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VIVOTEK Urban ANPR software

User Manual

V1.1



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History:

Version	Date	Creator	Details
1.0	24.09.2020	Aaron Hung	Initial Document
1.1	17.02.2021	Aaron Hung	Add Trigger mode API trigger period limitation, Maximum enabled actions and Maximum Master-slave camera connection

Overview

Urban ANPR software is a powerful LPR application developed by Neural Labs embedded in Vivotek cameras.

Urban ANPR software 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 installation.

Installation Requirements

2.1. Camera requirements

It is recommended a minimum size 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:

IP9165-LPR

Minimum firmware 0106b

2.2. Storage requirement

The preset values suppose a **40% of JPEG compression** (default system value)

In the following table we can find *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

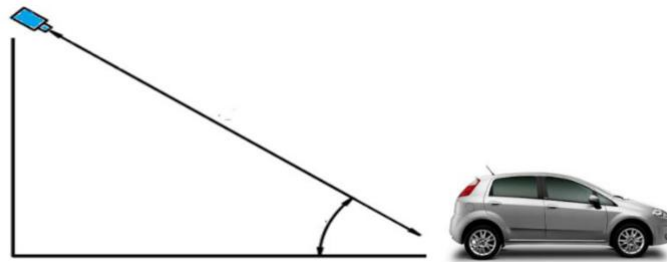
2.3. License Plate Character size

Characters in license plates must have an average height between 15 to 80 pixels, being 20 pixels a good reference value. Less resolution may lead character confusion in some countries. In addition, camera sensitivity affects 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.

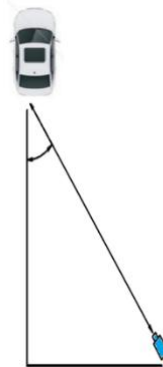


2.4. Camera Positioning

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



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



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



Recommended Parametrization

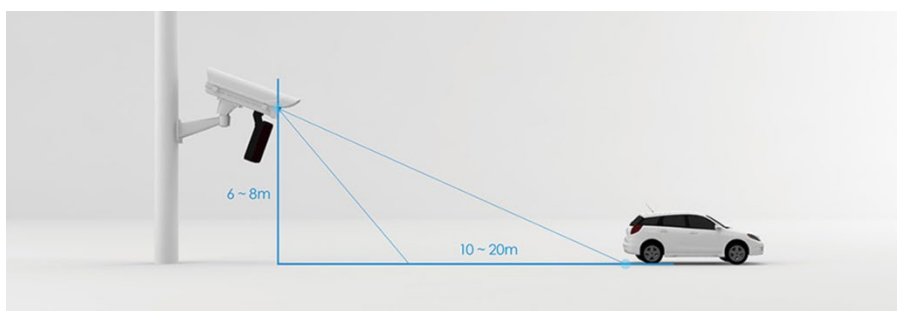
It should be mentioned that the following recommendations and specifications, are general and may vary depending on the brand and model of the selected camera and the country they are to be installed.

Common Scenario

Common scenario: 2 lanes

Suggested height of camera: 6-8 meters

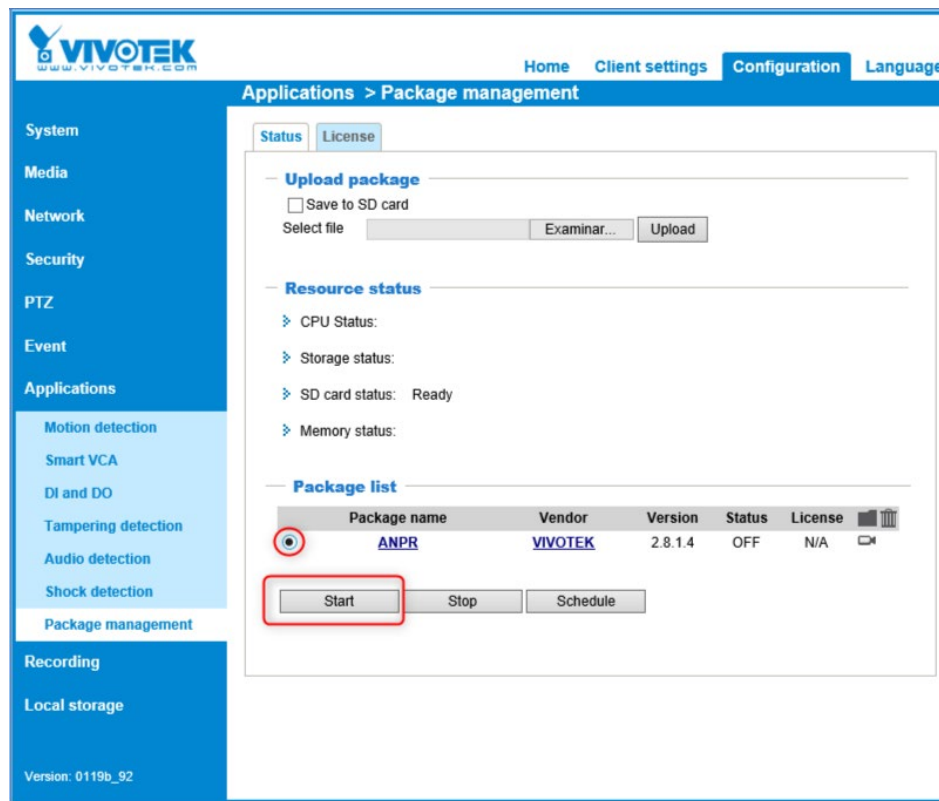
Suggested distance: 10-20 meters



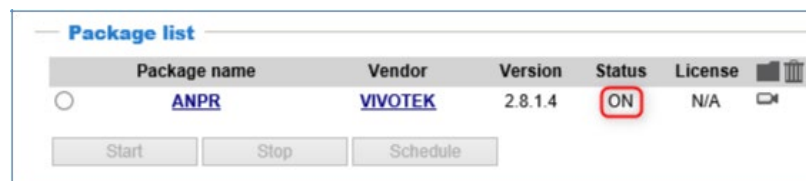
Installation Process

3.1. Starting Service ANPR

To start service, click on Package Management, select the ANPR and click on “START”.

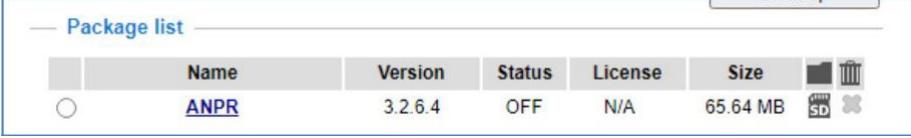


The service status should change as shown in the picture.



3.2. Urban ANPR software Management Browser

Open a web browser and enter the camera IP. Go to “Applications”, click on “Package management” and double click on ANPR service.

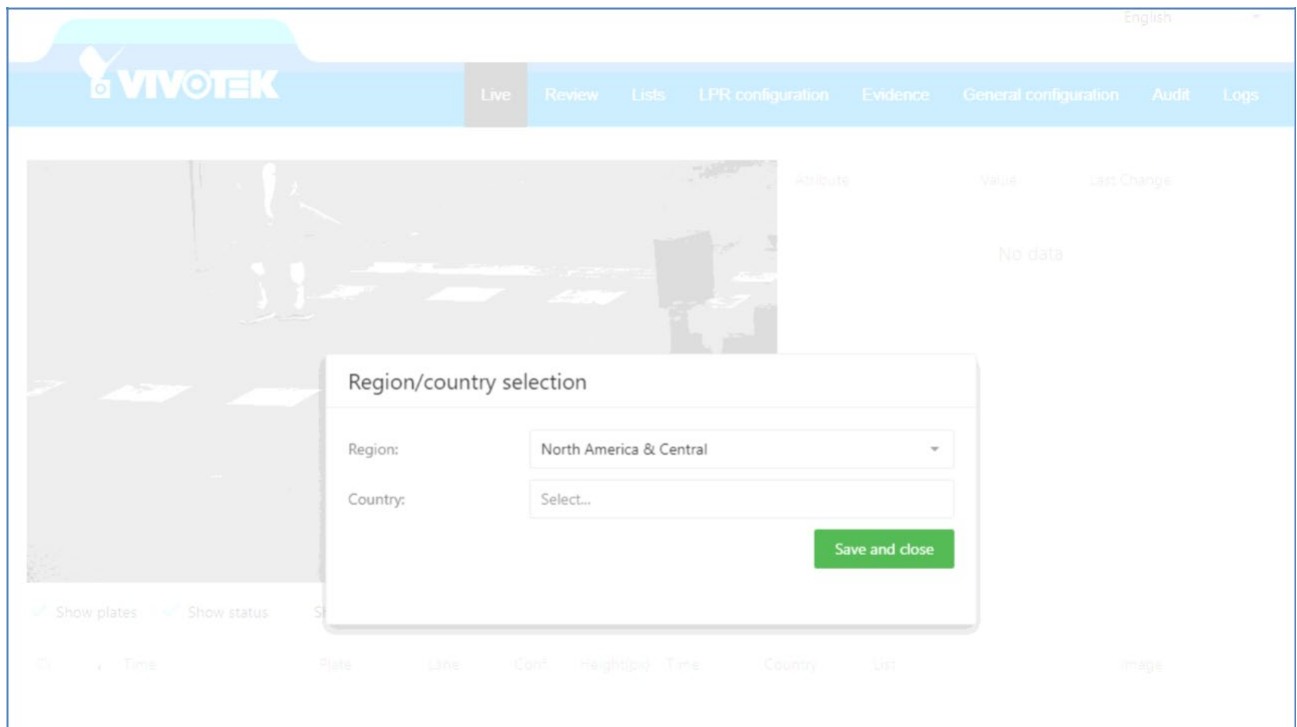


	Name	Version	Status	License	Size		
<input type="radio"/>	ANPR	3.2.6.4	OFF	N/A	65.64 MB		

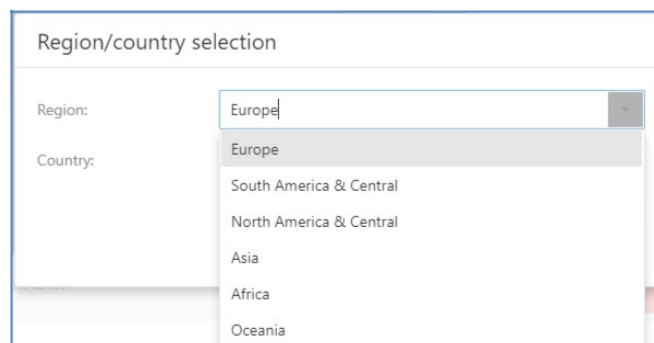
After this, you will access to Urban ANPR software Management Browser

3.3. First access (selection country)

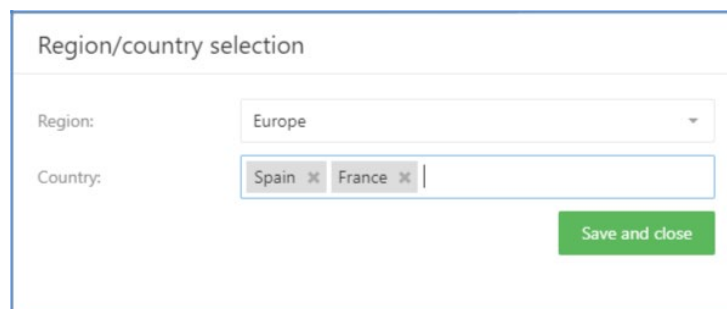
Upon the first access to the web Edge the system will ask us for the region and country. The country selection is mandatory to define the country(s) of license plate to read.



First select the Region:



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



Web View

4.1. Tab

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

The screenshot displays the VIVOTEK web interface. At the top left is the VIVOTEK logo. A red rectangle highlights the menu toolbar at the top right, which includes the following options: Live, Review, Lists, LPR configuration, Evidence, General configuration, Audit, and Logs. Below the menu is a live camera feed showing a road with white dashed lines. To the right of the feed is a table with system statistics.


Attribute	Value	Last Change
Results:	1	00:00:00.000 01/01/2018
Actions:	1	00:00:00.000 01/01/2018
Exports:	1	00:00:00.000 01/01/2018
Imports:	1	00:00:00.000 01/01/2018
Triggers received:	0	00:00:00.000 01/01/2018
Frames processed:	879	14:59:15.030 09/06/2020
SD space free (tpc):	98	14:59:06.861 09/06/2020
Camera space free (tpc):	81	14:59:06.882 09/06/2020
Last Size (pixels):	0	00:00:00.000 01/01/2018
Mode:	FREEFLOW	14:59:16.264 09/06/2020

Below the statistics table are several checkboxes: ☒ Show plates, ☒ Show status, ☐ Show ROI, ☐ Show Lanes, and ☐ Calibration pattern. At the bottom is a table with columns: ID, Time, Plate, Lane, Conf, Height(p), Time, Country, Lit, and Image.

ID	Time	Plate	Lane	Conf	Height(p)	Time	Country	Lit	Image
----	------	-------	------	------	-----------	------	---------	-----	-------

4.2. Live Tab

The live tab shows the cameras live view. (this tab is divided into 3 different areas) We have divided it into 3 parts: The Monitor Panel (labeled A), The Results Panel (labeled B) and the Info Panel (labeled C).

A

Attribute	Value	Last Change
Results:	2	10:34:05.122 05/03/2019
Actions:	0	00:00:00.000 01/01/2018
Exports:	0	00:00:00.000 01/01/2018
Imports:	0	00:00:00.000 01/01/2018
Triggers received:	0	00:00:00.000 01/01/2018
Frames processed:	46158	13:14:11.255 05/03/2019
FPS:	5	10:34:09.144 05/03/2019
SD space free (%):	3	13:13:36.051 05/03/2019
Camera space free (%):	99	13:13:36.052 05/03/2019
Last Size (pixels):	32	10:34:09.149 05/03/2019
Last OCR time(millis):	28	10:34:09.146 05/03/2019
Mode:	STOPPED	13:14:11.258 05/03/2019

☐ Show ROI

☐ Show lanes


☐ Calibration pattern

C

HBF (Spain)

92.94% 32.43px


2019-03-05 10:31:44.879



HBF (Spain)

92.94% 32.43px

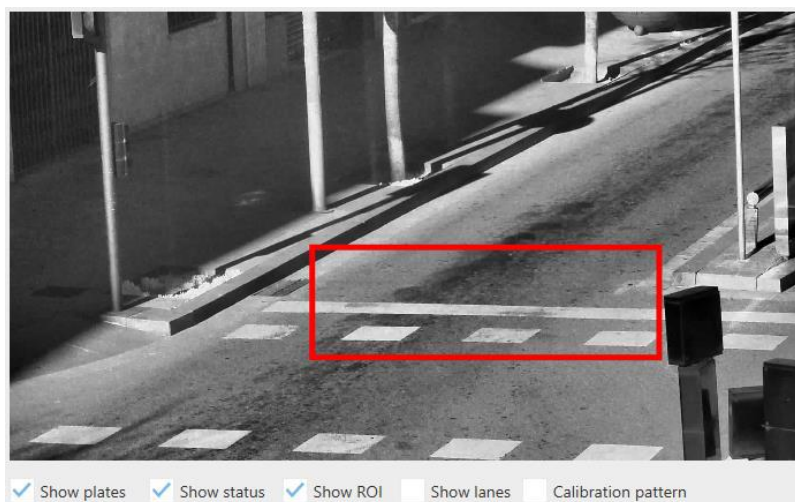
2019-03-05 10:34:04.980



Monitor Panel: Live image what the camera is streaming.

Under the live there is three checks:

Show ROI: Checking 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 engine will try to find plates.



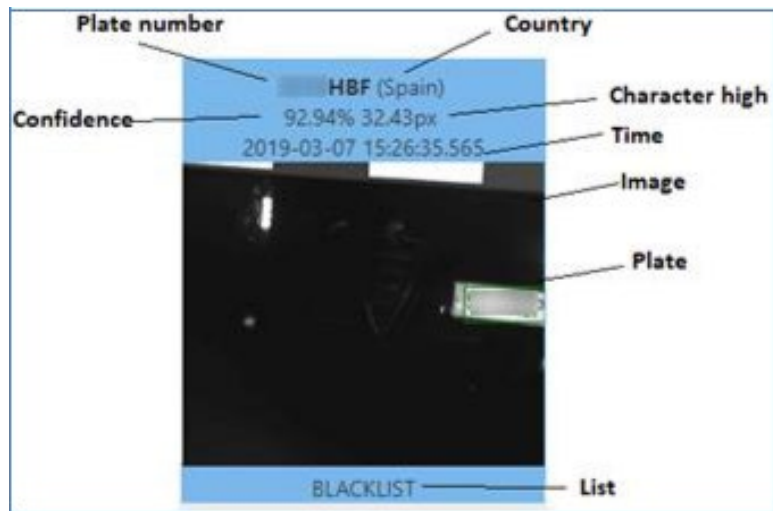
Show lanes: Checking you can see a blue line defining the lanes we have configured in the parameters, the plates in the left side of the screen are plates captured in lane 1, the plates in the right side of the screen in lane 2.



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



Results Panel: Shows the latest results, we highlight the last result with a Blue outline. The results will provide:

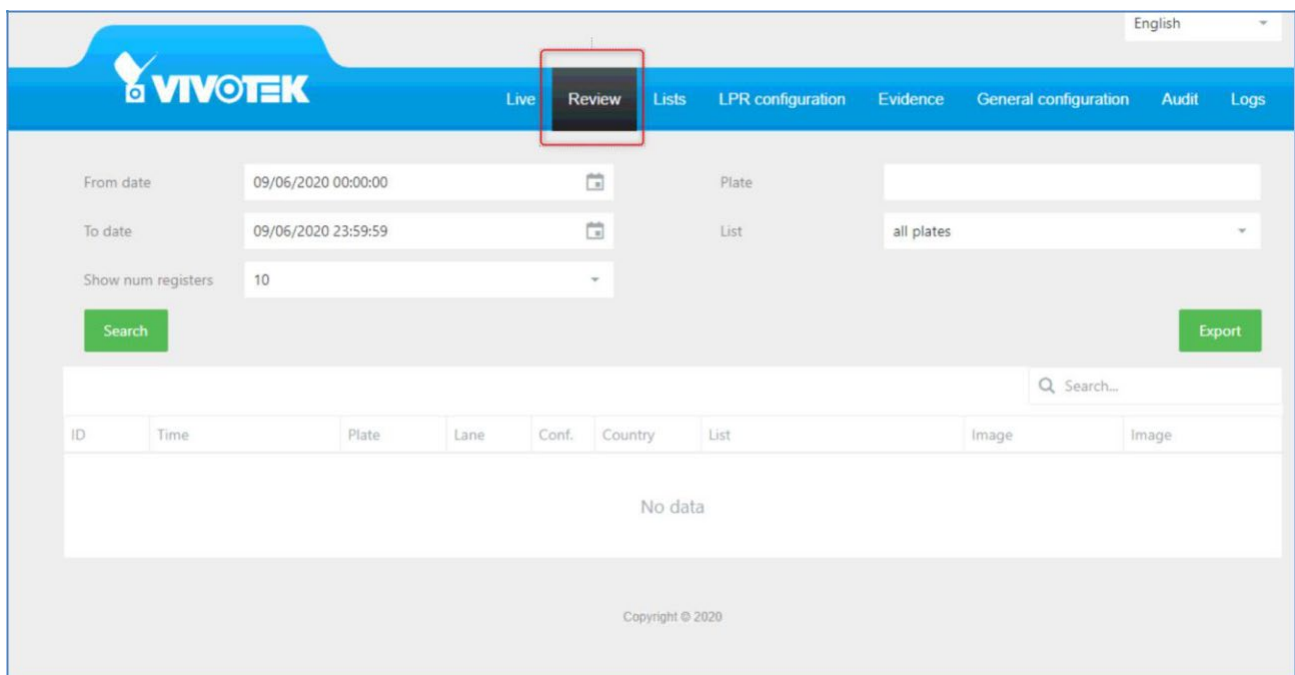


Info Panel: Information on the system status. The columns with the last change are with the last updated value.

- Results: Number of license plates registered.
- Actions: Number of actions executed.
- Exports: Number of automatic exports executed.
- Imports: Number of automatic imports executed.
- Trigger received: Number of triggers received.
- Frames processed: Number of total frames processed.
- FPS: Frames per second processed in the register.
- SD space free (%): Percent of space free 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.
- Last OCR time (milliseconds): Engine time spent on the last result plate processed.
- Mode: Mode of functionality. Values:
 - NO LICENSE: There is no license plate in the system.
 - STOPPED: The service is stopped.
 - MOTION: The service is working in Motion Detection mode.
 - FREEFLOW: The service is working in Free flow mode.
 - TRIGGER: The service is working in Trigger mode.

4.3. Review Tab

The review tab allows us to search, filter and consult the results.



The screenshot shows the VIVOTEK Review Tab interface. The top navigation bar includes 'Live', 'Review' (highlighted with a red box), 'Lists', 'LPR configuration', 'Evidence', 'General configuration', 'Audit', and 'Logs'. The main area contains search filters: 'From date' (09/06/2020 00:00:00), 'To date' (09/06/2020 23:59:59), 'Show num registers' (10), 'Plate' (text input), and 'List' (dropdown menu set to 'all plates'). There are 'Search' and 'Export' buttons. Below the filters is a table with columns: ID, Time, Plate, Lane, Conf., Country, List, Image, and Image. The table is currently empty, displaying 'No data'. A search bar is located above the table. The footer shows 'Copyright © 2020'.

From Date: Select the date when do you want to initiate the search

To Date: Select the date until you wish to search.

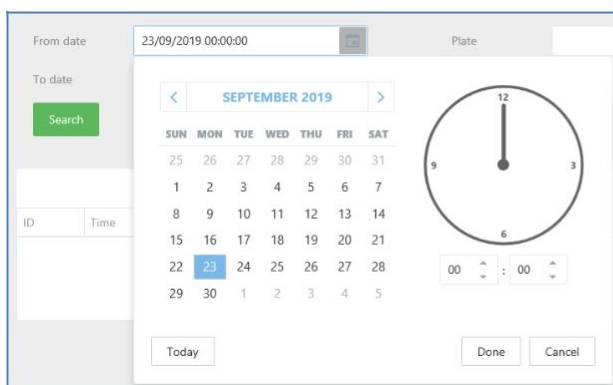
Plate: Allows you to search partially, entering a few numbers or letters of the license plate. This option will search all plates that coincide with the desired query.

List: Allows you to filter by lists, meaning it will show you all plates that belong to a list.

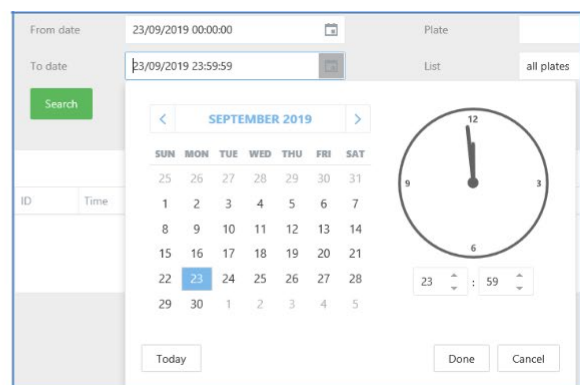
For example, if you wish to search for a specific plate by date, from 02/10 to 02/12.

From Date:

To Date:



This screenshot shows the 'From Date' date picker. It features a calendar for September 2019 with the 23rd selected. To the right is a clock face showing 12:00. Below the calendar are 'Today', 'Done', and 'Cancel' buttons. The 'From date' field in the background shows '23/09/2019 00:00:00'.



This screenshot shows the 'To Date' date picker. It features a calendar for September 2019 with the 23rd selected. To the right is a clock face showing 23:59. Below the calendar are 'Today', 'Done', and 'Cancel' buttons. The 'To date' field in the background shows '23/09/2019 23:59:59'.

Search...									
ID	Time(ms)	Plate	Lane	Conf.	Country	List	Image	Image	
2	04:46:18.645 08/01/2020			99.90	Spain			LPR	
3	04:46:18.645 08/01/2020			91.68	Spain			LPR	
4	04:46:34.494 08/01/2020			99.90	Spain			LPR	
5	04:46:49.904 08/01/2020			99.90	Spain			LPR	
6	04:46:59.520 08/01/2020			99.90	Spain			LPR	
7	04:47:49.541 08/01/2020			99.90	Spain			LPR	
8	04:48:00.036 08/01/2020			99.90	Spain			LPR	
9	04:48:47.152 08/01/2020			99.67	Spain			LPR	
10	04:49:06.442 08/01/2020			99.90	Spain			LPR	
11	04:49:06.442 08/01/2020			96.42	Spain			LPR	

First page
<< Before
Next >>
Last page

Pag. 1/11

The green box corresponds to the amount of results do you want to view per page.

The Blue Box indicates the numbers of pages you must check the results.

The Red Box shows the license plate number images. If you move the mouse cursor over any image you will obtain a larger image.



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.

From date: 10/02/2019 00:00:00 To date: 12/02/2019 23:59:59 Plate: 345 List: All

Search

ID	Time	Plate	Lane	Conf.	Country	List	Image	Image
36400	21:14:33.482 10/02/2019	3345		99.90	Spain			Download image
37066	22:19:24.512 10/02/2019	3345		99.90	Spain			Download image
37346	23:00:55.241 10/02/2019	3345		99.49	Spain			Download image
38024	00:05:47.595 11/02/2019	3345		99.90	Spain			Download image
38293	00:47:23.395 11/02/2019	3345		99.90	Spain			Download image
38947	01:52:12.396 11/02/2019	3345		99.90	Spain			Download image
39225	02:33:46.489 11/02/2019	3345		99.90	Spain			Download image
39861	03:38:34.765 11/02/2019	3345		99.90	Spain			Download image
40133	04:20:10.917 11/02/2019	3345		93.12	Spain			Download image
40801	05:24:58.533 11/02/2019	3345		99.90	Spain			Download image

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

1503	11:21:43.254 28/02/2019			99.10	Spain	BLACKLIST
1504	11:22:20.612 28/02/2019			93.55	Spain	
1505	11:22:34.864 28/02/2019			99.90	Spain	
1506	11:23:27.830 28/02/2019			95.53	Spain	
1507	11:24:47.292 28/02/2019			86.34	Spain	BLACKLIST

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

From date: 01/04/2019 00:00:00 To date: 01/04/2019 23:59:59 Plate: List: All

Search

Q 91

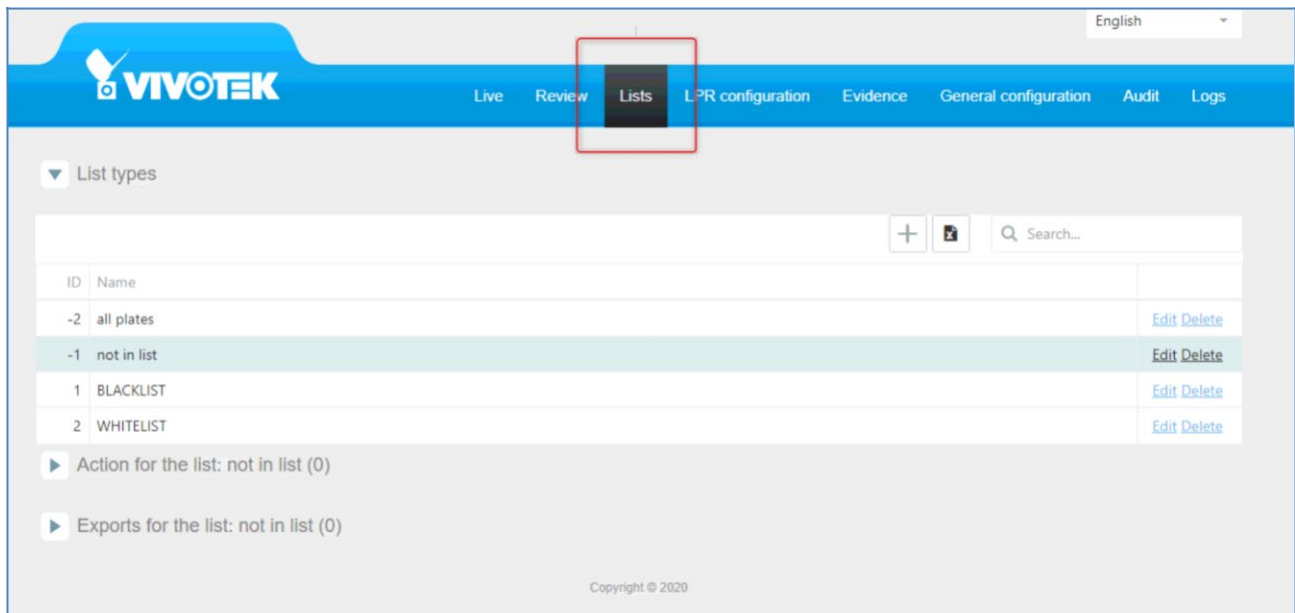
ID	Time	Plate	Lane	Conf.	Country	List	Image	Image
1	12:21:39.572 01/04/2019	B9059NW		91.34	Spain			Download image
8	12:27:19.391 01/04/2019	B9059NW		90.64	Spain			Download image
11	12:27:22.412 01/04/2019	B9059NW		91.15	Spain			Download image
20	12:27:31.491 01/04/2019	B9059NW		90.88	Spain			Download image

Page 1 of 1 (4 items) 5 10 20 50 100

4.4. List Tab

In this tab you can create lists, a list is a group of license plates that will trigger an action, Urban ANPR software allows you perform different actions to any list.

By default, there are 4 lists created, ALL PLATES, NOT IN LIST, BLACKLIST, and WHITELIST. You can edit, delete or add more lists.



In the lists tab we have the following options:

List: Will show all the lists created

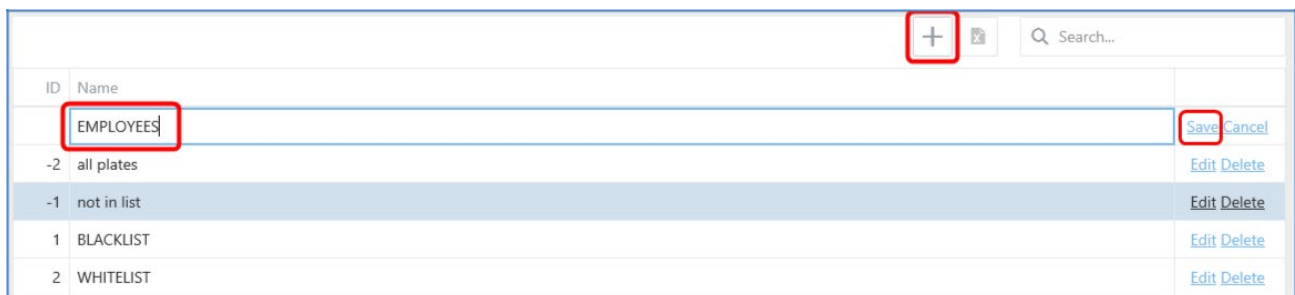
Action: Will show all the actions created by list.

Export: Allows you export a single list or if all plates are selected it will create a unique file with all the licenses plates that belong to that list.

Import: Allows you import a single list or if all plates are selected it will create a unique file with all the licenses plates that belong to that list.

Let's create a new list and call it "EMPLOYEES"

Click on the "+" button, text 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 types

Search...

ID	Name	
-2	all plates	Edit Delete
-1	not in list	Edit Delete
1	BLACKLIST	Edit Delete
2	WHITELIST	Edit Delete
4	EMPLOYEES	Edit Delete

List of the license plates: EMPLOYEES (0)

Action for the list: EMPLOYEES (0)

Exports for the list: EMPLOYEES (0)

Imports for the list: EMPLOYEES (0)

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List of the license plates: EMPLOYEES

Add a new license plate, click on the “+” button and fill in the grid.

						<div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div>Search...</div>
Plate	Description	Insert Date	Start validity date	End validity date		
005OCR	NAME LASTNBAME	01/04/2019 13:33:23	01/04/2019 13:33:23	01/01/3000 00:00:00	<div><div></div><div></div></div>	Save Cancel

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

						<div><div><div></div><div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div>Search...</div>
Plate	Description	Insert Date	Start validity date	End validity date		
005OCR	NAME LASTNBAME	01/04/2019 13:33:23	01/04/2019 13:33:23	01/01/3000 00:00:00	<div><div></div><div></div></div>	Edit Delete

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

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

- **Socket Client:** Enable a socket connection to send messages as XML or JSON
- **Socket Server:** Open a port in the camera to listen to hosts to send messages as XML or JSON.
- **Onvif Event:** Enable the Onvif event to send the license plate information using this protocol.
- **IO:** Enable inbound and outbound digital signals in the camera.
- **FTP:** store the results in an FTP server.
- **HTTP:** send a request using this protocol to a server.
- **MILESTONE:** send an analytic event to Milestone VMS.
- **VAST2:** Send the license plate to the Vivotek VAST2 video server.
- **Trigger Server:** Enable a port that sends the read response when a trigger message arrives.
- **Meypar Server:** send a meypar protocol message.
- **WIEGAND Vivotek:** send a signal to Wiegand middleware board (Same action than Wiegand).
- **FTP JPG MTT:** store the results JPG image in an FTP server by camera, year and day with a structure of subfolders.
- **EMAIL:** send an email.
- **FTP JPG MTTCL:** store the results JPG image in an FTP server, allowing filtering by lane.

Recommend up to 4 enabled actions at the same time.

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.

The screenshot displays a web-based interface for managing license plate data. On the left, a table lists various license plate categories:

ID	Name
-2	all plates
-1	not in list
1	BLACKLIST
2	WHITELIST
3	EMPLOYEES

Below this table, there are two expandable sections: "List of the license plates: EMPLOYEES (0)" and "Action for the list: EMPLOYEES (0)". The "Action for the list" section is currently expanded, showing a dropdown menu with the following options:

- Socket client
- Socket server
- Onvif event
- IO
- FTP
- HTTP
- MILESTONE
- WIEGAND
- VAST2
- Trigger server
- WIEGAND SOYAL
- FTP JPG MTT
- EMAIL

At the bottom of the dropdown menu, there is a "Select..." button. To the right of the dropdown menu, there is a table with columns for "Active" and "Select...". The "Active" column has a checkbox, and the "Select..." column has a dropdown menu. At the bottom right of the interface, there are "Save" and "Cancel" buttons.

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

ID	Description	Action type	Active	
2	SEND XML MSG	Socket client	Enabled	Edit Delete

Action properties

Scheduler

ACTIVATION SCHEDULER

0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00

Sun
Mon
Tue
Wed
Thu
Fri
Sat

Save scheduler


Action Info

Host: 127.0.0.1

Port: 17000

Format: XML XML_IMG JSON JSON_IMG

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

Action Info: Click on  for more information.


Help

Enable a socket connection to send messages as XML or JSON

The parameters are the following

- **Host:**The IP for the device that will listen to
- **Port:**The port that will listen to
- **Format:**The message type (XML/JSON) and if need to send the image too

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

Click on  for more information.

Help

The possible formats are following

- **XML:**XML message without image [Download Sample](#)
- **XML_IMG:**XML message with image [Download Sample](#)
- **JSON:**JSON message without image [Download Sample](#)
- **JSON_IMG:**JSON message with image [Download Sample](#)

2. Configuring the action **Socket Server** will use the camera to receive messages from other devices.

ID	Description	Action type	Active	
4	Receive XML msg	Socket server	Enabled	Edit Delete

Action properties

▼ Scheduler

ACTIVATION SCHEDULER

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Sun																								
Mon																								
Tue																								
Wed																								
Thu																								
Fri																								
Sat																								

✓ Save scheduler

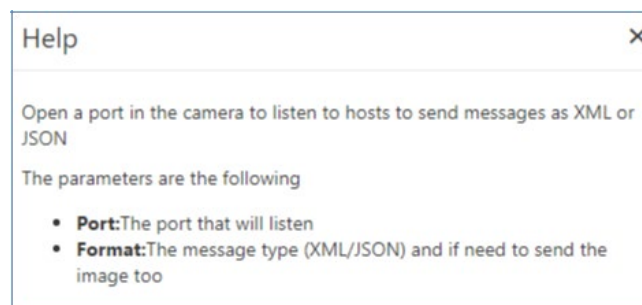
Action Info


Port: 8050

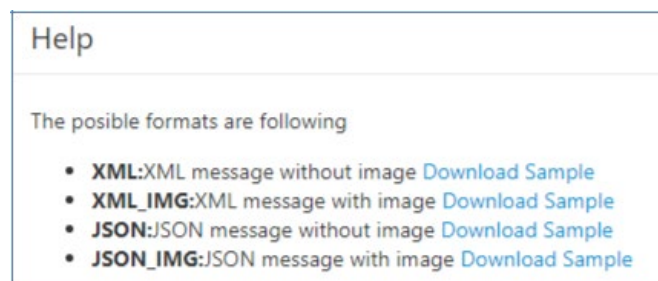
Format: ☐ XML ☐ XML_IMG ☐ JSON ☒ JSON_IMG

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

Action Info: Click on  for more information.



Click on  for more information.



3. Configuring the action **Onvif Event** to send the license plate using this protocol.

ID	Description	Action type	Active	
3	Onvif Events	Onvif event	Enabled	Edit Delete

Action properties

☒ Scheduler

ACTIVATION SCHEDULER


	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Sun																								
Mon																								
Tue																								
Wed																								
Thu																								
Fri																								
Sat																								

☒ Save scheduler

Action Info

Message: ☐ Vivotek_Plate

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


Click on  for more information.

Help

Enable the onvif event to send the license plate information using this protocol

The parameters are the following

- **Format:**The message type

Click on  for more information.

Help

The possible messages are the following:

- **Plate:** Onvif message [Download Sample](#)

4. Configuring the action **IO** to open a gate for those plates that belong to the list EMPLOYEES. Click on “Action for the list” and add a new action pressing “+” and then select in “Action type = IO”

ID	Description	Action type	Active	
3	Open Gate	IO	Enabled	Edit Delete

Action properties

▼ Scheduler

ACTIVATION SCHEDULER

0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Sun																								
Mon																								
Tue																								
Wed																								
Thu																								
Fri																								
Sat																								

✓ Save scheduler

Action Info

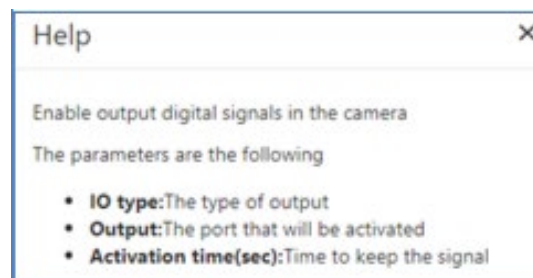
IO type: ☒ VIVOTEK

Output: 0

Activation time(sec): 1

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

Click on for more information.



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.

5. Configuring the action **FTP** to send an XML, JSON or image to an FTP server. Using the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = FTP”.

ID	Description	Action type	Active	
6	90	FTP	Disabled	Edit Delete

Action properties

Scheduler

ACTIVATION SCHEDULER

0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00

Sun
Mon
Tue
Wed
Thu
Fri
Sat

Save scheduler

Action Info

Host: 127.0.0.1

Port: 21

Format: ☒ XML ☐ XML_IMG ☐ JSON ☐ JSON_IMG ☐ IMAGE

Folder:


User:

Password:

Confirmation file: ☒ NONE ☐ .FLAG ☐ .CONF

Type: ☒ FTP ☐ FTPS

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

Click on  for more information about how to configure.

Help

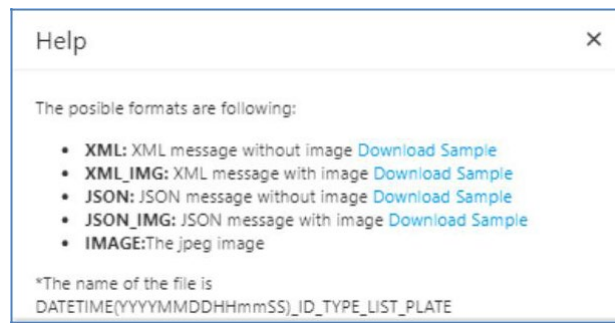
Store the results in an FTP server

The parameters are the following:

- **Host:** Ftp server IP
- **Port:** Ftp server port
- **Format:** The message type (XML/JSON/CSV) and if need to send the image too
- **Folder:** Ftp folder to save the messages
- **User:** Ftp user
- **Password:** Ftp password
- **Confirmation file:** In order to track if all images have been sent to the FTP server you can select .flag or .conf that will generate a single file per each correct action to FTP.
- **Type:** The FTP type to be used

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

Click on  for more information about format type.



6. Configuring the action **HTTP** to send analytic events to a VMS. Using the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = HTTP”
You can use wildcards in the “URL” param to include some information in the http petition:

#DTE# Time stamp of the image captured.

#IDCAM# Camera identifier

#PLT# Plate number #CNF#

Global confidence #IDLAN#

Lane identifier (1 or 2)

#IDLIST# List of list identifiers separated by []. [-1] not in list

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`

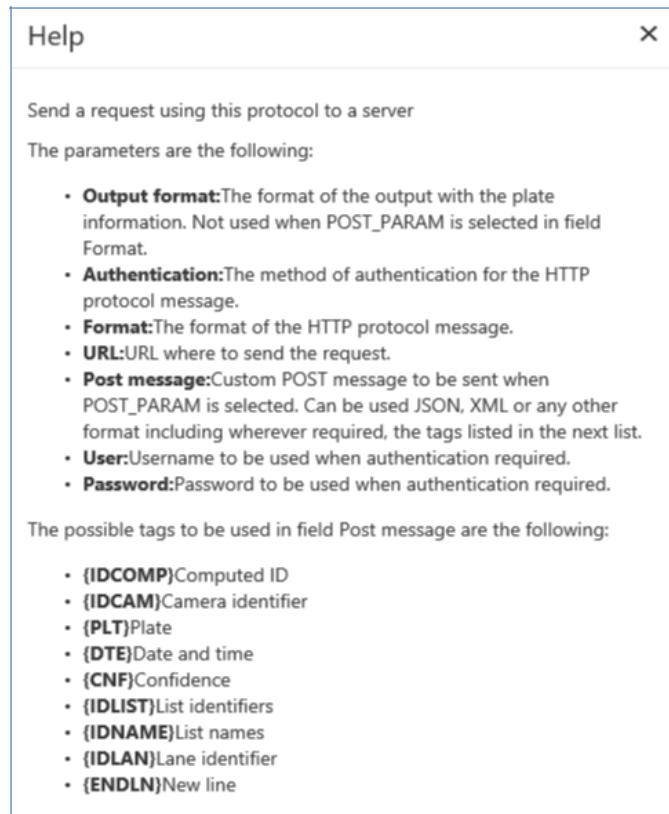
`http://192.168.1.34:8090?plate=#PLT#&cam=#IDCAM#&time=#DTE#&conf=#CNF#&lane=#IDLAN#&list=#IDLIST#`

`http://192.168.1.34:8090?plate=0715GYC&cam=1&time=2019-09-27T18:52:49.929&conf=99.90&lane=2&list=[-1]`

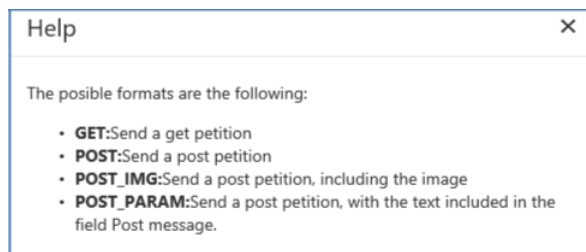
The screenshot displays the configuration page for an HTTP action. At the top, a table lists actions, with the 'HTTP' action (ID 49) highlighted. Below this, the 'Action properties' section is visible, with the 'Scheduler' tab selected. The scheduler interface includes a 24-hour time grid and a list of days (Sun-Sat). A green 'Save scheduler' button is located below the grid, with a red arrow pointing to it. The 'Action info' section contains various configuration options: 'Output format' (XML selected), 'Authentication' (NONE selected), 'Format' (GET selected), 'Url' (http://127.0.0.1:80), 'Post message', 'User', and 'Password'. Two red callout boxes with numbers 1 and 2 point to green help icons (question marks) in the 'Action info' section.

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.



7. Configuring the action **MILESTONE** to send analytic events to a Milestone VMS. Using the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = MILESTONE”

The screenshot shows the configuration interface for the MILESTONE action type. At the top, a table lists actions with columns for ID, Description, Action Type, Action, and Edit/Delete. The 'MILESTONE' action is highlighted. Below this, the 'Action properties' section is visible, with a 'Scheduler' tab selected. The 'ACTIVATION SCHEDULER' section shows a calendar grid for days of the week (Sun to Sat) and a time range from 0:00 to 23:00. A green 'Save scheduler' button is present. Below the scheduler, the 'Action info' section contains fields for Host (127.0.0.1), Port (8080), Format (ANALYTIC_EVENT), and URL (http://127.0.0.1:8080). A red callout '1' points to a green question mark icon next to the Host field. Another red callout '2' points to a green question mark icon next to the Format field.

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

Click on  for more information about how to configure.

Help

Send a request using this protocol to a server

The parameters are the following

- **Host:**Milestone server IP
- **Port:**Milestone server port
- **Format:**Petition format to send
- **URL:**URL to send the petition
- **Event Type:**Analytic event type

Click on  for more information about format type.

Help

The possible formats are following


- **ANALITYC_EVENT**: Send a Milestone analytic event message
[Download Sample](#)

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

8. Configuring the action **VAST2** to send analytic events to the VAST2 video server. Using the EMPLOYEES list, click on "Actions for the list" and add a new action by pressing "+" and then select "Action type = VAST2".

The screenshot shows a web interface for configuring VAST2 actions. At the top, there is a table with columns: ID, Description, Action type, Active, and Edit/Delete. The first row shows ID 1, Description 11111, Action type VAST2, and Active Enabled. Below the table, the 'Action properties' section is expanded to show the 'Scheduler' tab. The 'ACTIVATION SCHEDULER' section features a time slot grid from 0:00 to 23:00 for each day of the week (Sun to Sat). A green 'Save scheduler' button with a checkmark is located below the grid, with a red arrow pointing to it. Below the scheduler, the 'Action Info' section contains fields for 'Host' (127.0.0.1) and 'Port' (17000). A green question mark icon with a red '1' is positioned above the Host field.

Set the scheduler as needed and click on "SAVE SCHEDULER".

Click on  for more information about how to configure.



See chapter 4.4.2 for more information on how to configure VAST2.

9. Configuring the action **Trigger Server** will use the camera to receive triggers from other devices and send a message. Using 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 connect to the server socket and send the message specified in the “Trigger mode”, received this message (another message is discarded) make a trigger to the camera and take a picture to process the engine. After engine 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

ID	Description	Action type	Active	
10	11	Trigger server	Disabled	Edit Delete

Action properties

☒ Scheduler

ACTIVATION SCHEDULER

0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00

Sun
Mon
Tue
Wed
Thu
Fri
Sat

☒ Save scheduler

Action Info

Port: 8060

Format response: ☒ SIMPLE ☐ XML ☐ XML_IMG ☐ JSON ☐ JSON_IMG

Trigger message: \$

Simple response init:

Simple response end:

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

Click on  for more information about how to configure.

Help



Enable a port that sends the read response when a trigger message arrives

The parameters are the following:

- **Port:** The port that will listen/respond to.
- **Format:** The message type and if need to send the image too.
The possible formats are following:
 - **SIMPLE:** Return only the number plate
 - **XML:** XML message without image [Download Sample](#)
 - **XML_IMG:** XML message with image [Download Sample](#)
 - **JSON:** JSON message without image [Download Sample](#)
 - **JSON_IMG:** JSON message with image [Download Sample](#)
- **Trigger message:** Activation message for trigger
- **Simple response init:** Message concatenated before plate (only for simple format)
- **Simple response init:** Message concatenated after plate (only for simple format)

10. Configuring the action **Meypar Server**: Using the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = Meypar Server”.

Port: UDP local camera port

Camera ID: Camera identifier

Remote IP: IP for the client UDP (If the IP remote is empty use the IP from the first message received)

Remote Port: Port for the client UDP (If the port is empty use the same UDP local Port)

ID	Description	Action type	Active	
2	action	Meypar server	Enabled	Edit Delete

Action properties

▼ Scheduler

ACTIVATION SCHEDULER

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Sun	[Active]																							
Mon	[Active]																							
Tue	[Active]																							
Wed	[Active]																							
Thu	[Active]																							
Fri	[Active]																							
Sat	[Active]																							

✓ Save scheduler

Action Info

Port: 7050

Camera ID: 1

Remote IP: 123.323.234.234

Remote port: 7053

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

Click on  for more information about how to configure.

Help

Enable the meypar protocol

The parameters are the following:

- **Port:** The port that will listen.
- **Camera ID:** The id of camera in meypar system
- **Remote IP:** IP that the system will send the message
- **Remote port:** Port that the system will send the message

11. Configuring the action **WIEGAND VIVOTEK** to send analytic events to a Wiegand middleware board.

Using the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = WIEGAND”.

The screenshot shows the configuration page for the 'WIEGAND VIVOTEK' action. At the top, a table lists actions, with 'WIEGAND VIVOTEK' highlighted. Below, the 'Action properties' section includes an 'Activation Scheduler' with a grid for days (Sun-Sat) and time slots (0:00-23:00). A 'Save scheduler' button is present. The 'Action info' section contains fields for 'Host' (192.168.1.173), 'Port' (1601), 'Output format' (radio buttons for Bypass data bits, Even/Odd parity bits, and Odd/Even parity bits), and 'Output bit length' (radio buttons for 24 bits and 32 bits). Two red callout boxes with question marks are present: one labeled '1' near the 'Host' field and another labeled '2' near the 'Output format' options.

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

Click on  for more information about how to configure.

Help

Send a request using this protocol to a server

The parameters are the following:

- **Host:**Http server IP
- **Port:**Http server port
- **Output format:**Parity bits configuration of the output
- **Output bit length:**Number of bits of the output without parity bits

Click on  for more information about format type.

Help

The possible output formats are the following:

- **Bypass data bits:**No parity bits are added to the output
- **Even/Odd parity bits:**The leading parity bit is even, and the ending parity bit is odd
- **Odd/Even parity bits:**The leading parity bit is odd, and the ending parity bit is even

The output bit length without parity bits can be 24 or 32 bits

12. Configuring the action **FTP JPG MTT** using the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = FTP JPG MTT”.

ID	Description	Action type	Active
11	1	FTP JPG MTT	Enabled

Action properties

Scheduler

ACTIVATION SCHEDULER

0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00

Sun

Mon

Tue

Wed

Thu

Fri

Sat

Save scheduler

Action info

Host: 127.0.0.1

Port: 21

Format: ☒ JPG

Folder:

User:

Password:

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

Click on  for more information about how to configure.

Help

Store the JPG image of the result in a FTP server by camera ID, year, month and day

The parameters are the following

- **Host:** Ftp server IP
- **Port:** Ftp server port
- **Format:** The image format (JPG)
- **Folder:** Ftp folder where to save the image files
- **User:** Ftp user
- **Password:** Ftp password

Click on  for more information about format type.

Help

The only supported format is JPG

The image files will be stored in the following folders structure: cameraID/year/month/day

The image file name will follow the layout: YYYYMMDD-hhmmss_cameraID_plate.jpg

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

ID	Description	Action type	Active
14	1	EMAIL	Enabled

Action properties

Scheduler

ACTIVATION SCHEDULER

0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00

Sun
Mon
Tue
Wed
Thu
Fri
Sat

Save scheduler

Action info

Server:

Port: 587

Server type and format: ☒ SMTP/SSL ☐ SMTP

From:

User:

Password:

To:

Subject: plate (PLT) received

Message: Plate (PLT){ENDLN}Time {DTE}{ENDLN}Global Confidence: {CNF}{ENDLN}List: {IDNAME}{ENDLN}Lane: {IDLAN}{E

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

Click on  for more information about how to configure.

Help

Send an email

The parameters are the following:

- **Server:** Email Server
- **Port:** Email port
- **Server type and format:** Type of email server
- **From:** From email address
- **User:** Email user
- **Password:** Email password
- **To:** To email address
- **Subject:** Email subject
- **Message:** Email message

*The possible tags to use in Subject/Message are {PLT}:Plate, {DTE}:Date, {CNF}:Confidence, {IDNAME}:List name, {IDLIST}:List id, {IDLAN}:Lane, {ENDLN}: New line

Click on  for more information about format type.

Help

The possible formats are following:

- **SMTP/SSL:** SMTP server over SSL
- **SMTP:** SMTP Server

14. Configuring the action **FTP JPG MTTCL** using the EMPLOYEES list, click on “Action for the list” and add a new action pressing “+” and then select in “Action type = FTP JPG MTT”.

ID	Description	Action type	Active	
2	1	FTP JPG MTTCL	Enabled	Edit Delete

Action properties

Scheduler

ACTIVATION SCHEDULER

0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00 18:00 19:00 20:00 21:00 22:00 23:00

Sun
Mon
Tue
Wed
Thu
Fri
Sat

Save scheduler

Action Info

Host: 127.0.0.1

Port: 21

Format: ☒ JPG

Folder:

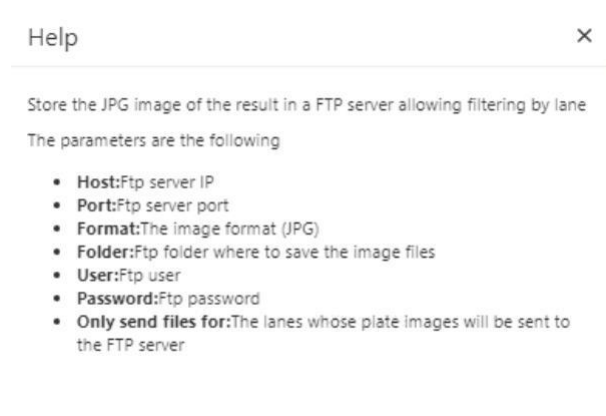
User:

Password:

Only send files for: ☐ Lane 1 ☐ Lane 2 ☒ Lane 1 and lane 2

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.



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

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

In Active change to Disabled and then click on Save.

▼ Action for the list: EMPLOYEES (0)

ID	Description	Action type	Active	
	open gate	IO	Select...	Save cancel
			Disabled	
			Enabled	

▶ Exports for the list: EMPLOYEES (0)

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

ID	Description	Action type	Active	
3	open gate	IO	Disabled	Edit Delete

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

▼ Action for the list: EMPLOYEES (1)

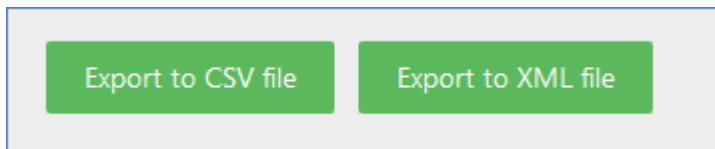
ID	Description	Action type	Active	
2	Test	Trigger server	Enabled	Edit Delete

Are you sure to delete the action from list?

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

- Local matches: Exports the matches of the list locally
- FTP matches: Exports the matches of the to an FTP server
- Local list: Exports the list locally
- FTP list: Export the list to an FTP server

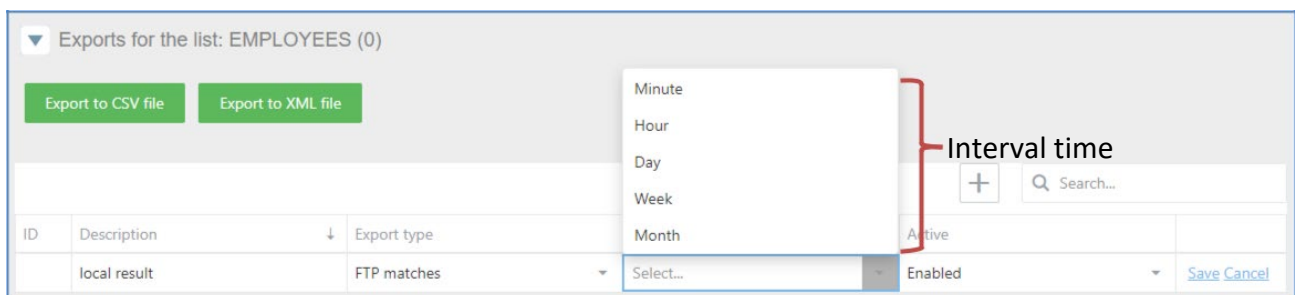
You can also download the selected list pressing the button “Export to XML file” or “Export to CSV file”



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 and define the type and interval. The interval can be set as:

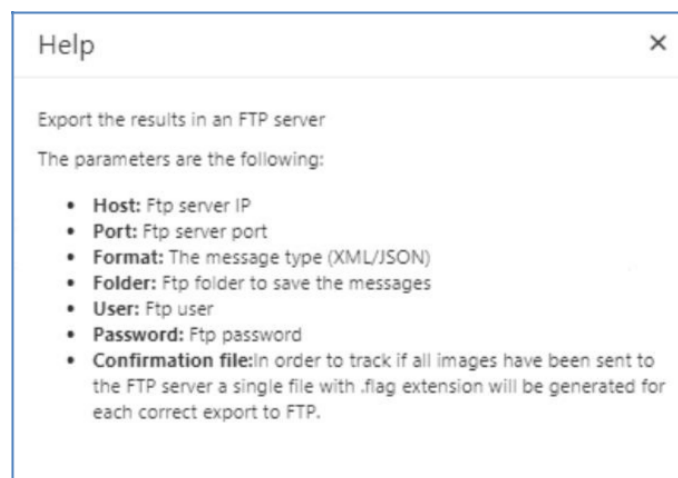
- *Minute*: Will execute the task every minute.
- *Hour*: Will execute the task every hour.
- *Day*: Will execute the task once a day at 23:59:59.
- *Week*: Will execute the task once a week, every Monday at 00:00:00.
- *Month*: Will execute the task once a month, the first day of the month at 23:59:59.



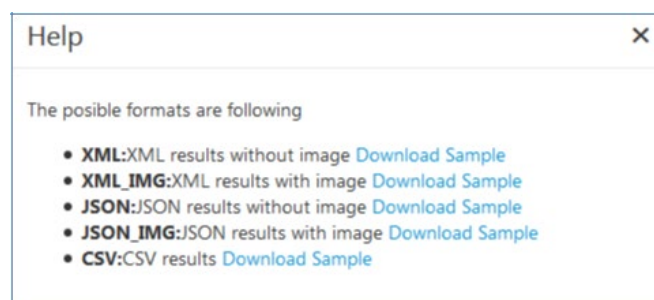
1. Configuring the export **FTP matches** to export the results to an ftp result, using the EMPLOYEES list, click on “Export for the list” and add a new export pressing “+” and then select in “Export type = FTP matches”.

The screenshot shows the 'Export properties' dialog for 'FTP matches'. At the top, there's a header bar with '3', '11', 'FTP matches', 'Minute', 'Disabled', and 'Edit Delete' links. Below this, the 'Export properties' section has a left sidebar with 'Export Info'. The main area contains fields for 'Host' (127.0.0.1), 'Port' (21), 'Format' (XML selected, with options XML_IMG, JSON, JSON_IMG, CSV), 'Folder name:', 'User:', 'Password:', and 'Confirmation file' (.FLAG selected). A red callout bubble with the number '1' points to a green question mark icon next to the Host field. Another red callout bubble with the number '2' points to a green question mark icon next to the Format field.

Click on  for more information about how to configure.



Click on  for more information about format type.



2. Configuring the export **FTP lists** to export the list locally, using the EMPLOYEES list, click on “Export for the list” and add a new export pressing “+” and then select in “Export type = FTP list”.

ID	Description	Export type	Interval	Active	
1	local result	FTP list	Hour	Enabled	Edit Delete

Export properties

Export Info

Host: 127.0.0.1

Port: 21

Format: ☒ XML ☐ CSV


Folder name:

User:

Password:

Confirmation file: ☐ .FLAG

Help icons: 1 (Host), 2 (Format)

Click on  for more information about how to configure.

Help

Export the lists in an FTP server

The parameters are the following

- **Host:**Ftp server IP
- **Port:**Ftp server port
- **Format:**The message type (XML)
- **Folder:**Ftp folder to save the lists
- **User:**Ftp user
- **Password:**Ftp password
- **Confirmation file:**In order to track if all files have been sent to the FTP server, it will generate a single file per each correct action to FTP.

Click on  for more information about format type.

Help

The possible formats are following

- **XML:**XML list [Download Sample](#)
- **CSV:**CSV list [Download Sample](#)

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 the export and then click on delete option.

					+ Search...	
ID	Description	Export type	Interval	Active		
2	11111	FTP list	Minute	Enabled	Edit Delete	

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

In *Active* change to *Disabled* and then click on Save.

					+ Search...	
ID	Description	Export type	Interval	Active		
2	11111	FTP list	Minute	Disabled	Save Cancel	

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

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 exits any change.

					+ Search...	
ID	Description	Export type	Interval	Active		
2	11111	FTP list	Minute	Enabled if change	Save Cancel	

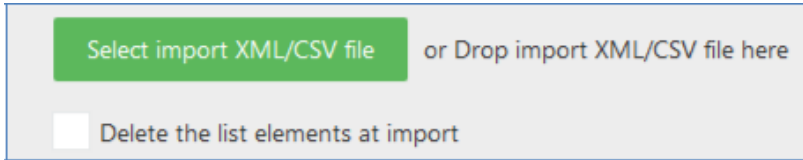
To delete an action, click on the action and click on the DELETE button and then YES.

					+ Search...	
ID	Description	Export type	Interval	Active		
2	11111	FTP list	Minute	Enabled	Edit Delete	

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 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"/>

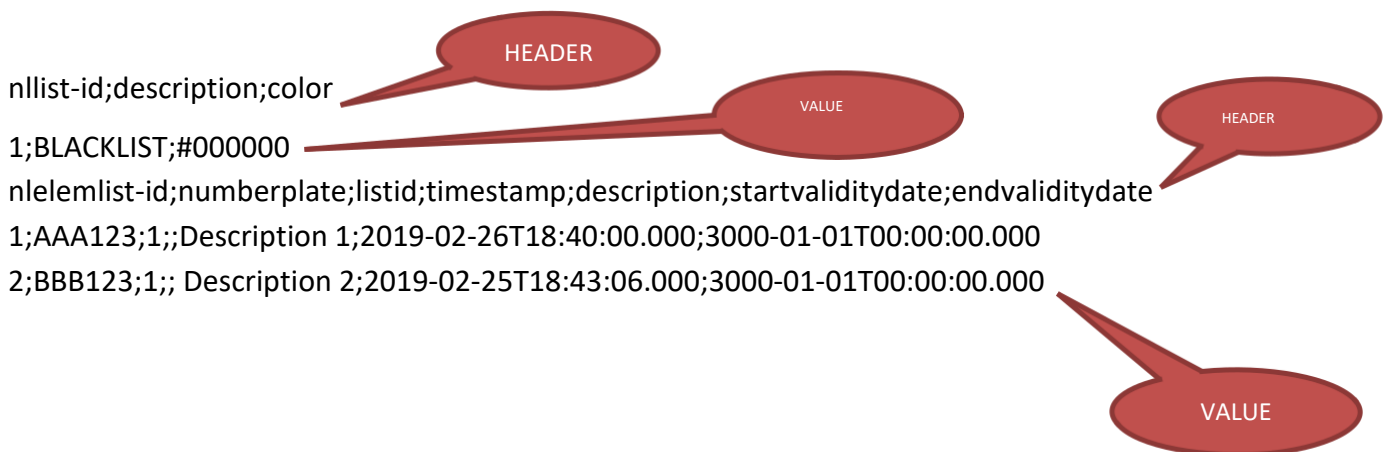
<nlelemlist id="2" sendserver="0" dateserver="" reserve="" numberplate="BBB321" listid="3" timestamp=""
description="EMP 2" startvaliditydate="2000-01-01T00:00:00.000" endvaliditydate="3000-01-01T00:00:00.000"/>

</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:



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

- nlist-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 and define the type and interval. The interval can be set as:

- *Minute*: Will execute the task every minute.
- *Hour*: Will execute the task every hour.
- *Day*: Will execute the task once a day at 23:59:59.
- *Week*: Will execute the task once a week, every Monday at 00:00:00.
- *Month*: Will execute 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, using the EMPLOYEES list, click on “Import for the list” and add a new import pressing “+” and then select in “Import type = FTP list”.

ID	Description	Import type	Interval	Active	
1	import	FTP list	Day	Enabled	Edit Delete

Import properties

Import Info

Host: 127.0.0.1

Port: 21


Format: ☒ XML ☐ XML_NOTDELETE ☐ CSV ☐ CSV_NOTDELETE

Folder name:

User:

Password:

Confirmation file: ☒ .FLAG


Click on  for more information about how to configure.

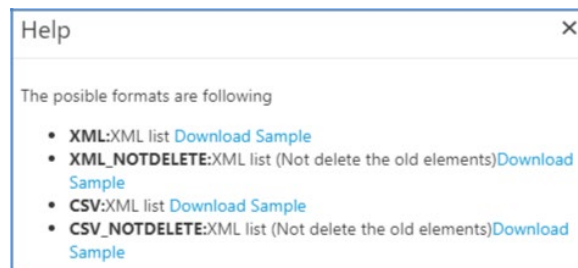
Help

Import the lists from an FTP server

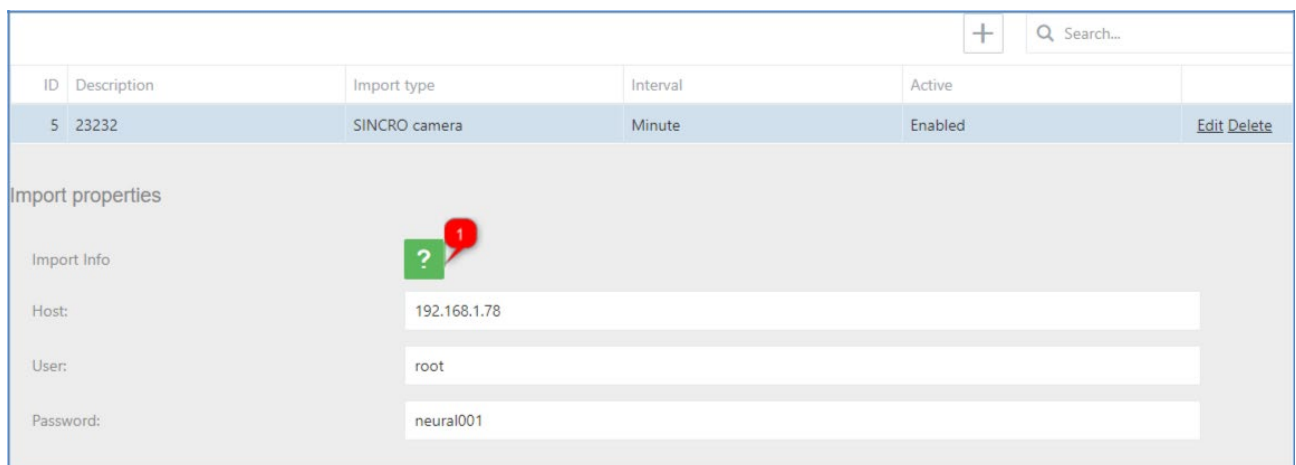
The parameters are the following

- **Host**:Ftp server IP
- **Port**:Ftp server port
- **Format**:The message type (XML)
- **Folder**:Ftp folder to save the lists
- **User**:Ftp user
- **Password**:Ftp password
- **Confirmation file**:In order to track if list have been recieve from the FTP server.

Click on  for more information about format type.



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




Import properties

Import Info

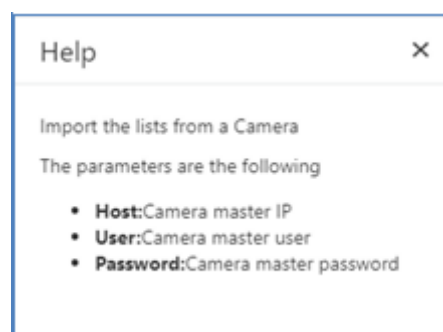
Host: 192.168.1.78

User: root

Password: neural001



Click on  for more information about how to configure.

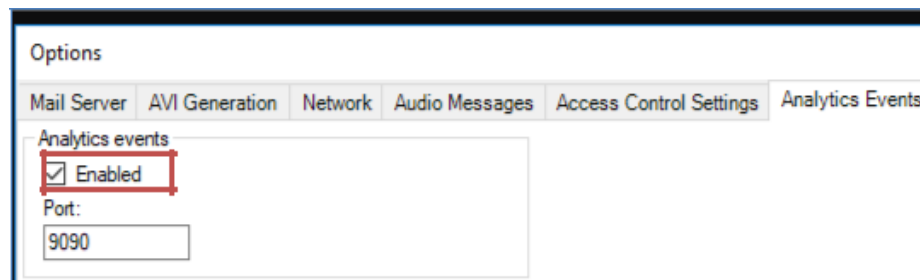


4.4.1 Configure Milestone

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

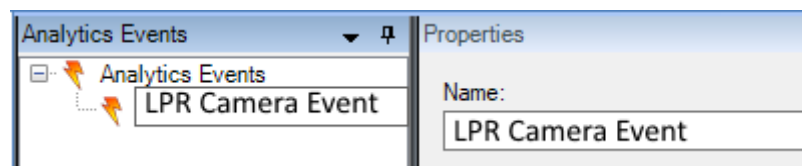
1- Enable analytic events.

- a. We click to Tool -> Options and select the “Analytics Event” tab. At this tab we will active the Analytics events.



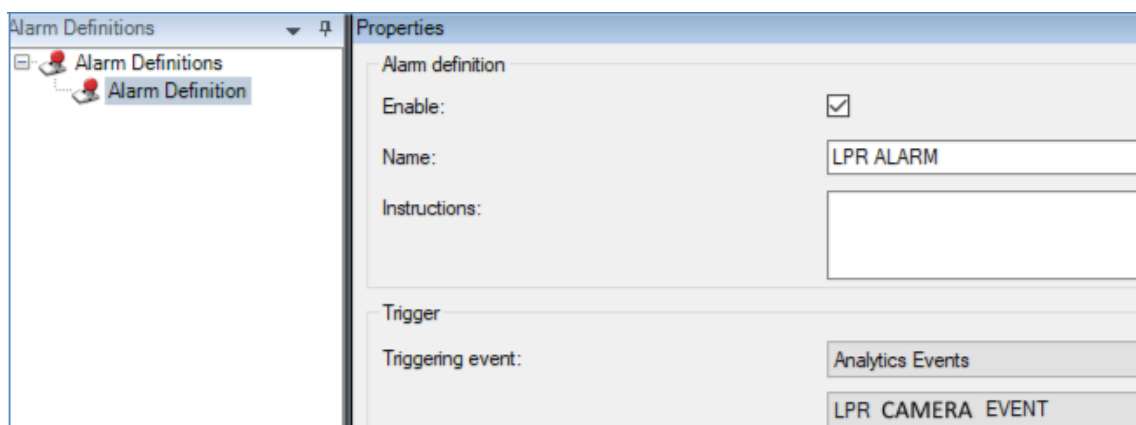
2- Create the analytic event.

- a. We do a click at Rules and Events -> Analytics Events. And then right button to create a new analytic event. The name must be the same 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 at 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 at milestone system



4.4.2 Configuración de VAST2

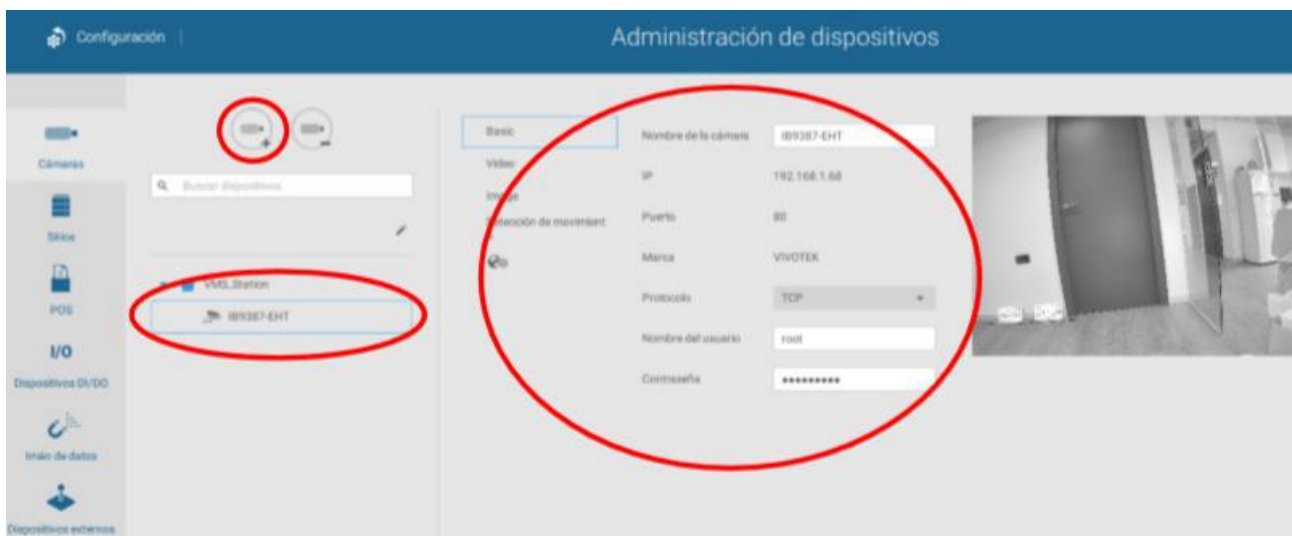
Once the VAST2 action is configured, we need to configure the VAST2 server so that it can process our action. VAST2 minimum version: 2_5_0_3000 To perform this configuration follow the steps below:

- 1- Access the client tool:

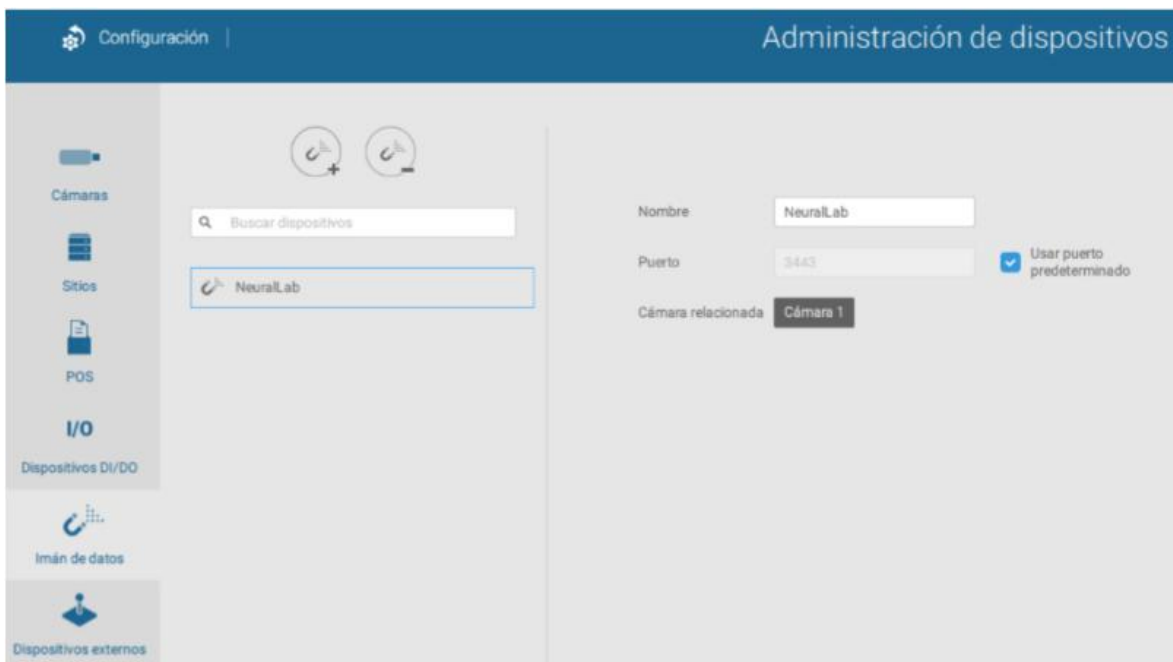


- 2- Include the camera.

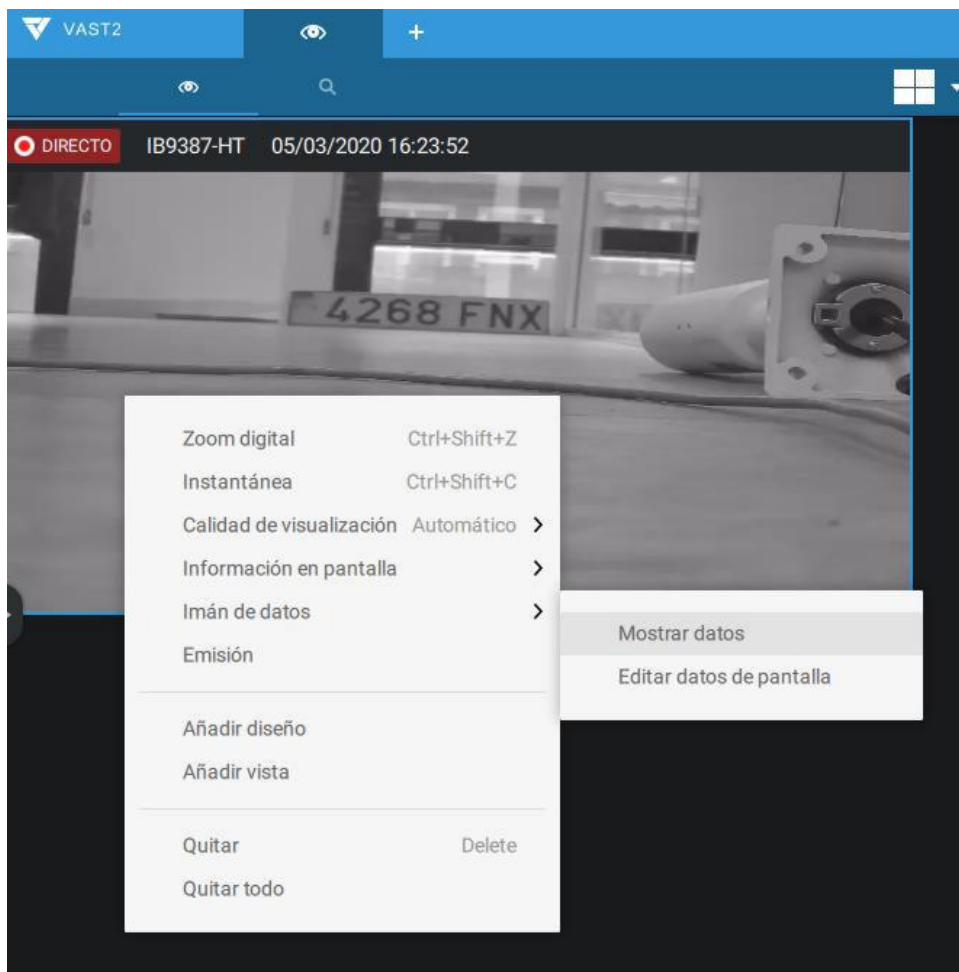
Within settings, add the camera.



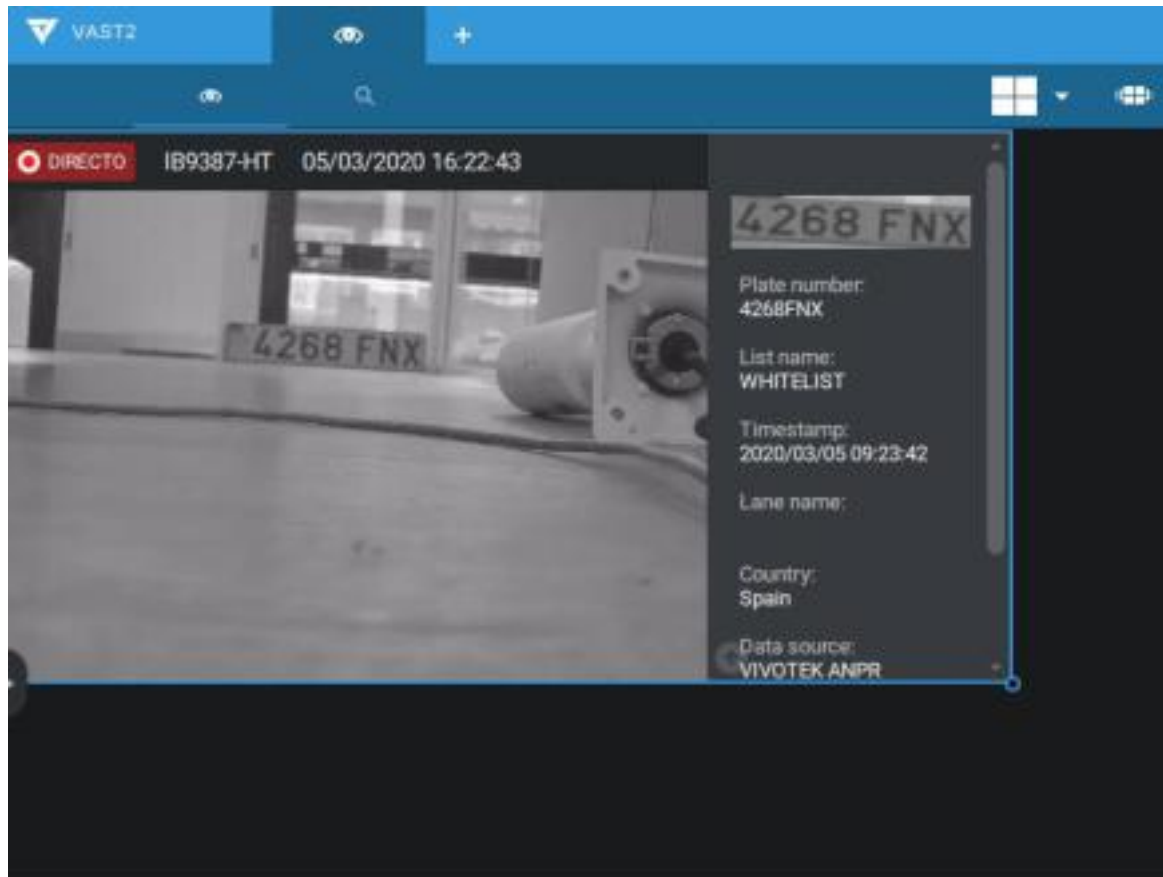
- 3- Create a data magnet Within the configuration of the Data Magnet create a new Data Magnet with the name NeuralLabs.



- 4- Verify if we receive the information In the Live image, right-click with the mouse and select Data Magnet / Show Data.

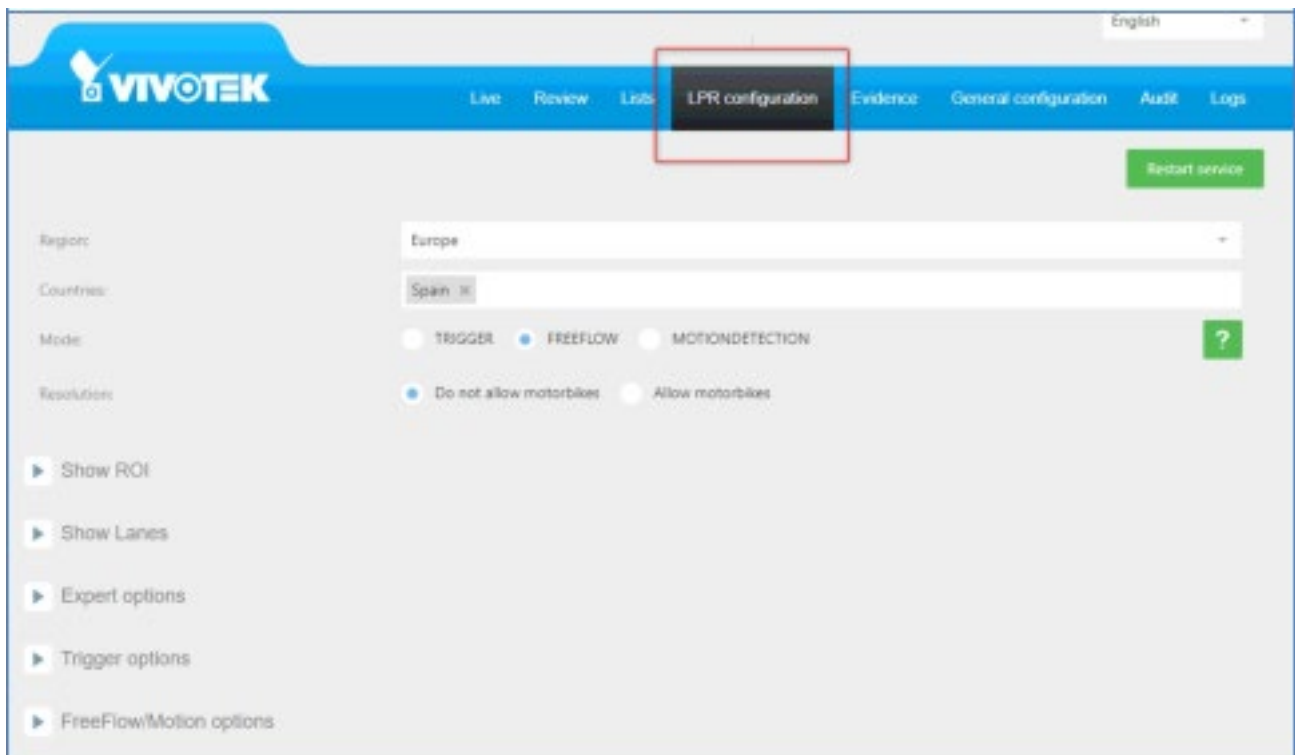


Each registration received will appear on the right:



4.5. LPR Configuration Tab

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



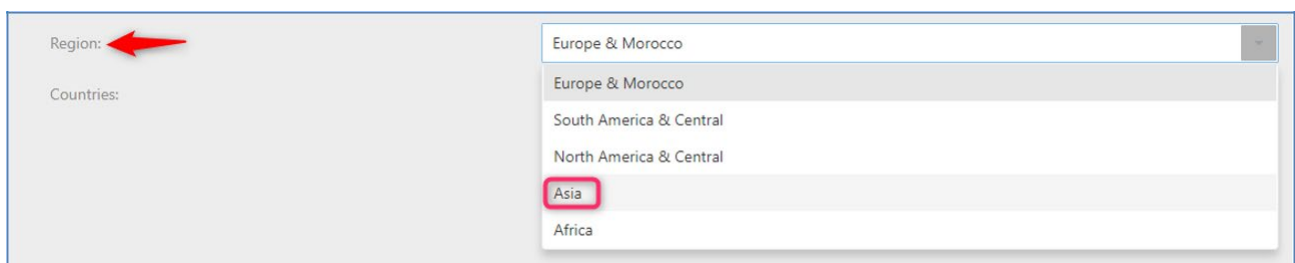
Restart service

All the options after modified requires a service reset.

Depending on which region you select it will list the countries in that region. In case the country you are searching for isn't listed please contact Neural Labs.

Let's configure Urban ANPR software to read plates from Malaysia and Singapore.

In Region, list and select ASIA



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

Countries:

Select...

- Russia
- Turkey
- Vietnam
- Indonesia
- Philippines
- Malaysia
- Singapore
- Israel
- Lebanon
- Hong Kong
- Macau
- India
- Taiwan
- Bahrain
- Abu Dhabi

After selecting the countries, restart service clicking on [Restart service](#) button.
Now you are ready to read license plates for these two countries.

Region: Asia

Countries: Singapore x Malaysia x

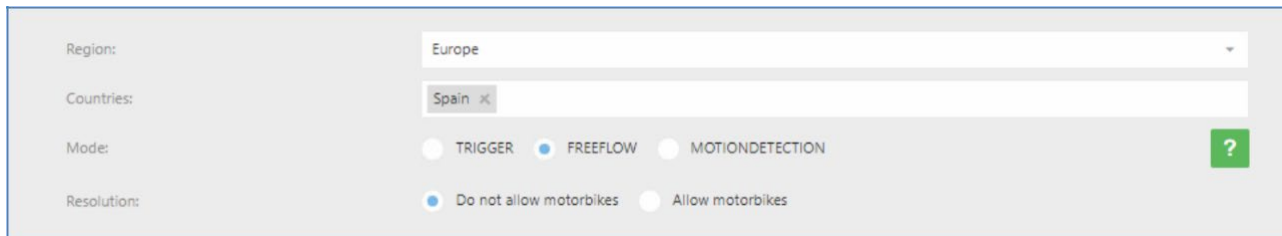
Restart service

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.

Free Flow: The camera is continuously processing all the images, is not recommended unless there is a constant flow of vehicles.

Motion Detection (Set by default): The camera will read if detect any change in the image.

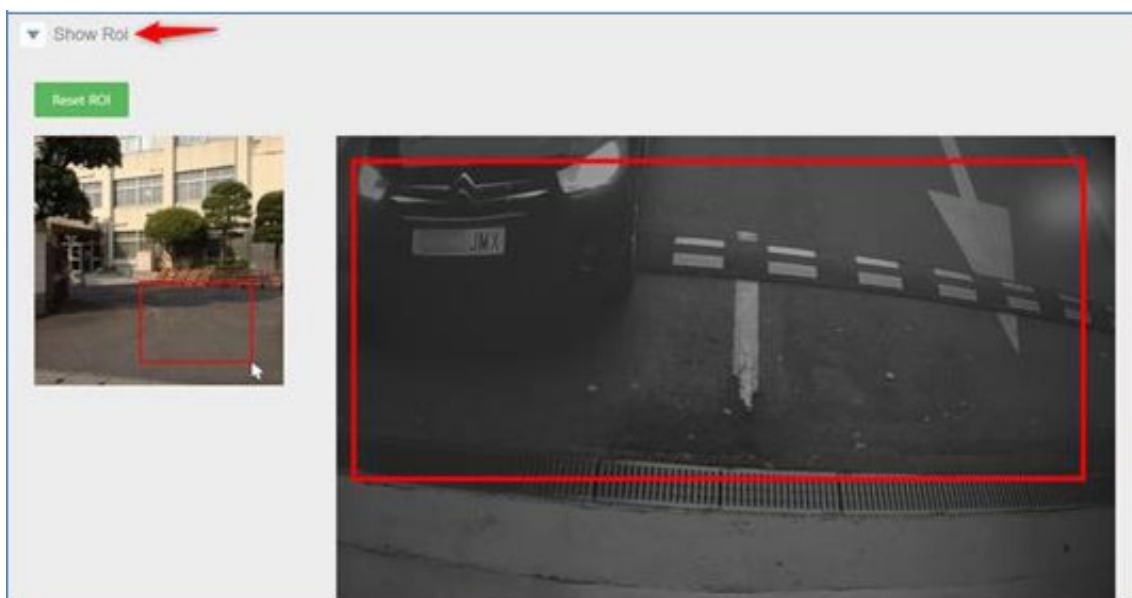


The configuration interface shows the following settings:

- Region: Europe (dropdown menu)
- Countries: Spain (input field with a clear button 'x')
- Mode: ☐ TRIGGER ☒ FREEFLOW ☐ MOTIONDETECTION (a green button with a question mark is to the right)
- Resolution: ☒ Do not allow motorbikes ☐ Allow motorbikes

You also need to configure the camera resolution, which image size do you need to process, this will depend on the distance where you will read the license plate. You can select a resolution allow to read motorbike license plate or not.

Show ROI: Let you draw a *region of interest* in the image, which part of the image do 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:

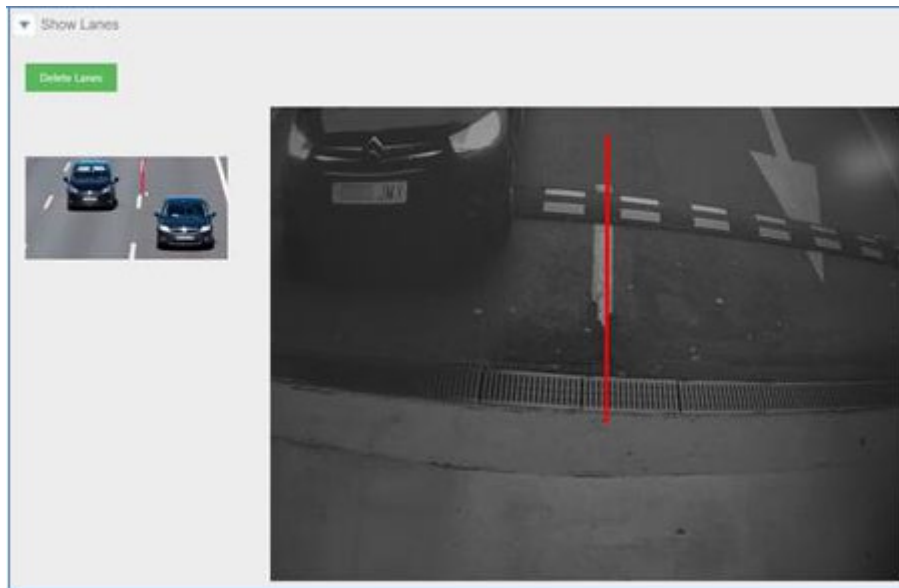
- 1.- Draw top left point.
- 2.- Draw bottom right point.

To reset ROI, click on "RESET ROI" button.

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

Restart service

Show Lanes: Let you draw a line to configure 2 lanes, depending on how you draw the line Urban ANPR software 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:

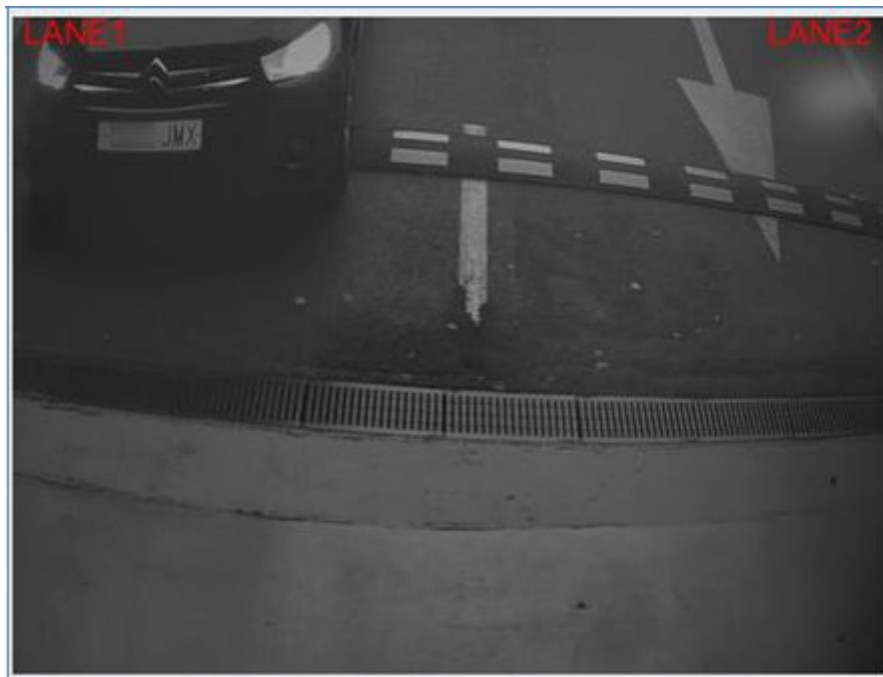
1.- Draw top point.

2.- Draw bottom point.

To reset ROI, click on “Delete Lanes” button.

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

Restart service



Urban ANPR software will read the license plate and indicate on which lane they were detected.

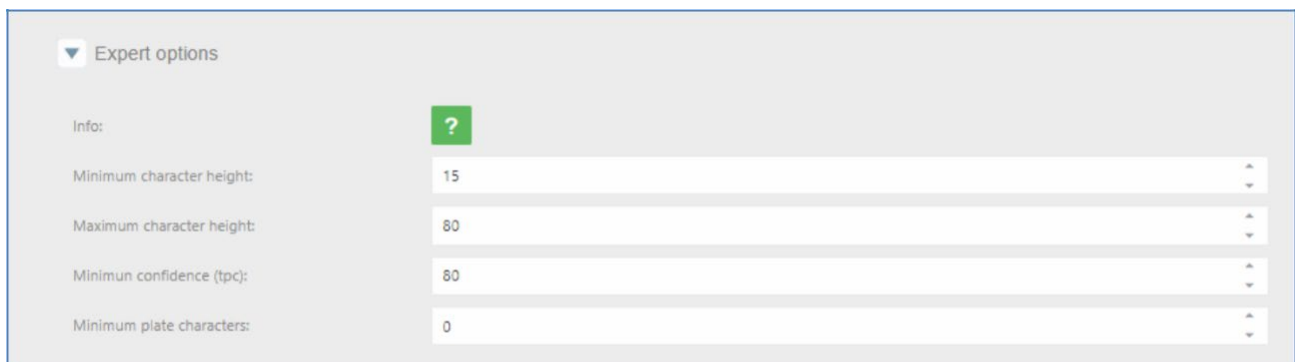
Expert Options: Here is the recommended configuration for best performance if Motion Detection (default configuration) is selected.

Minimum character height: Minimum character size. Very useful for cases where you want to ensure a minimum character size. 25 being the recommendation

Maximum character height: Maximum character size. Very useful for cases where you want to ensure a maximum character size.

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 (value of 1-100, where 100 is the most reliable). 80 being the recommendation

Minimum plate Characters: Minimum characters will read the camera. 0 in case you don't need to use this option.



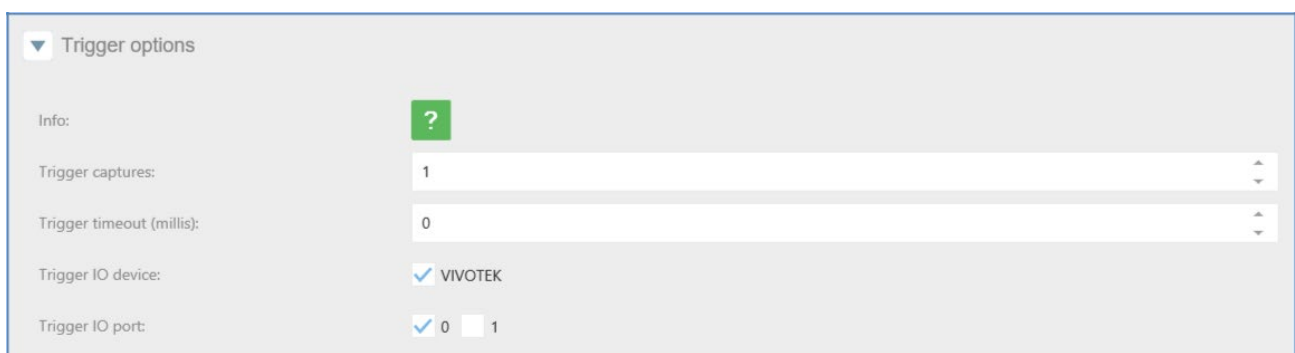
The screenshot shows a configuration panel titled "Expert options" with a dropdown arrow. It contains five settings, each with a label, a value field, and a green question mark icon. The settings are: "Minimum character height" with a value of 15, "Maximum character height" with a value of 80, "Minimum confidence (tpc)" with a value of 80, and "Minimum plate characters" with a value of 0. The "Info:" label is also present.

Label	Value
Info:	?
Minimum character height:	15
Maximum character height:	80
Minimum confidence (tpc):	80
Minimum plate characters:	0

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

Restart service

Trigger Mode: Urban ANPR software 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 NCaptures, or the time exceeds Timeout.



The screenshot shows a configuration panel titled "Trigger options" with a dropdown arrow. It contains five settings: "Trigger captures" with a value of 1, "Trigger timeout (millis)" with a value of 0, "Trigger IO device" with a checked checkbox and the label "VIVOTEK", and "Trigger IO port" with a checked checkbox and the label "0". The "Info:" label is also present.

Label	Value
Info:	?
Trigger captures:	1
Trigger timeout (millis):	0
Trigger IO device:	<input checked="" type="checkbox"/> VIVOTEK
Trigger IO port:	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1

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

Trigger Timeout: How many seconds do you want to process and read license plates to stop.

In case to use the timeout option, the trigger captures must be 50.

Trigger IO Device: If selected, the Digital Input ports will activate.

Trigger IO Port: Choose which digital input port you will use.

Please be noted, if you are using Trigger mode API, the trigger period shall no less 4 seconds.

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

Restart service

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

The screenshot shows a configuration window titled "FreeFlow/Motion options". It contains several settings:

- Info:** A green button with a white question mark.
- Free flow/Motion filter mode:** Three radio buttons: "NONE", "CAPTURES" (selected), and "TIME".
- Free Flow/Motion filter captures:** A text input field with the value "5".
- Free Flow/Motion filter time (millis):** A text input field with the value "0".
- Minimum characters difference:** A text input field with the value "1".
- Motion queue:** A text input field with the value "20".

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: Is the number of characters between two plates to consider a plate different (AAAA to AAAB is 1 character different)

Motion queue: Is the number of images stored in a queue to process in MOTION mode.

For example, you have the camera in a Parking 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”

▼ FreeFlow/Motion options

Info: ?

Free flow/Motion filter mode: ☐ NONE ☒ CAPTURES ☐ TIME

Free Flow/Motion filter captures: 5

Free Flow/Motion filter time (mills): 0

Minimum characters difference: 1

Motion queue: 20

With this configuration, once a license plate is read, won't be read again until another 5 different license plates have been read. The difference between plate has to be more than 1.

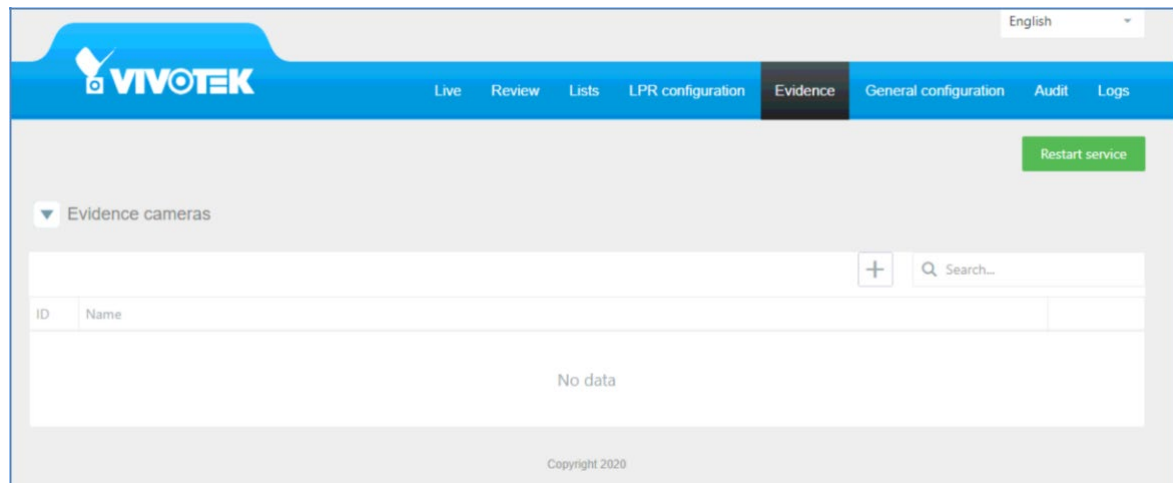
After all, changes are done, remember always to restart service, clicking on [Restart service](#) button.

If you need to restart all configuration for this section, click on [Restart default configuration](#) button.

4.6. Evidence Tab

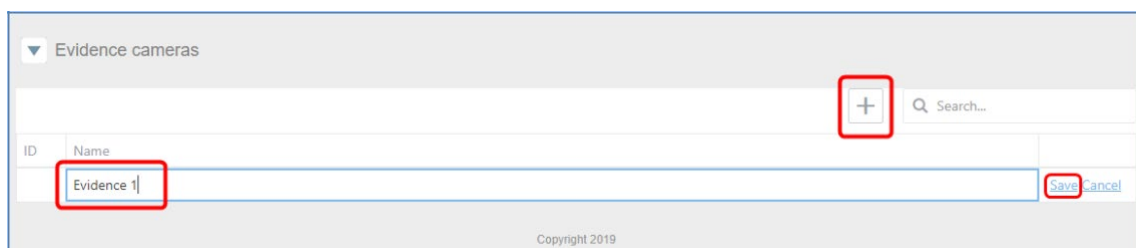
This feature allows the user to capture evidence images in addition to the LPR image. There is no limit in the number of evidence cameras that the user can setup. So, the camera will capture 1 synchronized evidence snapshot for each evidence camera when a license plate is captured.

In this tab, configure the Evidence Camera:



to add a new evidence camera:

Click on the “+” button, text the evidence camera name and click on “Save”.



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

FPS: Maximum frames per second to process. 5 being the recommendation.

Connection type: for the moment only HTTP connection.

Login: login user of camera.

Password: Password of camera.

URL: URL in **jpg format** of the camera.

Real scenarios

Access control

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

Capture the face of the driver for security reasons

Capture the number of wheels in tooling for auditing

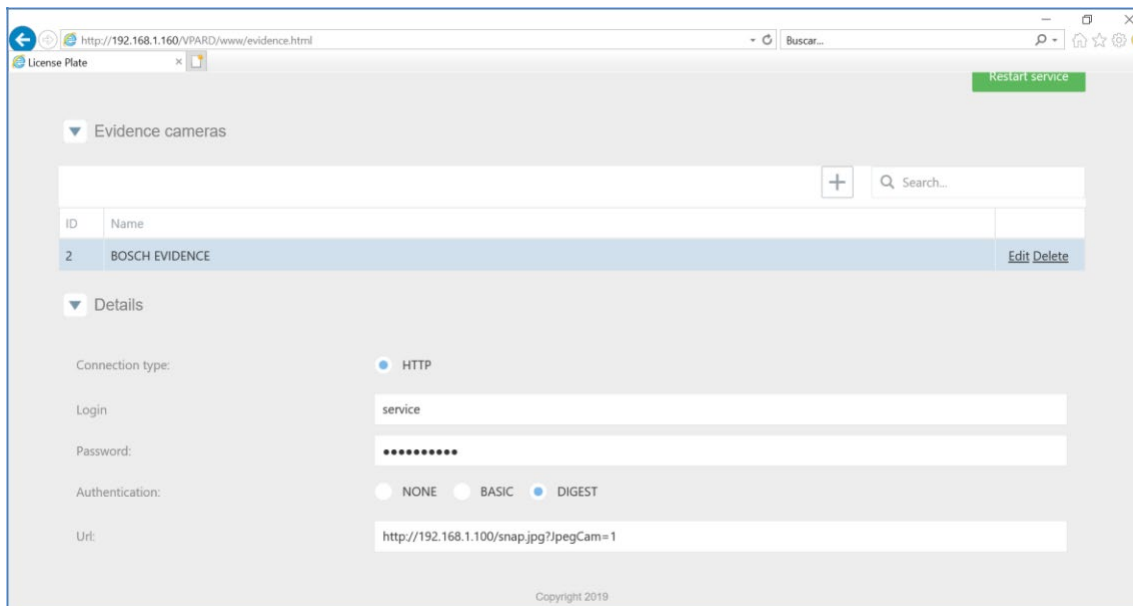
Traffic

Capture color image of the car to know color, make, etc (as lrp image is in black & white)

SETUP

The user may add as many cameras as he wants by typing:

- 1) Url of the snapshot CGI of a reachable camera (may be any vendor as far as we know the snapshot URL).
- 2) User with permissions on the evidence camera to capture a snapshot
- 3) Password of this user



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 this evidence images are synchronized with the lrp 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.

IMPROVEMENT

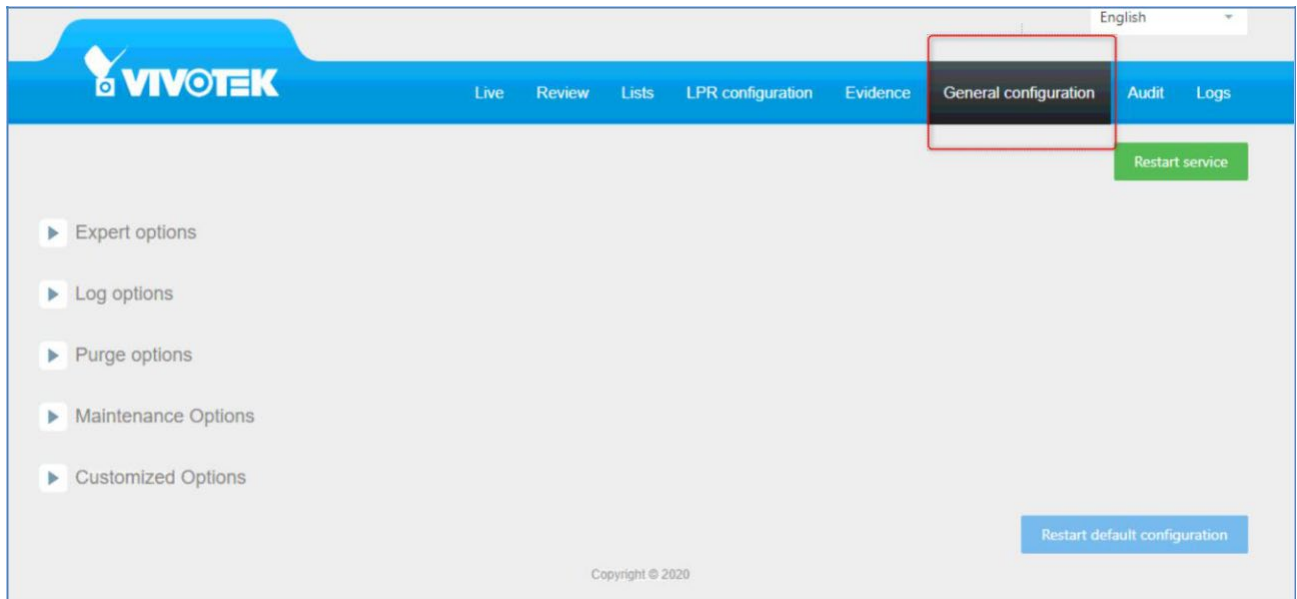
If vivotek wants, we can assume & restrict the evidence cameras will be Vivotek. So we will know the URL and the user will only need to setup ip, user, pass.

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

Restart service

4.7. General Configuration Tab

In this tab, configure general parameters:



Expert Options:

View type:

Save the image: If selected, will store in a folder the complete image.

Save the plate image: If selected, will store in a folder only the license plate image.

Image quality: will store the image with the compression configured here.

Store image on: will store data on an SD or in the camera. We strongly recommend adding an SD card in the camera.

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

Action time:

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

Retry period for failed actions(hours):

▼ Expert options

Info:

?

View type:

☒ LIST ☐ SQUARE

Save the image:

☒

Save the plate image:

☒

Image quality:

40

Store image on:

☒ SD

Trigger Socket port:

8040

Action time:

☒ IMMEDIATE ☐ PERSISTENT

Retry period for failed actions (hours):

168

Help

×

Expert options

The parameters are the following:

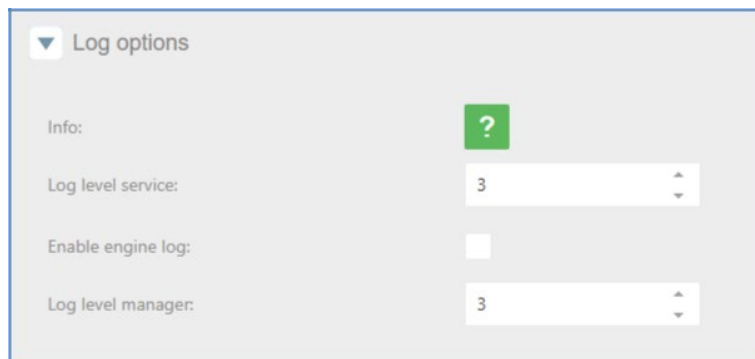
- **View type:**The type of displaying for every detected vehicle.
- **Save the image:**If selected, will store in a folder the complete image.
- **Save the plate image:**If selected, will store in a folder only the license plate image.
- **Image quality:**Will store the image with the compression configured here.
- **Store image on:**Will store data on an SD or in the camera (strongly recommend to add an SD card in the camera).
- **Trigger Socket Port:**Will enter the port we want to use for sending messages.
- **Action time:**Execute actions immediately or previously storing them.
- **Retry period for failed actions (hours):**The period of time in hours where to retry the execution of a failed action.

Log Options:

Log Level: Let you determine the log level to register what is going on with Urban ANPR software. By default, is set to 3. Level 4 and 5 are for experts and debugging team.

Activate log engine: Select only if debugging mode is necessary, only for expert technicians.

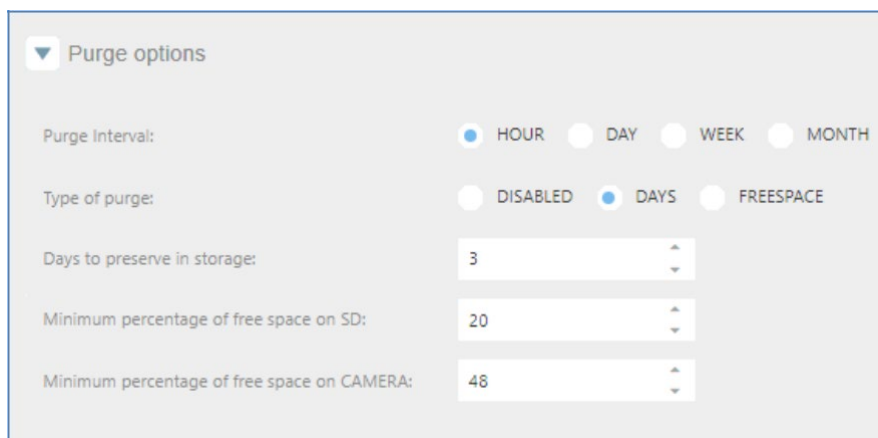
Log Level CGI (manager): Let you determine the log level to register what is going on with the CGI. By default, is set to 3. Level 4 and 5 are for experts and debugging team.



The screenshot shows a configuration panel titled "Log options" with a dropdown arrow. It contains four settings:

- Info:** A green square button with a white question mark.
- Log level service:** A dropdown menu currently showing the value "3".
- Enable engine log:** An unchecked checkbox.
- Log level manager:** A dropdown menu currently showing the value "3".

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



The screenshot shows a configuration panel titled "Purge options" with a dropdown arrow. It contains five settings:

- Purge Interval:** Radio buttons for HOUR (selected), DAY, WEEK, and MONTH.
- Type of purge:** Radio buttons for DISABLED, DAYS (selected), and FREESPACE.
- Days to preserve in storage:** A dropdown menu showing the value "3".
- Minimum percentage of free space on SD:** A dropdown menu showing the value "20".
- Minimum percentage of free space on CAMERA:** A dropdown menu showing the value "48".

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

Hour: Will execute the task every hour.

Day: Will execute the task once a day at 23:59:59.

Week: Will execute the task once a week, every Monday at 00:00:00.

Month: Will execute 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: Won't execute any purge.

Days: Will purge by days, keeping data for the last days.

Freespace: Will purge 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): Will keep data of the last (XX) days and purge the rest.

Delete files before (days): Will keep files of the last (XX) days and purge the rest.

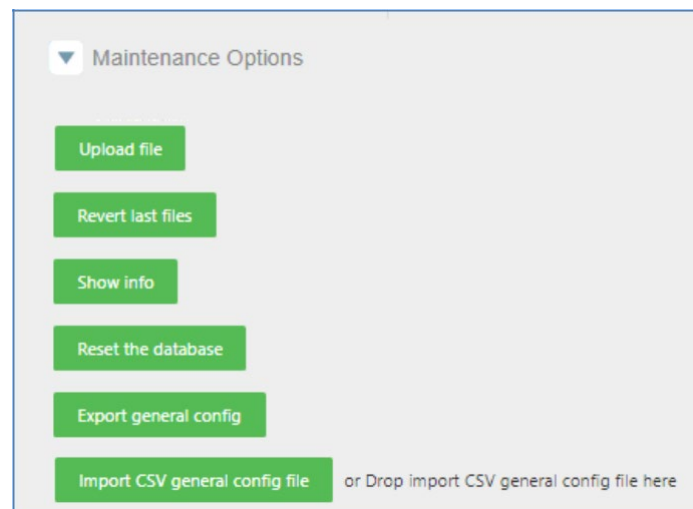
Purge by Free Space:

Delete files and database on SD below (percent): Will delete data in database and files stored until free space on the SD is lower than configured.

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

Maintenance Options:

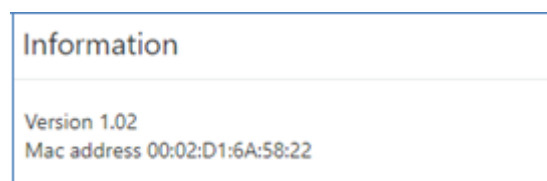
In this section you can upload files for camera configuration, licensing, update Urban ANPR software version, change the logo and upload images for the path option showed in the Camera Configuration tab.



Upload File: Let you upload a file.

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

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



Reset the database: If you want to delete and clear all ANPR results including number plate readings, actions, exports, imports from the camera.

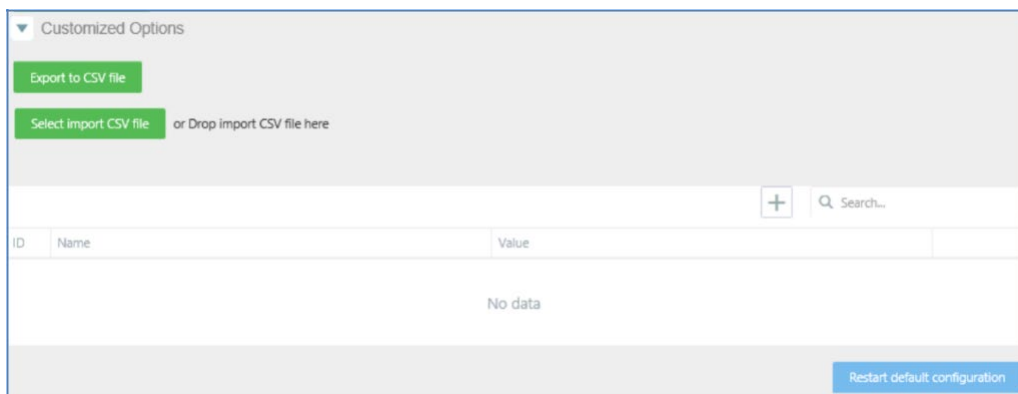
Export general configuration file.

Import general configuration file

Customized Options:

In this section you can add new fields, export and import lists (The maximum fields it is 10).

You can search by dates information the field you want.



The screenshot displays the 'Customized Options' section of a web application. At the top, there is a dropdown menu labeled 'Customized Options'. Below it, there are two green buttons: 'Export to CSV file' and 'Select import CSV file'. To the right of the 'Select import CSV file' button is the text 'or Drop import CSV file here'. Below these buttons is a table with three columns: 'ID', 'Name', and 'Value'. The table is currently empty, and the text 'No data' is displayed in the center. To the right of the table is a search bar with a magnifying glass icon and the text 'Search...'. At the bottom right of the section is a blue button labeled 'Restart default configuration'.

In case you want to revert, all changes done and want to get back to the default configuration, click on [Restart default configuration](#) button.

4.8. 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 information related to these actions.

English

VIVOTEK

Live Review Lists LPR configuration Evidence General configuration **Audit** Logs

From date: 09/06/2020 00:00:00

To date: 09/06/2020 23:59:59

Show num registers: 10

Search

Type: export

Export

Search...

ID	Time	Status	Type	Res.	List	Description	Num.	File
No data								

Copyright © 2020

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

Export: Will show you automatic exports done

Import: Will show you automatic imports done.

Action: Will show you automatic actions triggered on the lists.

The result of the search can be exported and downloaded.

Exports example:

From date: 28/02/2019 00:00:00

To date: 28/02/2019 23:59:59

Search

Type: export

Search...

ID	Time	Status	Type	List	Description	Num.	File
4	12:27:00.010 28/02/2019	DONE	Local list	all plates	Export [223232] time [from:20000101T000...	10	Get file
5	12:28:00.172 28/02/2019	DONE	Local list	all plates	Export [223232] time [from:20000101T000...	9	Get file
6	12:29:00.127 28/02/2019	DONE	Local list	all plates	Export [223232] time [from:20000101T000...	11	Get file
7	12:30:00.259 28/02/2019	DONE	Local list	all plates	Export [223232] time [from:20000101T000...	12	Get file

Copyright © 2019


Imports example:

From date: 28/02/2019 14:00:00

To date: 28/02/2019 23:59:59

Search

Type: import



Q Search...

ID	Time	Status	Type	List	Description	Num.	File
3	14:00:00.218 28/02/2019	DONE		all plates	Import [23232] time [from:200	12	Get file
4	14:01:00.228 28/02/2019	DONE		all plates	Import [23232] time [from:200	7	Get file

Copyright © 2019


Actions example:

From date: 28/02/2019 00:00:00

To date: 28/02/2019 23:59:59

Search

Type: action



Q Search...

ID	Time	Status	Type	Res.	List	Description	File
1284	12:26:53.370 28/02/2019	DONE	FTP	1289	all plates	Action [121221] plate [0715GY	Get file
1285	12:26:53.492 28/02/2019	DONE	FTP	1290	all plates	Action [121221] plate [0715GY	Get file
1286	12:26:53.615 28/02/2019	DONE	FTP	1291	all plates	Action [121221] plate [0715GY	Get file
1287	12:26:53.733 28/02/2019	DONE	FTP	1292	all plates	Action [121221] plate [0715GY	Get file
1288	12:26:53.852 28/02/2019	DONE	FTP	1293	all plates	Action [121221] plate [0715GY	Get file
1289	12:26:53.975 28/02/2019	DONE	FTP	1294	all plates	Action [121221] plate [0715GY	Get file
1290	12:26:54.097 28/02/2019	DONE	FTP	1295	all plates	Action [121221] plate [0715GY	Get file
1291	12:26:54.217 28/02/2019	DONE	FTP	1296	all plates	Action [121221] plate [0715GY	Get file
1292	12:26:54.334 28/02/2019	DONE	FTP	1297	all plates	Action [121221] plate [0715GY	Get file
1293	12:26:54.450 28/02/2019	DONE	FTP	1298	all plates	Action [121221] plate [0715GY	Get file

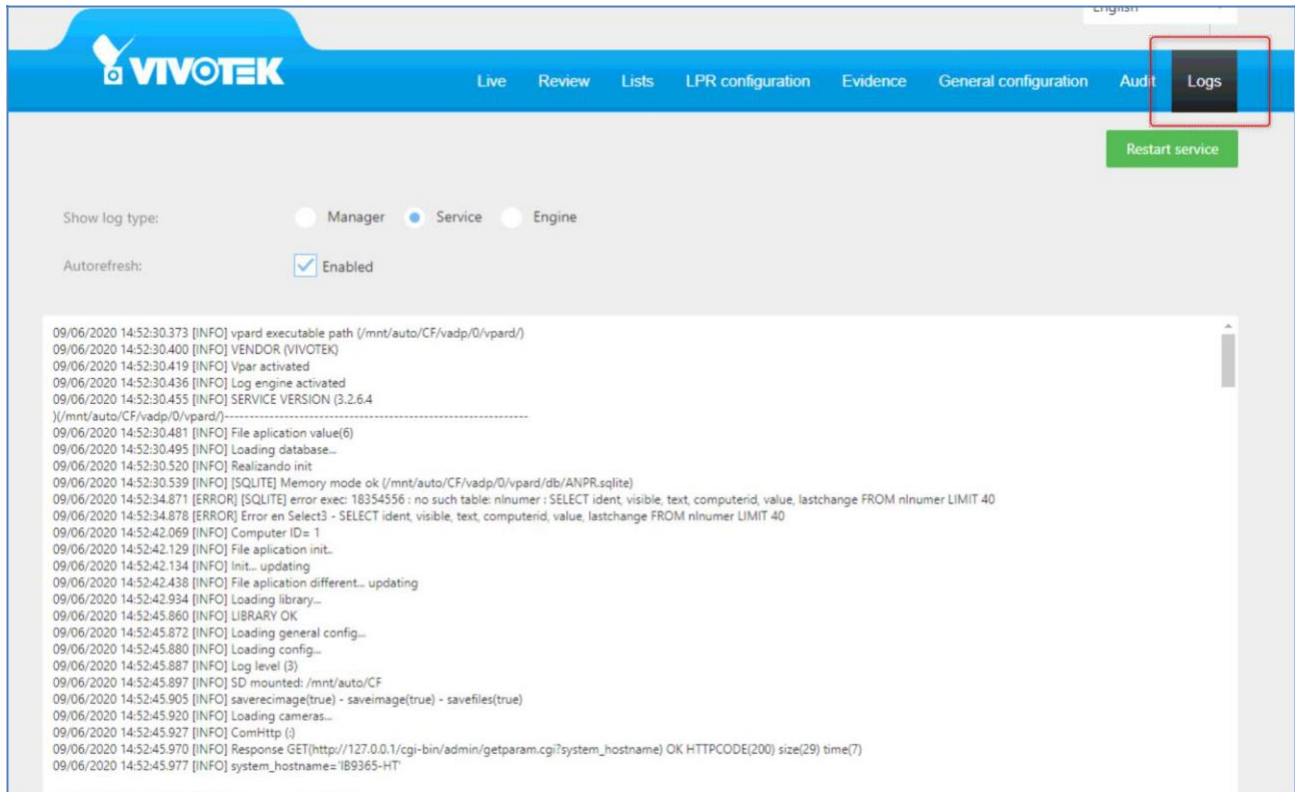
5 10 20 50 100

Page 1 of 100 (1000 items) 1 2 3 4 5 ... 100

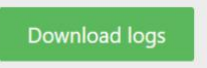
4.9. Logs Tab

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 to diagnose and solve application problems.



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

Camera list synchronization

The Urban ANPR software 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 download 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.

We recommend 10 slave cameras connect to master camera at the same time; The maximum number of connections is depending on the FTP server(master camera).

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)



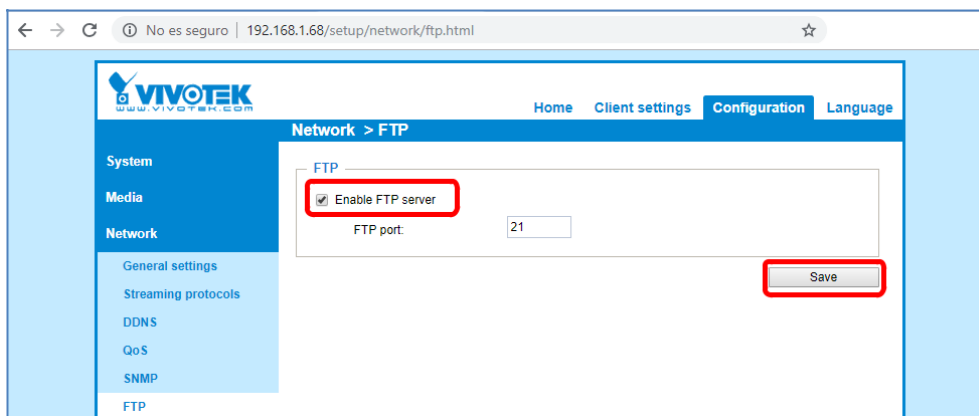
5.1.1. Master configuration

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 to the List Tab.

To configure only one list selects the list and make the import in the list.

The screenshot shows the 'List Tab' configuration interface. At the top, there is a search bar and a '+ Add' button. Below this is a table with columns 'ID' and 'Name'. The table contains four rows: '-2 all plates', '-1 not in list', '1 BLACKLIST' (highlighted with a red box), and '2 WHITELIST'. To the right of each row are 'Edit' and 'Delete' links. Below the table, there is a section for the selected list 'BLACKLIST'. It contains expandable sections for 'List of the license plates: BLACKLIST (0)', 'Action for the list: BLACKLIST (0)', 'Exports for the list: BLACKLIST (1)', and 'Imports for the list: BLACKLIST (0)'. The 'Imports' section is expanded, showing a green button 'Select import XML/CSV file' and a text input field. Below this is a checkbox 'Delete the list elements at import'. At the bottom right of this section is a '+ Add' button (highlighted with a red box) and a search bar. Below this is another table with columns 'ID', 'Description', 'Import type', 'Interval', and 'Active'. It currently shows 'No data'.

To configure all the list selects all plates.

The screenshot shows the 'List Tab' configuration interface with the '-2 all plates' list selected (highlighted with a red box). The configuration section below shows 'Action for the list: all plates (1)', 'Exports for the list: all plates (0)', and 'Imports for the list: all plates (0)'. The 'Imports' section is expanded, showing the same 'Select import XML/CSV file' button and text input field. The 'Delete the list elements at import' checkbox is also present. At the bottom right of this section is a '+ Add' button (highlighted with a red box) and a search bar. Below this is the same table as in the previous screenshot, showing 'No data'.

Create an import each minute (or desirable time) the time enabled if change with the type SINCRO Camera and click Save.

The screenshot shows the 'List Tab' configuration interface with the '2 import' list selected (highlighted with a red box). The configuration section below shows 'Action for the list: import (1)', 'Exports for the list: import (0)', and 'Imports for the list: import (0)'. The 'Imports' section is expanded, showing the same 'Select import XML/CSV file' button and text input field. The 'Delete the list elements at import' checkbox is also present. At the bottom right of this section is a '+ Add' button and a search bar. Below this is the table with columns 'ID', 'Description', 'Import type', 'Interval', and 'Active'. It contains one row: '2 import', 'SINCRO camera', 'Minute', 'Enabled if change', and 'Edit Delete' (highlighted with a red box).

Configure the master camera credentials.

ID	Description	Import type	Interval	Active	
2	import	SINCRO camera	Minute	Enabled if change	Edit Delete

Import properties

Import Info

Host:

User:

Password:

Host: Camera master IP

User: Camera master user

Password: Camera master password

Can be checked in the Audit Tab.

From date:

To date:

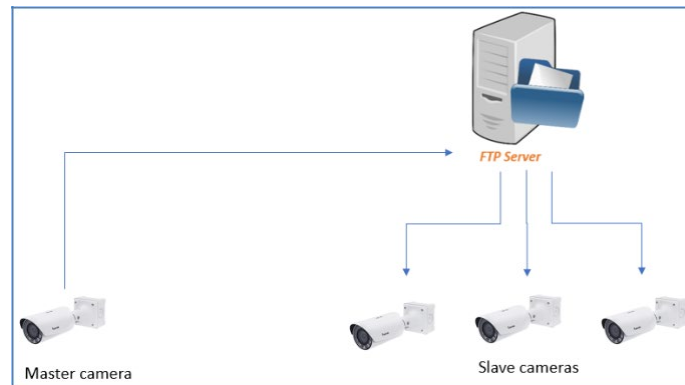
Type:

[Search](#)

ID	Time	Status	Type	List	Description	Num.	File
21	13:25:00.136 08/04/2019	DONE			Import [import slave] time [f	1	Get file

5.2. Architecture 2

Using FTP server where store the list.



5.2.1. Master configuration

Access to the List Tab.

To configure only one list selects the list and make the export in the list.

The screenshot shows the 'List Tab' configuration interface. At the top, there is a table with columns 'ID' and 'Name'. The rows are:

ID	Name
-2	all plates
-1	not in list
1	BLACKLIST
2	WHITELIST

The row '1 BLACKLIST' is highlighted with a red box. Below the table, there are sections for 'List of the license plates: BLACKLIST (0)', 'Action for the list: BLACKLIST (0)', and 'Exports for the list: BLACKLIST (0)'. There are two green buttons: 'Export to CSV file' and 'Export to XML file'. At the bottom, there is a table with columns 'ID', 'Description', 'Export type', 'Interval', and 'Active'. The table is empty, and the text 'No data' is displayed. A red box highlights the '+' icon in the top right corner of the bottom table.

To configure all the list selects all plates.

The screenshot shows the 'List Tab' configuration interface. At the top, there is a table with columns 'ID' and 'Name'. The rows are:

ID	Name
-2	all plates
-1	not in list
1	BLACKLIST
2	WHITELIST

The row '-2 all plates' is highlighted with a red box. Below the table, there are sections for 'Action for the list: all plates (1)' and 'Exports for the list: all plates (0)'. There are two green buttons: 'Export to CSV file' and 'Export to XML file'. At the bottom, there is a table with columns 'ID', 'Description', 'Export type', 'Interval', and 'Active'. The table is empty, and the text 'No data' is displayed. A red box highlights the '+' icon in the top right corner of the bottom table.

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

ID	Description	Export type	Interval	Active	
1	export master	FTP list	Minute	Enabled if change	Save Cancel

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

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

ID	Description	Export type	Interval	Active	
1	export master	FTP list	Minute	Enabled if change	Edit Delete

Export properties

Export Info

Host: 192.168.1.21

Port: 21

Format: ☒ XML ☐ CSV

Folder name: EXPORT

User: user


Password: password

Confirmation file: ☒ .FLAG

Can be checked in the Audit Tab.


From date:

08/04/2019 00:00:00



To date:


08/04/2019 23:59:59





Search

Type:

export





 Search...

ID	Time	Status	Type	List	Description	Num.	File
1	12:55:00.010 08/04/2019	DONE	FTP list	BLACKLIST	Export [export master] time [from:2000010...	1	Get file

5.2.2. Slave configuration

Access to the List Tab.

To configure only one list selects the list and make the import in the list.

+

Q Search...

ID	Name	
-2	all plates	Edit Delete
-1	not in list	Edit Delete
1	BLACKLIST	Edit Delete
2	WHITELIST	Edit Delete

▶ List of the license plates: BLACKLIST (0)

▶ Action for the list: BLACKLIST (0)

▶ Exports for the list: BLACKLIST (1)

▼ Imports for the list: BLACKLIST (0)

Select import XML/CSV file or Drop import XML/CSV file here

☐ Delete the list elements at import

+

Q Search...

ID	Description	Import type	Interval	Active
No data				

To configure all the list selects all plates.

+

Q Search...

ID	Name	
-2	all plates	Edit Delete
-1	not in list	Edit Delete
1	BLACKLIST	Edit Delete
2	WHITELIST	Edit Delete

▶ Action for the list: all plates (1)

▶ Exports for the list: all plates (0)

▼ Imports for the list: all plates (0)

Select import XML/CSV file or Drop import XML/CSV file here

☐ Delete the list elements at import

+

Q Search...

ID	Description	Import type	Interval	Active
No data				

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

+

Q Search...

ID	Description	Import type	Interval	Active	
	import slave	FTP list	Minute	Enabled if change	Save Cancel

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

Import properties

Import Info

Host: 192.168.1.21

Port: 21

Format: ☒ XML ☐ XML_NOTDELETE ☐ CSV ☐ CSV_NOTDELETE

Folder name: EXPORT

User: user

Password: password

Confirmation file: ☒ .FLAG

If the master selection type format is XML can be selected 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.

From date: 08/04/2019 13:25:00

To date: 08/04/2019 23:59:59

Type: import

Search

ID	Time	Status	Type	List	Description	Num.	File
21	13:25:00.136 08/04/2019	DONE			Import [import slave] time [f	1	Get file

6 Troubleshooting

6.1 Mode: NO LICENSE

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

Mode:	NO LICENSE	11:43:42.081 25/03/2019
-------	------------	-------------------------

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

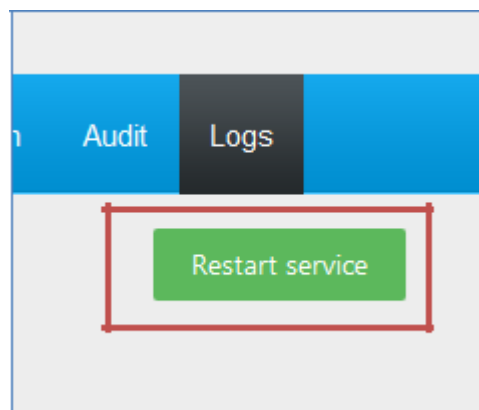
6.2 Mode: STOPPED

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

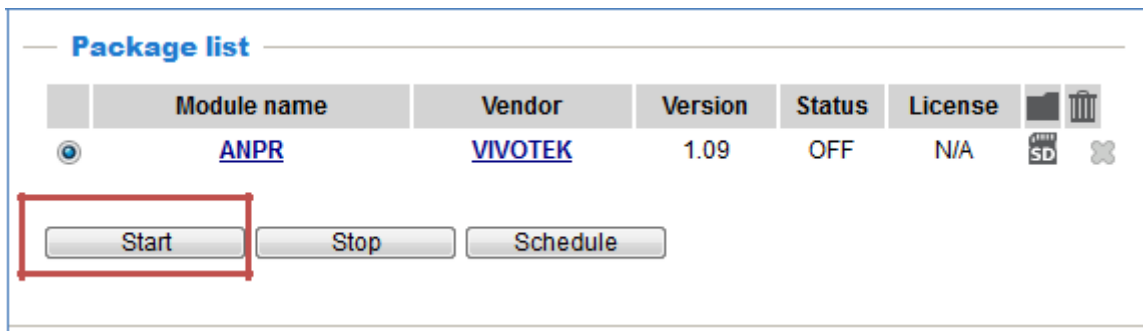
Mode:	STOPPED	11:43:42.081 25/03/2019
-------	---------	-------------------------

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

- Logs page:



- Package management (http://CAMERA_IP/setup/application/vadp.html):



6.3 No enough space at Camera or SD

If the camera or SD card has not enough space, the system could fail

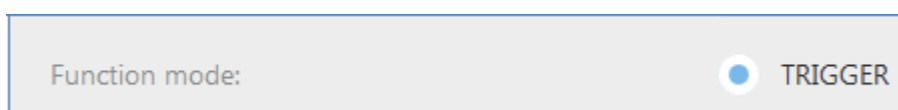
SD space free (%):	0	00:00:00.000 01/01/2018
Camera space free (%):	0	00:00:00.000 01/01/2018

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](#) at live page to adjust the size of the license plate. The license plate must be between 2 lines.
3. If you the system has a defined ROI, verify that license plate is inside [ROI area](#).
4. If the system is configured at motion detection mode, please be sure have a movement inside the image.
5. If the system has read a license plate and it do not read anymore, check [the filters](#).
6. If the system is configured at trigger mode, please check the following points:
 - a. Check the mode of in camera ([LPR CONFIGURATION](#)):



- b. Check the trigger socket port ([GENERAL CONFIGURATION](#)):

Trigger Socket port:	8040
----------------------	------

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

Show log type:	<input type="radio"/> Manager	<input checked="" type="radio"/> Service	<input type="radio"/> Engine
----------------	-------------------------------	--	------------------------------

6.5 Problem with ACTIONS

If the action does not execute, 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 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 on a valid time defined in the scheduler.

Scheduler

ACTIVATION SCHEDULER

	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Sun																								
Mon																								
Tue																								
Wed																								
Thu																								
Fri																								
Sat																								

✓ Save scheduler

6) Check in Tab Audit if the action has been executed. In red error sent.

ID	Time	Status	Type	Res.	List	Description	File
264	18:26:25.257 27/03/2019	FAILED	Socket client	15614	all plates	Action [1] plate [64998HW]	Get file
263	18:26:25.217 27/03/2019	DONE	IO	15614	all plates	Action [1231231] plate [64998]	
262	18:26:24.260 27/03/2019	FAILED	Socket client	15613	all plates	Action [1] plate [64998HW]	Get file
261	18:26:24.235 27/03/2019	DONE	IO	15613	all plates	Action [1231231] plate [64998]	
260	18:26:23.247 27/03/2019	FAILED	Socket client	15612	all plates	Action [1] plate [64998HW]	Get file
259	18:26:23.222 27/03/2019	DONE	IO	15612	all plates	Action [1231231] plate [64998]	
258	18:26:22.311 27/03/2019	FAILED	Socket client	15611	all plates	Action [1] plate [64998HW]	Get file
257	18:26:22.281 27/03/2019	DONE	IO	15611	all plates	Action [1231231] plate [64998]	
256	18:26:21.253 27/03/2019	FAILED	Socket client	15610	all plates	Action [1] plate [64998HW]	Get file
255	18:26:21.228 27/03/2019	DONE	IO	15610	all plates	Action [1231231] plate [64998]	

7) Check in the logs if the action has been executed. Active Service and Enabled.

Show log type: ☐ Manager ☒ Service ☐ Engine

Autorefresh: ☒ Enabled

```

27/03/2019 18:28:40.006 [INFO] OK Execute action (1)(IO_ACTION) for result (15748)(64998HW)
27/03/2019 18:28:40.025 [ERROR] ERROR Execute action (2)(SOCKET_CLIENT_ACTION) for result (15748)(64998HW)
27/03/2019 18:28:41.011 [INFO] Text=64998HW Date=2019-03-27T18:28:40.396 Conf=97.18 Height=23.50 Coord=441#552#622#597, Country=101, Angle=4.72, Info=1, Time=519
27/03/2019 18:28:41.180 [INFO] OK Execute action (1)(IO_ACTION) for result (15748)(64998HW)
27/03/2019 18:28:41.192 [ERROR] ERROR Execute action (2)(SOCKET_CLIENT_ACTION) for result (15748)(64998HW)
27/03/2019 18:28:41.932 [INFO] Text=64998HW Date=2019-03-27T18:28:41.367 Conf=97.32 Height=23.38 Coord=441#552#624#597, Country=101, Angle=4.71, Info=1, Time=444
27/03/2019 18:28:42.048 [INFO] OK Execute action (1)(IO_ACTION) for result (15750)(64998HW)
27/03/2019 18:28:42.059 [ERROR] ERROR Execute action (2)(SOCKET_CLIENT_ACTION) for result (15750)(64998HW)
27/03/2019 18:28:42.816 [INFO] Text=64998HW Date=2019-03-27T18:28:42.396 Conf=97.11 Height=23.50 Coord=441#552#622#597, Country=101, Angle=4.72, Info=1, Time=434
27/03/2019 18:28:43.033 [INFO] OK Execute action (1)(IO_ACTION) for result (15751)(64998HW)
27/03/2019 18:28:43.044 [ERROR] ERROR Execute action (2)(SOCKET_CLIENT_ACTION) for result (15751)(64998HW)
27/03/2019 18:28:44.028 [INFO] Text=64998HW Date=2019-03-27T18:28:43.403 Conf=97.49 Height=23.38 Coord=440#552#624#597, Country=101, Angle=4.71, Info=1, Time=534
  
```

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

```

Administrador: Símbolo del sistema
Microsoft Windows [Versión 10.0.17134.648]
(c) 2018 Microsoft Corporation. Todos los derechos reservados.

C:\Users\Administrador>ping 192.168.1.1

Haciendo ping a 192.168.1.1 con 32 bytes de datos:
Respuesta desde 192.168.1.1: bytes=32 tiempo<1m TTL=64
Respuesta desde 192.168.1.1: bytes=32 tiempo<1m TTL=64
Respuesta desde 192.168.1.1: bytes=32 tiempo<1m TTL=64
Respuesta desde 192.168.1.1: bytes=32 tiempo<1m TTL=64

Estadísticas de ping para 192.168.1.1:
    Paquetes: enviados = 4, recibidos = 4, perdidos = 0
              (0% perdidos),
    Tiempos aproximados de ida y vuelta en milisegundos:
        Mínimo = 0ms, Máximo = 0ms, Media = 0ms

C:\Users\Administrador>
  
```

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 connection that the camera has connection to the HOST/PORT.
- 3) Download, install and open the sample test program on client computer.
 - www.neurallabs.net/SendReceiveEvents/SendReceiveEvents_x64.zip
 - www.neurallabs.net/SendReceiveEvents/SendReceiveEvents_x86.zip
- 4) Check the IP from client computer, set port 17000 and read a plate.

Sample Send Receive Events

Send Event

IP 127.0.0.1 Port 8040 ☐ Include ID Event

Camera 1 Type of event 0

Path Ev Path

Received Event

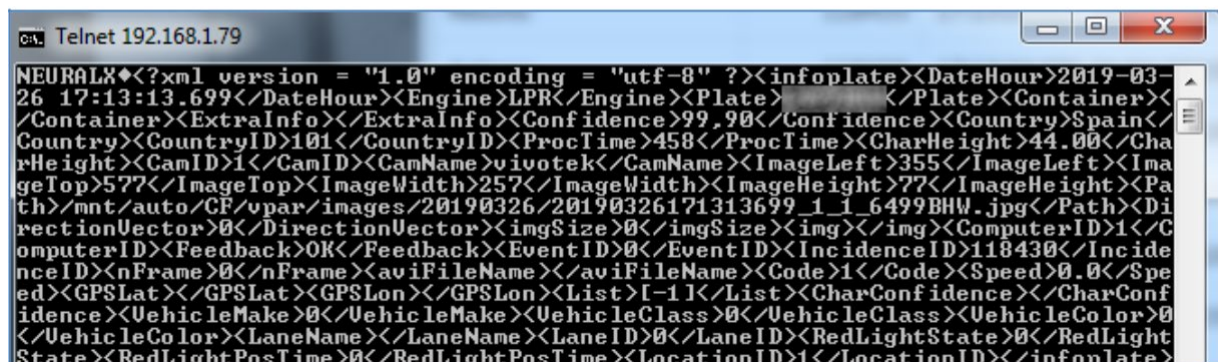
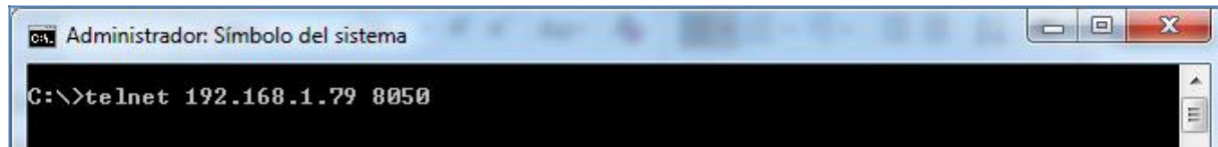
Engine	LPR	Analytics	Speed	0.0
Plate/ContainerID		Direction	0	
Extra code		Make	0	
Confidence	99.9	Color	0	
Country code	101	Class	0	
Image	/mnt/autocf/vpar/	Lane		
Date hour	2019-03-26 02:08	RL State	0	
Feedback	OK	RL PTime	0	
ID cam	1	ID Location	1	
ID event	0			
Events Received	5			
Process Time	392			
GPS	-			
Path	/mnt/autocf/vpar/images/20190326/2019032602			
Ev Path				
List	[-1]			

Video feed showing a door with a license plate.

6.5.2 Socket server / Trigger server

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

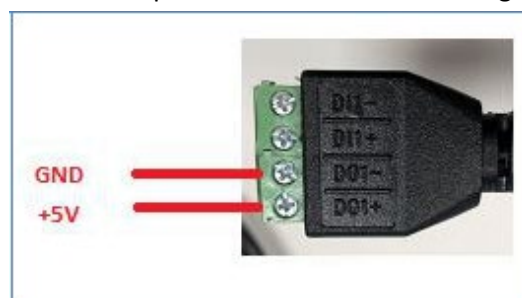
- 1) Check the defined port
- 2) Reboot the service if you have defined a new socket server action
- 3) Open a telnet client to Camera IP and defined port and check that the message is received.



6.5.3 IO

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

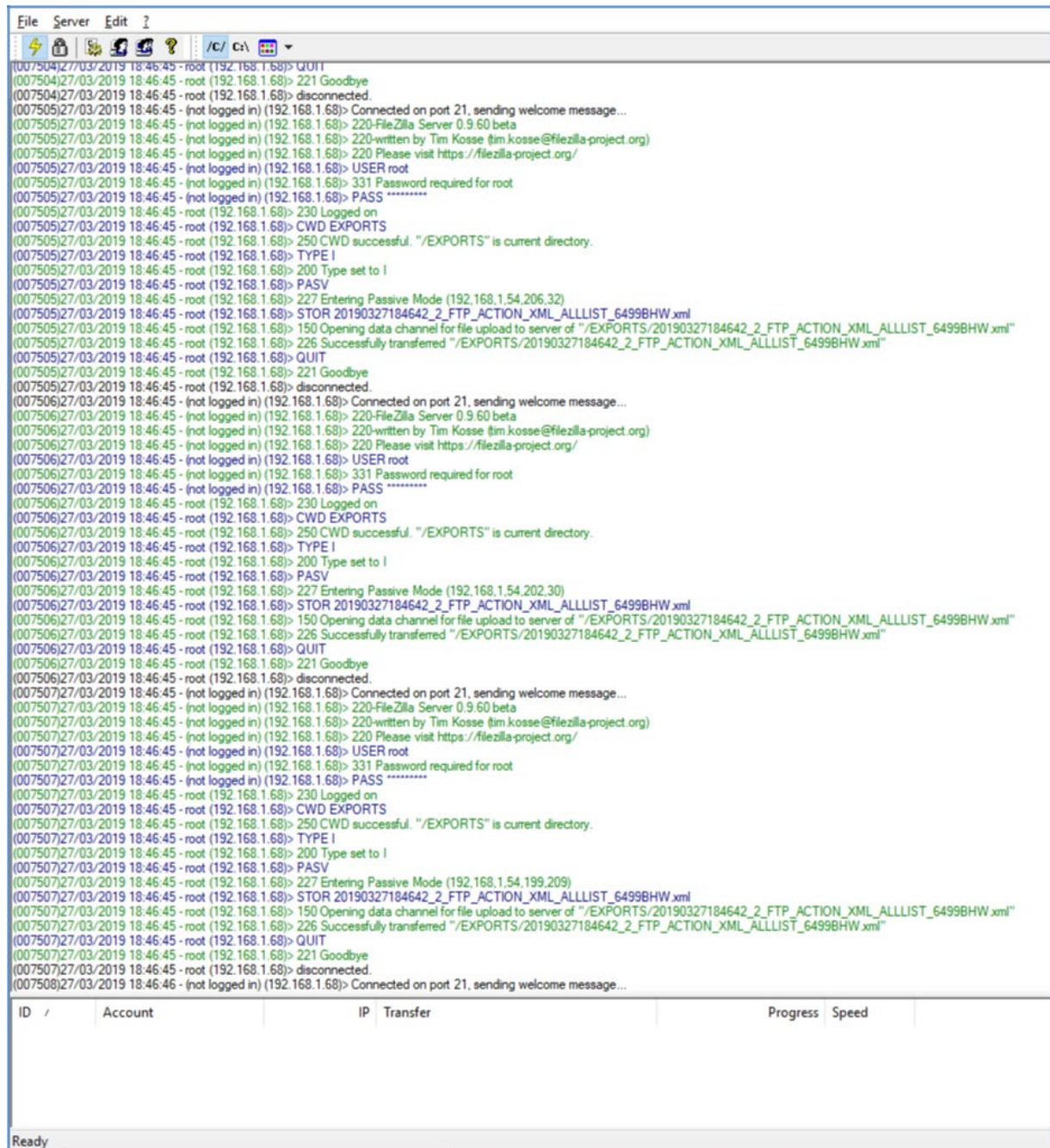
- 1) Check the defined port
- 2) Check the defined time
- 3) With a multimeter, connect to selected port and check that the voltage changes from 0 to 5 V.



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
 - o <https://filezilla-project.org/download.php?type=client>
- 3) Install FTP server like the FileZilla server and check the logs
 - o https://dl2.cdn.filezilla-project.org/server/FileZilla_Server-0_9_60_2.exe?h=Fjvi4wvvZmA-MDcp3K9v0Q&x=1553712290



The screenshot shows the FileZilla Server application window. The top menu bar includes 'File', 'Server', 'Edit', and '?'. Below the menu is a toolbar with icons for various server functions. The main area displays a log of server activity, showing connections from 192.168.1.68 and 192.168.1.54, user logins, password prompts, directory listings, and file transfers. At the bottom, there is a table with columns for ID, Account, IP, Transfer, Progress, and Speed. The table is currently empty. The status bar at the very bottom indicates 'Ready'.

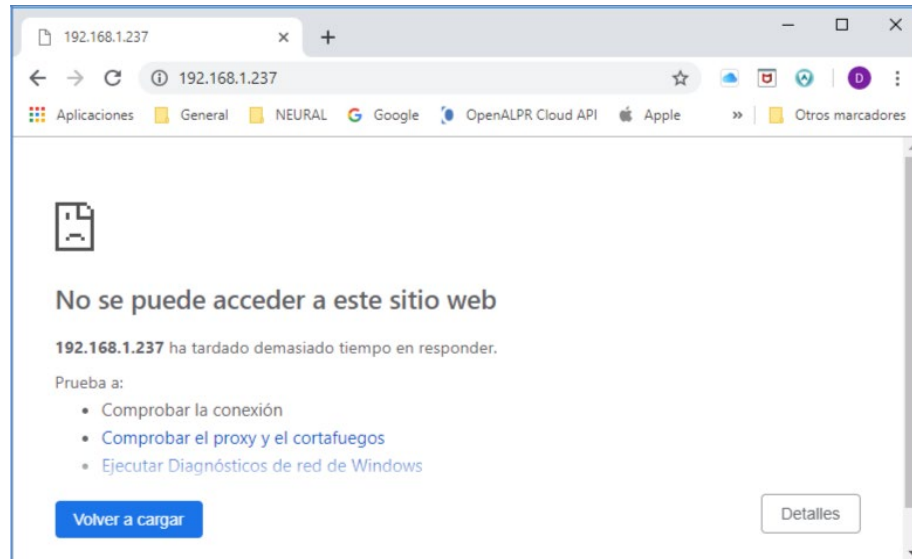
ID	Account	IP	Transfer	Progress	Speed
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6.5.5 HTTP/MILESTONE/WIEGAND

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.

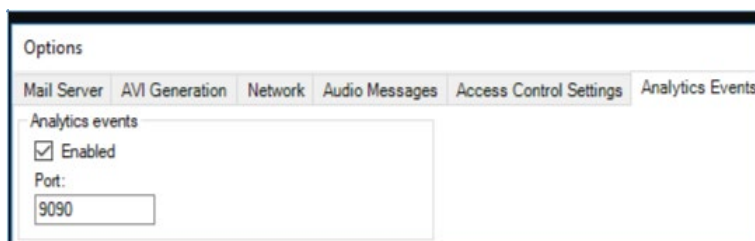
In this case not responds



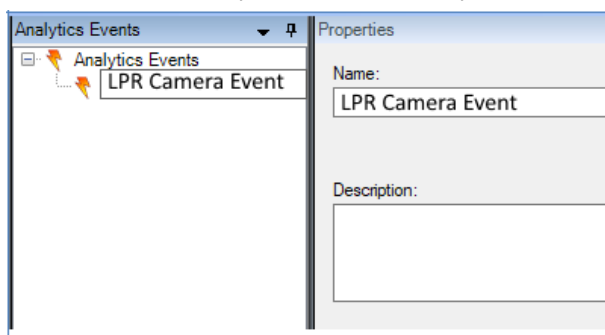
6.5.5 MILESTONE

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"



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