following points:

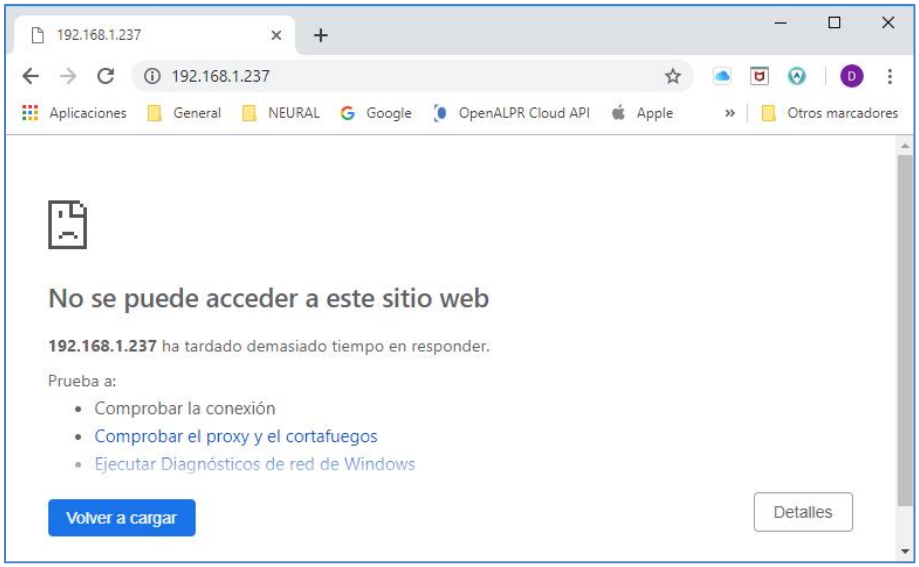
1) Check the defined parameter.
2) Check the credentials and access with FTP client.
    - https://filezilla-project.org/download.php?type=client
3) Install FTP server like the FileZilla server and check the logs.
    - https://dl2.cdn.filezilla-project.org/server/FileZilla_Server-0_9_60_2.exe?h=Fjvi4wvvZmA-MDcp3K9v0Q&x=1553712290



6.5.5 HTTP/MILESTONE/WIEGAND

If the HTTP action does not send the message, please check the following points:

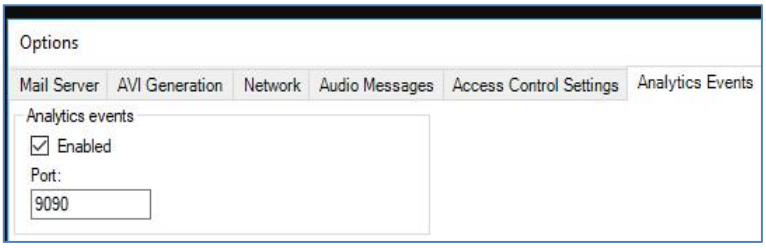
1) Check the defined parameter.
2) With an explorer (Internet explorer, Firefox, Chrome) do a request to defined URL and check that the URL respond.
   In this case it does not respond.



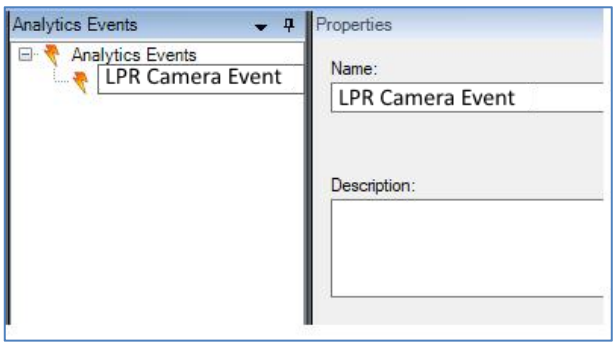
6.5.6 MILESTONE

If the MILESTONE action does not send the message, please check the following points:

3) Check the defined parameter.
4) Check in Milestone system that the analytics events are enabled.



5) Check in Milestone system that the analytic event name is “LPR Camera Event”.



Check in Milestone system that the created alarm uses the before analytic event and related camera.