Helix Server



Installation and User manual

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VAXTOR UK (HQ)

19-20 Bourne Court Woodford Green Essex. IG8 8HD / UK Tel: +44 (0)1707 808650 Info.uk@vaxtor.com

VAXTOR SPAIN

Sector Foresta 1, Bldg AKAL 2nd Floor. 28760 Tres Cantos Madrid (Spain) Tel: +34 91 757 22 11 info.eu@vaxtor.com

VAXTOR USA

23201 Lake Center Drive, Suite 211 Lake Forest, CA 92630 (USA) Toll Free: 877-5-VAXTOR Outside US: +1-949-444-5829 info.us@vaxtor.com

VAXTOR SINGAPORE

18 Howard Road #07-01/11 369585, Singapore Phone: +65 8613 3554 Info.asia@vaxtor.com



Preface

This user manual is designed for the management and proper use of Helix-Server by Vaxtor.

About this manual

This manual is intended for administrators and users of the Vaxtor Helix-Server application and is applicable to Version 1.5. It covers the installation, configuration and operation aspects of Helix-Server.

The most recent version of this document is available at <u>www.vaxtor.com</u>.

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

Section 9 of this manual explains in detail the different configurations that can be used as a starting point for more complex scenarios.

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Introduction

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

This manual allows the user to explore the full functionality of Helix-Server.

Helix-Server can be used with the Vaxtor licence plate reading products:

- VaxALPR On Camera
- VaxALPR PC
- VaxALPR Android

... and with the Vaxtor traffic monitoring products:

- RedLight
- IllegalTurns

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

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

New API Application Program Interface

Helix-Server has a new Application Program Interface (API) with which applications and third-party systems can obtain information in a simple way by receiving events, queries to databases and queries to devices etc.

New SQL Platform

Helix-Server now uses Postgres as the database manager providing enterprise class performance with many new functions. PostgreSQL is a powerful, open source object-relational database system that uses the SQL language to store data.

Dynamic and real-time information updating

The new communication architecture between modules and the technology of the software components used allows Helix-Server to automatically and instantly display new plate reads in addition to updating any user screen layout modifications (made by another user) to any part of the system. Helix-Server extends its capabilities to the end user, being both a management and a real-time monitoring tool.



Multi-platform and responsive user interface

Helix-Server comes with a modern user interface making it possible to use it from any device as the Graphic User Interface (GUI) automatically adapts to the equipment from which it is being used, be it a PC, tablet or smartphone.

Enhanced permissions management

The management of user permissions have also been improved. This feature is now completely transparent to the user who will only see the information relevant for him or her.

Seamless integration of 'VaxALPR On Camera'

Helix-Server incorporates the configuration and setup functions of 'VaxALPR On Camera' that previously could only be managed from the camera interface or in the configuration menu of each camera. It is now possible to manage how the on-board software saves the images directly from Helix-Server.

In summary

Helix-Server offers customers a powerful tool to manage the Vaxtor licence plate reading systems, maintaining and improving the existing functionality with a comprehensive interface compatible with almost any device. The new optimised architecture improves performance and allows future expansion at the same time interacting with third party systems and applications.

Requirements

Minimum PC Requirements

- Windows 10
- 32 bits (x86) or 64 bits (x64) processor at 2 GHz or higher
- 16 GB RAM
- 256GB (32-bit) or 20GB (64-bit) of hard disk space available.
- Microsoft .NET Framework 4.5.2 or higher

Database requirements

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

PostgreSQL is a powerful, open source object-relational database system that uses the SQL language to store data.



Software installation

• Run HelixServer-setup.exe as an administrator. In the first window, you will be prompted to accept Vaxtor's License Agreement:



• After agreeing you will be prompted for the location where you want to install this program. Leave the default path and click **"Next"**:

Setup - Helix Server version 1.0		—		\times
Select Destination Location Where should Helix Server be installed?				(IION)
Setup will install Helix Server into the	e following folde	r.		
To continue, click Next. If you would like to	select a different	folder, click E	rowse.	
C:\Program Files\Vaxtor Technologies\Helix	Server		Browse	
At least 48.5 MB of free disk space is require	ed.			
	Back	Next	с	ancel



• Leave the default "Full installation" and click "Next":



• Leave the postgres installation directory as the default:

Setup - Helix Server version 1.0		-		×
Postgres install Postgres installation directory				(m)
Please specify the postgres installation directo Postgres data directory	ry, then click I	Vext.		
C:\ProgramData\VaxtorMNGR\data			Browse	
	Back	Next	Can	icel



• Leave the default values for the username and password:

Setup - Helix Server version 1.0		_		×
Postgres credentials Postgres credentials			(- Con
Please specify username and password for t	he Postgres ser	vice user, then cli	ck Next.	
osername: postgres				
Password:				
•••••				_
	Back	Next	Ca	ncel

• In the next window of the wizard you can begin the installation by pressing the "Install" button:

🕞 Setup - Helix Server version 1.0		_		\times
Ready to Install Setup is now ready to begin installing Helix S	erver on your co	omputer.	(uon)
Click Install to continue with the installation, change any settings.	or click Back if y	ou want to review	/ or	
Destination location: C:\Program Files\Vaxtor Technologies\- Setup type: Full installation Selected components: Helix-6 server PostgreSQL 11 Postgres Admin Tool Grafana 7.1.3	lelix Server			k.
4			•	r
	Back	Install	Car	ncel

• Once the installation is complete, click the "Finish" button:



Setup - Helix Server versic	n 1.0 — 🗆 🗙
	Completing the Helix Server Setup Wizard
	Setup has finished installing Helix Server on your computer.
HOM	Click Finish to exit Setup.
	Finish

• A new service called "VaxtorMNGR" will be installed and automatically started.



The Application

After installation, Helix-Server can be accessed by the URL <u>http://serverip:8080/Helix6</u>, where serverip is the IP address of the machine where Helix-Server is installed. If accessing from the same PC then this would be **127.0.0.1/8080/helix6** or **localhost:8080/helix6**

Basic Configuration

This configuration can be changed by editing the file config.xml stored in the directory **c:\programdata\VaxtorMNGR** and adding to it a new Helix-Server Port tag.

Example (using SQLite database):

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

Valid tags and values for **config.xml** file:

Field	Description	Mandatory
BindAddress	Default value " * "	М
Helix6BaseUrl	Default value: /Helix-Server	Ор
Helix6Port	Default value: 8080	Ор
Helix6Environment	Default value: Vaxtor	Ор
Helix6DB	Valid values: SQLserver Postgres SQLite . Default value: SQLite	Ор
if Helix6DB equal SQLite		
DBAdminUser	Default value ""	Ор
DBAdminPassword	Default value ""	Ор
if Helix6DB equal Postgres		
PostgresDBName	Example: helix	М
PostgresDBHost	Example: 127.0.0.1	М
PostgresDBUser	Example: admin	М
PostgresDBPassword	Example: vaxtor	М



if Helix6DB equal sqlserver					
SQLServerDataSource	Example: 192.168.0.236	М			
SQLServerUserId	Example: admin	М			
SQLServerPassword	Example: vaxtor	М			
SQLServerInitialCatalog	Example: Helix-Server	М			
SQLServerIntegratedSecurity	Default value: false	М			
NOTE : If Helix6DB equal to sqlite does not have any additional configuration parameters					
АріКеу	Valid API key	М			
EnableSsl	default value: False	М			
NOTE: If EnableSsl is True, review <u>https://docs.microsoft.com/en-us/docs.microsoft.com/en-</u>	this article: otnet/framework/wcf/feature-details/ho	ow-to-config			
AuthenticationMethod	Valid values none Basic Forms Default value: Forms	М			
LogLevel	Valid values: Info Debug Trace . Default value Info	Ор			

Important!

That you must restart the service to apply any changes.





Login

The Helix-Server login screen will be displayed in the browser, asking for the username and password:

🚯 Helix Server - Login 🛛 🗙 🕂								~	-		×
← → C				Ê	☆	6	A	R	*	•) :
	\$										
	Helix Server										
	Username										
	Password										
	Log in										
	Remember me										
	© 2022 VAXTOR TECHNOLOGIES										

Helix-Server creates the default user "admin" with password "admin" when no other users have been added to the system.

If you wish, you can select the "Remember me" option so that the system saves your credentials for one week.



Helix-Server Application Layout

\$	AXTOR	I	HelixServer - Authorizatio	ons	0 =
AUTHOR	RIZATIONS CATEGO	DRIES PEOPLE	ROLL CALL SUPERSEARCH	5	PLATES 2
Search crite	eria			6	I DASHBOARD I≡ PLATE LISTS
Plate 👻	Active from	Active until	Zone and Schedules	Last seen	P ACTUATORS
999DLX	05/30/2022, 04:05:00 PM	05/30/2023, 04:05:00 PM	Parking_zone(Office hours)		
					➔ LOGOUT
					LADMIN 4
					*
•				1 items	C + 🛨 🛨 🛢

Main Menu

To access the main menu, click the **Main menu** button (1).

- Here you can access the following features (2):
 - PLATES
 - DASHBOARD
 - PLATE LISTS
 - ACTUATORS
 - AUTHORIZATIONS
 - CONFIGURATION
 - SETTINGS
- Tools (3):
 - LOGFILE: Select to view the HelixServer log file(s).
 - LOGOUT
- Current user button (4) default: ADMIN.

Secondary Menus

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

- DASHBOARD
 - Dashboard
 - Dashboard Setup
- PLATE LISTS
 - Plates



- List
- ACTUATORS
 - Actuators
 - Actuator Links
- AUTHORIZATIONS
 - \circ Authorizations
 - Categories
 - People
 - Roll Call
 - Supersearch
- CONFIGURATION
 - Zones
 - Cameras
 - Schedule
 - Sections
 - Capacity
- SETTINGS
 - Settings
 - o Users
 - Audit
 - GDPR

Search area

Some features have a **Search criteria (6)** area where various fields can be searched.

Toolbar

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

Contextual menu

Id	Name 🔻	Туре	Description		Color	Users	Zone	Owner
30	list2	Black list		1	#FFFCCC	timo vaskin	Axis Finland	timo vaskin
20	List that I want to sync	White list	Plate list 'list2'		#000000	camera_list	List sync testing	jigarcia
76	Lista demo Paula	White list	Edit Import		#00D9FF	paula	Parking demo	paula
25	Delivery cleared List	Black list	Renew for one year Delete	npleted eft	#000000	vaxtor-asia	Indonesia-PoC	vaxtor-asia
13	Kedacom	Black list 🧃	Filter by		#000000	ogarate	K-Test	ogarate
26	Civica Staff	White list	— Type — Zone		#D92F1C	lawson	Civica	lawson
86	list_to_delete	Black list	Close		#FB0404		ADT-POC	admin_user
83	Spyglass - test	Black list	Test		#E53E3E	brian	Spyglass	brent



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

The contextual menu has two areas: The actions area (1) which includes item actions such as Edit, Delete etc. and the filter area (2) which includes a comprehensive list of specific filters.

An example of the List Management secondary menu:

Note:

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

\$ V	AXTOR	HelixServer - Plate lists						
PLATE	LISTS							
LIST:list1	Search cri	teria	2				8 × Q	
Plate 👻	List	Active from	Active until	Description	Last detection	Hit count	4	
YVY480	🔳 list1	07/06/2021, 11:00:00 PM	07/30/2022, 11:00:00 PM	Test description	06/15/2022, 12:26:49 PM	411	0	
YVY480	📕 list1	07/06/2021, 11:00:00 PM	List item 'YVY480' 🛛 🔞	Test description	07/30/2021, 04:41:45 PM	83		
YVY480	list1	07/06/2021, 11:00:00 PM	Edit Delete	Test description	07/30/2021, 04:41:45 PM	83		
YKE862	list1	07/06/2021, 11:00:00 PM	Filter by	Test description	07/27/2021, 07:37:35 PM	4		
YKE862	list1	07/06/2021, 11:00:00 PM	– Plate – List	Test description	07/27/2021, 07:37:35 PM	4		
YKE862	list1	07/06/2021, 11:00:00 PM	Close	Test description	07/27/2021, 07:37:35 PM	4		
OYT729	🔳 list1	07/06/2021, 11:00:00 PM	07/30/2021, 11:00:00 PM	Test description	07/30/2021, 11:50:31 AM	30		
OYT729	list1	07/06/2021, 11:00:00 PM	07/30/2021, 11:00:00 PM	Test description	07/30/2021, 11:50:31 AM	30		
OYT729	list1	07/06/2021, 11:00:00 PM	07/30/2021, 11:00:00 PM	Test description	07/30/2021, 11:50:31 AM	30		
OS1659	List1	07/06/2021. 11:00:00 PM	07/30/2021, 11:00:00 PM	Test description	07/22/2021, 06:49:26	256		
0					7 41 items	3 +	<u> </u>	

Description:

- **Search** button (1). This button opens the Search dialogue box.
- Search Filters area (2) This search area allows you to quickly add search criteria. It includes a Clear search options button (3).
- Table header (4).
- Table data area (5)
- List view configuration button (6).
 (see '<u>How to configure your personal view</u>' below)
- List tools area (7). This could include:
 - An items counter ^{4 items}
 - Reload button C,
 - Add item ⁺ button
 - Download button
 - Contextual Menu (8)





Show logfile option

The Users with administration rights, are able to review the HelixServer log file. To do this, click the LOGFILE menu option in the menu (see (3) in the Main Menú)

Logfile		×
22-5-30 16:22:44.6 Warn LogMap 22-5-30 16:23:12.8 Warn LogMap 22-5-30 16:23:32.0 Warn LogMap 22-5-30 16:23:32.0 Warn LogMap 22-5-30 16:42:14.9 Info GrafanaM 22-5-30 16:42:14.9 Info ProcessPr 22-5-30 16:42:14.9 Info ProcessPr 22-5-30 16:42:14.9 Info GrafanaM 22-5-30 16:42:14.9 Info GrafanaM	per[File C:\ProgramData\VaxtorMNGR\\logs\vaxtormngr.bt not found per[File C:\ProgramData\VaxtorMNGR\\logs\vaxtormngr.trace.bt not found per[File C:\ProgramData\VaxtorMNGR\\logs\vaxtormngr.trace.bt not found per[File C:\ProgramData\VaxtorMNGR\\logs\vaxtormngr.trace.bt not found per[File C:\ProgramData\VaxtorMNGR\\logs\vaxtormngr.trace.bt not found langer[Grafana Stop request rovider[23572]: Willing process rovider[23572]: Waiting for exit rovider[23572]: Frocess terminated successfully erver.exe[Process exit C:\Program Files\Vaxtor Technologies\VaxALPR 4.6\grafanatbin\grafana-server.exe NGR\grafana.in"homepath "C:\Program Files\Vaxtor Technologies\VaxALPR 4.6\grafanatbin\grafana-server.exe langer[Grafana exit with ErrorCode -1 lanager[Grafana: Launching runner for Grafana C:\Program Files\Vaxtor Technologies\VaxALPR 4.6\grafanatbin\grafana.server.exe langer[Grafana: Launching runner for Grafana C:\Program Files\Vaxtor Technologies\VaxALPR 4.6\grafanatbin\grafana for the for Grafana fo	8 -
4 3 ∠ ± Info •	CLOS	E

Description:

- Reload the latest log file (1)
- Select file type (2): This depends on what you have configured (see <u>Configuration of Server</u>)
- Scroll to the end of the file (3)
- Download the log file (4)



How to customise screens for each user

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

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

Config list columns - List item							
Name	Show	Export	Width		Positio	n	
Id	4	3	2	•	0	~	
Plate			10	Ŧ	^	~	
List			10	Ŧ	^	~	
Active from			15	•	^	\sim	
Active until			15	Ŧ	^	\sim	
Comments			20	Ŧ	^	\sim	
Description			20	Ŧ	^	\sim	
Last detection			15	•	^	\sim	
* 7 6 5			10	Ŧ	^	\sim	
C 🖋 🐗			0000			SAVE	

Description:

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

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

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

At the bottom of the pop-up window you can restore the default values by clicking on the Default config (7) button or save your new configuration by pressing the Save button.





PLATES: Licence plates

Plates table

Clicking **PLATES** will display a list of licence plates recently received.

			Helix7	- Plates				=
FROM:16/06/2022, 00	1:00:00 🛞 S	earch criteria	2				×	1 Q
Capture date 🛛 🔫	Plate	Image	Status	Camera	Country	Direction	Speed	
16/06/2022, 09:29:38	ZNZ6434	Plate 'ZNZ6434'	Allowed	GreeceParking	GRC	Getting closer	-1	Î
16/06/2022, 09:29:31	IPX6745	Edit 4 Add to 5	Allowed	GreeceParking	GRC	Getting closer	-1	
16/06/2022, 09:29:23	PEN2456	Filter by — Zone — Camera 6	Allowed	GreeceParking	GRC	Getting closer	-1	
16/06/2022, 09:28:49	ITI7188	- Plate Close	Allowed	GreeceParking	GRC	Getting closer	-1	
16/06/2022, 09:28:42	PEN1008	PENº 1008	Allowed	GreeceParking	GRC	Getting closer	-1	
16/06/2022, 09:28:36	HKT5031	HKT=503	Allowed	GreeceParking	GRC	Getting closer	-1	
16/06/2022, 09:28:13	HPH8681	HPT-868	Allowed	GreeceParking	GRC	Getting closer	-1	
8 2022, 09:27:49	PEH3930	PEH*3930	Allowed	GreeceParking	GRC	10nknorvn	9 3	
\$					2:	2939 items C	• +	<u>+</u>

Note: that any new plates received will NOT be displayed until you press the Play icon (9), bottom right (See <u>Real-time view</u>).

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

• Capture Date:

Date and time that the plate was captured.

Plate:
 The ASCII interpretative

The ASCII interpretation of the Licence plate.

• Image:

The image of the licence plate. (The 'Plate Patch')

• Status:

This indicates whether the vehicle is "Authorized", "Pending", "Confirmed" or "Cancelled". (These states are discussed later in the manual.)

• Camera:

The name of the camera that detected the licence plate.

• Country:

Indicates the country of origin of the recognized plate (if known).

• Direction:

Indicates the direction the vehicle was travelling. This can be: "Getting closer", "Getting farther", "Unknown" or "Stopped".

• Speed:

This field displays the instant speed or the average speed of the detected



vehicle if available. If both measurements are available, the "instant speed" will be used (if known and configured).

• .. and various other configurable options such as OCR processing time, Multiplate rate etc.

Licence plate details

If you click on any of the plates in the list, the small associated <u>context menu</u> will appear. If you then click the action **Edit** of the context menu (see (4) of the <u>Plates</u> <u>table</u>), the following pop-up window will appear with the associated metadata of the reading including the source image and a small zoom tool to view the image in more detail.



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

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

Plate Images tab

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





Description:

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

Details tab

Plates			×
Capture date 09/05/2022, 11:44:55	Camera GreeceParking	Original plate ANZ8799	Original country GRC
PLATE IMAGES	DETAILS	ADD TO	
Plate * ANZ8799		Country * GRC - Greece	•
			\$
Capture date	e 0	9/05/2022, 11:44:55	3
Status	Д	llowed	
Camera	G	GreeceParking	
Direction	L	Inknown	
Speed	-	1	
2 SAVE			4 IC C > >I

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

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

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



'Add to' tab

In the tab ADD TO... you can:

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

Plates			×
Capture date 09/05/2022, 11:44:55	Camera GreeceParking	Original plate ANZ8799	Original country GRC
PLATE IMAGES	DETAILS	ADD TO	
Add the plate 'ANZ8799'	to		
AUTHORIZATIONS	LISTS		
Select a vehicle Owne	r and click [Add]		
Owner U			
Demo, U ser			•
			ADD

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

Plates			×
Capture date 09/05/2022, 11:44:55	Camera GreeceParking	Original plate ANZ8799	Original country GRC
PLATE IMAGES	DETAILS	ADD TO	
Add the plate 'ANZ8799'	to		
AUTHORIZATIONS	LISTS		
Select a Plate list and	click [Add]		
GIVILĂ STAII	•		
Copper Thieves			ADD
Delivery cleared List			
Eikona - Blacklist			
Eikona - Whitelist			
ISOBlackList	-		

NOTE: To fast access to the *Add to...* click the action **Add to** in the context menu (see (5) of the <u>Plates table</u>).



Search Plates

Search criteria dialog

In the upper right corner of the table there is a small magnifying glass icon (see (1) of <u>Plate table</u>). When clicked, a popup window appears where you select from various search filters.

The Search criteria popup window is divided into four sections: DETAILS, ALARMS, LOCATION and INFO.

S	earch criteria				×
	< DETAILS	ALARM:	S	LOCATION	>
	Plate		Country		Ŧ
	Date from 09/05/2022, 00:00:00		Date to		
	Capturer Type		Capturer Id		
	Camera	*	Zone		*
	Status	*	Direction		v
	Speed		Signal ID		
	CLEAR				SEARCH

DETAILS search tab.

Search criteria	Description
Plate	 Here you can search through all the plates using the wildcards "*" and "?" to refine the search (you can also use _ in place of ? and % in place of "): "*" replaces any number of characters (including no characters). "?" replaces a single character in the search
Country	Filter the results by the country of origin of the plate selected from a combo box from the configured countries.
Date from	In this field, you can search from any date simply by clicking in the field. A pop-up window appears where you can select the start date + time of the search.
Date to	As in the previous field, you can search for plates up to a specific date again by clicking in the field. The pop-up window appears where you can select the "To" date + time and then press [OK]
Capture Type	Filter the results by a specific Capturer type
Camera ID	Filter the results by a specific Camera ID.
Camera	Filter the results by a particular camera selected from a combo box from the configured cameras for the current user.
Zone	Filter the results by zone from a combo box from the configured zones for the current user. NOTE: Cameras can be allocated to a zone – e.g. a car park with several entrances so a search would produce a list of vehicles currently in that zone.



Status	Filter the results by the selected vehicle status from a combo box including: OK, Pending, Confirmed, Cancelled, Exported, Prescribed, NoAuth, SanctionPending, NoAuthExceed, Ignored		
Direction	Filter the results by the selected vehicle direction from a combo box including Unknown, GettingCloser, GettingFarther, Stopped		
Speed Available as an add-on. Only vehicles moving faster than the selected sp will be shown.			
Signal ID	Filter the results by a specific Signal ID.		

ALARMS search tab.

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

LOCATION search tab.

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

INFO search tab.

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

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



Filter Plates

The Helix-Server **PLATES** page includes a quick way to use filters by adding your own search criteria as a text string (area (2) of the <u>Plate list</u>) into the search filter bar. You can add or remove search filters, also you can use the **Filter by** option in the context menu (see (9) of the <u>Plate list</u>).

Token	filterKey	filterValue
CAMERA	camera	Camera ID or camera name
COUNTRY	country	Three letter Country code
DIRECTION DIR	direction	Unknown, GettingCloser, GettingFarther, Stopped
PLATE	plate	p.e. M4616WZ
STATUS	status	OK, Pending, Confirmed, Cancelled, Exported, Prescribed, NoAuth, SanctionPending, NoAuthExceed, Ignored
ZONE	zone	Zone ID or Zone name
CAPTURERID CAPID	capturerId	Capturer ID
CAPTURERTYPE CAPTYPE	capturerType	Capturer Type
ALARM	alarm	true or false
MAXLATITUDE MAXLAT	maxlatitude	Max latitude (double)
MINLATITUDE MINLAT	minlatitude	Min latitude (double)
MAXLONGITUDE MAXLON	maxlongitude	Max longitude (double)
MINLONGITUDE MINLON	minlongitude	Min longitude (double)
DATEFROM FROM	dateFrom	DateTime format dd/MM/yyyy hh:mm:ss, example: 08/01/2018 10:22:29
DATETO TO	dateTo	DateTime format dd/MM/yyyy hh:mm:ss, example: 08/01/2018 10:22:29
SPEED	speed	Speed (integer)
SIGNALID	signalId	Signal ID (integer)
VEHICLEMAKER	vehicleMaker	Vehicle marker (text)
VEHICLEMODEL	vehicleModel	Vehicle model (text)
VEHICLECOLOR	vehicleColor	Vehicle colour (text)

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



VEHICLECLASS	vehicleClass	Vehicle class
CATEGORY	category	Category
REGION	region	Region
ALARM	alarm	If it is an alarm (boolean)
EXIT	exit	If it is an exit (boolean)

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

Real-time view

Click the **Play** button (button (9) of <u>Plate table</u>) to see plate reads as they arrive in real time.

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

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

Getting farther 29			≡ Ţ
15266 items	•	+	•

Note: This only works if the current user has been authorised.

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

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

Download Plates

To download a Plate list, click the *download* button (button (7) of <u>Plate table</u>) at the bottom-right of the plate list page:

Before downloading consider:

- The columns to include into the .csv file. Using the columns configurator (button (8) of <u>Plate table</u>) you can select which columns to be included. (for additional details, review <u>How to configure your personal view</u>)
- The number of plates in your current search (area (10) of <u>Plate table</u>), in this example nearly 15,300. Keep this to a reasonable number by using more Search Filters to avoid a massive download that could lock your system up.



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

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

Field	Туре	Example
id	Integer	1
camerald	Integer	1
zoneld	Integer	1
cameraName	String	"Camera #1"
latitude	Float	12.1234
longitude	Float	12.1234
plateNumber	String	"M4616WZ"
originalPlateNumber	String	"M4616WZ"
country	String	"ESP"
originalCountry	String	"ESP"
takenOn	DateTime as String	"2017-12-19T11:38:33.12Z"
status	Status	OK, Pending, Confirmed, Canceled, Exported, Prescribed, NoAuth, SanctionPending, NoAuthExceed, Ignored
direction	VehicleDirection	Unknown, GettingCloser, GettingFarther, Stopped
speed	Integer	0
confidence	Integer	89
envImagelds	List of Integer	[12300, 12302, 12303]
ocrImageId	Integer	12301
signaled	Boolean	false
avgDigitsHeight	Integer	16
multiplateRate	Integer	2
processingTimeOCR	Float	72.817330121994019
capturerId	Integer	1
capturerType	String	



isAlarm	Boolean	false
kamikazeAlarm	Boolean	false
timeInZoneAlarm	Boolean	false
blacklistAlarm	Boolean	true
alarmListIds	List of Integer	[20, 21]
speedAlarm	Boolean	false
prowlingAlarm	Boolean	false
vehicleMaker	String	"BMW"
vehicleModel	String	"M5"
vehicleColor	String	"UNKNOWN"
crosstime	Float	0
hasExit	Boolean	false
signalld	String	1
authorized	Boolean	false
category	String	
vehicleClass	String	
region	Sting	

Add to

If you are working with Authorizations and/or Lists, you can associate the current Plate to an owner (see <u>PEOPLE tab</u>) or to add to a List (see <u>LIST: Black an White</u> <u>Lists</u>), simply click on the action Add to of the context menu (see (5) of <u>Plate List</u> <u>items table</u>). Then, the following popup window will appear:



For additional information, review Add to tab.



DASHBOARD: Grafana Plugin

Helix includes a version of Grafana which is an open source analytics and monitoring solution for databases. This allows you to query, visualise and alert on your site metrics.

It works with the plate reads data stored within Helix to provide tailored reports of traffic volume and area capacities including maps of plates read if they have accompanying GPS data.

Note that Grafana is a third-party open source product and as such we are not able to offer support for its functionality. See <u>www.grafana.com</u> for details and full documentation. There are some very good third-party YouTube videos on its usage.



Vaxtor does offer a paid-for service where we will build custom dashboards for you if you are unable to do this yourself. Contact Vaxtor for more information.

S VAXTOR	Helix7 - Dash	board		=
DASHBOARD DASHBOARD SETUP				
				ⓒ Last 24 hours ~ Q 및 1m
		2		Remove this panel
** Basic The steps below will guide you to quickly finish setting up your Grafana installation.	TUTORIAL DATA BOURCE AND DASHBOARDS Grafana fundamentals Statana de defense (Colon Van Jane San	COMPLETE Add your first data source	DASHBOARDS Create your first dashboard	
	tori dy and understand o data and in you have no pice dependence. Insi tutorial guides system through the entitipe process and covers the "Data source" and "Dashboards" steps to the right.	8	88	
	V .	Learn how in the docs 🕑	Learn how in the docs 🖉	
Total license plat	te numbers detected by camera	Licen	ise plate numbers detected by camera	
15 20 15	- Del 928 23 12 - Del 928 65 6			eument total - Dell 9020 0 23
5 2000 0000 0400	4 2 	20:00 00:00 04:00	0 0600 1200	

Selecting DASHBOARD causes the main menu to be displayed:



Click on DASHBOARD SETUP to start connecting your data.



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

器 Helix-6			② Last	24 hours ~ 🛛 🔾 1m -
	49	Learn how in the docs 🗗	Learn how in the docs 🖄	
Total license plate numbers	detected by camera	Lice	nse plate numbers detected by camera	
125	- Priory Q1785 108			- Priory Q1785 0 108
75	3			
50	2			
25				
0 20:00 00:00 04:00 08:00	12:00 16:00 0	20:00 00:00 04:00	08:00 12:00 16:00	
Total license plate number	s detected by zone	Lice	ense plate numbers detected by zone	
125	current 5			- Priory 0 108
100	4			
50	3			
25	1			
0	0			

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

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

DASHBOARD DASHBOARD SETUP	
New dashboard / Edit Panel	Discard Save Apply
Fill Fit Exact Image: Control of the con	Panel Field Overrides
Panel Title	 ✓ Settings Panel title
0.5 No data	Panel Title
	Description Panel description supports markdown and links.



LISTS: Black and White Lists

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

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

Plate Lists tab

Plate Lists table

	- •					-				~	
	Name 🔻	Туре		Description		Color		Users	Zone	Owner	
	Lista blanca de Santo Tomas	White	list	Lista blanca Sar	nto Tomas		#000000		Kai_Test	jigarcia	
	OvationTest	Black	list			;	#FF0000	fb4, ovation	Kai_Test		
	Blacklist	Black	Plate list	'Blacklist'		;	#F70202	admin, dan, demo, mobotix	Kai_Test	demo	
	TestListKai	Black		Didekiist	-	;	#1EF12C	jason	Kai_Test		
1	Test Actuator List Kai	White	Import 4		Park 1	;	#33DD27	kaicamera65	Kai_Test		
		Renew for one year 3 Delete 2	rone year 3								
			Filter by		-						
			 Type Zone 	0							
			Close		-						

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

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

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

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





Search Filters

Helix-Server includes a fast way to search a List by adding search criteria as a text string (see (6) of the <u>Lists table</u>). To enable this, a Filter to the Results can be added or removed. You can also use the **Filter by** option in the context menu (see (7) of the <u>Lists table</u>). Search filter syntax is: **Token:FilterValue**, where:

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

Notes:

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

Add a new list

At the bottom right of the screen there is a [+] button (see (1) of <u>Lists table</u>) to add a new list to the system.

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

Plate list	Clandard	, ,
Name *		
2 Description *		
3 Zone *	is Virtu	ai
5 Type *	6	
7 Users Availables	Assigned	
adaking admin	Â	
admin_user adt-poc adtel		
agdcamera agustin		
ahack	•	
Owner		
		CAVE

Description:

- Name (1) Insert a name for the list.
- Description (2) Insert a description of the list.
- Zone (3) Insert the zone associated with the list.
- Is Virtual (3) This kind of list will just be stored in memory, not into the database. If the application is stopped, this list will be removed from memory.
- Type (5)
- Set the list to be a blacklist or whitelist. • Colour (6)
- Choose a reference colour for the new list. Once clicked, you will see a colour palette where you can select a colour using the cursor. The field will automatically display the associated RGB hexadecimal colour code.
- Users (7) Defines the user who will receive events linked to the list.
- Owner (8) This field is automatically filled with the user who created the list.




Delete a list

To delete a list, simply click on the action **Delete** in the contextual menu (see (2) of <u>Lists table</u>).

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

]
Delete Platelist	
Would you want to delete 'list_doc' from 'Platelist'?	
Important! All information associated with the Platelist 'list_doc' will b	e deleted!
CANCEL	ок

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

Import a Plate List from a CSV file

To import a plate list from a CSV file, simply click the action **Import** in the contextual menu (see (4) of <u>Lists table</u>). A selection file window is opened:

→ ✓ ↑ ≪ Data (D:) > Test > PruebasListasHelix6	🚺 🗸 ඊ Buscar en Pru	ebasListasHelix6 🔎	 Select folder (
Irganizar 👻 Nueva carpe	ta		III • 🔲 🕜	 Select file (2)
👌 Música 🔷 🔨	Nombre	Fecha de modifica Tipo	Tamaño	 Open file (3)
🗊 Objetos 3D	acportSOS.csv 2	16/01/2018 16:06 Archivo	de valores 103 K	
public L				
📑 Vídeos				
🏪 OS_Install (C:)				
Data (D:)				
🛫 public (\\192.168.(
🔿 Red				
Red ANDROMEDA				
Red ANDROMEDA DESKTOP-B6IM0L				
Red ANDROMEDA DESKTOP-B6IM0L DESKTOP-K44I06f				
Red ANDROMEDA DESKTOP-B6IM0L DESKTOP-K44I06f DESKTOP-K44I06f			>	
Red ANDROMEDA DESKTOP-B6IM0L DESKTOP-K44IO66 Nombre:	exportSOS.csv	Microsoft Ex	> cel Comma Separa V	

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



				- Star	idard -				
35	list_doc	Black list	List doc	#F4EB01		Vaxtor Spain	(1)	Ċ	Î
34	Spyglass - test	White list	Test	#83D902	brent	Spyglass	<u>±</u>	C	Î
33	Spyglass - test	Black list	Test	VE53E3E	brian	Spyglass	±	Ċ	Ĩ
32	Wegmans	Black list	Ex-employees	#F17109	admin, steve	Westwood Store	±	C	Î
31	ISOBlackList	Black list	ISOBlacklist	=000000	isosmartcity	ISOSmartCity	<u>±</u>	C	Î
79	Eikona - Blacklist	Black list	Blacklist	#E13737		Elkona - India	±	Ċ	Î
78	Eikona - Whitelist	White list	Whitelist for Eikona PoC	#25AFEA		Eikona - India	<u>±</u>	C	Î
77	SPG Test list	Black list	First test list	#000000	brent	Spyglass	<u>±</u>	C	Î
76	Lista demo Paula	White list	Lista demo Paula	#00D9FF	paula	Parking demo	<u>±</u>	C	Î
74	Vaxtor Spain	Black list	Vaxtor Spain Test List	#000000	rafa	Vaxtor Spain	±	Ċ	Î
71	Lista Blanca	White list	White list of employees	#0077FF	jaime	Omnicloud MX	1	C	Î
59	OvationTest	Black list		#FF0000	fb4, kai, ovation	Kai_Test	<u>±</u>	C	Î
34	CG_TESTLIST	White list	TEST PLATE IMPORTANT	#05D9F5	admin	Australia- iSpeed	<u>±</u>	C	Î

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



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

Field	Туре	Example
plate *	String	"0933BFF"
activefrom *	DateTime as String	"2017-01-01T00:00:00.00Z"
activeuntil *	DateTime as String	"2017-12-31T23:59:59.00Z"
Comments *	String	"Comments"
Description *	String	"Description"
Hitcount	Integer(\$int32)	5
lastDetection	DateTime as String	"2017-12-19T11:38:33.12Z"

The CSV file format is defined as follows:

(*) Required

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

```
plate;activefrom;activeuntil;comments;description
ABC123;2019-01-01T00:00:00.00Z;2020-01-01T00:00:00.00Z;Comment 1;description 1
XYZ234;2019-01-01T00:00:00.00Z;2020-01-01T00:00:00.00Z;Comment 2;description 1
LAW345;2019-01-01T00:00:00.00Z;2020-01-01T00:00:00.00Z;Comment 3;description 1
```

Important!

• The CSV file must include a header with column names.



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

Note: Fields **hitCount** and **lastDetection** help when exporting or importing lists from different Helix-Server installations.

Renew the List

To renew the list for one year, click the action **Renew for one year** in the contextual menu (see (3) of <u>Lists table</u>). Then, this pop-up windows is opened:



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

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

Items of 'list_doc' list have been renewed	



Edit a list item

To edit a list, simply click the action **Edit** in the contextual menu it (see (5) of <u>Lists</u> <u>table</u>), this pop-up window is opened:

Plate list			×
_{Name} * TestListKai			
Description * Test			
_{Zone *} Kai_Test	*	Is Virtual	
Type * Black list	Ŧ	Color	
Users			
Availables adaking admin admin_user adt-poc		Assigned jason kai	
adtel agdcamera agustin ahack	••		
Owner kai			•
			SAVE

Note: For more details, review the previous section Add a new list.



Plate List items tab

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

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

PLATE	LISTS							
LIST:Polic	cia 🙁 Search c	riteria		2				XQ
Plate 👻	List	Active from	Active until		Description	Last detection	Hit count	6
7590JVJ	Policia	06/10/2020, 12:00:00	AM 06/10/2021, 12:00:	00 AM	Delta 2		0	
7590JVJ	Policia	06/10/2020, 12:00:00	List item '7590JVJ'	0 AM	Delta 2		0	
7590JVJ	Policia	06/10/2020, 12:00:00	Edit 4 Delete 5	0 AM	Delta 2		0	
6564HZR	Policia	06/12/2020, 11:46:57	Filter by	7 AM	Detectado en 12/06/2020 10:35:55 por la cámara Calafell 2		0	
6564HZR	Policia	06/12/2020, 11:46:57	– List 9	7 AM	Detectado en 12/06/2020 10:35:55 por la cámara Calafell 2		0	
6564HZR	Policia	06/12/2020, 11:46:57	Close	7 AM	Detectado en 12/06/2020 10:35:55 por la cámara Calafell 2		0	
1111BBB	Policia	09/24/2020, 12:00:00	AM 09/25/2020, 12:00:	00 AM	hhkjh		0	
1111BBB	Policia	09/24/2020, 12:00:00	AM 09/25/2020, 12:00:	00 AM	hhkjh		0	
1111BBB	Policia	09/24/2020, 12:00:00	AM 09/25/2020, 12:00:	00 AM	hhkjh		0	
1						9 items	3 C +	

Search Plate list items

Search criteria

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





• Active (7) Show only the plates that are active, inactive or both at this moment.

* Wildcards are allowed.

Description:

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

Search filter

Helix-Server includes a fast way to search a List by adding search criteria as a text string (see (2) of <u>Plate List items table</u>). To enable this, includes a Search Filter where Search Filters can be added or removed, also you can use the **Filter by** option in the context menu (see (9) of <u>Plate List items table</u>). The Search filter syntax is: **Token:FilterValue**, where:

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

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

Add a licence plate to a list

Click on the [+] symbol located at the bottom right corner of the screen (see (3) of <u>Plate List items table</u>).



See List item	×	Description:
Plate* Description* Ui List*	[The licence plate to add to the list. Description (2) Add a description in this field. List (3)
Active from *	5 Active until *	 Select a list to add the plate to. Active from (4) Starting date of the plate in the list. (validity period) Active until (5)
15 15 15 15 15	SAVE SAVE	 Finish date of the plate in the list. Comments (6) Freeform text comment to be associated with the plate.

All fields in this pop-up menu marked with an asterisk are required. To add a record, press the [Save] button. The window will close automatically and the record will be added.

Edit Plate list item

To edit a list, simply click on the action **Edit** of the context menu (see (4) of <u>Plate</u> <u>List items table</u>), this pop-up window is opened:

List item			×
Plate* OSI659	Hit count 256		
Description * Test description			
List list_doc			
Active from * 06/07/2021, 23:00:00	Active until * 30/07/2021, 23:00:00		
Last detection 22/07/2021, 06:49:26			
Comments			
			_
SAVE		K < >	ы

Note: For more details, review the previous section Add a licence plate to a list.



Delete a Plate list item

To delete Plate list items, the action **Delete** of the context menu or use the multiple delete option, selecting the associated checkbox (see **(5)** of <u>Plate List items table</u>).

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

Once the checkbox or checkboxes are selected, press the delete button (see (6) of <u>Plate List items table</u>), and a confirmation window will appear asking you if you want to delete the list items:



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

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





Export all Plates in Lists

To export all of the plates, first choose which fields are to be exported by pressing the Settings icon (see (10) of <u>Plate List items table</u>). You will see a list of available fields and as we have already seen, we can select which should be displayed on the screen, – but we can also use the 'Export' slider to add them to the .csv output file (for more details, see <u>How to configure your personal view</u>).

Config list columns - List item						
Name	Show	Export	Width	Position		
Id			5	* ^	\sim	
Plate			10	• ^	\sim	
List			10	* ^	~	
Active from			15	* ^	~	
Active until			15	* ^	~	
Comments			20	* ^	\sim	
Description			20	* ^	\sim	
Last detection			15	* ^	\sim	
Hit count			10	* ^	\sim	
C 、	1	~		(SAVE	

Select the CSV File Download icon (see (3) of <u>Plate List items table</u>) to start the export.

Note: For more details about available columns to download, review the previous section Export all Plates in Lists.

The exporter tool will use the active search filters, in order to download just the required list items.

The exported file, named **exportListitem.csv**, will be saved to the standard Download folder – and is shown at the bottom of your screen.

Opening as flat text shows the file:

```
Plate;ActiveFrom;ActiveUntil;Comments;Description;HitCount;LastDetection
YVY480;2021-07-06T21:00:00.000+00:00;2022-07-30T21:00:00.000+00:00;this is where we
would put more information about this plate.;Test
description;388;2022-05-10T07:10:51.946+00:00
YKE862;2021-07-06T21:00:00.000+00:00;2021-07-30T21:00:00.000+00:00;;Test
description;4;2021-07-27T17:37:35.847+00:00
OYT729;2021-07-06T21:00:00.000+00:00;2021-07-30T21:00:00.000+00:00;Unpaid parking
ticket.;Test description;30;2021-07-30T09:50:31.810+00:00
...
```



ACTUATORS

ACTUATORS tab

Introduction

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

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

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

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

(Note that if the device is not on the same local network then a fixed IP should be used to remotely address it).

Α	ACTUATORS ACTUATOR LINKS									
Filt	er results			6					>	<
ID	Description 👻	Туре	IP	Port	User	Channel	State	Period	4	2
15	actuator_2	SkydataController	1.1.1.1	1	1	1	1	1		
12	Actuator_demo	Adam6050Controller	1.1.1.1	1	admin	1	1	5	!	
14	actuator_1	AxisController	1.1.1.1	1	a	1	1	1		
۵	:						3 ite	ms C	-	- 1

Actuators table

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



Filter Actuators

The Filter result area (see (4) of the <u>Actuators table</u>) allows you to filter the current listed Actuators. To enable this, a Filter to the Results can be added or removed. In addition you can use the **Filter by** option in the context menu (see (8) of the <u>Actuators table</u>). The filter syntax is: **Token:FilterValue** where:

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

Add a new Actuator

Click **Edit (1)** of the context menu of the <u>Actuators table</u>, to add a new actuator. A window will appear where you can set up the device.

n605	Actuator		×
0	Description *	2 Type *	Ŧ
3	IP ·	4 Port	
5	^{User*} User	6 Password *	0
0	State *	8 Period *	
9	Channel *		
l			
L			SAVE

(*) Username and Password to access the device. The default Adam password is: 0000000

e	
-	Confirm password
ie Le	Repeat password to confirm
12	-
te	CANCEL
5	

Description:

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



Test Actuator

Once added you can test the relay by clicking **Actuator connection text (6)** of the context menu of the <u>Actuators table</u>.

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

Actuator connection test	×
Confirm test of 'Front Gate Barrier'?	
	CANCEL CONFIRM

Edit an Actuator

To edit an Actuator, simply click **Edit** (5) of the context menu of <u>Actuators table</u>, this pop-up window is opened:

Actuator		×
Description * 1234ABC IP * 192.168.0.49 User * admin State * 1 Channel * 1	Type * Adam6052Controller Port * 80 Password ••• Period * 1	•
	SA	VE

Note: For more details, review the previous section Add a new Actuator.

Delete an Actuator

To delete an Actuator, click **Delete (7)** of the context menu of the <u>Actuators table</u>

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



ID	Description 👻	Туре	IP	Port	User	Channel	State	Period		
15	actuator_2	SkydataController	1.1.1.1	1	1	1	1	1		•
12	Actuator_demo	Adam6050Controller	1.1.1.1	1	admin	1	1	1		
14	actuator_1	AxisController	1.1.1.1	1	a	1	1	1	!	

And click the **(3)** button of the <u>Actuators table</u>. Then a confirmation window is opened:



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

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



ACTUATOR LINKS tab

Actuator links table

ACTUATORS	ACTUA	FOR LINKS			
Filter results				4	×
Camera	Actuato	rs E	event type	Accept external authorization	2
Android Test Vaxtor	Actuato	r_delete N	lot Authorized	false	
to_delete	Actuato	Actuator Links ID: '19'	horized	false	
9WNWExit	Actuato	Delete 6	:klist	true	
		Filter by – Camera – Actuators 7 – Event type Close			
					03
۵					3 items 🕑 🕂 📋



Filter Actuator links

The Filter result area (see (4) of the <u>Actuator links table</u>) allows users to filter current listed Actuator links. To enable this, a Filter to the Results can be added or removed, also you can use the **Filter by** option in the context menu (see (7) of the <u>Actuators table</u>). The filter syntax is: **Token: FilterValue** where:

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

Add a new Actuator link

Click on the plus icon (see (1) of the <u>Actuator links table</u>), to add a new actuator link. A window will appear where you can set up the device.



Description

- Camera (1): select from the configured Cameras (see <u>Cameras</u>)
- Actuator (2): select from the configured Actuators (see <u>Actuators</u>)
- Event type (3) *
 Accept an external authorization (4)

(*) Event type could be:

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

(+) if Access Control is licensed)

Edit an Actuator link

To edit an Actuator, simply click the action **Edit** (5) of the context menu of the <u>Actuator links table</u>.



Actuator Links		×
^{Camera *} 9WNWExit	 Actuators - Actuator_demo 	Ŧ
Event type * Authorized	Accept external authorization	
		SAVE

Delete an Actuator link

To delete an Actuator, click the action **Delete (2)** of the context menu of <u>Actuator</u> <u>links table</u> or use the multiple Actuator links delete option.

Camera	Actuators	Event type	Accept external authorization
9WNWExit	Actuator_demo	Capacity not full	false 🔽 🏠
9WNWExit	Actuator_demo	Authorized	true
Android Test Nacho	Actuator_demo	Capacity is full	false 🗹



AUTHORIZATIONS

AUTHORIZATION tab

An authorized plate is one that can be allowed into a zone or past a fixed camera. This section allows the user to view, create, edit and delete the authorized plates in the system. The fields show the licence plate of the vehicle, its authorized date range, zone and enabled schedules.

Authorization table

AUTHORI Search criter	ZATIONS CATEGO	DRIES PEOPLE	ROLL CALL SUPERSEARCH		х (1) (2)
Plate 👻	Active from	Active until	Zone and Schedules	Last seen	4
DL64SSX	14/09/2021, 01:00:00	14/09/2023, 02:00:00	Test_Parking_Zone_Kai(Office hours)		
10 5 ‡ 🗆				1 items C	 3 9 8 6 + ± ± ±



AUTHORI	ZATIONS CATE	GORIES PEOPLE	ROLL CALL SUPERSEARCH		
Search criter	ia		2		X Q
Plate 👻	Active from	Active until	Zone and Schedules	Last seen	Owner
DL64SSX	09/14/2021,01:00:0 AM	Authorizations 'DL64SSX'	Test_Parking_Zone_Kai(Office hours)		Phillips, Kai
		Edit 7 Delete 8			
		Filter by – Plate 9 – Owner			
		Close			
126					3 1 10 5
۵ 🗘				1 items	C + 🛨 主 🗊

Search Authorizations

Search criteria

In the upper right corner of the table there is a small magnifying glass icon (see (1) of <u>Authorization table</u>). If you click on it a popup window will appear where you can select from the following search filters:

	Search criteria	×	Description:
0	Piate		 Plate (1) Comments (2) Description (3)
2	Comments		
3	Description		
	CLEAR	SEARCH	

Search Filters

The fast way to search Authorizations is by adding search criteria as a text string (see (2) and (9) of the <u>Authorization table</u>). To enable this, includes a Search Filter where Search Filters can be added or removed. The Search filter syntax is: **Token:FilterValue**, where:

Token filterKey	filterValue	
-----------------	-------------	--



PLATE	plate	p.e. M4616WZ
DESCRIPTION DES	description	Description
COMMENTS COMM	comments	Comments
PERSON OWNER PERSONID	personId	Person ID

Add a new plate authorization

To create a new authorization, press the add [+] button (see (3) of the <u>Authorization table</u>). A pop-up window will appear in which the following parameters must be entered:

Authorizations		6	
Plate *	2 Owner	r +	
Description		5 Disabled?	
Active from *	7 Activ	e until	
Comments			
Last seen	10 Tokens	3	
Make	12 Model	13 Color	
Zone and Schedules			
Kai_Test			Î
UK Office			
Zona garaje			
ISO.Zone			¥
		5	SAVE

Description:

- Plate (1): Enter the registration number you want to authorise.
- Owner(2)
- Description (4)
- Disabled (5)
- Active from (6): Enter the starting date for the plate to be authorised.
- Active until (7): Enter the end date for the authorization period.
- Comments (8)
- Last seen (9)
- Token (10)
- Make (11)
- Model (12)
- Color (13)
- Zones and Schedules (14) *
- The button [+] (3) next to the Owner field allows to create on the fly a new person as owner of this licence plate. See the <u>People section</u> to get additional info.

(*) Select the zone for which the vehicle will be authorised, and if applicable, the timetable for the authorization.

- First level is **Zones** (e.g. *"UK Office"*)
- Second level is **Schedules** (e.g. "Office hours")

Zone and Schedules	
Kai_Test	Î
UK Office	
Office hours	
24 x 7	•

Edit an Authorization

To edit an Authorization, simply click on the action **Edit (7)** of the context menu of the <u>Authorization table</u>.



Authorizations							×
Piate ^ DL64SSX		_{Owner} Phillips, Kai				SHOW	
Description Kai Car				Di	sabled?		_
Active from * 14/09/2021, 01:00:00		Active until 14/09/2023, 02:0	00:00				
Comments							_
Last seen		Tokens -1					
^{Make} Vauxhall	Model Insignia		Color Grey				
Zone and Schedules							
Kai_Test						^	
UK Office						- 1	
Office hours							
24 x 7						Ŧ	
SAVE				<	<	>	>1

Delete an Authorization

To delete an Authorization, click the action **Delete (8)** of the context menu the <u>Authorization table</u> or using multiple delete option, includes the checkbox **(5)** of <u>Authorization table</u> to select all Authorizations to delete.

Plate 👻	Active from	Active until	Zone and Schedules	Last seen	Owner	
HKN9199	12/05/2022, 14:11:31	13/05/2022, 14:11:31	Test_Parking_Zone_Kai(Office hours)		Phillips, Kai	^
DL64SSX	14/09/2021, 01:00:00	14/09/2023, 02:00:00	Test_Parking_Zone_Kai(Office hours)		Phillips, Kai	
1798GDX	12/05/2022, 14:10:09	13/05/2022, 14:10:09	UK Office(Office hours)		Noble, Lawson	

CATEGORIES tab

When you set up an authorization for an individual plate, you can add a description and specify what zones and at what times (schedules) that the plate will be authorised to enter.

Another way of doing this is to define a category where you can define default zones and schedules and also assign the category to a system user.

You can then set up People (e.g. drivers - see next section) and allocate a category to each person giving them access rights.



Categories table

A	UTHORIZATIONS	CATEGORIES	PEOPLE	ROLL CALL	SUPERSEARCH		
L	ISER:1,4 🛞 Filter re	sults		(0		×
ld	Name 🔻	Description		Color	Default Zone and Schedules	Users	3
3	Cat2	Categoria 2	Category 'Cat2'	#000000	UK Office (Office hours)	admin, demo	
11	VIP Access Right	24 hours for	Edit 8	08FD24	UK Office (24 x 7)	admin	
2	Categoria1	Categoría	Delete 7	DCE931	UK Office (Office hours)	admin, demo, ogarate	
10	ADR	ADR Categor	– Users 6	000000	UK Office (Office hours)	admin, ogarate	
5	cat4	Categoría 4	Close	000000		dan, demo, , jaime, jigarcia	
\$						5 iter	ns C + Î

Filter Categories

The Filter result area (see (1) of the <u>Categories table</u>) allows to filter current listed Categories. To enable this, a Filter to the Results can be added or removed, also you can use the **Filter by** option in the context menu (see (6) of the <u>Actuators table</u>). The filter syntax is: **Token:FilterValue** where:

Token	filterKey	filterValue
ID	id	Category ID
NAME	name	Category name
DESC DESCRIPTION	description	Category description
USER	userlds	User id or User username

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

Add a new Category

To add a new Category, click the button (2) of the <u>Categories table</u>





Edit a Category

To edit a Category, simply click to the action **Edit** (8) of the context menu of the <u>Categories table</u>.

Category		×
Name - VIP Access Right	Color	
Description * 24 hours for all zones		
Default Zone and Schedules		
UK Office		^
Office hours		
✓ 24 × 7		
Zona garaje		-
Users		
Availables	Assigned	
adaking ^ admin_user adt-poc adtel	admin ▶▶	
agdcamera agustin ahack alan	44	
SAVE	IK K	> >I

Delete a Category

To delete a Category, simply click to the action **Delete** (7) of the context menu of the <u>Categories table</u>, or use the multiple Categories delete option.

Name Categoria i	Description Categoria	Color #UCE931	Default Zone and Schedules UK Office (office nours)	Users admin, demo, ogarate
cet3	ct3	#920707		
cet1	cc1	#C5DE0D		



PEOPLE tab

'People' are essentially drivers or owners of vehicles and in this section you can add people to the database. Data can be entered against each person e.g. Name, Company etc. and there are several user-defined (empty) fi=elds that could be used for say a staff or badge number.

An authorization can then be added to each person so here you can enter a plate (i.e. their car(s) and any zones and schedules to give them access to various areas at various times.

People table

A	UTHORI	ZATIONS	CATEGO	RIES	PEOPLE	ROLL CALL	SUPERS	EARCH				
	COMPANY	Y:Vaxtor 🛞 S	earch criteri	a			2				×	٩
ld	Title	Forename	Surna	me 🔻	Position	VIP?	Generic?	Company	Personal ID	Category	Disabled?	4
23	mr	Kai	Phillips	ople 'Phil	llips Kai'	False	True	Vaxtor		Test_Cat_Kai	False	
22	mr	Rafael	Pat	it 6		False	True	Vaxtor		cat3	False	
29	mr	Lawson	No Fil	ter by		False	True	Vaxtor Recognition Technologies Ltd.		Vaxtor	False	
3		Vaxtor	Gu = - - -	Forename Company Position Personal Category	e 8 ID	True	True	Vaxtor		Vaxtor	False	
0			Clo	ose							3 0	9 6
*									4 i	tems C -	+ 👱	1

Filter People

The Filter result area (see (2) of the <u>People table</u>) allows users to filter current listed People. To enable this, a Filter to the Results can be added or removed, also you can use the **Filter by** option in the context menu (see (8) of the <u>Actuators table</u>). The filter syntax is: **Token:FilterValue** where:

Token	filterKey	filterValue
SUR SURNAME	surname	Person surname
FORE FORENAME	forename	Person forename
COMPANY	company	Person company
PERSONAL PERSONALID	personalID	Person personal ID



POSITION	position	Person position
CATEGORY CATEGORYID	categoryld	Category Id or Category name

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

Add a new Person

To add a new Person, click the button (3) of the <u>People table</u>.

copic			• Title (1) Mrs
Person image	1 Title 2	🕒 VIP? 3 🔵 Generic? 4 🗩 Di	isabled?
	5 Surname *	6 Forename *	 Is it VIP? (2) Is it Generic?
	Position	8 Company	Is it Disabled?
	9 Category not assigned	10 Personal ID	• Surname (5)
	User's defined 1	User's defined 2	 Position (7)
	User's defined 3	User's defined 4	Company (8) Category (9)
	User's defined 5	User's defined 6	 Personal ID (User's defined
	Authorizations	12	fields(11)Authorization
	1	-	(12)

Edit a Person

To add a new Person, click the action **Edit** (6) of the context menu of the <u>People</u> <u>table</u>.



People		×		
	Tite Mr VIP?	Generic? Disabled?		
	Position	Company Vaxtor		
	Category Test_Cat_Kai	r Personal ID		
	i o di fi Qirkaatamaanii zari wala.	07929412480		
	User's defined 3	User's defined 4		
	User's defined 5	User's defined 6		
	DL64SSX	+		
UPLOAD IMAGE SAVE				

Delete Person

To delete a Person, simply click to the action **Delete** (7) of the context menu of the <u>People table</u>, or use the multiple People delete option.

Title	Forename	Surname 🔻	Position	VIP?	Generic?	Company	Personal ID	Category	Disabled?		
	Vaxtor	Guest		True	True	Vaxtor		Vaxtor	False		······ •
	User	Demo		False	True			Vaxtor	False	~	
	One	Delete		False	True			Not assigned	False	~	

ROLL CALL tab

Roll Call is a function which allows you to determine which plates are currently in say a car park. In Helix, an area can be defined with a capacity (how many vehicles are permitted to enter - (See the Configuration section later in this manual).

Users can then search these 'capacities' for an individual person - or all the people in that area.



Roll call table

Search criteria				0				×	Q
late number	Taken on	Status	Owner ID	Owner Name	Company	VIP?	Category	Capacity	
NHN891	07/08/2021, 02:41:59 PM	Roll call '8NH	IN891'	Phillips, Kai	Vaxtor		Test_Cat_Kai		
_64SSX	04/22/2021, 12:01:59 PM	Show 3		Phillips, Kai	Vaxtor		Test_Cat_Kai		
64SSX	04/22/2021, 11:51:59 AM	Remove from	Roll Call list	Phillips, Kai	Vaxtor		Test_Cat_Kai		
_64SSX	04/22/2021, 11:41:53 AM	- Owner ID	6	Phillips, Kai	Vaxtor		Test_Cat_Kai		
_64SSX	04/22/2021, 11:41:46 AM	Close		Phillips, Kai	Vaxtor		Test_Cat_Kai		
.64SSX	04/22/2021, 11:31:46 AM	ok	23	Phillips, Kai	Vaxtor		Test_Cat_Kai		7
Owne	er picture			etails			1 Vehicle image	11 items C	5
			Vehicle details Plate number Taken on Status	: 8NHN891 : 08/07/2021, 14:41:59 : ok			NOIM	AGE	
1	21 1		Owner details Owner Name	Philips, Bal			118.100	WAE	

Search Roll call

In the upper right corner of the table there is a small magnifying glass icon (see (2) of the <u>Roll call table</u>). If you click on it a popup window will appear where you can select from the following search filters:

Search criteria		×	Description:
Capacities	1 Person	2	 Capacities (1) Person (2)
CLEAR		SEARCH	

Search Filters

The quick way to search Roll call is by adding search criteria as a text string (see (1) of the <u>Roll call table</u>) or click the Filter by option in the context menu (see (6) of the <u>Roll call table</u>). To enable this, includes a Search Filter where Search Filters can be added or removed. Search filter syntax is: **Token:FilterValue**, where:

Token	filterKey	filterValue
AFOROIDS AFORO	aforold	Capacity id or Capacity name



PERSONID	userlds	Person id or
PERSON		Person name

SUPERSEARCH tab

The Supersearch tab is where a user can perform a general search on any fields associated with a plate. For example you could enter a plate or partial plate (using wildcards), a user (someones name) or maybe their ID that you entered in one of the user defined fields. All references to the search text will then be displayed in sections such as: People, Authorizations, Plates etc.

Supersearch table

_	AUTHORIZATIONS	CATEGORIES	PEOPLE	ROLL CALL	SUPERSEARCH		
	JG Search criteria			0		х Q	
	People					×	١
	Morgan	JG				3	
I	Authorization						
ſ	JGMORGAN					JG, Morgan 4	1
I	Plates					×	
ľ	25/05/2022, 17:39:14		2WJG57		Allowed	Millbrook Rd Axis P1455-LE	1
	25/05/2022, 17:20:13		9819JGG		Allowed	Q1785-LE Alphanet - 1 carril	
	25/05/2022, 17:06:42		4300JGP		Allowed	Q1785-LE Alphanet - 1 carril 5	
I	25/05/2022, 17:05:37		5244JJG		Allowed	Commswire 1	
	25/05/2022, 16:21:43		4982JGM		Allowed	Zoilo 03 - MMC	
	25/05/2022, 16:16:44		YF19JGN		Allowed	Commswire 1	
	25/05/2022, 16:09:17		NJ71EJG		Allowed	Commswire 1	
	25/05/2022, 16:05:49		J16JGH		Allowed	Ranger Strensham Services M5 South Exit 006	
							-11

Search criteria

In the upper right corner of the table there is a small magnifying glass icon (see (2) of the <u>Supersearch table</u>). If you click on it a popup window will appear where you can select from the following search filters:



Search criteria	×	Description:
Elastic Date from Date to	2	 Elastic(1) Free text to search People, Plates and Authorizations inside columns Plate Number, Surname, and Forename. Date from (2) Date to (3)
CLEAR	SEARCH	

View Supersearch result details

To see a Person, Plate or Authorization, simply click to the selected row(3), (4) or (5) of the shown result in the <u>Supersearch table</u>.

For detailed information of each pop-up, review <u>Add a Person</u>, <u>License Plate details</u> or <u>Add a new plate authorization</u>.



CONFIGURATION

This section allows the user to view, create, modify and delete the zones, cameras, schedules, sections and capacity counting areas. Chapter 11 of this document contains a few configuration examples for the most common scenarios.

ZONES tab

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

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

Review the examples in chapter 11 for further details.

U	USER:rafa 🛞 Filter results								
	Name 🔻	Parent	Inherit Shedules?	Schedules	Users	Town Code			
1	Cosco		No		axis experience, cosco, eticoparking, minuteman, rafa				
7	Sice	Zones 'Cosco'			jigarcia, rafa, sice				
1	Clovis	Delete 6			admin, anthonylee, lawson, rafa, testuser				
16	Palos Garza	Filter by – Users 7			lawson, palos, rafa				
8	Campus1	Close			admin, axis experience, jigarcia, karen, lawson, minuteman, rafa, vaxtor-asia, veronica				
19	Malaysia iSpeed Po	oC	No		malaysia-poc, rafa, vaxtor-asia				
3	Clovis Police		No		clovis, jigarcia, rafa				
3	Civica		No		alan, anthonymclellan, jigarcia, lawson, rafa				
4	ART CA		No		rafa, shane				

Zones table

Filter Zones

Helix-Server includes a quick way to search a Zone by adding search criteria as a text string (see (4) of the <u>Zones table</u>). To enable this, a Filter to the Results can be added or removed, also you can use the **Filter by** option in the context menu (see (7) of the <u>Zones table</u>). Search filter syntax is: **Token:FilterValue**, where:

Token	filterKey	filterValue
ID	id	Zone ID



name

Zone name

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

Create a Zone

NAME

To add a new Zone, press the button (1) of the <u>Zones table</u>. A pop-up window will appear in which you can define the following parameters.

Zones	
Name *	2 Use authorization rules
No parent	*
Schedules	5 Town Code
Users	
admin q1700-le-uk-off demo q1700-le-ny jigarcia xtivity jaime dan	Asigneo
Speed limit * 0	Speeding alarm
Prowling minutes *	Prowling alarm
Prowling times detected *	Kamikaze alarm
	ADR (Dangerous Goods) alarm
	SA

Description:Name (1):

- Name for the zone.
- Use Authorization rules (2):
 - Parent (3): Select the parent zone (if any). Once a parent zone is selected it can inherit any schedule set. Schedules (4):
 - Select the schedules that apply to this zone. If a zone has no schedules associated with it, then all the vehicles are authorized by default.
- Town code (5)

Users (6):

•

Select which users can see this zone and receive real time events generated by it. *

- Speed limit (7)
 Prowling minut
- Prowling minutes(10)
- Prowling times detected(10) Alarms (10) **

(*) Users:

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

(**) Alarms:

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





Edit a zone

To edit a Category, simply click to the action **Edit** (5) of the context menu of the <u>Zones table</u>.

Zones			×
Name* Kai_Test		Use authorization rules	
Parent No parent	*		
Schedules 24 x 7 , Estado Alarma - 0 y 1 , Office hours	▼ To\	vn Code	
Availables adaking admin_user adt-poc adtel	••	Assigned admin fb4 georgios jigarcia	*
agustin ahack alan	44	kaicamera65 ogarate ovation	Ŧ
100		Speeding alarm	
Proving minutes *		Prowling alarm	
Proving times detected * 0		D Kamikaze alarm	
		ADR (Dangerous Goods) alarm	
SAVE		1< <	> >1

Delete a zone

To delete a Zone, simply click to the action **Delete** (7) of the context menu of the <u>Zones table</u>, or use the multiple Zone delete option:

Name 👻	Parent Inheri Shedu	t Schedules	Users	
ok onice	NO	Office flours, 24 & 7	vaxtor-asia	
Trigg Industries	No		rafa, sam7007	
to_delete_3	No			
to_delete_2	No			
to_delete_1	iio	— this Zone has a c	amera associated!	
Test-ALPR India	No		rafa, startologic, vaxtor-asia	

Once the checkbox or checkboxes are selected, press the delete button (see (3) of the <u>Zones table</u>), and a confirmation window will appear asking you if you want to delete the listitems:





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

As **to_delete_1** zone has a camera associated, an error message is displayed:

aunin, axis experie	nce, uavecarson,
Error	
Delete item #126 is not allowed: Zone with ID 126 can not be deleted. Zone has activ	e cameras.
	ОК

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





CAMERAS tab

This area shows all active cameras defined in Helix-Server including environment (colour contextual) cameras.

Cameras table

ZON	IE:Kai_	Test 😣 Filter re	esults		0/1	2					:	×
	Туре	lmage	Name 🔻	Zone	Time sync	Hardware	Serial number	Version	Queue	Reset count	Last ping	3
8		Camera 'Provi	denceAndroid'	roid Kai_Test	\checkmark					~	206 days, 1 hour 10 minutes, 23 seconds ago	
9		Edit 5 Delete 6		Kai_Test	\checkmark					~	27 seconds ago	
7		Filter by		iera Kai_Test	~					\checkmark		
		– Type 🥑 – Zone										
		Close										
											1	
										2:	tama (1	

Filter Cameras

Helix-Server includes a quick way to filter a Camera by adding search criteria as a text string (see (2) of the <u>Cameras table</u>) or using the fast Filter by options in the context menu (see (7) of the <u>Cameras table</u>). To enable this, a Filter to the Results can be added or removed. Search filter syntax is: **Token:FilterValue**, where:

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

Notes:

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



Add a camera

To add a new camera to the system, press the button (1) of the <u>Cameras table</u>.



Details tab

Description:

- **Plate Reader Id (1)** This is a unique identifier defined by the plate reading software (VaxALPR On Camera, VaxALPR for PC, VaxALPR for Android etc.).
- Region of interest ID(2)
- Name (3) User defined name to help identify the camera.
- Type (4) Camera type:
 - o *Reader*: Select this option if the camera is an ANPR camera.
 - *Environment*: Select this option if the camera is linked to a plate reader but is not the camera capturing the plate. i.e. this is a (colour) contextual camera.
 (Use the same Plate Reader Id as this is the associated colour contextual camera for the IR camera setup in VaxALPR)
- Zone (5) Select the area in which you want to register the camera.
- Address (6) User defined address of the camera.
- Overlay (7) User defined text to appear as a watermark on the saved image (top left)
- **Capturer (8)** User defined name for this server. This field is used in the replication process (when servers are being linked).
- Grace hours (9) This is the time interval between camera health checks.
- **Report type (10)** Select when Helix-Server should store the result.
 - o *Freeflow*: Store the plate only if it has been detected in freeflow mode.
 - o Signalled (Triggered): Store the plate only if it has been detected due to an external trigger.
 - o Both: Store the plate if either of the above occur (so always store the plate).
- **Expected Vehicle Direction (11)** Alarms can be generated if a plate is travelling the wrong way. VaxALPR attempts to determine the direction of each plate read and passes this onto Helix-Server. Values can be:
 - o Getting closer. Plates are expected to approach the camera.
 - Getting farther. Plates are expected to be moving away from the camera.
 Note that if the camera is positioned very low for example, i.e. below the height of a plate, then the direction can be mis-reported.

Synched Information tab

Remote cameras can be monitored by Helix and certain information can be synchronised between the camera and the Helix Server.



DR	Camera				×
CA	DETAILS	SYNCED INFORMATION			
12	Longitude		13	Latitude	
14	Serial number		15	Camera brand	
1 6	Camera model		17	Remarks	
18	Reset count * 0		19	Download config	
20	Update frame timeout 43200	*	21	Update frame quality * 20	
22	Enable maint	enance alarms			

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

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

Edit a Camera

To edit a Camera, simply click to the action **Edit** (5) of the context menu of the <u>Cameras table</u>.

STATUS	DETAILS	SYNCED I	NFORMATION	
128			Region of Interest Id * 0	
hame *			Turne *	
ProvidenceAndro	bid		Reader	
Zone *				
Kai_Test		*	Address	
Overlay				
			Grace hours	
Capturer			0	
Report type			Expected vehicle direction *	
Both		*	Unknown	





Delete a Camera

To delete a Camera, simply click to the action **Delete**(**6**) of the context menu of the <u>Cameras table</u>. Or use the multiple Cameras delete option.

SCHEDULE tab

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

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

Only three exceptions are applied:

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

Schedule table

ZONES CAMERA	S SCHEDULE	SECTIONS	CAPACITY		
Description 🔻	Active from	Active until	Global	Time frames	Regular expressions
Office hours	01/19/2020	01/21/2025	Global	Office	^
Estado Alarma - 0 y 1	Schedule 'Office hours	21/2021	Not global	Circulación 0 y 1	Plate number is odd
24x7	Edit 2 Time frames 3 Regular expressions 4 Delete 5 Close	31/2021	Not global		
•					3 items C +

Edit or create a new Schedule

Press the add (+) button (1) at the bottom right of the <u>Schedule table</u>. A pop-up window will appear in which you can define the following parameters.



Schedule		×
Description * 1		
Active from * 2	Active until * 3	
Global	Not global	
		SAVE

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

Note: To edit a Schedule, click the action Edit (2) in the context menu

Delete a Schedule

To delete a Schedule, click on the action **Delete** (5) in the context menu of the <u>Schedule table</u>. Once pressed, a confirmation window will appear. A schedule cannot be deleted if it has been associated with a zone.

Linking Time frames to a Schedule

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

Once you have created your schedule, click the action **Timeframe** (3) in the context menu of the <u>Schedule table</u> to access the Time frames window.

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

Timeframe table

ZC C	Time frames of 'Office	CHEDULE SECTIONS CAP	PACITY			6 5 SAVE
	Description 👻	Start	Stop	Days of week	Months	
	Office	Time frames 'Office'	9999 31-18:59	-MTWTF-	JFMAMJJASOND	
	First seven days of each month	Edit 2 Delete 3	9999 07-23:59	SMTWTFS	JFMAMJJASOND	
	Circulación 0 y 1	Close 0:00	0000 31-23:59	-MT	JFMAMJJASOND	
	Always	2000 01-00:00	9999 31-23:59	SMTWTFS	JFMAMJJASOND	
۵						4 items C +


Add or modify Time frames

Press the add (+) button (1) at the bottom right of the <u>Timeframe table</u>. A pop-up window will appear in which you can define the following parameters.

Description * 🚺				
Ignore year: No	2			
start 3 Year *	▼ Day	✓ Hour	✓ Minute	Ŧ
Stop 4 Year *	▼ Day	✓ Hour	✓ Minute	Ŧ
Days of week 5				
All All				
-				

Description:

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

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

NOTE: Modifying preconfigured Time Frames is NOT recommended.

Note: To modify a Time frame, click the action **Edit (2)** in the context menu

Assign a Timeframe

To assign the new timeframe to the schedule (see the <u>Timeframe table</u>.): enable it (4) and press "Save" (5). Otherwise, click (6) to return without changes.

Delete a Time frame

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

Linking Regular expressions to a Schedule

Once you have created your schedule, click the action **Regular Expressions (3)** in the context menu of the <u>Schedule table</u> to access the Regular Expressions window.



Regular expressions table

ZONES CAMERAS SCHEDULE SECTIONS	
Ay Regular expressions of 'Estado Alarma - 0) y 1':
Regular expression Description	n v
^([a-zA-Z]*)(Regular expressions 'Plate number is odd'	er is odd
<pre>^([a-zA-Z]*)(Edit 5 Delete 6</pre>	er is even
Close	
	3
\$	2 items C +

Once inside this menu, you can select previously configured Regular expressions, or create a new one by pressing the add button (+) (3) at the bottom right of the <u>Regular expressions table</u>.

Add or modify 'Regular Expressions'



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

To edit fields:

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

Note: To modify a Regular expression, click the action **Edit** (5) in the context menu

Assign a Regular expression.

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



To assign the new 'Regular Expression' to the Schedule (see the <u>Regular</u> <u>expressions table</u>) enable it (4) and press "Save" (2). Otherwise, click (1) to return without changes.

Delete a Regular expression

To delete a 'Regular Expression', click the action **Delete** (6) in the context menu of the <u>Regular expressions table</u>. Once pressed, a confirmation window will appear. A Regular expression cannot be deleted if it is associated with a Schedule.



SECTIONS Tab - and Average Speed Alerts

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

Section table

Name 🔻	Distance (m)	Maximum (Sec)	Entrance camera	Exit camera	
Section Test	500	300	Vaxtor Test Entry	Vaxtor Test Exit	
Indonesia -J	Edit 5	300	Indonesia - Camera 1 - Incoming	Indonesia - Camera 2 - Outgoing	
HYT - Taiwa	Delete 6	60	HYT - Taiwan - Back Camera	HYT - Taiwan - Front Camera	
HYT - Taiwa	Filter by – Entrance camera	60	HYT - Taiwan - Front Camera	HYT - Taiwan - Back Camera	
HK Section (Close	400			

Filter sections

Helix-Server includes a quick way to filter a Section by adding search criteria as a text string (see (2) of the <u>Section table</u>) or using the fast **Filter by** options in the context menu (see (7) of the <u>Section table</u>). To enable this, a Filter to the Results can be added or removed. Search filter syntax is: **Token:FilterValue**, where:

Token	filterKey	filterValue
ID	id	Section ID
NAME	name	Section name
ENTRANCE	entranceCameraId	Section entrance camera
EXIT	exitCameraId	Section exit camera

Create a new Section

Press the add (+) button (see (1) of the <u>Section table</u>) at the bottom right of the menu.





Section	×
Name *	
Distance (m) *	
Maximum (Sec) *	
Entrance camera * 4	v
Exit camera * 5	Ŧ
	SAVE

Description:

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

NOTES:

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

Delete a Section

To delete a Section, click the action **Delete** (6) in the context menu of the <u>Section</u> <u>table</u>. Once pressed, a confirmation window will appear. Also, you can use the multiple Sections delete option.

NAME:section 🔇	NAME:section & Filter results					
Name 👻	Distance (m)	Maximum (Sec)	Entrance camera	Exit camera		
section_2	2	2	Axis Embarcado	Axis Finland - Timo1	~	*
section_1	12	12	9WNWExit	9WWSEntry	~	
Section Test	500	300	Vaxtor Test Entry	Vaxtor Test Exit		



CAPACITY Tab - Vehicle Count, also known as 'AFORO'

Helix-Server can track the capacity (vehicle count) within a defined area.

Capacity table

С	AT:Not assigned	😣 Fi	ilter results			2						×
d	Count	Name	9	Entrance cameras	Exit Cameras	Category	Max capacity	Ignore car direction	Reset time	Crosstime	Virtual?	3
2	12/38	Vis	Capacity	Lawson - 'Visitas Sur'	Q-1700-LE North Carolina	Not assigned	38	Ignore	02/04/2020, 12:00:00 AM		False	
7	0/0	Ind JM	Edit 5 Delete 6		/axtor - Asia Camera 2	Not assigned	0	Ignore	12/03/2020, 06:00:00 PM		False	
}	0/0	Ind Hig F	Filter by	e cameras	ndonesia - Camera 2 - Dutgoing	Not assigned	0	Ignore	12/14/2020, 05:00:00 PM		False	
12	10/25	AX	 Exit Ca Catego 	meras 🕧 ry	SO Demo	Not assigned	25	Does not ignore	10/22/2021, 12:00:00 AM		False	
3	0/50	MB	Close			Not assigned	50	Does not ignore	12/13/2021, 12:00:00 AM		False	
4	0/10	Vaxto	or Test	Vaxtor Test Entry	Vaxtor Test Exit	Not assigned	10	Does not ignore	03/25/2022, 12:00:00 AM		False	
)	0/1000	Parki	ng demo	Parking demo entrada	Parking demo salida	Not assigned	1000	Ignore	05/07/2021, 12:00:00 AM		False	
l	0/1552	Camp	pus1	CP 02 Entry	CP 01 Exit	Not assigned	1552	Ignore	03/31/2020, 06:00:00 AM		False	
\$										8 i	tems C	+

Filter Capacity

Helix-Server includes a quick way to filter Capacity by adding search criteria as a text string (see (2) of the <u>Capacity table</u>) or using the fast **Filter by** options in the context menu (see (7) of the <u>Capacity table</u>). To enable this, a Filter to the Results can be added or removed. Search filter syntax is: **Token:FilterValue**, where:

Token	filterKey	filterValue
ID	id	Aforo ID
NAME	name	Aforo name
ENTRANCE	entranceCameralds	Aforo entranceCameraIds
EXIT	exitCameralds	Aforo exitCameraIds
CATEGORY	categoryld	Category ID or Category name

Create a Capacity / Count Area

Press the add (+) button (see (2) of the <u>Capacity table</u>) at the bottom right of the menu.

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





Description:

- Name (1): User defined name for the Capacity / Count area.
- Entrance camera (2): Entrance camera for the section.
- Exit Camera (3): Exit camera for the section
- Max Capacity (4): The maximum number of vehicles allowed in the Capacity / Count area.
- Reset time (5): The time at which the count is automatically reset to zero. E.g. 23:00.
- Maximum time allowed (6): by vehicle.
- Maximum search time (7): by vehicle.
- Count (8): Vehicles inside Capacity / Count area.
- Virtual? (9)
- Flags (10)
 - o Ignore Car direction: The user can choose to ignore the direction of travel.
 - Fire an alarm if maximum time is exceeded.
 - Crosstime.
 - o Reset capacity.
 - o Deny if full.
 - Ignore if not authorized.
- Category (11)

Delete a Capacity

To delete a Capacity, click the action **Delete** (6) in the context menu of the <u>Capacity table</u>. Once pressed, a confirmation window will appear.

Also, a multiple Capacity delete option is available.

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



SETTINGS

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

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

SETTINGS Tab

() VAXTOR	Helix7 - Settings	=
SETTINGS USERS AUDIT GDPR		
Configuration of Alerts		*
Configuration of Data storage		
Configuration of Server		
LDAP Configuration		
Telegram		
Configuration of Email server		
Test Email server connection		*

Configuration of Alerts

SETTINGS USERS	AUDIT
Configuration of Alerts	^
Time between alert for the same vehicle (seconds)	0
Send alerts by email	
Email sender address	username@server.com
Email sender name	Helix-6
Blacklist alert email subject	Helix-6 Blacklist alert \$platenumber\$ - \$zone\$
Blacklist alert email body	Blacklist plate Splatenumber\$ detected by camera Scameraname\$ in zone \$zone\$ at \$timestamp\$. Hitcount \$
Speed alert email subject	Helix-6 Speed alert \$platenumber\$ - \$zone\$
Speed alert email body	Plate \$platenumber\$ detected by camera \$cameraname\$ in zone \$zone\$ at \$timestamp\$.Speed \$speed\$
Prowling alert email subject	Helix-6 Prowling alert SplatenumberS - SzoneS
Prowling alert email body	Prowling plate \$platenumber\$ detected by camera \$cameraname\$ in zone \$zone\$ at \$timestamp\$.Count \$ct
Kamikaze alert email subject	Helix-6 Kamikaze alert SplatenumberS - SzoneS
Kamikaze alert email body	Kamikaze plate \$platenumber\$ detected by camera \$cameraname\$ in zone \$zone\$ at \$timestamp\$.
Time in zone alert email subject	Helix-6 Time in zone alert \$platenumber\$ - \$timestamp\$ - \$zone\$
Time in zone alert email body	Plate \$platenumber\$ detected by camera \$cameraname\$ in zone \$zone\$ at \$timestamp\$.
Must send OCR image	•
Must send environment images	
Blacklist Levenshtein distance used	1
CANCEL SAVE	

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

• **Time between alerts for the same vehicle (seconds)**: Set the minimum time between blacklist alerts for the same vehicle.



- Send alerts by email: Enable this option to send emails to specified users when an alert is triggered by the system.
- Email sender address: Insert the sender's email address for all the alerts.
 This is how it should appear in the received email message and needn't be the actual email address used (smtp) as set up below.
- **Email sender name**: Enter the name of the sender that will appear in the sent emails.
- **Blacklist alert email subject**: Set the email subject for blacklist alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Blacklist alert email body**: Set the email body for blacklist alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Speed alert email subject**: Set the email subject for overspeed alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Speed alert email body**: Set the email body for overspeed alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Prowling alert email subject**: Set the email subject for prowling alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Prowling alert email body**: Set the email body for prowling alerts. It is possible to use special words that will be replaced by the real-time information in the email. The allowed values are described in the appendix of this document.
- **Kamikaze alert email subject:** Set the email subject for Kamikaze alerts. It is possible to use special words that will be replaced by real-time information in the email. The allowed values are described in the appendix of this document.
- **Kamikaze alert email body:** Set the email body for Kamikazee alerts. It is possible to use special words that will be replaced by real-time information in the email. The allowed values are described in the appendix of this document.
- **Time in zone alert email subject:** Set the email subject for time in zone alerts. It is possible to use special words that will be replaced by real-time information in the email. The allowed values are described in the appendix of this document.
- **Time in zone alert email body**: Set the email body for time in zone alerts. It is possible to use special words that will be replaced by real-time information in the email. The allowed values are described in the appendix of this document.
- **Time in zone plate distance**: This is the plate match accuracy (Levenshtein distance) of a plate entering and leaving a zone for them to be considered the same plate. Example: if the reader at the entrance reports 1234ABC and the reader at the exit reports 1235ABC and the distance is 1, then system will mark 1234ABC as out.
- Must send OCR image: Enable this option to append the OCR image to the emails.
- **Must send environment images:** Enable this option to append the environment images to the emails.
- Blacklist Levenshtein distance used: This is the Blacklist Match Accuracy which is the number of characters that may differ between the plate read and the plate on the blacklist to trigger an alert.



Configuration of Data storage

SETTINGS USERS A	AUDIT		
Configuration of Alerts			~
Configuration of Data stor	age		^
Storage folder for images	c:\images-postgresql		
Must save images	-		
Delete images after (days)	30		
Process local plates	•	l≽	
Delete plates after (days)	0		
CANCEL SAVE			
Configuration of Server			~

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

Configuration of Server

Configuration of Server		^
API key	ed735e222de3488dba432	159005b84482
Reset API key		
Maximum login tries (0 for unlimited)	3	
Login disable time (minutes)	5	
Audit days stored	7	4
Audit all users	-	
Logout automatically after (minutes)	0	
Encrypt local lists		
CANCEL SAVE		

- **API Key**: Displays the master API Key assigned to the system.
- **Reset API key**: Enable this option to generate a new random API Key for the server.
- **Maximum login tries**: The maximum number of attempts to access Helix-Server before the account is locked. (incorrect login credentials)
- Login disable time: Set the number of minutes that an account is locked for after the maximum number of login tries has been exceeded.
- Audit days stored: Enter how many days the audit trail logs will be stored on the system.
- Audit all users: When enabled, all the actions of all the users are stored in the audit system. When disabled, only the actions of the users that have been selected for audit are stored.



- Logout automatically after: Set the number of minutes that a user can be idle before Helix-Server logs them out and they are requested to login again.
- Encrypt local lists: Select this option to encrypt all lists on the system using RSA 256 bit encryption. Note that the program currently uses a Postgres database which is already encrypted so this extra layer is not needed.
- **Password expiration**: Set the number of days before the user is requested to change their password.
- **Default time for quick add to list (hours)**: There is a button to quickly authorise a plate on the system for an extra 2 hours. Set this value here normally 24 hours.

Configuration of LDAP

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

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

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

Configuration of LDAP		^
LDAP server	ldap.server.org	
LDAP server port	389	
Search base distinguished name	ou=people,dc=nodomain	
LDAP unique search filter	uid={0}	
Use LDAP	•	
CANCEL SAVE		

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

Telegram

Telegram		
	Enable	
	Bot token	14B1429725:AAFQgBJ6jX4GyITRa6O6OyONK-IRCmFX
	Bot domain URL	https://helix-demo.vaxtor.com/helix6
CANCEL SAVE	1	

Telegram is a free and open source, cross-platform, cloud-based instant messaging App and associated software. Telegram can be installed on Android and iOS hand-held devices, smart watches or on PC and Mac platforms.



The Telegram Plugin enables Vaxtor's Helix Back Office to monitor hundreds of remote ALPR cameras and send all real-time alerts (Blacklist, Speed, Prowling, Wrong-way, Time in Zone, Dangerous Goods, Camera not responding etc.) as secure instant Telegram messages to individuals or groups of individuals.

Once a message is received there are various messages that the user can send back to authorise entry to a site entrance for say 2 hours or add a vehicle to a centralised Blacklist so that it can be tracked. For example, if a vehicle licence plate is captured on any ALPR camera and the vehicle is on a watch list or is a vehicle of interest, then Helix can send an instant secure alert to a local security team to respond.

A car may have entered a private car park without a valid permit – and any parking wardens that might be in the area can be instantly alerted to speak with the driver before he leaves the site.

Search for Helix7bot on Telegram (it has the Vaxtor icon)

Configuration of Email se	ver	
Enable SSL/TLS		
SMTP port	25	
SMTP host		
Time out (seconds)	100	
Must use default credentials		
Password		0
Username		
CANCEL SAVE		

Configuration of Email server

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

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

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



NOTE: The button changes from "Cancel" to "Confirm" when the password has been input correctly.

Remember to set up the receiving email address. This can be setup for each user – see Section 10.2.1

Test Email server connection

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

Test Email s	server conne	ction	^
Email to	send a test	user@mail.com	
CANCEL	SAVE		

Remember to set the permanent target email address up when you set up users in section 10.2.1. Even the admin account should have one.



USERS Tab

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

Users table

CL	AIMS:Plates,Basic 🛞	Filter results	2		:	×
	User name 🔻	First name	Last name	Privileges	Email	3
	q1700-le Users 'q17	700-le-uk-off'		Plates, Basic		
	demo Edit 5	p	Cabrera	Basic, Lists, Authorizations	sergi@sanserg.com	
	q1700-le			Basic, Plates		
	xtivity - Privilege	es 🕖 all	Gradert	Basic, Authorizations, Lists, Cameras	rgradert@xtivitysolutions.com	
	dan		Herdenson	Basic, Plates	dhenderson@griffonsecurity.con	n 🗌
	q1798-le-argent			Basic, Plates		
	jbayona			Basic, Lists, Plates		
	karen	Karen	Hartley	Basic, Plates, Lists	KHartley@campusparc.com	
	veronica			Basic, Lists, Plates, Authorizations		

Filter users

Helix-Server includes a quick way to filter the User list by adding filter criteria as a text string (see (4) of the <u>Users table</u>) or using the fast **Filter by** options in the context menu (see (7) of the <u>Users table</u>). To enable this, a Filter to the Results can be added or removed. Search filter syntax is: **Token:FilterValue**, where:

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



Create new user

Press the add (+) button (see (1) of the <u>Users table</u>). A popup window will appear to create a new user.

Jsers			×
User name *	1 Empty	password *	0
Email		3 Audited 4	
Privileges 5			
Availables		Assigned	
Actuators Admin AdminAuthorizations AdminLists Authorizations Cameras Lists Maintenance	•	Basic	
First name	6	Last name	0
Language			
English	8	User ID	9
Pushbullet notifications			10
Pushbullet Api Key		GET DEVICES	
			SAVE

Description:

- Username (1): Username for the new user.
- Empty password (2)
 - o If enabled the user will not be able to login in the system and his password will be deleted. Apikey access will still work. This option has no effect if LDAP is enabled.
 - o **Password**: Default password for the new user.
- Email(3): Enter the user's email address. This email is used to receive system alerts and allows each user to receive their own email alerts.
- Audited (4): Activate this option to add this user to the audit trail.
- Claims (5): Set the privileges assigned to the user. Do this by double clicking on an item in the list to move it over to the user column (on the right)
 - Allowed privileges are:
 - o **Actuators**: The user can set up and configure actuators (relays).
 - o Admin: Full privileges.
 - o **Admin Lists:** The user can create, modify and delete any lists in the system.
 - o **Authorizations**: The user can view, create, modify or delete authorizations.
 - o **Basic**: The user can view data for zones, cameras, calendars, licence plates and images.
 - The user will only be able to see the information if it is also added for a user in the desired zone.
 - o *Cameras*: The user can create and modify cameras.
 - o Lists: The user can create, modify and delete only his own lists.
 - o **Plates**: The user can modify plates read and protect images.
 - o **Schedules**: The user can create, modify and delete schedules and timeframes.
 - o **Users**: The user can create, modify and delete users.
 - o **Zones**: The user can create, delete and modify zones.
- First Name (6): First name of the user.
- Last Name (7): Last name of the user.
- Language (8): User interface language.
- User ID (9): An optional ID normally used by the Police when plates are exported.
- **Pushbullet API Key** (5): Used with the Pushbullet software which is used for communicating with mobile devices. The system can be set up to send alarms to such a mobile device.



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

Confirm password	
	CONFIRM

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

Delete a user

To delete a user, click the action **Delete** (6) in the context menu of the <u>Users table</u>. Once pressed, a confirmation window will appear.

Also, a multiple User option is available.

ld	User name 🔫	First name	Last name	Privileges	Email		
2	q1700-le-uk-off			Plates, Basic		~	
4	demo	Sergio	Cabrera	Basic, Lists, Authorizations	sergi@sanserg.com		
5	q1700-le-ny			Basic, Plates			





AUDIT Tab

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

Audit table

SETTING	S USERS AUDI	T GDPR				_ 0
USER:ad	min_user 🔕 Search criteria		2			× Q
ld 👻	Timestamp	Source address	Action	Failed	User	
51937293	06/17/2 Audit 'GET /api/a	udit' admin_user 13	GET /api/audit	No	admin_user	4
51937280	06/17/2 Show 3	19	GET /api/user/all	No	admin_user	
51937276	06/17/2 Filter by	13	GET /api/user/all	No	admin_user	
51936947	06/17/2 - Failed	13	GET /api/audit	No	admin_user	
51936917	06/17/2 - Source address	s 13	GET /api/user/all	No	admin_user	
51936911	06/17/2 — Date to	19	GET /api/config/telegram	No	admin_user	
51936908	06/17/2 Close	13	GET /api/config/dgl	Yes	admin_user	
51936907	06/17/2022, 01:22:25 PM	79.116.77.213	GET /api/config/spf	Yes	admin_user	
51936906	06/17/2022, 01:22:25 PM	79.116.67.213	GET /api/config/smtptest	No	admin_user	
51936905	06/17/2022, 01:22:25 PM	79.116.65.213	GET /api/config/smtp	No	admin_user	
51936902	06/17/2022, 01:22:25 PM	79.116.77.213	GET /api/config/alert	No	admin_user	5
٠					66745 items	с 于

Search Audit records

Search criteria

In the upper left corner (see (1) of the <u>Audit table</u>). When clicked, a pop-up window appears where you can choose from the following search filters:

Search criteria		×
Action	Details	2
Date from	3 Date to	4
Source address	5 admin_user	6
Failed Yes No All	7	
CLEAR	(2E L/ani/contin/ent	SEARCH

Description

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



Search Filters

Helix-Server includes a quick way to filter the Audit list by adding search criteria as a text string (see (4) of the <u>Audit table</u>) or using the fast **Filter by** options in the context menu (see (7) of the <u>Audit table</u>). To enable this, a Filter to the Results can be added or removed. Search filter syntax is: **Token:FilterValue**, where:

Token	filterKey	filterValue
ACTION	action	Action Example: <i>ACTION:GET / api/user/all</i>
DETAILS	details	Text included in the Details attribute.
FROM DATEFROM	dateFrom	DateTime format dd/MM/yyyy hh:mm:ss, example: 08/01/2018 10:22:29
TO DATETO	dateTo	DateTime format dd/MM/yyyy hh:mm:ss, example: 08/01/2018 10:22:29
FAILED	failed	True of False
USER USERID	userld	User id or Username
SOURCE	sourceAddress	Source address

Note: To clear search criteria use button ${\bf x}$ located at the right of the Search Filter bar.



REST API

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

Definitions

API – Application Programming Interface. This allows an external or remote piece of software to communicate directly with Helix

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

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

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

Helix 6 REST API Complete Definition

See separate manual: Helix6 – API Definition – v1.7.1 or later.



To request a copy of the API Definition Guide please contact Vaxtor via the website form or directly from info.eu@vaxtor.com



Configuration Examples

This section will cover how to configure the system for different common scenarios.

Configuration based on a schedule

Scenario conditions:

- Helix-Server system setup for access control.
- Employees of the company shall be allowed to enter the parking lot during office hours.
- Service staff of the company shall be allowed to enter the parking lot at the weekends at any time.

Configuration: Known delivery vehicles are to be permitted access during business hours.

This scenario will be configured with a general zone, which has two cameras, one for the entry lane and one for the exit lane.

- Create a new general zone. We will call this zone "Default zone".
- Create two cameras and assign them to the new zone.
- Create a new schedule. We will call this Schedule "Employees Schedule".
 - o Give the schedule the desired duration. In this example, it will be this year.
 - o Set the schedule as not global.
 - o Click "Save".

	2		H	elix6.1 Schedule			≡	
ZONES C	AMERAS SCH	EDULE	SECTIONS	CAPACITY				
Description 🔫	Active from	Active until	Global	Time frames	Regular expressions	_		1
Temporary Access	Schedule				×	A A	Î	1
Oficina 2017 Employees Schedule	Description * Employees Se	chedule					Î	
	Active from * 02/01/2018			Active until * 03/01/2018				
	Global			Not global				
					SAVE			
								÷
٠						3 items (3 +	

 Click on the "Clock" icon () in the "Employees schedule" row to open the timeframe interface.



ZC	ONES	CAMERAS	SCHEDULE	SECTIONS	CAPACITY						
0	() Time frames of 'Employees schedule':										
	Descriptio	on 🔻		Start	Stop	Days of week	Months				
	WEEKEND			0000 01-00:00	0000 31-23:59	sS	JFMAMJJASOND		Î	-	
	Office			2000 01-07:00	9999 31-18:59	-MTWTF-	JFMAMJJASOND		Î		
	First sever	n days of each mo	nth	2000 01-00:00	9999 07-23:59	SMTWTFS	JFMAMJJASOND		Î		
	Always			2000 01-00:00	9999 31-23:59	SMTWTFS	JFMAMJJASOND		Î		
										÷	
۵								4 items	C +		

- Select the "Office" default timeframe and click "Save".
- Create a new schedule for the service staff. We will call this schedule "Staff schedule".
 - o Give the schedule the desired duration. In this example, it will be this year.
 - o Set the schedule as not global.
 - o Click "Save"

	R		н	elix6.1 Schedule			:	=
ZONES C	AMERAS SCHE	DULE	SECTIONS	CAPACITY				
Description 👻	Active from	Active until	Global	Time frames	Regular expressions			
Temporary Access	Schedule				3	< A	⊳ i	ì î
Oficina 2017 Imposible	Description • Stuff schedule						v i v i	
Stuff schedule	Active from * 27/04/2018			Active until * 27/04/2019) A	⊳ ī	
	Global			Not global				
					SAVE			
٥						4 items	G	+

- Click on the "Clock" icon in the "Staff schedule" row to open the timeframe interface.
- Create a new time frame that covers the whole weekend.
 - o Set the description as "Whole weekend"
 - o Enable ignore year.
 - o Set days from 01 to 31.
 - o Set hours from 00 to 23.
 - o Set minutes from 00 to 59.



- o Set Days of Week to "Sun" and "Sat" only.
- o Set Months to All.
- Click "Save"

			Helix6.1 Sche	edule			=	ł
ZONES C/	Time frames					×		
🕓 Time fram	Description • Whole weekend					5	SAVE	
Description	Jgnore year: Yes							
Whole weeker	Start Year	□ay ▼ 01	+our ▼ 00	Minute ▼ 00	•	-	Î	
First seven da	Stop Year	Day T 31	Hour 23	Minute 5 9	•		Î	
Always	Days of week	Mon 🗌 Tue 🗌	Wed 🗌 Thu 🗌 Fri	✓ Sat			T	
	Months							
•						SAVE 4 ite	ems C ·	• +

• Enable "Whole weekend" timeframe for the "Staff Schedule" and click "Save".

ZC	ONES	CAMERAS	SCHEDULE	SECTIONS	CAPACITY					
G	Time fi	rames of 'St	uff schedule'	:				5	SAVE	
	Descript	ion 🔫		Start	Stop	Days of week	Months			
 Image: A start of the start of	Whole we	eekend		0000 01-00:00	0000 31-23:59	ss	JFMAMJJASOND		Î	^
	Office			2000 01-07:00	9999 31-18:59	-MTWTF-	JFMAMJJASOND		Î	
	First seve	en days of each mo	onth	2000 01-00:00	9999 07-23:59	SMTWTFS	JFMAMJJASOND		Ī	
	Always			2000 01-00:00	9999 31-23:59	SMTWTFS	JFMAMJJASOND		Î	
										÷
۵								4 items	c -	+



cription 🔻	Active from	Active until	Global	Time frames	4		
ff schedule	01/01/2017	31/12/2017	Not global	Whole weekend	S	Î	
ployees schedule	01/01/2017	31/12/2017	Not global	Office	0	Î	

- Go to "Zones" inside the "Configuration" menu and edit "Default zone" (click on it).
- Enable both schedules on the zone and click "Save".

	Zones		×	=
ZONES C	_{Name *} Default zone			
Name 🔻	Parent No parent			
Test On Camera (Urb- speed) Replication test	Employees schedule	wn Code		i
Remote	Temporary Access			Î
Containers		admin		Î
Calle Ronda de Poniente	Stuff schedule			Î
Calle Campomanes	ezzard fernando francisco			Î
	Speed limit *	Speeding slarm		
	Proviling minutes *	Speeding alarm		
	0	Prowling alarm		
	Proviling times detected *	Kamikaze alarm		
۵	SAVE			tems C +



Name 🔻	Parent	Inherit Shedules?	Schedules	Users		٠
Default zone		No	Employees schedule, Staff schedule	spf, vaxtor		Î
					1 itema	

Now we need to create the authorizations associated with the users. We will create two authorizations. User "Tom" will be an employee with plate number "ANM7386" and user "Brenda" will be service staff with plate number "PNG123". User "Max" is both an employee and a service staff user with plate number "2345ZZW"

- Go to the Authorization menu to create a new authorization.
- Add a new Authorization for the plate "ANM7386".
 - o On the Zone and Schedule menu enable "Default zone" and "Employees schedule"
- Click Save.

	Helix6.1 Authorizat	ions	=
AUTHORIZATIONS	Authorizations	×	
Plate - Active from 0933BFF 15/01/2018 00	Plate * 0933BFF Active from * 15/01/2018 00:00 Active until * 15/01/2019 00:00 Zone and Schedules Calle Ronda de Poniente Calle Ronda de Poniente Calle Ronda de Poniente Calle Calle Ronda de Poniente		
¢		SAVE	1 items $oldsymbol{C}$ +

• Repeat the operation for the user "Brenda".

• Repeat the operation for user "Max".



Configuration based on a zone

Scenario conditions:

- Helix-Server system will be used as an access control system.
- There is a main area where every car shall be allowed to pass during office hour.
- There is a satellite (nest) area where only "Employees" shall be allowed to enter.

Configuration:

• Create a new zone. We will call it "Main Area". Click "Save"

	Zones X	≡
ZONES C/	Name - Main area	
Name 👻	Parent	
Test On Camera (Urbar speed) Replication test	Schedules Town Code	Î
Remote	Users fernando	Î
Containers Calle Ronda de Poniente	lam vaxtor hugo citilog michael deutsch despeio	Î Î
Calle Campomanes	test ´	Î
	Seed Int* 0 Speeding alarm	
	Pooling minutes* 0 Proving alarm	
	Proming times descrete * ** 0 Karnikaze alarm	
٥	SAVE	terns C +

• Create another zone. We will call it "Satellite area". Click "Save"

	Zones ×	=
ZONES C/	Name - Satellite area	
Name 👻	Parent No parent	
Test On Camera (Urbar speed)	Schedules Town Code	Î.
Replication test	TUINI SUUV	Î
Remote	Users	Î
Containers	fernando am vaxtor hugo	Î
Calle Ronda de Poniente	citiog PP michael deutsch despejo 44	Î
Calle Campomanes	claudine -	Î
	Speed imit* 0 Speeding alarm	
	Proving minutes * 0 Proving alarm	
	Proving time detected * 0 Kamikaze alarm	
\$	SAVE	tems C +

- Create the desired cameras and assign them to the zones.
- Create a new schedule. We will call it "Main area schedule".
 - o Define the duration from 2017 to 2020.



- o Set the schedule as global.
- o Click "Save".

		Hel	lix6.1 Schedule		=
ZONES C	Schedule			×	
Description 👻	Description * Main area schedule				
Temporary Access	Active from *		Active until *		Ay 💼 î
Stuff schedule	02/01/2018		03/01/2018		Ay 📋
Main area schedule					Ą∕ ∎
Employees schedule	Global		Not global		A>
				SAVE	
\$				4 i	tems C +

• Click on the timeframe icon and enable the "Office" timeframe. Click "Save".

						0	SAV
-	Description 👻	Start	Stop	Days of week	Months		٠
1 0	Office	2000 01-07:00	9999 31-18:59	-MTWTF-	JFMAMJJASOND		Î
] F	First seven days of each month	2000 01-00:00	9999 07-23:59	SMTWTFS	JFMAMJJASOND		Î
_ A	Always	2000 01-00:00	9999 31-23:59	SMTWTFS	JFMAMUJASOND		Î

- Create a new schedule. We will call it "Satellite area schedule".
 - o Set the direction until 2020.
 - o Make this schedule not global.
 - o Click "Save".

in area schedule	01/01/2017	31. Schedule		×	© î
		Description * Satellite are	a schedule		
		Active from 01/01/2017	Active until 31/12/2020	,	
		Global	Not global		
				SAVE	

• Click on the timeframe icon for the new schedule and enable the "Always" timeframe. Click "Save".



Ξ	Description 👻	Start	Stop	Days of week	Months	*
	Office	2000 01-07:00	9999 31-18:59	-MTWTF-	JEMANUJASOND	Î
	First seven days of each month	2000 01-00:00	9999 07-23:59	SMTWTFS	JEMANUJASOND	Î
~	Always	2000 01-00:00	9999 31-23:59	SMTWTFS	JEMAMUJASOND	Î

- Assign the schedule "Main area schedule" to the zone "Main area".
- Assign the schedule "Satellite area schedule" to the zone "Satellite area".
- Create the desired authorizations for the "Employees" on the Satellite area.



Configuring different zones inheriting programming

Scenario conditions:

- Helix-Server will be used as an access control.
- There is a main area where every "Employee" and "Manager" car shall be allowed to pass.
- There is a satellite area where only "Manager" cars shall be allowed to enter.

Configuration:

- Create a new global schedule. We will call it "Global schedule".
 - o Define the duration from 2017 to 2020.
 - o Set the schedule as not global.

ZONES CAMERAS SCHEDULE	SECTIONS AFOROS				
Description 👻					
		Schedule			
		Description * Global schedule			
		Active from 01/01/2017	Active until 31/12/2020	_	
		Clabel			
		Giobai	Giobal	_	
				SAVE	
					0 items C +

- Create a new zone called "Satellite area".
 - o Assign the "Global schedule" created to it.
- Create a new zone called "Main area".
 - o Assign the "Global schedule" created to it.
 - o Assign "Satellite area" as a parent of this area.
 - o Enable Inherit Schedules.

ZON	S CAMERAS SCHEDU	JLE SECTIONS	AFOROS				
	Name 💌	Parent	Inherit Shedules?	Schedules	Users	•	>
	Satellite area		No	Global schedule.	vaxtor	Î	i
	Main area	Satellite area	Yes	Global schedule.	vaxtor	Î	ï
						2 items 🛛 😷	-

The main difference in this scenario is that any authorization given for the satellite area will also apply to the Main area, even if it is not specifically enabled for this zone by the authorization itself.



APPENDIX

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

\$timestamp\$	Sequence of characters denoting the time and date the reading event occurred, the format is "yyyy-MM-ddTHH:mm:sszzz"
\$platenumber\$	Returns the license plate number read.
\$cameraname\$	Indicates the name of the camera that made the recognition.
\$cameraid\$	Returns camera ID.
\$confidence\$	Provides the trust data of the read-in license plate.
\$charheight\$	Indicates the height of the character on the license plate.
\$latitude\$	Returns the latitude coordinates of the read plate.
\$longitude\$	Returns the logitute coordinates of the read plate.
\$speed\$	It returns the speed of the vehicle registered by the recognition system.
\$zone\$	Returns the area in which the plate was read.
\$zoneid\$	Return zone ID in which the plate was read.
\$description\$	Adds the alarm description in case of a blacklist trigger.
\$comments\$	Adds the comments of the alarm from a blacklist trigger.
\$hitcount\$	Shows the number of the hits for this plate on the blacklist.