

# NEURAL VIEWER

## User Manual



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## Purpose of this document

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This document is oriented to the user of the tool Neural Viewer.

## Introduction

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NEURAL VIEWER is designed as an application that allows to visualize the data generated by VPAR SERVER.

Neural Viewer functionalities are:

- Real time display of the last detection from all cameras of the installation.
- Detected plates search engine.
- Pop-up notices for black list alarms.

NEURAL VIEWER monitoring can be performed simultaneously at several operator points, without affecting VPAR SERVER servers performance.

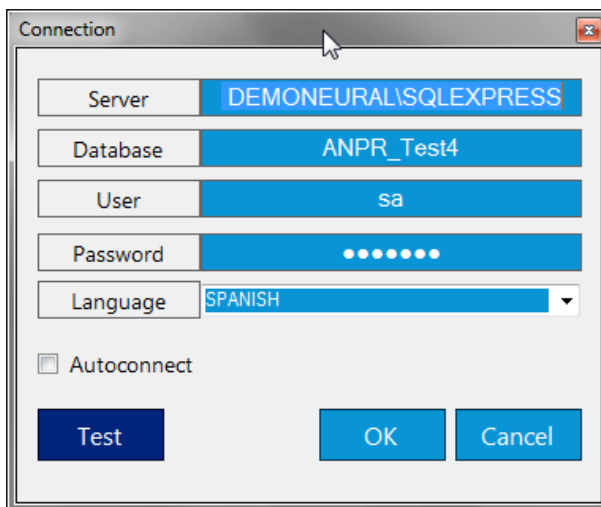
## Main functionalities

---

Neural Viewer main functionalities can be found below:

### Connection screen

Neural Viewer's initial screen allows the access configuration to the database the program will use. The connection screen looks like this:

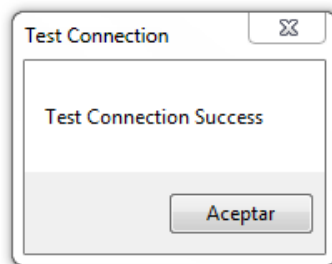


In order to configure the connection, we must fill in or confirm the following fields:

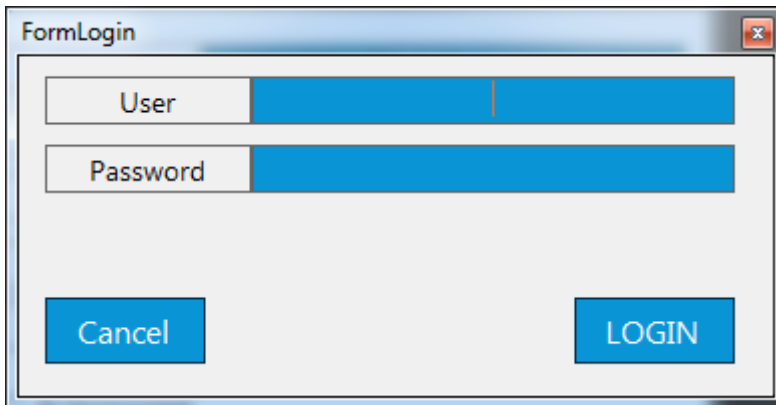
- Server: Name of the instance that runs Sql Server. In case of having the database manager installed on the same system, it is enough to enter “(local)\sqlexpress”. In case of having another instance name, replace “sqlexpress” with it.
- Database: Name of the database supporting VPAR SERVER configuration.
- User: The user name the application will use to connect with the database manager to operate. It must be an sql server user “sysadmin”. The default name is “sa” (sql server administrator system).
- Password: Password corresponding to the user name defined previously. The default password is “VparAdmin01#” .
- Language: It allows to select the application language from the available options in the dropdown menu.
- Autoconnect: If it’s checked, this allows to start the application without entering user name and password the next time, and will take our previously entered user name and password as predetermined. To revert this, see the annex “Advanced Configuration”, “Autoconnect”.

Once the data is properly defined, click the OK button to continue. In case there is any kind of error, the message will be clear enough to diagnose the problem. Generally, it can be due to a network problem, or an error regarding the instance name or the database.

Click the TEST button to check if the database exists and if the credentials are correct.



Once the database is defined, enter the user name and password.



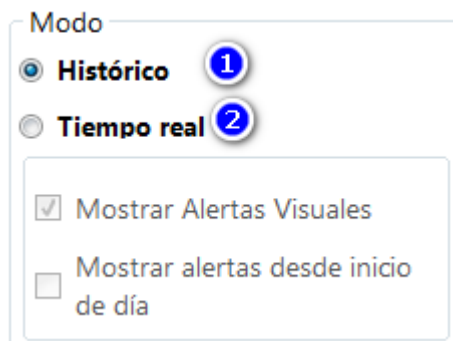
The image shows a 'FormLogin' window with two input fields: 'User' and 'Password'. Below the fields are two buttons: 'Cancel' and 'LOGIN'.

The first time we enter the system, the default user name and password will be “admin”, and “1234”. This data can be changed later from the user management section.

## Search Incidences Tab

In this tab we can find the license plate list functionality. This list is divided into two main functionalities:

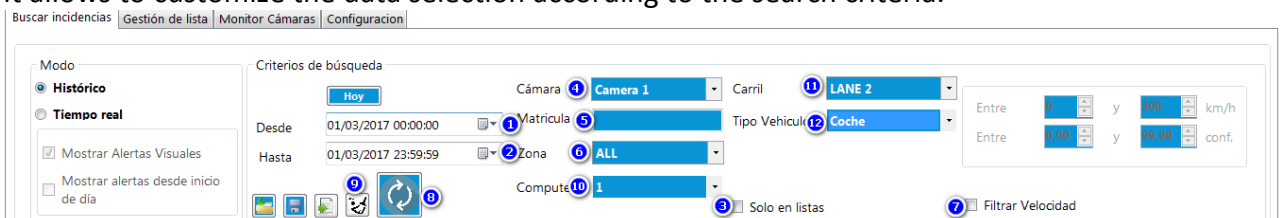
- Historical data: it allows to select the data range to display.
- Real time: it shows the data that is being generated in VPAR SERVER the current day in real time, from 00:00:00 until 23:59:59.



The image shows a 'Modo' section with two radio buttons: 'Histórico' (selected) and 'Tiempo real'. Below are two checkboxes: 'Mostrar Alertas Visuales' (checked) and 'Mostrar alertas desde inicio de día' (unchecked).

## Historical data

It allows to customize the data selection according to the search criteria.



The image shows a search criteria interface with various filters and options. Numbered callouts (1-12) point to specific elements: 1. Start date (01/03/2017 00:00:00), 2. End date (01/03/2017 23:59:59), 3. Solo en listas checkbox, 4. Cámara dropdown (Camera 1), 5. Matricula dropdown, 6. Zona dropdown (ALL), 7. Filtrar Velocidad checkbox, 8. Refresh button, 9. Carril dropdown (LANE 2), 10. Computo dropdown (1), 11. Tipo Vehicul dropdown (Coche), 12. Entree speed range (0 to 300 km/h).

1. Start: The starting moment of the data selection.
2. Finish: Ending moment of the data selection.

3. Only black list: Filter only license plates related to any list.
4. Camera: Filter results by a certain camera (choose ALL to not filter by camera).
5. Number plate: Filter by a certain plate (leave blank to see all). Filtering can be performed by approach entering only a part of the characters or through exact comparison.
6. Zone: Filter by a certain zone (leave blank to see all).
7. Speed: When activated, it allows to filter between speed ranges. When deactivated, there is not filtered.
8. Refresh: Refresh data according the selected criteria.
9. Reset Screen: default setting screen.
10. Computer: Allows to filter by the ID machine from which the log was generated, in case more than one VparServer installation is running simultaneously.
11. Lane: filter to lane.
12. Type of vehicle: filter to type of vehicle.

## Real Time

In Real Time mode, the application shows the data that is being generated on VPAR SERVER the current day in real time (from 00:00:00 until 23:59:59).

When using this mode, the search criteria have no effect.

In real time if a plate has the action of showing alarm (either by action default or by list action) a window with the information of this will be displayed. We can disable this behavior with the following options:

- Display visual alerts: Unchecking this option will not display visual alerts.
- Display alerts from the start of the day: Unchecking this option will only display the alerts from the current moment.

## Search Criteria

Through this functionality, the application allows to store search criteria, so it can be recovered to use it again.



1. By clicking the SAVE icon, the application will ask for a file name and will store the search criteria in it.

2. By clicking the OPEN icon, the application will ask for a file name and will recover the search criteria stored in the provided file.

## Export

By clicking the EXPORT icon, the application allows to export the data contained in the list. See the “Data Export Screen” section.



## List Management Tab

From this tab, we can add, modify or remove plates from the lists, as well as to define the behavior of their actions.

**Funcionamiento**

Usar listas

No usar listas

Acciones por defecto

Alarma Visual (VPAAR SERVER)

Enviar respuesta XML

Enviar imagen en XML

Sobreponer información en la imagen

Activar IO

Activar el relé de la cámara

Activar el protocolo de dorlet

[Guardar](#)

**Listas**

Condiciones de búsqueda

Tipo lista: Lista pepe Matricula:  [Buscar](#)

Descripción:  Información de listas:  [Todo](#)

Patente	Descripción	Información de List...	TimeStamp	id	Lista	Tipo L...

[Gestión de listas](#)

The user will have to define in the operating box if the system will use lists or not.

- Usar listas
- No usar listas

In case of not using lists, the user will need to define the actions that will be performed when a valid vehicle is detected:



● Comportamiento por defecto

Acciones por defecto

- Alarma Visual (VPAR SERVER)
- Enviar respuesta XML
  - Enviar imagen en XML
  - Sobreponer información en la imagen
- Activate IO
- Activar el relé de la camara
- Activar el protocolo de dorlet
- Enviar petición http
 

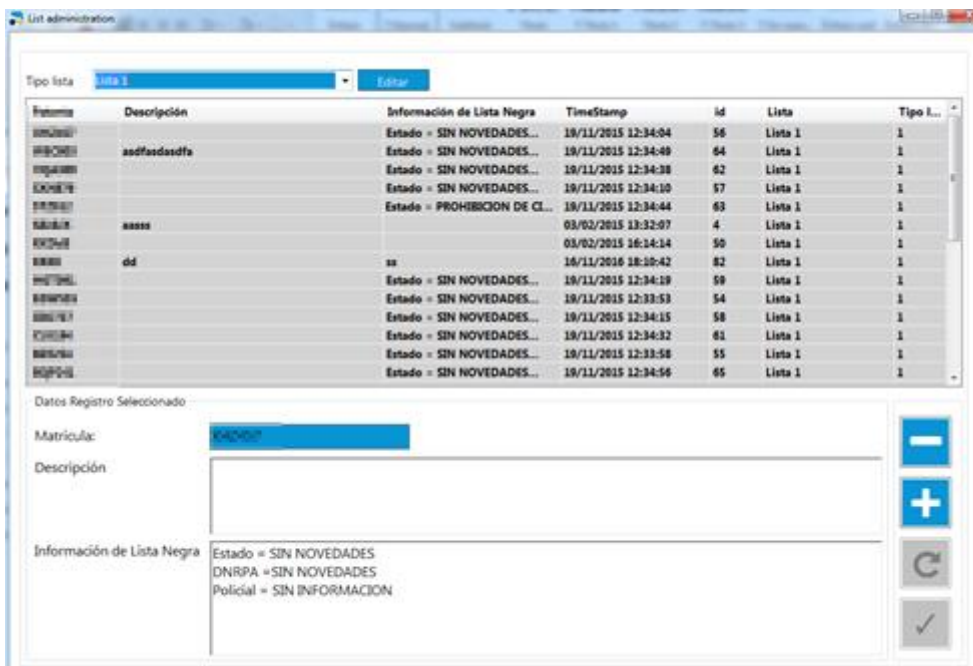
URL

- Visual alarm from VPAR SERVER: A window with a visual alarm of the detected vehicle will activate.
- Send an XML answer: An XML message will be sent to the configured server in VPAR SERVER.
  - Send image as XML: The image, coded in base64, will be sent as XML message.
  - Overlap information on the image: The image will be marked with the capture information.
- Activate IO: The signal of the input-output module will be activated.
- Activate camera relay: The configured camera relay will be activated.
- Activate the Dorlet protocol: A dorlet message configured in the camera will be sent.
- Send http request: An http request will be sent to the url defined in the URL text. If the url address contains the mark% **IP**% this will be replaced by the ip of the camera that has detected the vehicle.

Once the actions are selected, the user will click the SAVE button to apply the changes.

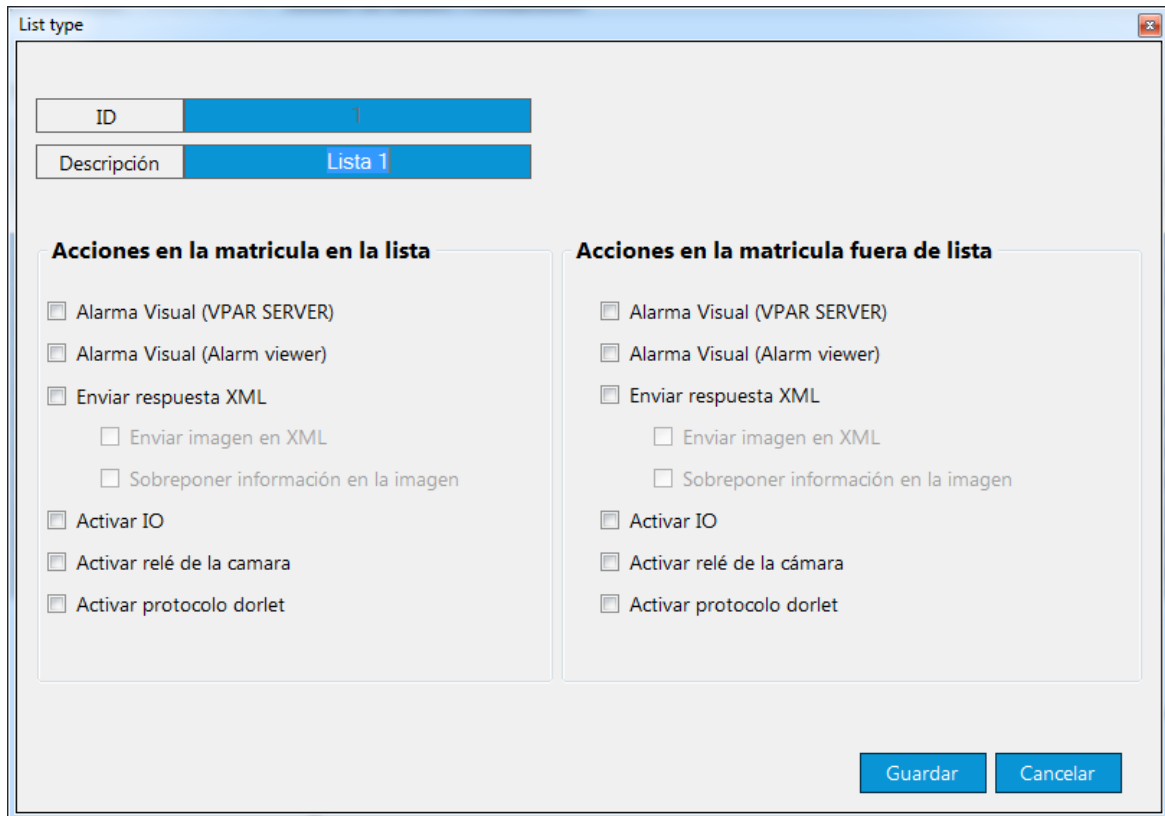
If the user decides to use the lists in this tab, it will be possible to perform vehicle search:





## Lists Edition

To edit an already created list, we have to select the desired list and click the EDIT button. If we want to add a new list, we will expand the drop-down and select the ADD NEW TYPE option. In both cases, the following window will open to edit the list:








In this window, we will be able to edit the list name, as well as the actions it will perform when the vehicle is on the list and when a new vehicle (not on the list) is detected.

The available actions are:

- Visual alarm from VPAR SERVER: A window with a visual alarm of the detected vehicle will activate.
- Visual alarm from Neural Viewer: A window with a visual alarm of the detected vehicle will activate.
- Send an XML answer: An XML message will be sent to the configured server in VPAR SERVER.
  - Send image as XML: The image, coded in base64, will be sent in the XML message.
  - Overlap information on the image: The image will be marked with the capture information.
- Activate IO: The signal of the input-output module will be activated.
- Activate camera relay: The configured camera relay will be activated.
- Activate the Dorlet protocol: A dorlet message configured in the camera will be sent.
- Send http request: An http request will be sent to the url defined in the URL text. If the url address contains the mark% **IP**% this will be replaced by the ip of the camera that has detected the vehicle.

## Edition of vehicles on the list

Once we've defined our lists, we can add/modify/remove vehicle number plates from them.

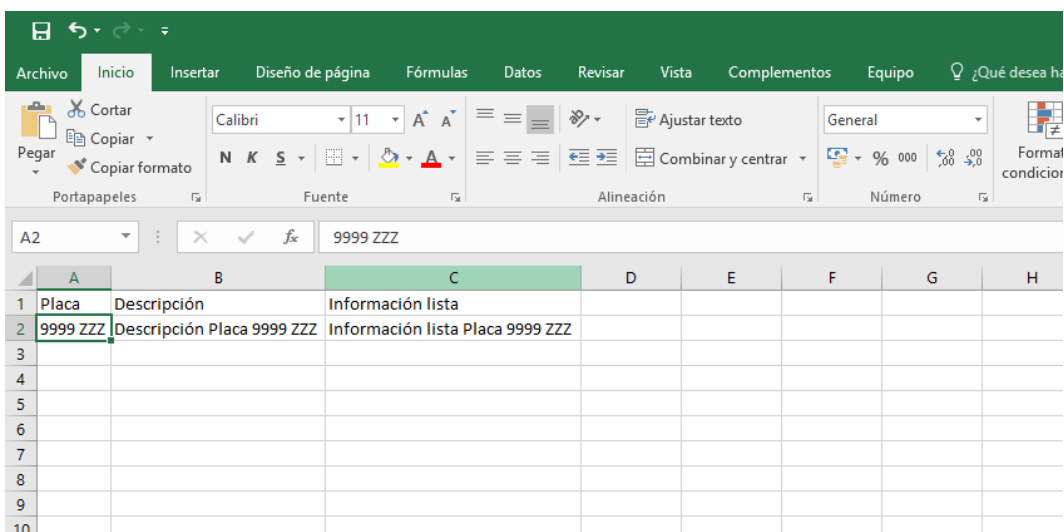
- To add a new register, we click the  button, fill in the fields and click on the  button.
- To modify a register, we will select it, modify the information and click the  button. In case we want to cancel the modification, we will click the  button.
- To remove a register, we will select it and click the  button.

## Import Lists

Once we've defined our lists, we can import vehicle number plates from them.

### File:

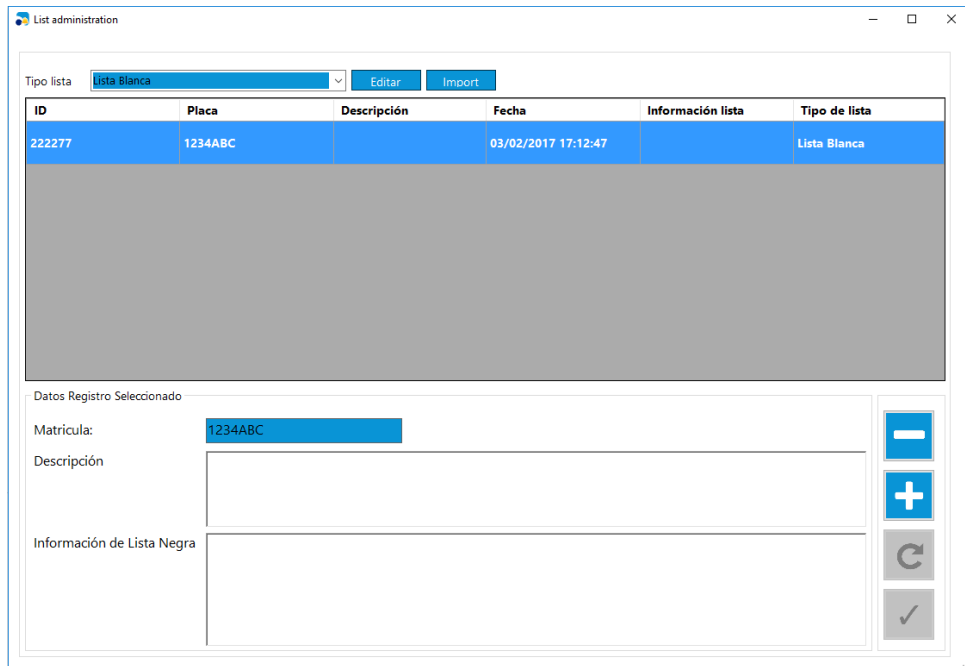
- Type file **CSV**, separator “;”
- Structure file:
  - 1º Column: Plate Number;
  - 2º Column: Description;
  - 3º Column: Comments;



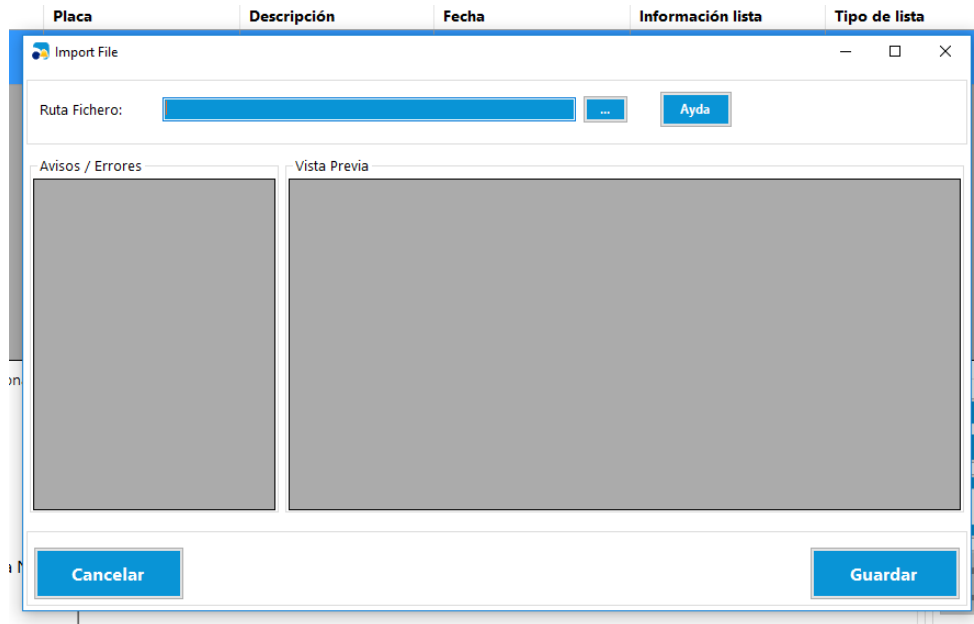
### Import:

- To import file (only CSV files) click Import:

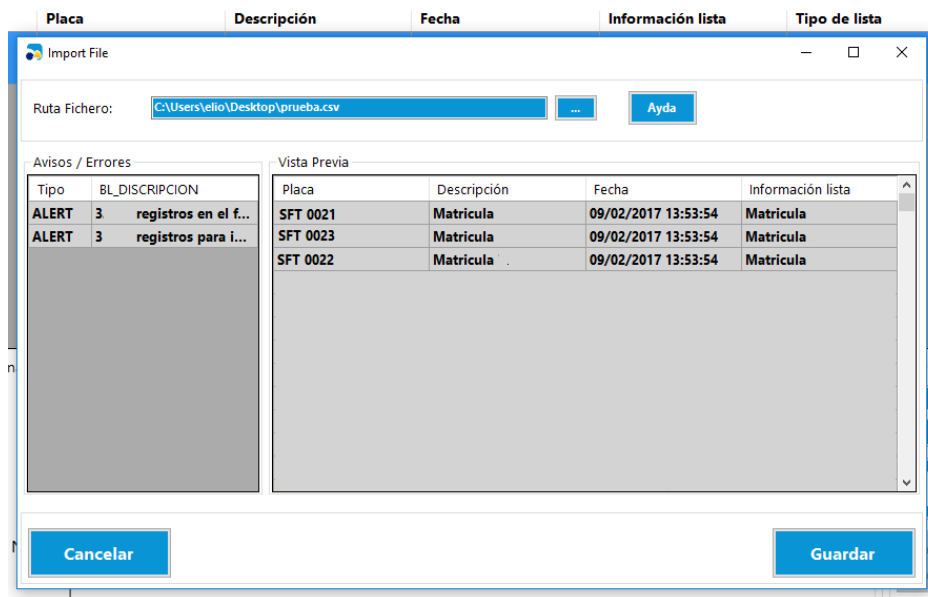




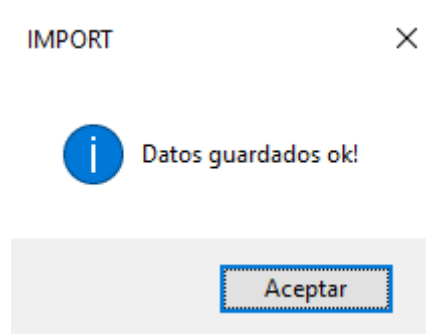
- To select file, click



- Preview of the import results



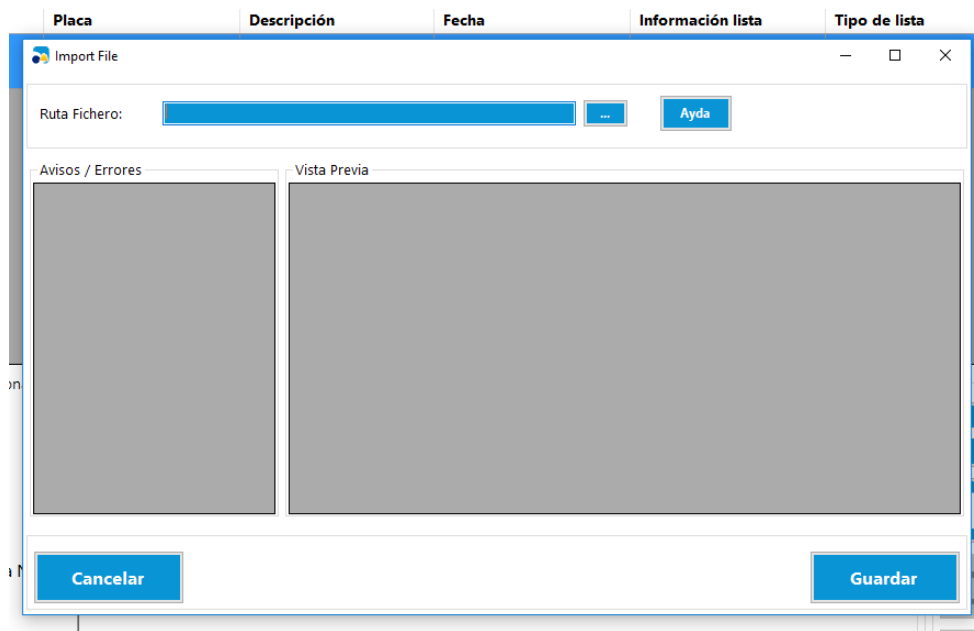
- To save, click “Save”



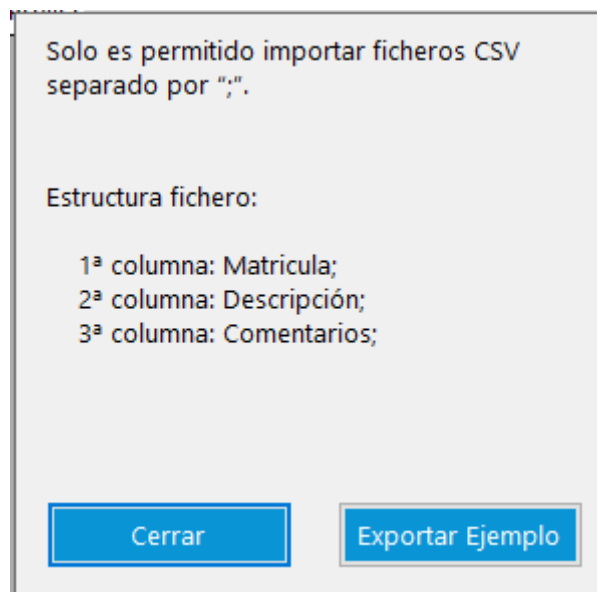
Export Demo File:

In the window “Import File”, click “Help”





- To save the file demo, click “Export”:



## Camera Monitor Tab

In this tab, we will be able to visualize the last image detected from each camera in real time.

The behavior and display of this functionality can be changed using the following controls:

1. **Available cameras:** It allows to define the cameras that will be displayed simultaneously.
2. **Images by tab:** It allows to visualize the maximum number of cameras that can be displayed under each tab.
3. **Adjust image size:** It allows to define the size of the frames.
4. **Alert when not receiving info from the camera:** In case a camera stops sending images after N seconds, a visual alert indicates no data is being received from that camera. If the value indicated is 0, this functionality will have no effect.

Buscar incidencias
Lista Negra
Monitor Cámaras

**1** Cámaras Disponibles

**Camera 1**

Ajustes

Imágenes por pestaña:

**2** 8

Ajustar tamaño de imágenes

**3** ▼ ▲


Alertar si no se recibe info de cámara en

**4** 0

(0 = desactivado)

1-8

Camera 1 - 14/10/2016 15:30:56



**Resultados:**

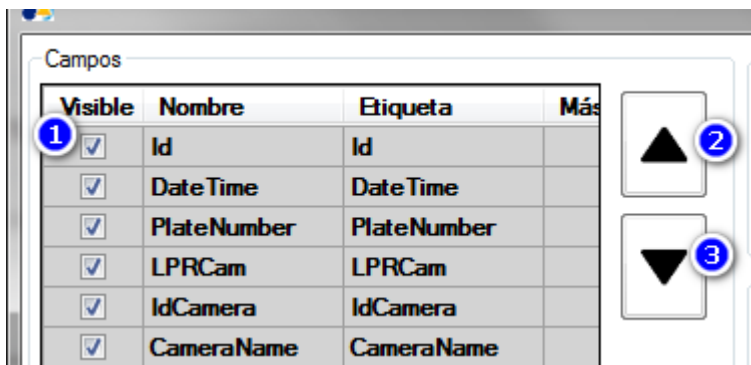
**Alertas recibidas 0**

## Data Export Screen

Through the export data screen, the application allows to export the data contained in the list as the CSV format compatible with MExcel. The data export screen consists of the following sections: Fields, Options and Preview.

### Fields

Through this functionality, we can select the columns of the list to be exported.



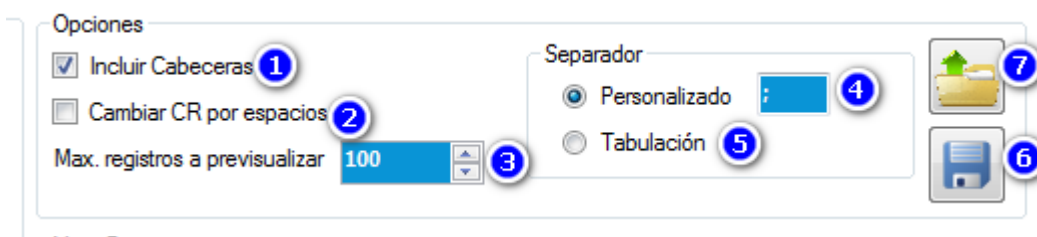
Visible: Check to export this field.

Move towards the beginning: Repositions the column towards the beginning.

Move towards the end: Repositions the column towards the end.

## Options

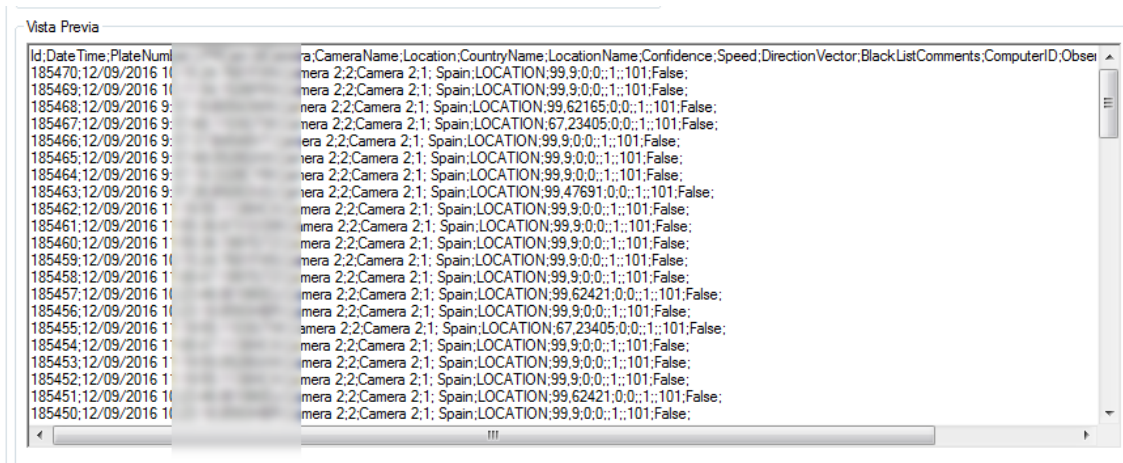
Through the export options, the chosen settings for both options and fields can be saved in order to use them again later.



1. **Include headers:** This option allows to include or omit the column titles.
2. **Replace CR with spaces:** This option allows to replace the line break with spaces. Usually, these line breaks appear in the observations field.
3. **Maximum number of registers to be displayed:** This options limits the registers to be displayed. It does not affect the exported registers, which are always the totality.
4. **Customized separator:** It allows to configure any charater or group of characters to be used as a field separator.
5. **Tabulation separator:** It allows to use a tabulation as a separator.
6. **Save options:** It allows to save the export options of both columns and options, in order to use them again later.
7. **Load options:** It allows to load saved settinigs

## Preview

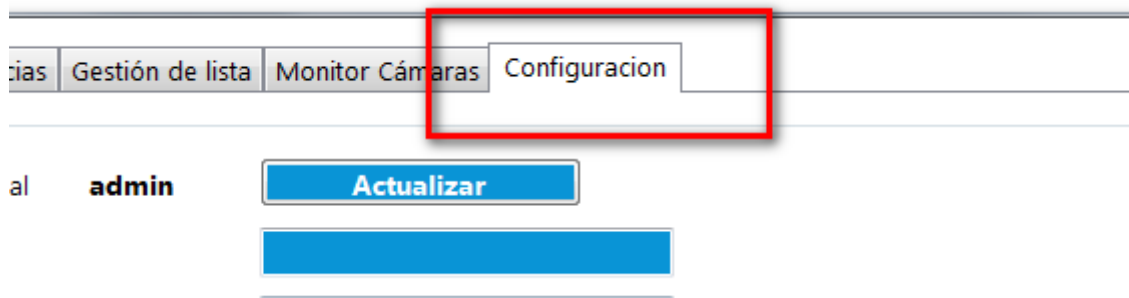
This allows to obtain a preveiw of the export results by clicking the Preview button.



## Configuration Tab

Under the configuration tab, we can manage several functionalities, related with the application behavior and security. These functionalities are:

- **Session (Sesión)** It allows to manage the current session, change its password and log out.
- **Permission: (Permisos)** It allows to access the permission / pass screen.



## Session

This functionality allows to manage two aspects related to the current user's session.

- **Change current password:** It allows to establish a new password for the user who just logged in. To proceed, we need to enter the new password and click the UPDATE button.
- **Log out:** It allows to log out and place/position the application on the login screen.

## Permission Screen

This screen allows to manage the users who will have access to the application, and the different functionalities each one will have in it.

The permission screen has two main groups:

- **Users:** Maintenance menu for the users management.

- **Groups:** Maintenance menu for the application access profiles management. These are groups of permissions which allow to perform certain actions.

In order to define the different permissions a user must have, we need to follow these steps:






- Firstly, create a group.
- Determine the different permissions for this group.
- Create a user and add it to the group.

When starting the application, a default “admin” user and password “1234”, and default group “default\_group”.

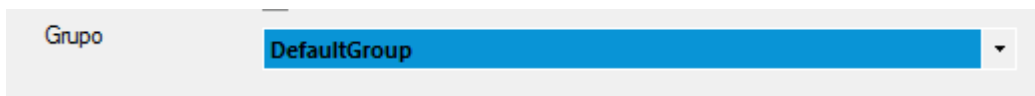
**Important:** Once the application is installed, it is recommended to change the admin default password.

## Users

It allows to create, modify and remove users.






- To add a new user, click the  button. Fill in the fields and click the  button.
- To modify a user, select it, modify the data and click the  button.
- In case we need to cancel the modification, click the  button.
- To delete a register, select it and click the  button.

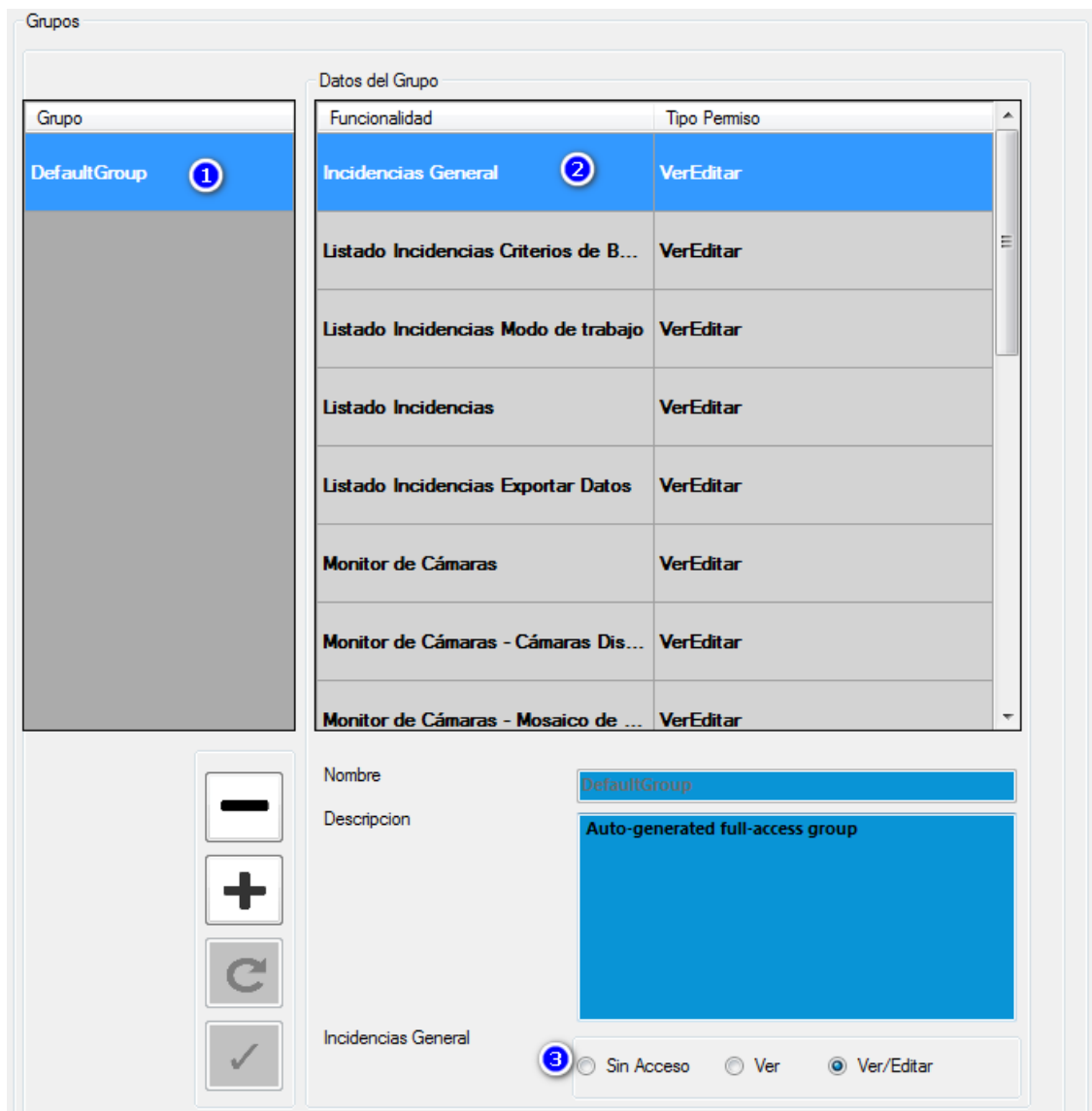
To add a user to a specific group, we need to select it from the Group dropdown menu.



## Groups

It allows to create, modify and remove groups, as well as to define their different permissions.

- To add a new group, click the  button, fill in the fields and click the  button.
- To modify a group, select it, modify the data and click the  button.
- In case the user needs to cancel the modification, click the  button.
- To remove a register, select it and click the  button.



To select the actions a group can perform, first select the group (1), then select the functionality (2) and finally establish the type of access (3).

There are three types of access:

- No access: (Sin acceso) The user can't see the functionality.
- See: The user can see the functionality, but can't edit it.
- See/Edit: The user can see and edit the functionality.



## ANNEX

---

### Advanced Configuration

In this section, we enlist some parameters that can be modified by advanced users, in order to customize certain functionalities of the application.

To proceed, open the AlarmClient.exe.xml file in the installation directory with a text editor such as Notepad or an editor able to work with xml format, such as Notepad++ or similar.

**CAUTION:** We highly recommend making a backup of the AlarmClient.exe.xml file before continuing with the process.

Once it's open, look for the section <AlarmClient.Properties.Settings>. In this section, we can find the different parameters the application uses along with its value between the <value> tags.

#### Autoconnect

When this value is True, the application will ask the user the data to start (connection, language, etc.) When it is False, the application will take the default data already provided.

```
<setting name="Autoconnect" serializeAs="String">
  <value>True</value>
</setting>
```

#### Levenshtein Distance

This value establishes the precision for any comparison between license plates. When the value is zero, it establishes that two license plates are identical only when all their characters are the same (default behavior). When the value is one, this establishes that two license plates are the same even when they differ in one character. When the value is two, this establishes that two license plates are the same even when they differ in two characters, and so on.

```
<setting name="levensteinDistance" serializeAs="String">
  <value>0</value>
</setting>
```

#### Real-time data window

This value establishes the data window in real-time mode. When you set to 3600 means that In every refresh you will get the last hour of generated data. Lower values increase the performance of the queries, but you get less registers into list view.

```
<setting name="SegundosVentanaRealTime" serializeAs="String">  
  <value>3600</value>  
</setting>
```

## Options Client

This value sets the activation of specific options for integration with VMS clients.

```
<setting name="cl_code" serializeAs="String">  
  <value>NEURAL</value>  
</setting>
```

The possible values for this field:

- Integration Milestone: MILESTONE
- Integration Indigo: INDIGO
- Integration Huawei: HUAWEI

## Change Log

Author	Date	Changes
LL	26/11/2017	Traducción
MO	26/11/2017	Verificado
EF	09/03/2017	Review
MO	24/3/2017	Actualizar password por defecto p.16
MO	20/3/2017	Crear apartado "real-time data window"