



AxxonNet Setup and Operation

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1 AxxonNet overview

AxxonNet (<https://axxonnet.com/>) is a cloud service by AxxonSoft enabling you to:

- securely connect to the Web-Server (see [Secure connection to Web server](#)),
- store and activate licenses (see [License Files in AxxonNet](#)),
- send e-mails letting you know when macro is triggered ([E-mail notification](#)),
- view exported frames and recordings (see [Viewing exported data in AxxonNet](#)),
- send push messages to mobile clients.

Register (see [Registration and Authorization in AxxonNet](#)) and connect to Axxon domain (see [Connecting Axxon Domain to AxxonNet](#)) in order to use AxxonNet.

Attention!

If a demo license is used on the Axxon domain, the web client (see [Secure connection to Web server](#)) and working with users (see [Configuring users and roles in AxxonNet](#)) will be disabled from 18:00 to 08:00.

2 Hardware requirements for the AxxonNet operation

AxxonNet operates correctly with the latest versions of Google Chrome, Firefox and Microsoft Edge browsers.

Note

Since no 3rd party technologies are used in AxxonNet, it may operate with other browsers; in this case, we cannot guarantee its stable operation.

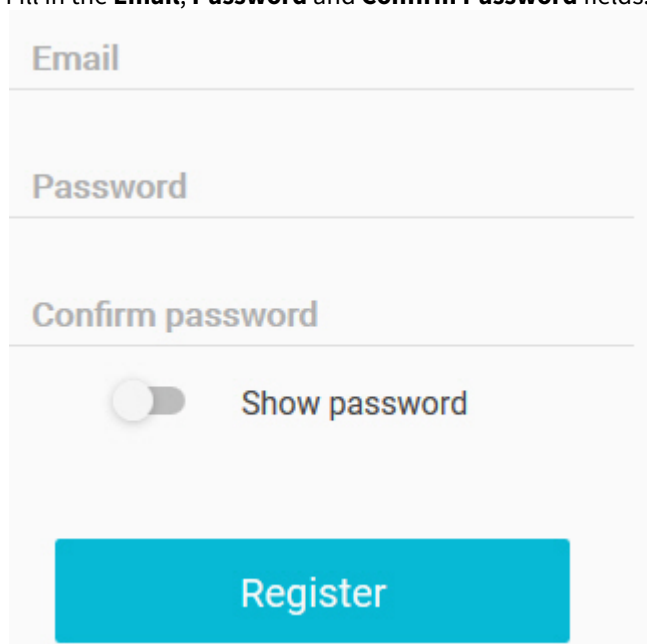
Attention!

Safari and Internet Explorer are not supported.

3 Registration and Authorization in AxxonNet

To register with AxxonNet, do as follows:

1. On the AxxonNet home page, click **Register**.
2. Fill in the **Email**, **Password** and **Confirm Password** fields.

A screenshot of the registration form in AxxonNet. It features three input fields: 'Email', 'Password', and 'Confirm password', each with a horizontal line below the label. Below the 'Password' field is a toggle switch labeled 'Show password', which is currently turned off. At the bottom of the form is a large blue button with the text 'Register' in white.

3. Click **Register**.
A confirmation email will be sent to the specified e-mail address.
4. Confirm registration.




To log into AxxonNet, enter your registration data and click **Log in**. You can also log in with your Vk, Google or Facebook account.

Email

Password

[Log in](#)

Log in with social network account

[Forgot password?](#) [Register](#)

If you authenticate via a vk.com or Google account, you have to enter your password.

Note

If you authenticate via a Facebook account, the link to enter the password will be sent to your email address.

4 Connecting Axxon Domain to AxxonNet

To connect an Axxon domain to AxxonNet, do as follows:

1. When logged in AxxonNet, go to the **Dashboard** page and click **Assign domain**.

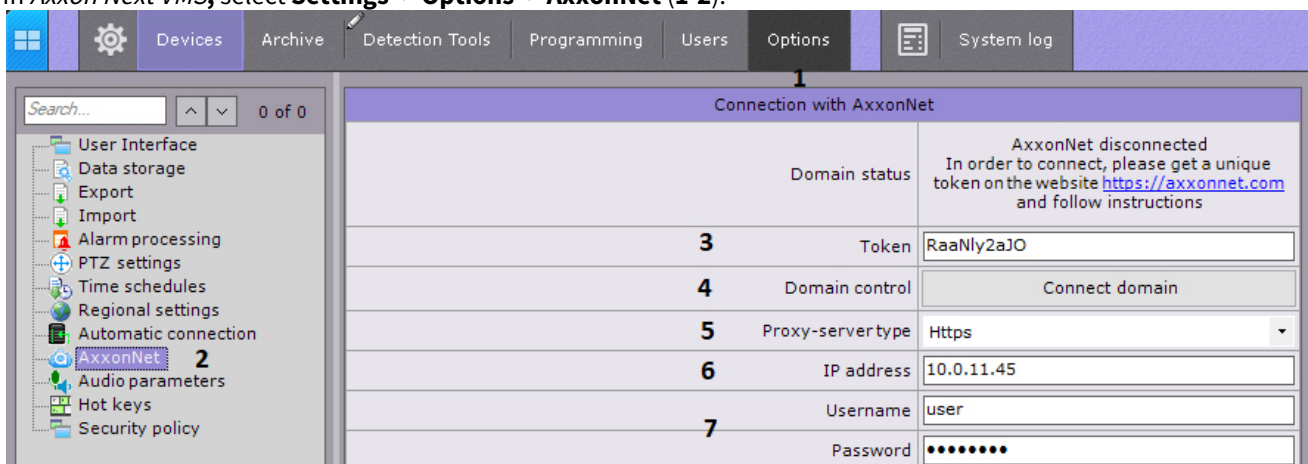
Password to assign to AxxonNet

xbbxexE5Th

! For final device assignment, paste the password into the appropriate Axxon Next field and click the "Connect domain" button.

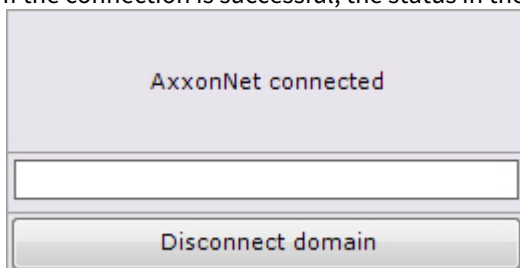


2. Copy the security key.
3. In *Axxon Next VMS*, select **Settings** -> **Options** -> **AxxonNet (1-2)**.



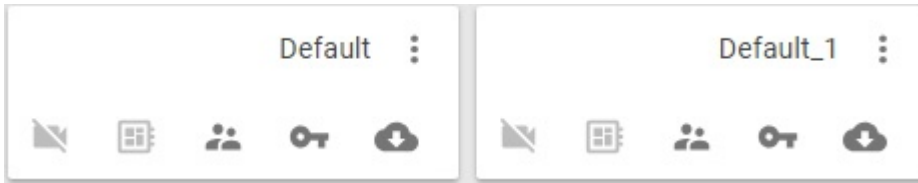
4. Paste the copied key into the **Token** field (3).
5. If you are connected through a proxy server:
 - a. Select the proxy type (5).
 - b. Set the proxy address (6).
 - c. Enter the user name and password for connecting to the proxy server (7).
6. Click **Connect domain** (4).

If the connection is successful, the status in the *Axxon Next VMS* will change to **AxxonNet connected**.



To disconnect AxxonNet from the Axxon domain click **Disconnect Axxon-domain**.

If several Axxon domains with identical names are connected to AxxonNet, a unique number will be added to each of the names listed on the **Dashboard** page.




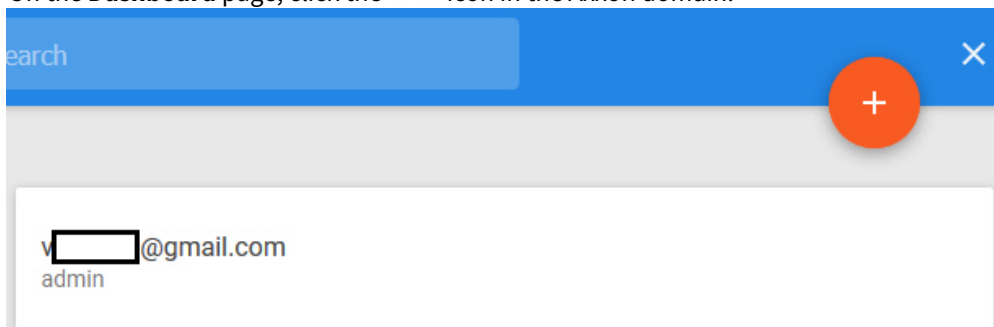
5 Configuring users and roles in AxxonNet

AxxonNet users and roles are synchronized with *Axxon Next* (see [Configuring user permissions](#)). The user who connected the Axxon domain is added to the **admin** role and will be available in *Axxon Next*.

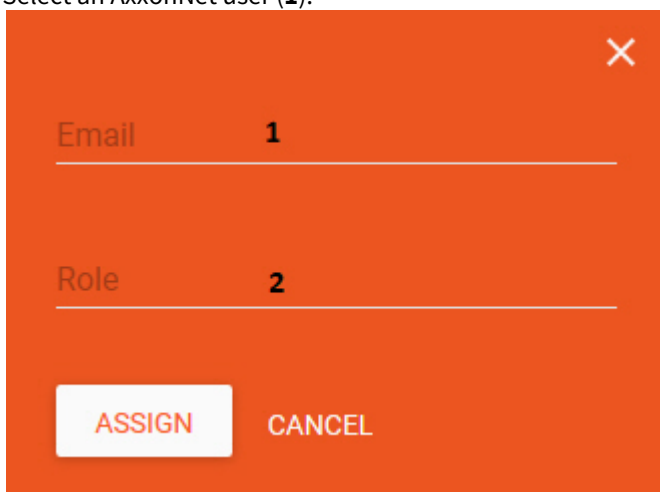
Users with the **admin** role in AxxonNet can perform any actions with the Axxon-domain. All other users will have view-only rights.

To allow a user to work with the Axxon domain via AxxonNet, do as follows:

1. On the **Dashboard** page, click the  icon in the Axxon domain.



2. Click the  button.
3. Select an AxxonNet user (1).





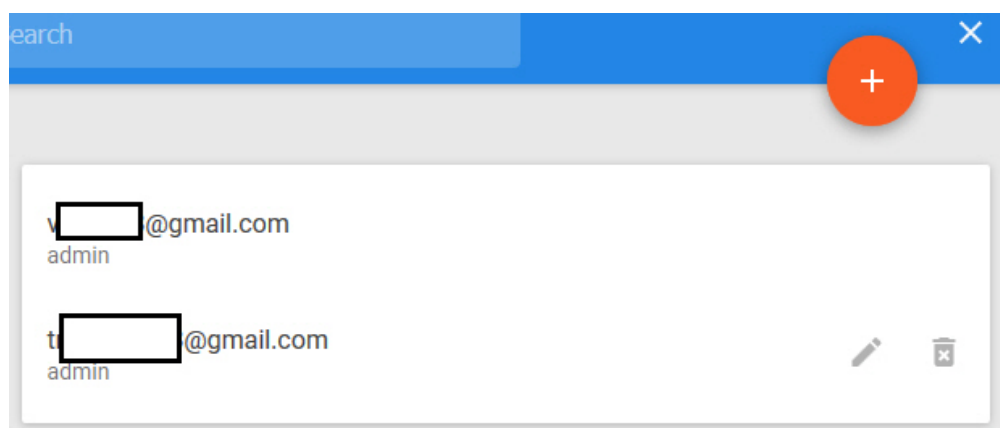
4. Select the role you want to add the user to (2) from the list. To create a new role, enter the new role name in the field.

Note

The role will be automatically created in *Axxon Next* and will have minimal access rights.

5. Click the **Assign** button.

To change the user role, click the  button and select a new role. To delete the user, click .

**Note**

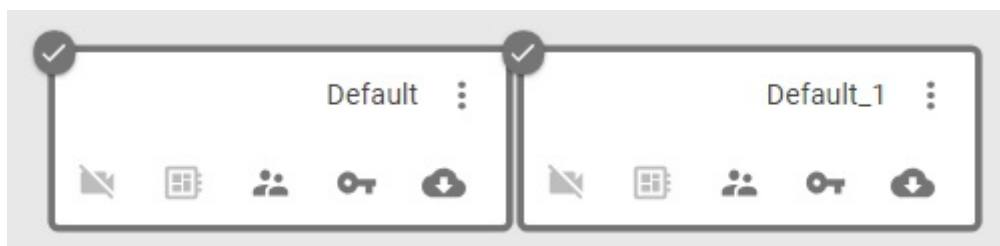
When you grant or change access to the Axxon domain, the user is notified by e-mail


To enable the user to edit multiple Axxon domains, do as follows:

1. Select multiple Axxon domains on the **Dashboard** page: hover the mouse over the Axxon domain of your choice and click



in the upper left corner.



2. Click  in the upper-right corner.
3. Then follow the procedure for adding a user for one domain. The list of roles will contain the roles of all selected Axxon domains.

6 Viewing exported data in AxxonNet









If email notifications were configured via AxxonNet (see [E-mail notification](#)) and contain a frame or video attached, you can use AxxonNet interface to view exported files.

Note

To view the files, you must have access to the corresponding Axxon domain (see [Configuring users and roles in AxxonNet](#)).


To do it, click the  icon on the **Dashboard** page in the Axxon domain.

The list of exported files pops up.


File name	File type	Date from	Date to	APPLY
			Name	Date
				
5.Devicelpint 2020-03-19 14-25-46.jpg	5.Devicelpint 2020-03-19 14-25-36.jpg	5.Devicelpint 2020-03-19 14-25-26.jpg	5.Devicelpint 2020-03-19 14-25-15.jpg	
				
5.Devicelpint 2020-03-19 14-25-05.jpg	5.Devicelpint 2020-03-19 14-24-55.jpg	5.Devicelpint 2020-03-19 14-24-45.jpg	5.Devicelpint 2020-03-19 14-24-35.jpg	

A single click on a file opens its information pane on the right.


Note

Click  to copy the direct link to the file. Clicking the link starts the file download.


A double click makes the file displayed in full screen mode.


5.Devicelpint 2020-03-19
14-25-36.jpg

×



Type	Image
Size	283.7 KB (290,547 Bytes)
Created	3/19/2020, 3:25:20 PM
Beginning	1/1/1, 3:19:52 AM
Ending	1/1/1, 3:19:52 AM


 <https://axxonnet.com/api/v1/uploa>

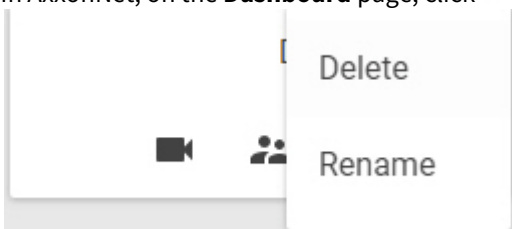
Exported files list can be filtered by name, type and date. To do so, specify required filters and click the **Apply** button.

		Date from	Date to	
File name	File type ▼	2020-03-18	2020-03-19	APPLY
			Name	Date

7 Editing the Axxon domain name in AxxonNet

You can change the name of Axxon-domain connected to AxxonNetd. Do the following:

1. In AxxonNet, on the **Dashboard** page, click  next to the required Axxon domain and select **Rename**.



2. Enter the new name and click the **Apply** button.

Domain name

Domain 2

APPLY CANCEL

You have renamed the Axxon domain.

8 License Files in AxxonNet

You can save licensed files in AxxonNet and activate them in an Axxon domain. Do the following:

1. On the **Dashboard** page, click the



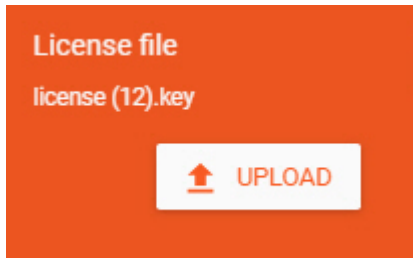
icon in the Axxon domain.

2. Click the



button.

3. Click the **Select** button and select a license file.



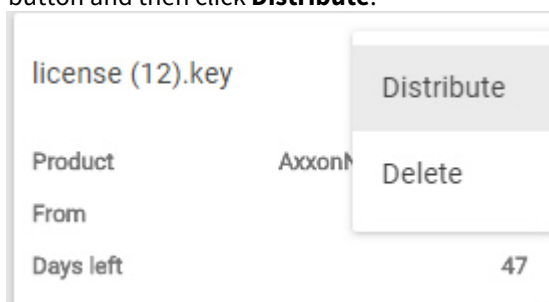
4. Click the **Upload** button.
You will see the uploaded file on the page.

license (12).key	:	universe	
Product	AxxonNext Professional	Product	universe
From	09.05.2018	From	01.03.2018
Days left	47	Days left	Expired

5. To activate the license, click the




button and then click **Distribute**.



6. Confirm activation.

Attention!

The license activation via AxxonNet may take 1-2 minutes.

To delete a license file, click the  button and click **Delete**.

9 Lists of facial templates

Lists of reference faces are used to perform automatic system responses when a recognized face is identified against an external list (see [Configuring real-time facial recognition](#)).

Attention!

To correctly synchronize lists of facial templates with an Axxon Next Client, activate the **Real Time Recognition** parameter for the face detection tool (see [Configure Facial Recognition](#)).

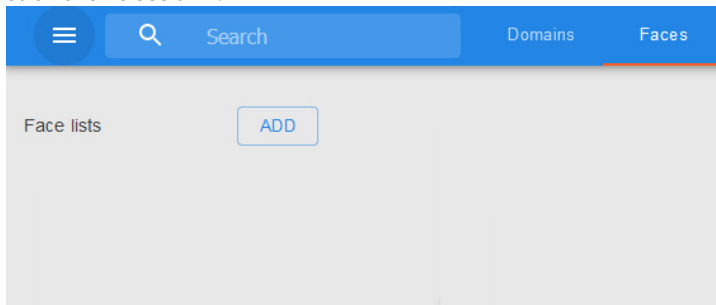
Here follows the operational sequence for the lists of facial templates:

1. Creating a list (see [Creating a list of facial templates](#)).
2. Enrolling faces (see [Face enrollment](#)).
3. Sharing a list (see [Sharing a list of facial templates](#)).
4. Editing a list (see [Editing a list of facial templates](#)).

9.1 Creating a list of facial templates

To create a list of faces, do the following:

1. Click the **Faces** link.



2. Click the **Add** button.
3. Enter the name of a list (**1**).

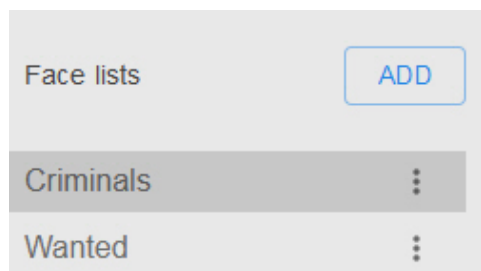
Add list

Name **1**

Similarity, 92% **2**

4. Set a minimum percentage of face similarity (**2**).
5. Click **OK**.

A list of faces is created.




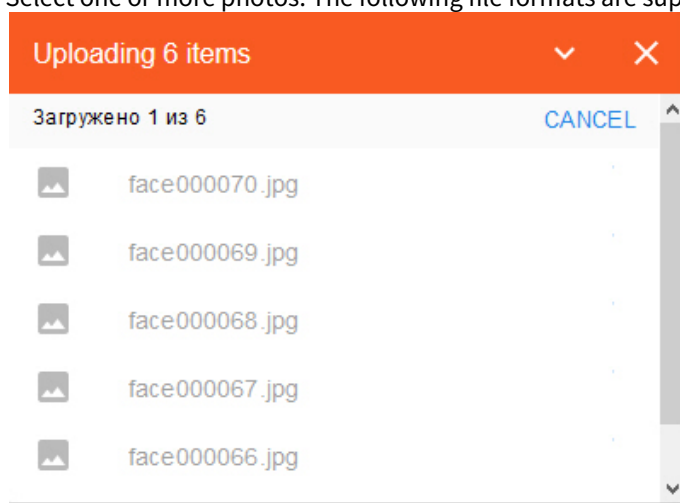
The newly created list will be automatically synced to the Axxon Next Client, and will become available to all users of the Axxon domain.

In AxxonNet, by default, a list of vehicle numbers is only available to its creator. If required, you can share the list among other AxxonNet users.

9.2 Face enrollment

To add photos to the list, do the following:

1. Select a list of faces.
2. Click the  button.
3. Select one or more photos. The following file formats are supported: jpeg, png, gif. The upload window will be displayed.

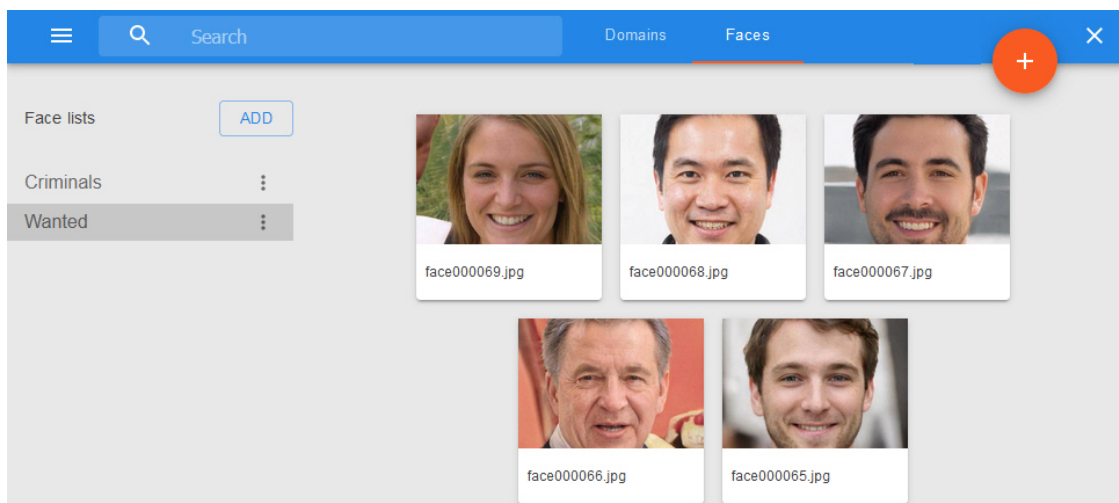


Attention!

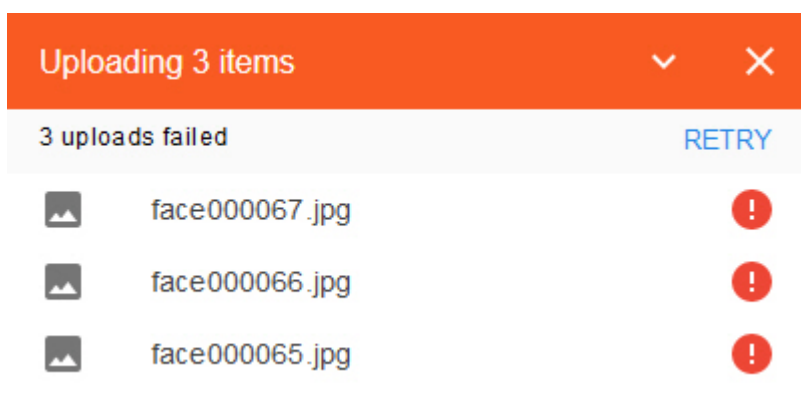
By default, each user can upload no more than 1 GB of photos per day and no more than 30 GB per month. This limit is managed by the system administrator.

Upon reaching the limit, you'll receive a notification.

After the uploading, the photos will be added to the list.



If the download is interrupted because of lost connection to AxxonNet or any other error, you will be offered to resume it.



When you click on a photo, a window will open where you can enter additional information about this person.



Name

James

Surname

Milner

Title

Department

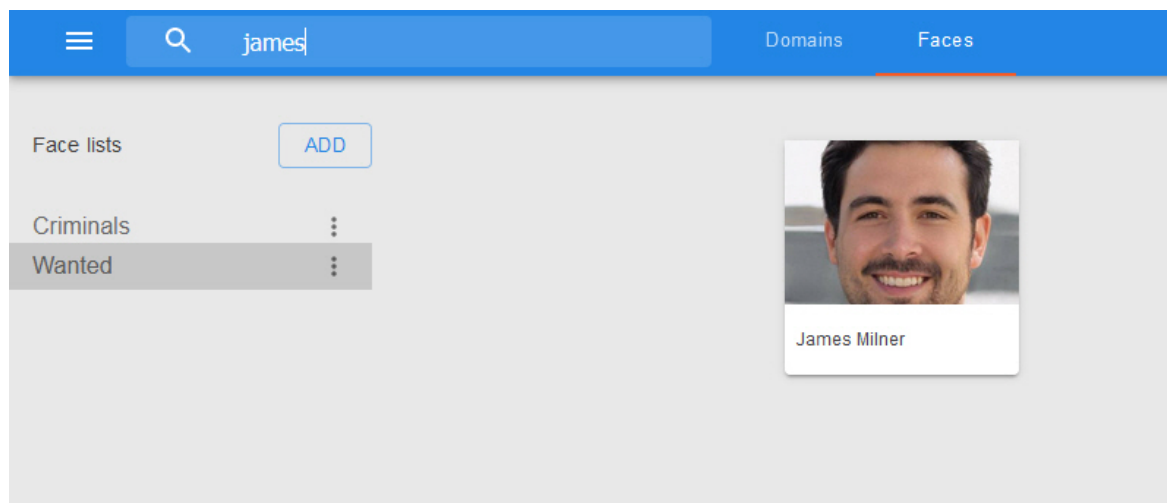
Comment

Additional comment

Date of creation

2/17/2020, 5:15:20 PM


The photo can be searched using any information specified for a given person as a criterion.

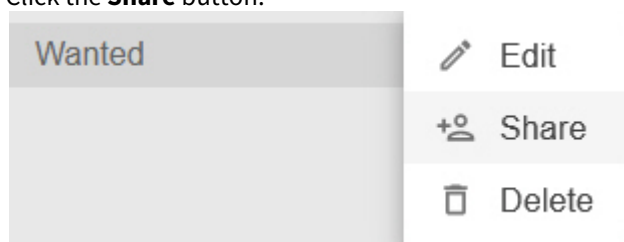


9.3 Sharing a list of facial templates

You can share a list with other AxxonNet users.

To do it, follow the steps below:

1. Select a list and click the  button.
2. Click the **Share** button.



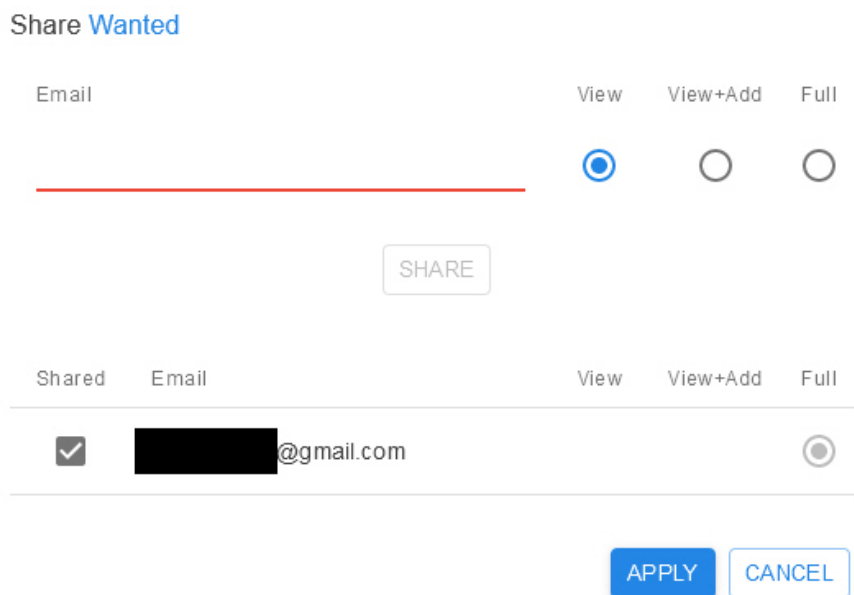
3. Enter the email address of the user you want to share the list with.

Share **Wanted**

Email	View	View+Add	Full	
<input type="text" value="██████████@gmail.com"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	
<input type="button" value="SHARE"/>				
Shared	Email	View	View+Add	Full

4. Select an access level for this user: view only, view and add images, or full access.

5. Click the **Share** button. The specified user now has access to the list.



To deny access to the list, do the following:


1. Deselect the **Shared** checkbox.
2. Click **Apply**.

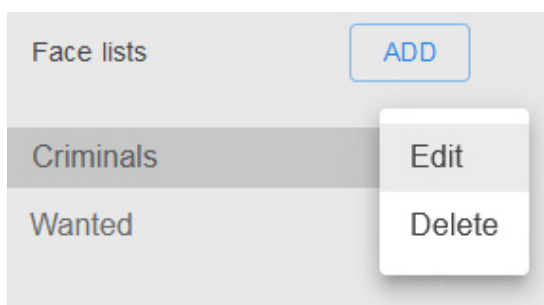
The selected user will lose access to the list.

9.4 Editing a list of facial templates


The following commands or actions are available:

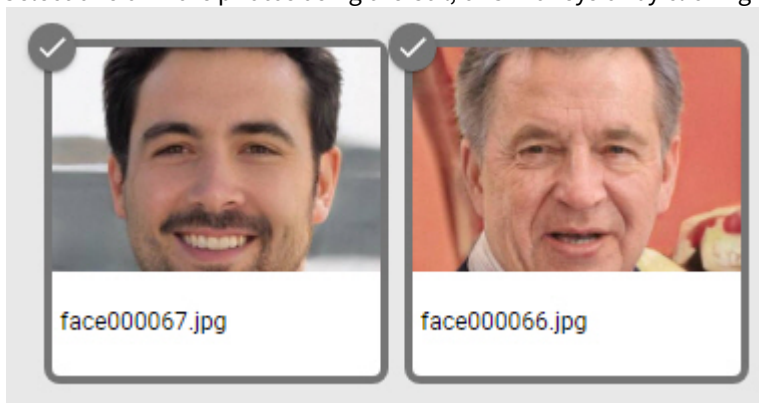
1. Renaming a list.
2. Changing face fuzzy match/similarity degree in %.
3. Removing facial images from the list.
4. Moving facial images to another list.
5. Deleting a list.


To edit the name of the list and the percentage of face similarity, click the  button and then select **Edit**, to delete the list - select **Delete**.




To move photos to other list, do the following:

1. Select one or more photos using the Ctrl, or Shift keys or by clicking on the  icon in the upper left corner of the photo.



2. In the upper right corner of the screen, click the  button.

Note

To delete selected photos, click the  button.

Сменить список

Текущий список

 Wanted

Сменить на

Criminals 

APPLY

CANCEL

3. Select a new list and click the **Apply** button.

10 Lists of vehicle numbers

Lists of vehicle numbers are used to launch automatic responses upon ANPR / LPR (recognizing a number included in such a list, see [Configuring real-time vehicle license plate recognition](#)).

Attention!

To correctly synchronize lists of vehicle numbers with an Axxon Next client, you have to activate the **Real Time Recognition** parameter for the number plate recognition tool (see [Automatic Number Plate Recognition \(LPR/ANPR\) tools](#)).

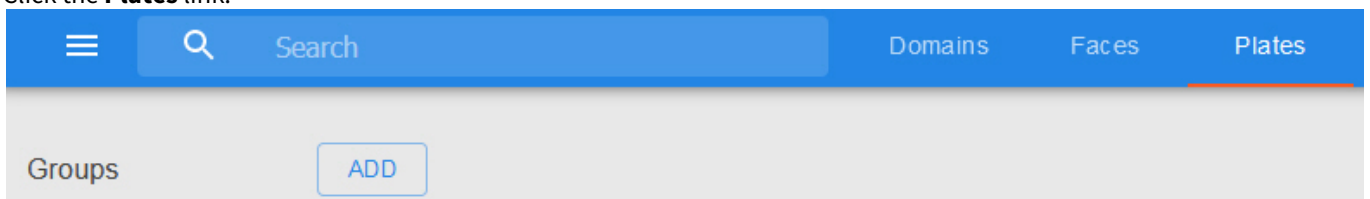
Here follows the operational sequence for the lists of vehicle numbers:

1. Creating a list (see [Creating a list of vehicle numbers](#)).
2. Adding numbers to the list (see [Adding numbers to the list](#)).
3. Sharing a list (see [Sharing a list of vehicle numbers](#)).
4. Editing a list (see [Editing a list of vehicle numbers](#)).

10.1 Creating a list of vehicle numbers

To create a list, follow the steps below:

1. Click the **Plates** link.



2. Click the **Add** button.
3. Enter the name of the list and its description.

Add group

Name

Wanted|

Description

Stolen cars

APPLY

CANCEL


4. Click **Apply**.

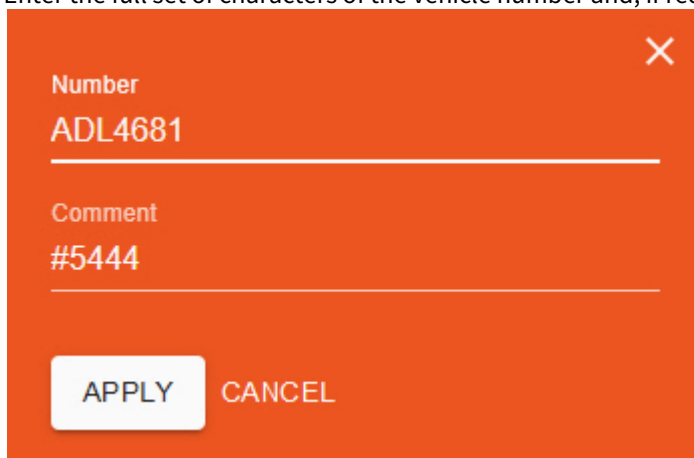
The list of vehicle numbers is now created and automatically synced to the Axxon Next Client from which it becomes available to all users of the Axxon domain.

In AxxonNet, by default, a list of vehicle numbers is only available to its creator. If required, you can share the list among other AxxonNet users (see [Sharing a list of vehicle numbers](#)).

10.2 Adding numbers to the list

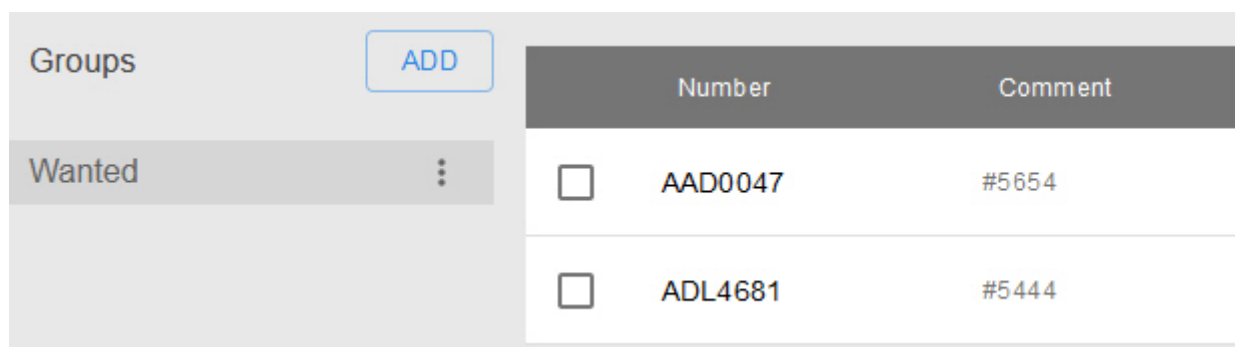
To add vehicle numbers to a list, do the following:

1. Select a list.
2. Click the  button.
3. Enter the full set of characters of the vehicle number and, if required, text comments.



A modal dialog box with an orange background and a white close button (X) in the top right corner. It contains two text input fields. The first field is labeled "Number" and contains the text "ADL4681". The second field is labeled "Comment" and contains the text "#5444". At the bottom of the dialog, there are two buttons: "APPLY" and "CANCEL".

The number is now added to the list.



The screenshot shows a user interface with a "Groups" section on the left containing a "Wanted" list and an "ADD" button. To the right is a table with two columns: "Number" and "Comment". The table contains two rows of data, each with a checkbox in the "Number" column.


	Number	Comment
<input type="checkbox"/>	AAD0047	#5654
<input type="checkbox"/>	ADL4681	#5444

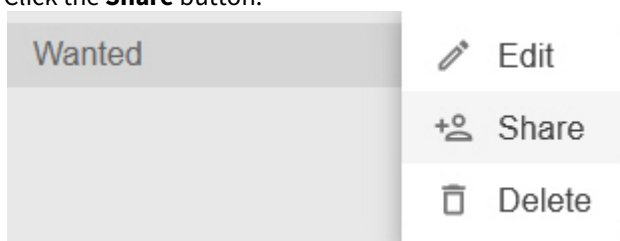
You can further edit or delete numbers from the list (see [Editing a list of vehicle numbers](#)).

10.3 Sharing a list of vehicle numbers

You can share a list with any other AxxonNet user.

To do it, follow the steps below:

1. Select a list and click the  button.
2. Click the **Share** button.



3. Enter the email address of the user you want to share the list with.

Share **Wanted**

Email	View	View+Add	Full
<input type="text" value="██████████@gmail.com"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Shared	Email	View	View+Add	Full

4. Select an access level for this user: view only, view and add images, or full access.
5. Click the **Share** button. The specified user now has access to the list.

Share **Wanted**

Email	View	View+Add	Full
<input type="text" value="██████████@gmail.com"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Shared	Email	View	View+Add	Full
<input checked="" type="checkbox"/>	<input type="text" value="██████████@gmail.com"/>			<input type="radio"/>

To deny access to the list, do the following:


1. Deselect the **Linked** checkbox.
2. Click **Apply**.

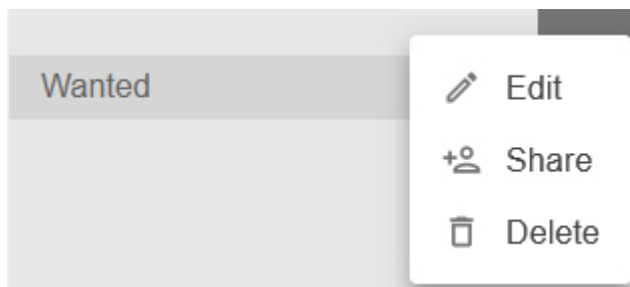
The selected user will lose access to the list.


10.4 Editing a list of vehicle numbers

The following commands or actions are available:


- Renaming a list.
- Changing a listed number.
- Removing numbers from the list.
- Deleting a list.

To edit a list name or text comments, click , then **Edit**, or **Delete** (if you wish to remove the list).

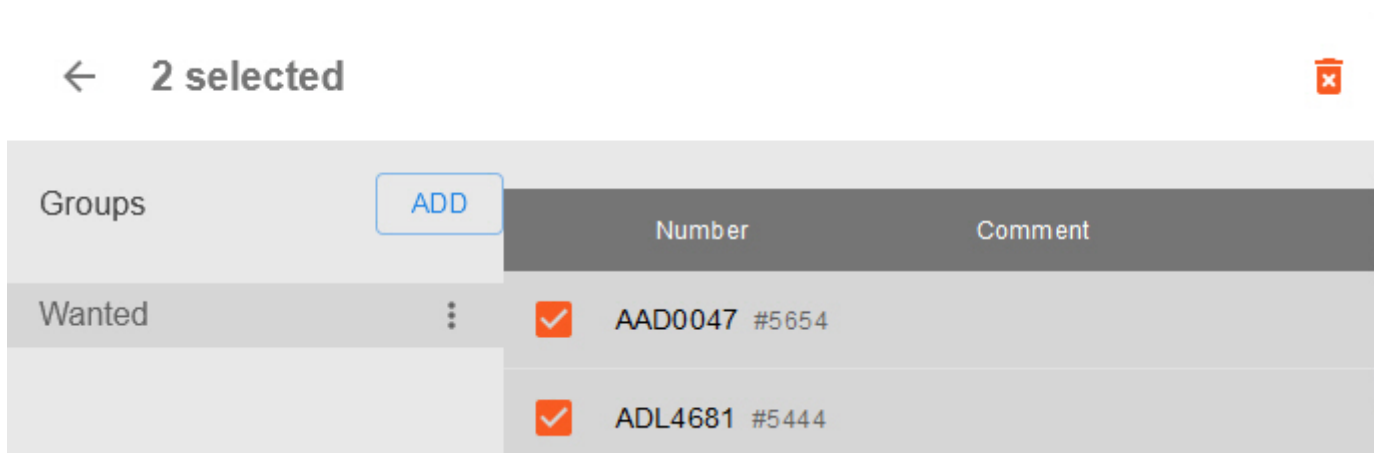


To edit a number included in the list, hover the mouse cursor over the number and click .

	Number	Comment		
<input type="checkbox"/>	AAD0047	#5654		

To remove a number from the list, hover the mouse cursor over the number and click .

To remove multiple numbers, select their checkboxes and click the  button.



11 Secure Connection to the Web Server

AxxonNet allows you to securely connect to a web server. The connection is encrypted using TLS v1.2 protocol.

Attention!

The minimum required network speed for using the web server is 15 Mbit/s, the recommended one is 50 Mbit/s or higher.

On the **Dashboard** page, click the



icon in the Axxon domain.

Attention!

To connect to a web server, the user must have permissions (see [Configuring user permissions](#)).

[Working with Axxon Next Through the Web Client](#)

12 AxxonData Reports

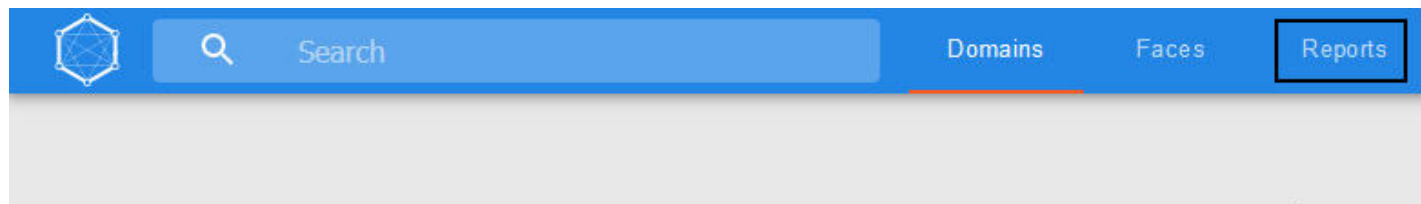
12.1 General information on AxxonData reports

AxxonData is the Axxon Next's reporting subsystem accessible via AxxonNet.

Attention!

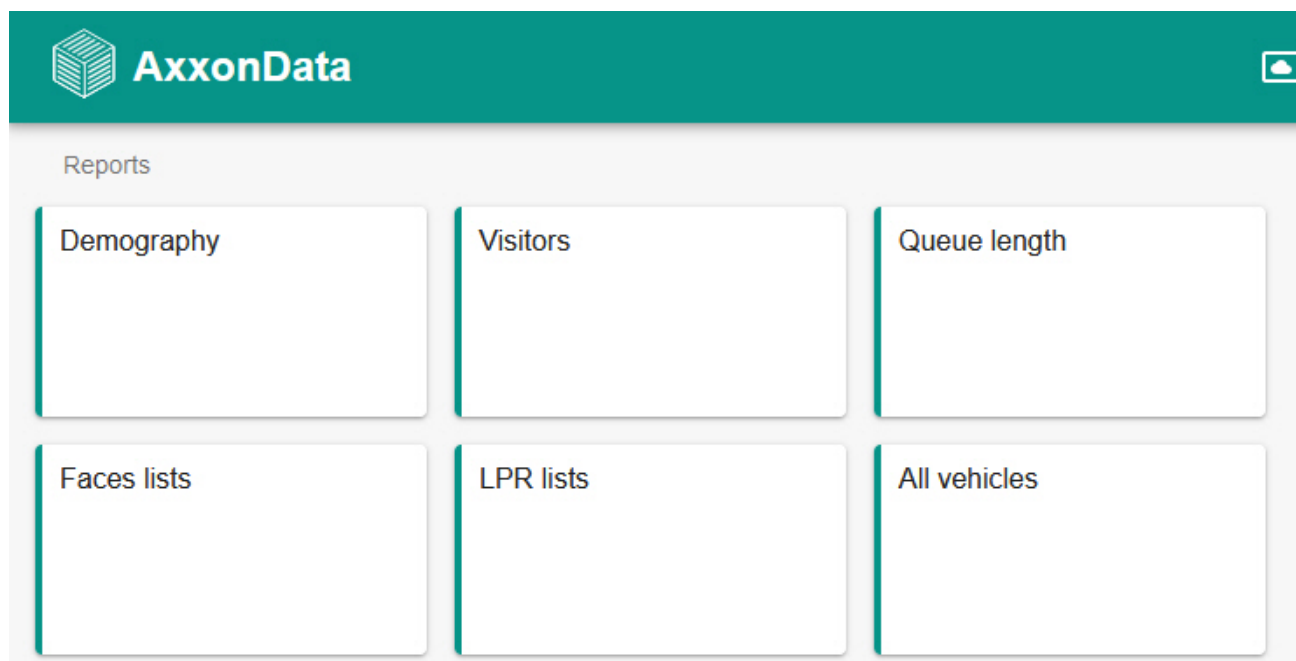
To use the AxxonData reporting subsystem, you need a Axxon Next software version starting from 4.4.0.198.

To enter AxxonData, click the **Reports** link in AxxonNet UI.




6 report types are available in AxxonData:

1. Demographic report.
2. Visitors report.
3. Queue length report.
4. Face lists report.
5. LPR lists report.
6. All vehicles report.



Note


To return to AxxonNet, click the  button.

12.2 Demographic report

To build a report, select its type on the AxxonData main page.

Note

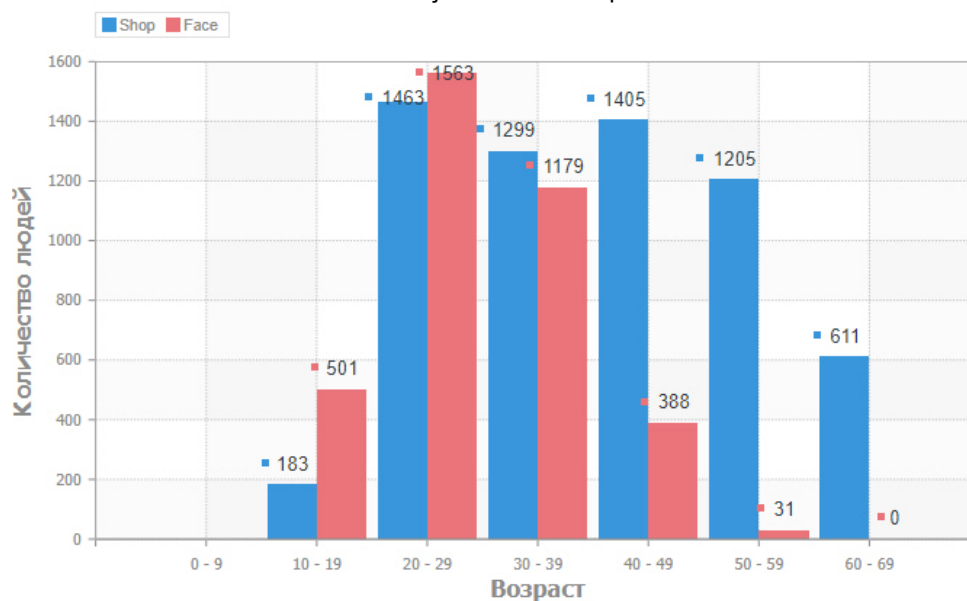
To build a report, you have to configure the facial detection tool, and activate the **Age and Gender** parameter (see [Configure Facial Recognition](#)).

By default, a report covers the current day. To change the reporting time interval, click the  button and select a new interval. Select **Custom** to set an arbitrary time interval.

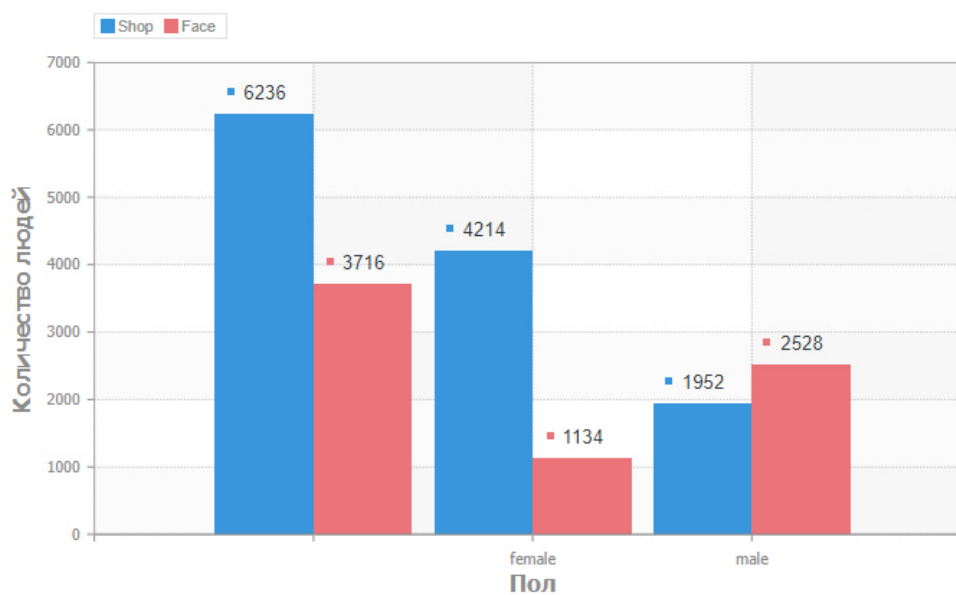
The report contains the following information:

1. 1st page:

- a. A bar chart of visitor count for each object within the specified time interval. The data are sorted by age groups.

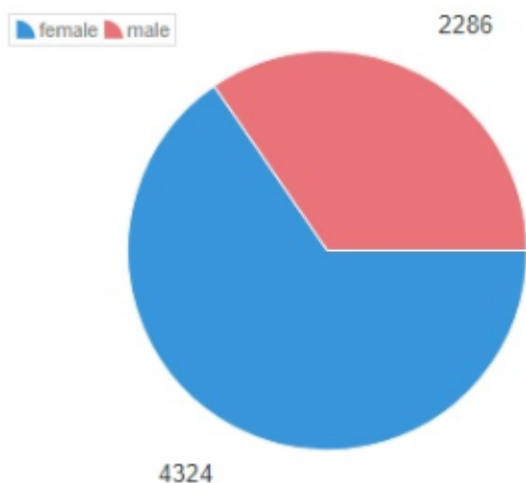


- b. A bar chart of visitor count for each object within the specified time interval. The data are sorted by gender.

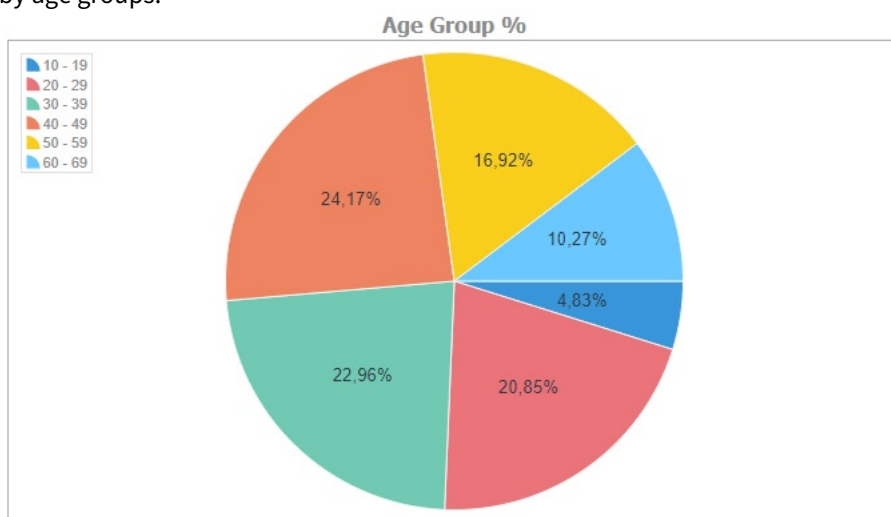


2. 2nd page:

a. A pie chart of visitor count across all objects within the specified time interval. The data are sorted by gender.



b. A pie chart of visitor count in percentage across all objects within the specified time interval. The data are sorted by age groups.




To return to report type selection, click the  button.

12.3 Visitors report

To build a report, select its type on the AxxonData main page.

Note

To build a report, you have to configure the Visitor Counter detection tool (see [Configuring the visitors counter](#)).

By default, a report covers the current day. To change the reporting time interval, click the  button and select a new interval. Select **Custom** to set an arbitrary time interval.

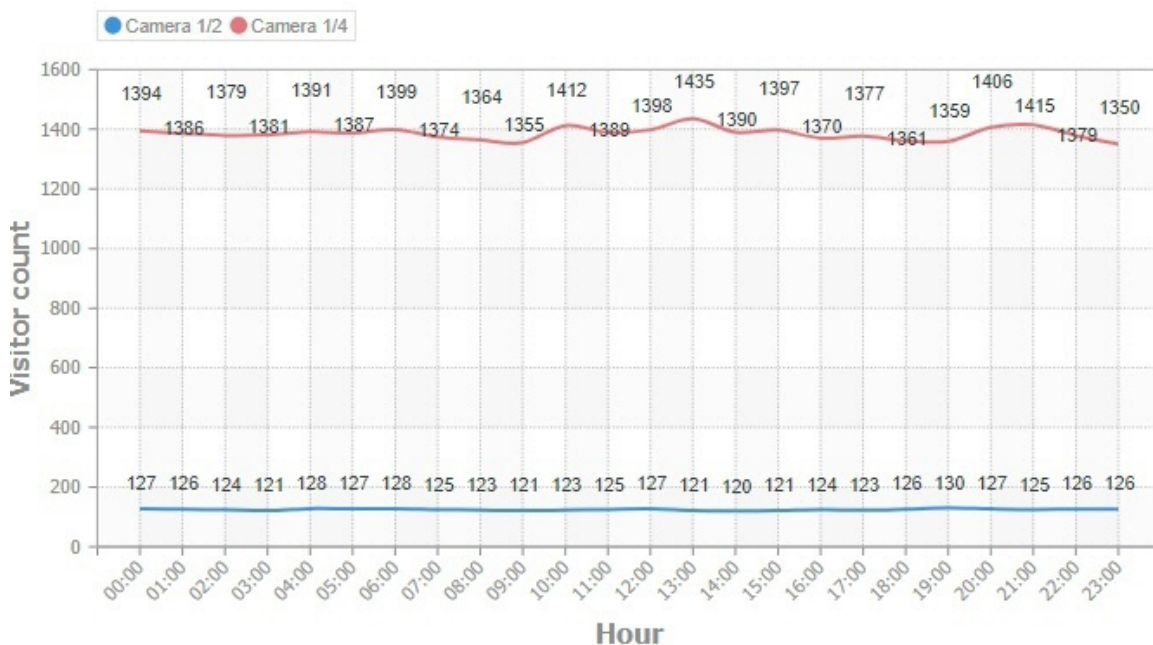
The report contains the following information:

1. 1st page:

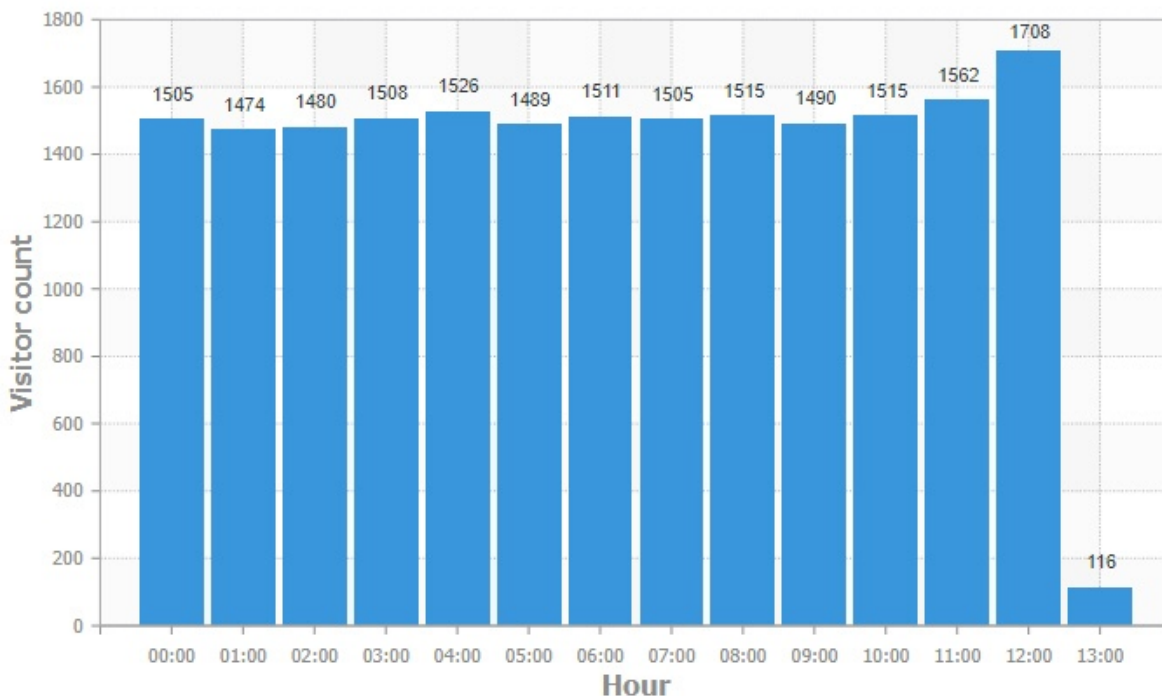
- a. Hourly visitor count charts for each object within the specified time interval.

Visitor report

16.08.2019 13:02:34



- b. Hourly visitor count chart for all objects within the specified time interval.

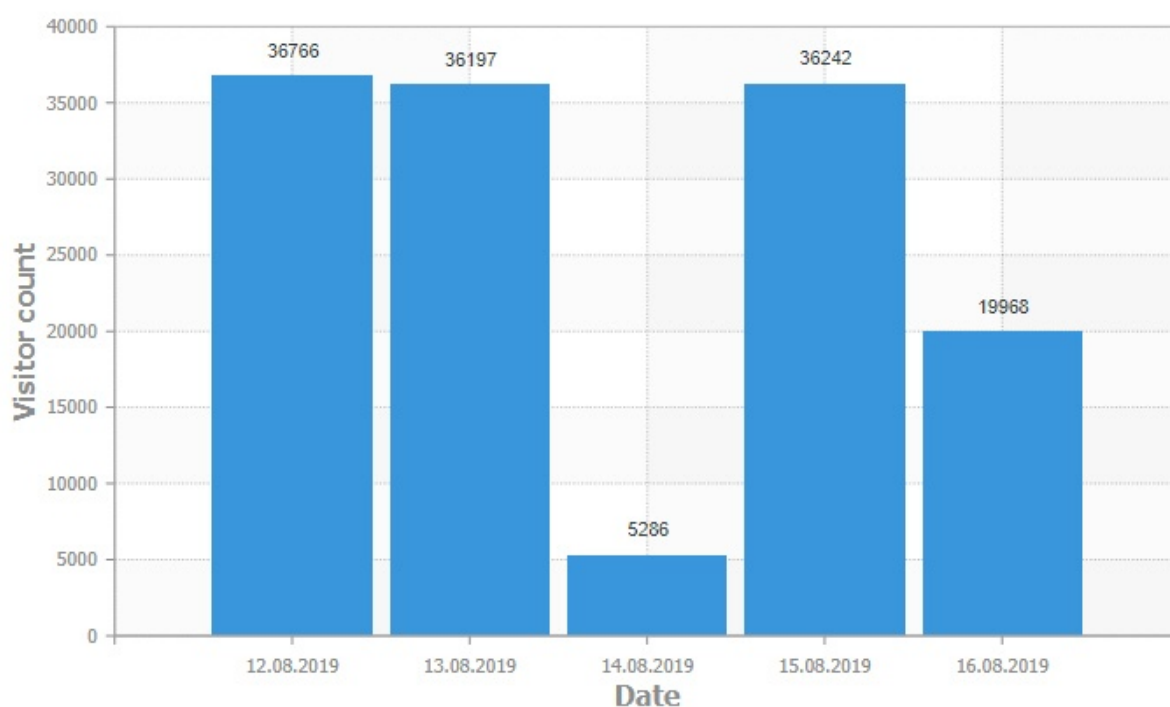


2. 2nd page:

a. Total visitor count chart.



b. Daily total visitor count chart.



To return to report type selection, click the  button.

12.4 Queue length report

To build a report, select its type on the AxxonData main page.

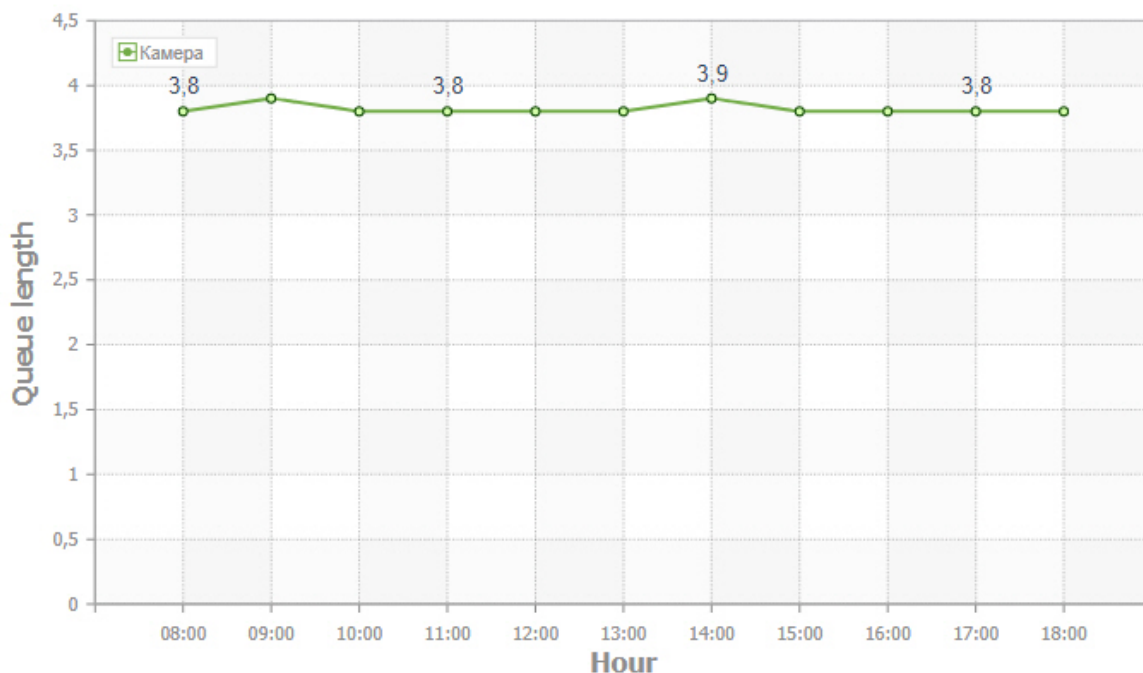
Note

To build a report, you have to configure the queue detection tool (see [Configuring the queue detection tool](#)).

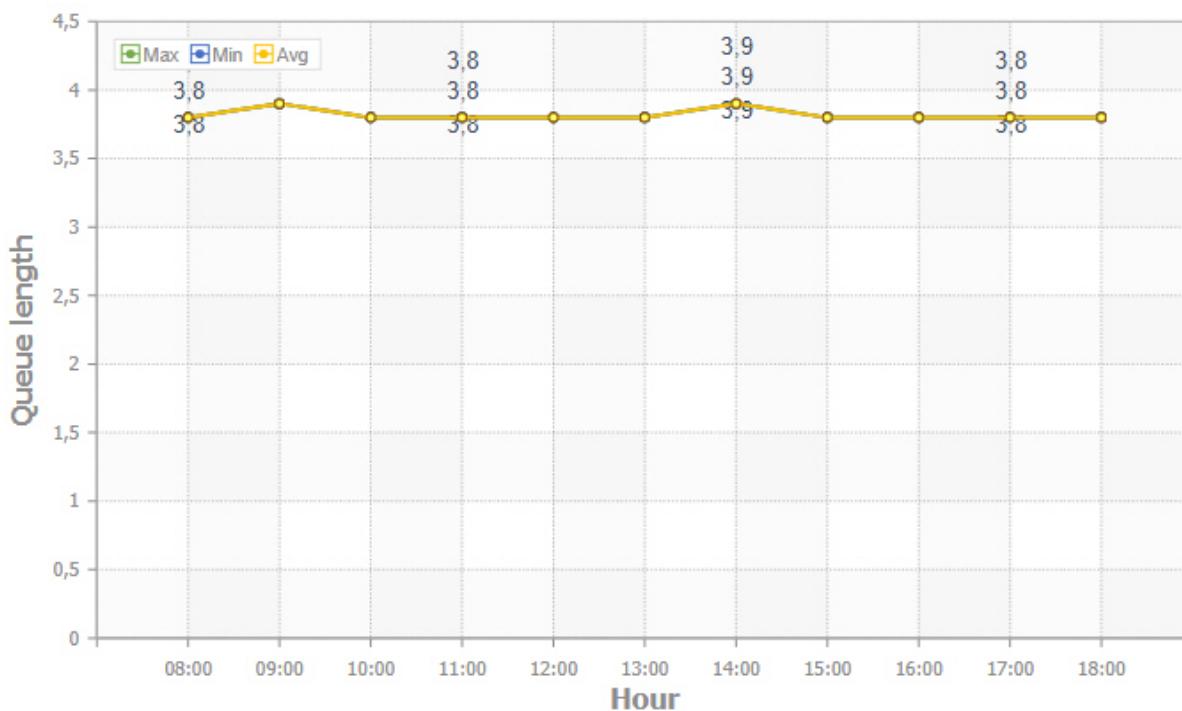
By default, a report covers the current day. To change the reporting time interval, click the  button and select a new interval.

The report contains the following information:

1. Charts of average queue length for each object within the specified time interval.



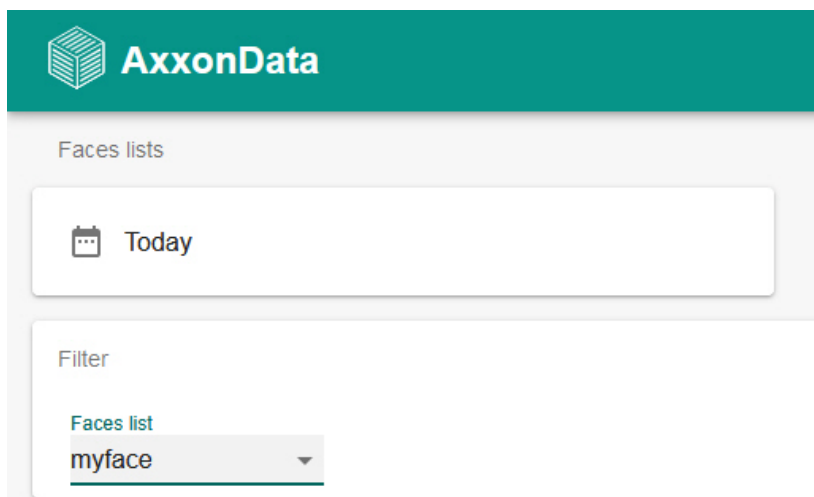
2. Chart of average queue length across all objects within the specified time interval.



To return to report type selection, click the  button.

12.5 Face lists report

To build a report, select its type on the AxxonData main page.



AxxonData

Faces lists


Today

Filter

Faces list
myface

Note

To build a report, you have to configure the facial recognition tool (see [Configure Facial Recognition](#)), and set face lists (see [Lists of facial templates](#)).

By default, a report covers the current day. To change the reporting time interval, click the  button and select a new interval. Select **Custom** to set an arbitrary time interval.

If necessary, you can narrow down recognition report to a list of persons to be tracked. If no particular list is specified, the report will include persons from all lists created within the system.

Attention!

A report may include no more than 200 persons. If the limit is exceeded within the specified time interval, the list will be truncated to 200 most recent entries.

Loading a report may take noticeable time.


The report is displayed as a table and contains the following:

1. Facial image.
2. Date and time of recognition.
3. Recognition accuracy in per cent.
4. List of persons.

Faces list

2/14/2020 12:00:00 AM

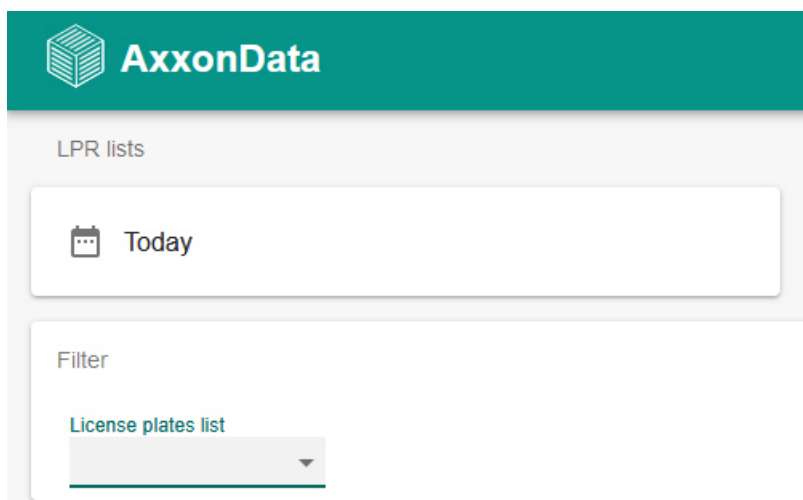


Image	Time	Accuracy	List Name
	2/14/2020 4:00:41 AM	99.36	FL1
	2/14/2020 4:02:48 AM	99.16	FL1
	2/14/2020 4:03:50 AM	93.34	myface
	2/14/2020 4:06:04 AM	99.36	FL1
	2/14/2020 4:08:11 AM	99.16	FL1

To return to report type selection, click the  button.


12.6 LPR lists report

To build a report, select its type on the AxxonData main page.



Note

To build a report, you have to configure the ANPR tool (see [Automatic Number Plate Recognition \(ANPR\)](#)) and specify number lists (see [Create a List of License Plates](#)).

By default, a report covers the current day. To change the reporting time interval, click the  button and select a new interval. Select **Custom** to set an arbitrary time interval.

If necessary, you can narrow down recognition report to a list of numbers to be tracked. If no particular list is specified, the report will include numbers from all lists created within the system.

Attention!

A report may include no more than 200 vehicle numbers. If the limit is exceeded within the specified time interval, the list will be truncated to 200 most recent entries.

Loading a report may take noticeable time.

The report is displayed as a table and contains the following:

1. Number plate image.
2. Recognized number in text format.
3. Date and time of recognition.
4. Camera name.
5. List of vehicle numbers.

Image	Plate	Time	Camera
	A010AX07	17.12.2019 11:08:26	Camera
	T919AT07	17.12.2019 11:09:12	Camera
	O095EK07	17.12.2019 11:09:29	Camera
	E968EH07	17.12.2019 11:09:29	Camera
	M112YB26	17.12.2019 11:09:30	Camera
	Y419BE07	17.12.2019 11:09:39	Camera
	P256BY07	17.12.2019 11:09:39	Camera
	O383AM07	17.12.2019 11:09:42	Camera
	Y777BT07	17.12.2019 11:09:43	Camera
	A373EE07	17.12.2019 11:09:44	Camera
	K204EC07	17.12.2019 11:09:45	Camera
	H579EH07	17.12.2019 11:09:46	Camera
	A010AX07	17.12.2019 11:09:48	Camera
	Y399BX07	17.12.2019 11:09:49	Camera
	H380BO07	17.12.2019 11:09:50	Camera
	H380BO07	17.12.2019 11:09:50	Camera


To return to report type selection, click the  button.

12.7 All vehicles report

To build a report, select its type on the AxxonData main page.

Note

To build a report, you have to configure the ANPR tool (see [Automatic Number Plate Recognition \(ANPR\)](#)).

By default, a report covers the current day. To change the reporting time interval, click the  button and select a new interval. Select **Custom** to set an arbitrary time interval.

Attention!

A report may include no more than 200 vehicle numbers. If the limit is exceeded within the specified time interval, the list will be truncated to 200 most recent entries.

Loading a report may take noticeable time.

The report is displayed as a table and contains the following:

1. Number plate image.
2. Recognized number in text format.
3. Date and time of recognition.
4. Camera name.

All vehicles

2/14/2020 12:00:00 AM



Image	Plate	Time	Camera
	AH438JH	2/14/2020 4:00:01 AM	Traffic1
	2015711	2/14/2020 4:00:01 AM	Traffic1
	CK884BV	2/14/2020 4:00:01 AM	Traffic2
	CQ625DE	2/14/2020 4:00:05 AM	Traffic2
	2919VD45	2/14/2020 4:00:05 AM	Traffic1
	3297XM45	2/14/2020 4:00:05 AM	Traffic1
	DA980LL	2/14/2020 4:00:07 AM	Traffic1
	AY679NG	2/14/2020 4:00:07 AM	Traffic1
	CA466TA	2/14/2020 4:00:09 AM	Traffic1
	1616XT45	2/14/2020 4:00:10 AM	Traffic2
	DL956GO	2/14/2020 4:00:12 AM	Traffic2

To return to report type selection, click the  button.