Operator's Guide

Monitoring PSIM 2.0 (english)

Last update 02/04/2026

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1 Operator's Guide. Introduction

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1.1 Purpose of Monitoring PSIM

Monitoring PSIM is designed to automate the activities of personnel at service companies involved in the operation of *Axxon PSIM*-powered video surveillance systems. The purpose of *Monitoring PSIM* is to improve the quality of operation for such video surveillance systems.

1.2 Document purpose

The document is intended for Operators working with *Monitoring PSIM.*

This User's Guide describes how to work with *Monitoring PSIM*'s main graphic user interface (GUI) objects.

2 Control panel

The **Control panel** is part of the **Monitoring** interface window. You can configure this window using the setting panel for the **Monitoring** object. For how to do it, see the document Monitoring PSIM Software Package. Administrator's Guide.

You can see the **Control panel** in the figure below.

2.1 Purpose of the Control panel

The **Control panel** is intended for quickly assessing the current status of video surveillance components.

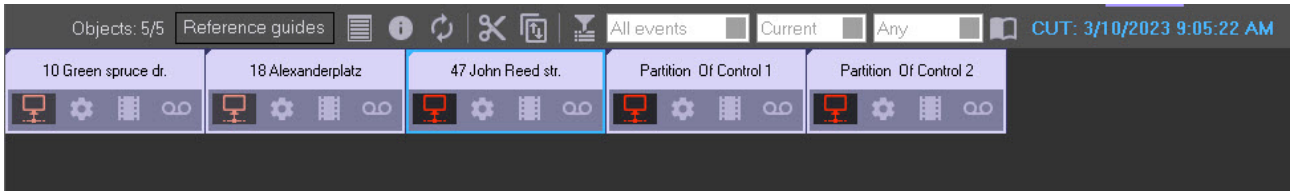
Each object has a corresponding graphic element shown as a rectangle. It contains the object's identification area (at the top) and a configurable number of alarm indication buttons arranged in groups by source type:

1. Communication Channel.
2. Hardware.
3. Videosystem software.
4. Size of archives.
5. Cameras.
6. ACS.
7. SFA.
8. Detections.
9. Extra 1.
10. Extra 2.

If the **Owners panel** is enabled (see Configuring the Monitoring interface object section of Administrator's Guide), then only the objects that belong to the selected owner are displayed on the **Control panel**.

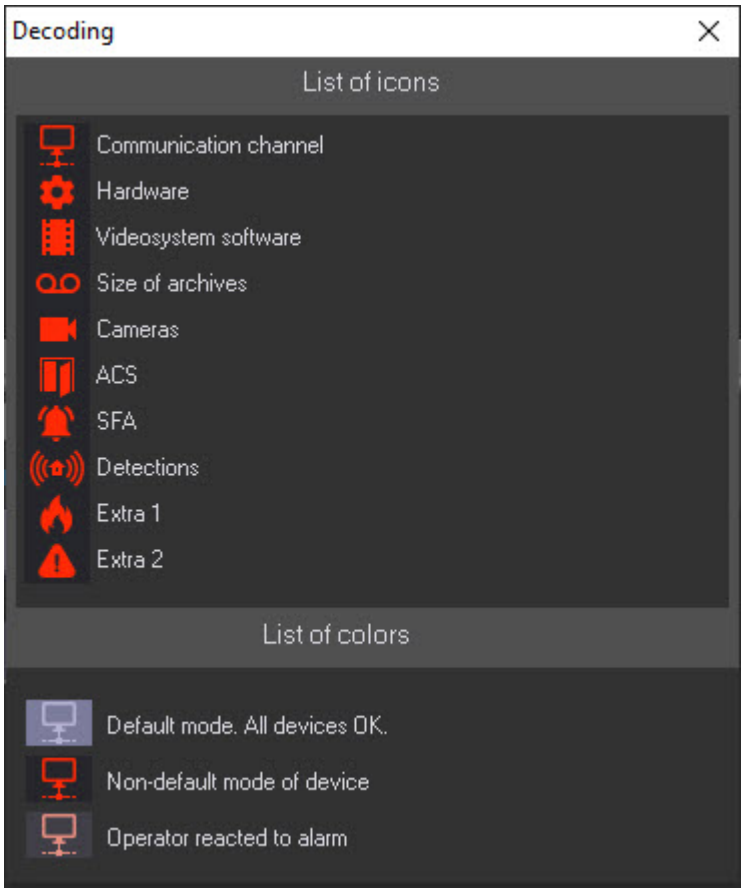
The number of shown alarm groups can change from 4 to 10, depending on the **Monitoring** object settings on the **Interfaces** tab.

Four alarm groups:



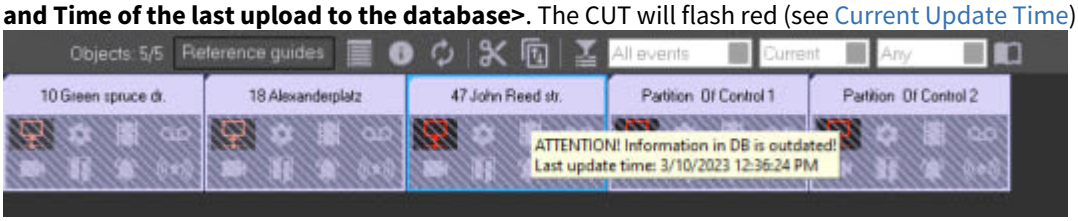
Ten alarm groups:

You can learn the meaning of the icons by clicking the button  (**Information about symbols**). When you click this button, the **Decoding** window opens.



By default, if the **MonitorSSTV** database has not been updated for more than 30 minutes, for example, due to a *Data Loader* malfunction or if the communication module (license restrictions) has stopped working on the *Server of Control*, then:

1. On the *Server of Control*, all objects will be covered with diagonal lines. When you hover over such an object, a contextual prompt will appear: **ATTENTION! Information in DB is outdated! Last update time: <Date and Time of the last upload to the database>**. The CUT will flash red (see Current Update Time).



2. On the *Central Server of Control*, only those objects that belong to the *Servers of Control* with outdated info will be covered with diagonal lines. When you hover over such an object, a similar contextual prompt will appear. However, the CUT will remain blue and will not flash.

> **Note**
>
> To change the waiting time for updating the **MonitorSSTV** database, after which the corresponding indication on the *Server of Control/CSC* will appear, it is necessary to set the required time value in minutes for the **LastLoadThreshold** registry key (for details, see Registry keys reference guide, for more information about working with the registry, see Working with Windows OS registry).

If there is no connection between the *Central Server of Control* and the *Server of Control,* or if there is a problem in data exchanging with the FTP server (for example, an incorrect password), then only those objects that belong to the *Servers of Control* with this problem will be covered with diagonal lines. When you hover over such an object, a contextual prompt will appear: **ATTENTION! No connection with Server Of Control or error of data exchange with FTP server!** The CUT will remain blue and will not flash.

2.2 Changing alarm group icons

You can change the default icons for each alarm group and assign your own icons. To change an icon, replace the corresponding default picture file in the package. You can find the files in the Bmp subfolder of *Monitoring PSIM*'s installation folder. The default path to the folder with pictures is C:\Program Files (x86)\Axxon PSIM\Vhost\Bmp. For example, to change the icon for the Communication Channel group, replace two files:

1. Bmp\Active\01_net_active.bmp;
2. Bmp\InActive\01_net_inactive.bmp.

The size of icons is 33x23 pixels. If the size of your image is different, it will be changed to the above.

If the object scaling parameter exceeds 110% (see Configuring the Monitoring interface object), then the high-resolution icons of 172x120 pixels will be used on the object with the **_hd** postfix in the name.

So, for example, to replace the high-resolution icon corresponding to the Communication Channel group, it is necessary to replace two files:

- Active\01_net_active_hd.bmp
- InActive\01_net_inactive_hd.bmp

After you replace graphic files, restart *Axxon PSIM*. If at least one of the files is missing from the Bmp folder or has invalid format, the default icons are used.

2.3 Current Update Time

The information in the **Control panel** is refreshed every time data is loaded from the database. The Current Update Time (**CUT**) is shown in the window's upper-right corner.

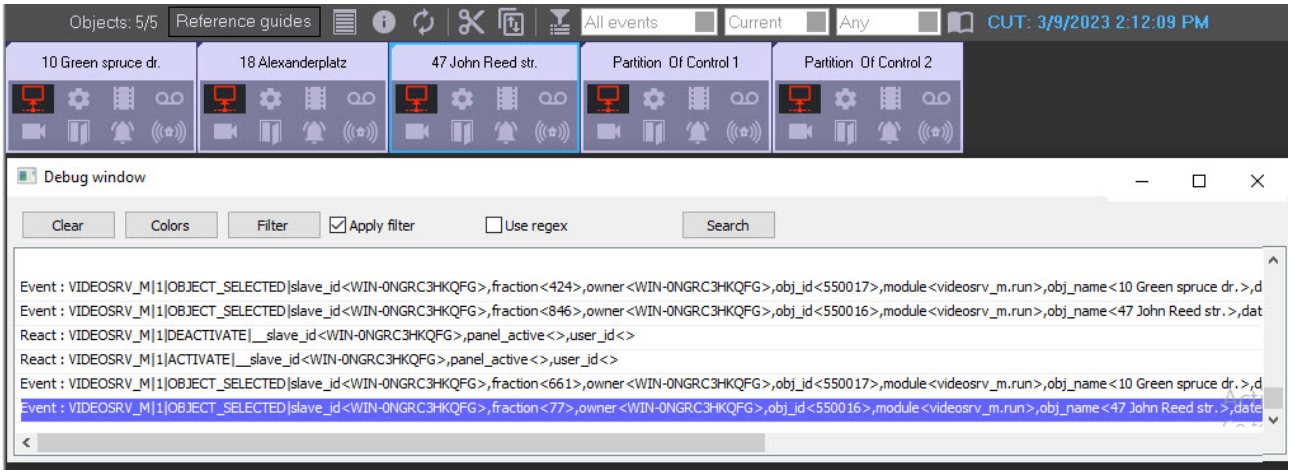
Periods of information updating in the interfaces can vary for particular alarm types – see Appendix 1. Data update periods summary.

To get the latest database information, click the button  (**Refresh data).** This forces the data to load. If new data is found, it is shown.

2.4 Selecting an object on the Control panel

When you select an object on the **Control panel**, the **VIDEOSRV_M|n|OBJECT_SELECTED| obj_id<id>,obj_name<name>** event is sent to *Axxon PSIM,* where **n** is the index number of the **Monitoring** interface object, **id** is the object identifier, **name** is the object name.

You can view the event in the **Debug window** (see Enabling the Debug window).



When you select one object and successively click different alarm buttons, the **OBJECT_SELECTED** event is not re-sent, it will be sent only if you select a different object.

This feature can be used to create various scenarios using scripts, for example, to display an object scheme when it is selected in the **Monitoring** interface object. In this scenario, the operator selects an object in the **Monitoring** interface, and a pre-created diagram or map of the selected object is displayed on another monitor. Objects are visualized using scripts; for this, the **OBJECT_SELECTED** event from the **VIDEOSRV_M** object is processed.

When you select an object on the **Log panel** (see Selecting an object on the Log panel), the event is sent to *Axxon PSIM* in the similar way.

2.5 Ignoring objects

You can put the objects that must not be shown on the ignored objects list. For example, these can be objects that were created on *Monitoring PSIM*'s server, but not launched yet or objects that are known for sure to be under maintenance at the moment.

The objects on the ignored objects list are not shown in the **Control panel** or **Log panel**. They are also not included in system reports.

To move an object to the ignored objects list, press the Shift key and left-click on one or multiple objects. The selected objects are now highlighted with a red border.

Then click the button  (**Ignore/Analyze**).

You can see the ignored objects list by clicking the button  (**Show ignored objects**).

Use the same actions to move objects back from the list.

2.6 Processing alarms

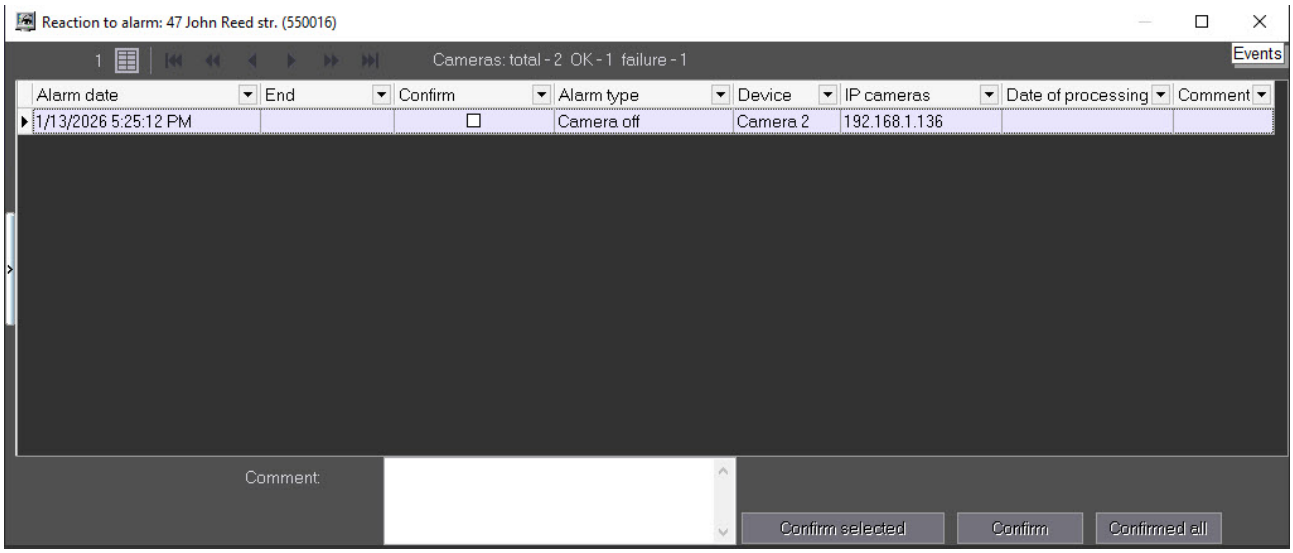
2.6.1 Confirming alarms

The functionality of the alarm indicator buttons contains the information and action components.

1. The information component: if an alarm occurs, the button becomes red; if confirmed by the operator, it becomes pink, and when an alarm ends, it returns to the inactive state.
2. The action component: when you click the button, the operator receives the detailization before the device or an event.

For example, if a camera is out of order on an object, the indicator button corresponding to the **Cameras** alarm group becomes red.

To get the detailed information about an alarm, you must click the corresponding icon. The **Reaction to alarm** window opens. The title of the window contains the selected object's name and its ID.



The **Alarm date** field displays the time of loading an alarm from the *Agent of Control* to the *Server of Control* database. This is not the time when the alarm event occurs on the *Agent of Control*. For more information about data transmission, see the Appendix 1. Data update periods summary section.

The **Alarm type** field contains the name of the alarm situation, and the **Device** field details it before the device or an event.

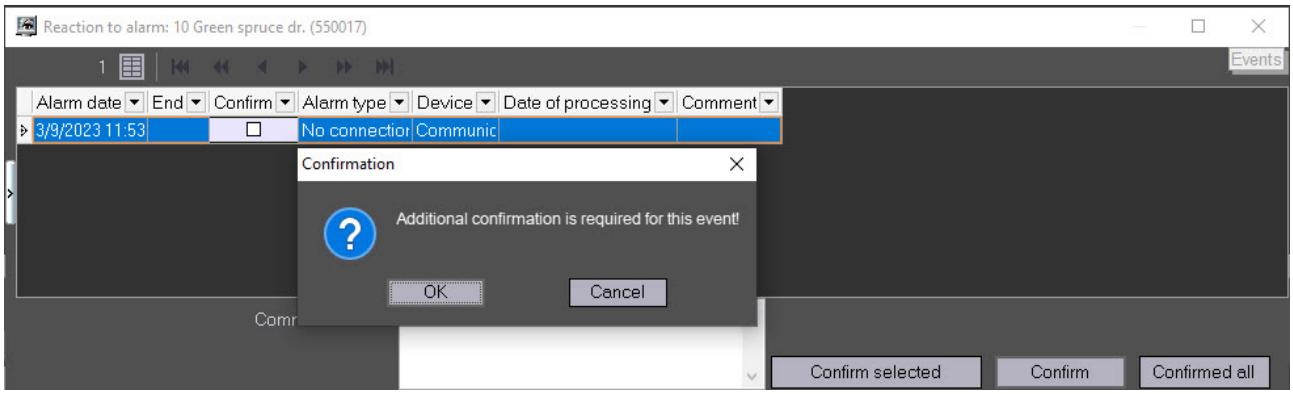
If you set the **Confirm** checkbox in the **Reaction to alarm** window, the icon's background on the control panel changes from red to orange, and the **Date of processing** column is automatically filled.

The **Date of processing** column contains not the current computer system time but the current update time (see the Current Update Time section) stored in the database. This is done so that the operator cannot roll back the system time and accept an alarm with a different time.

> **Note**
>
> When you view the **Cameras** alarm groups, the **Reaction to alarm** window also displays the line with the camera statistics of the given object and the IP camera address.
> The **IP cameras** field contains the IP address of the invalid camera. You can mask it with stars using the HideIpCam=1 parameter of the HKEY_LOCAL_MACHINE\SOFTWARE\BitSoft\VHOST\VHostService registry key (for more details, see Vertical solutions, for information on how to work with the registry, see Working with Windows OS registry). When you use analog cameras of the video capture card or virtual cameras, the **IP cameras** field becomes empty.

If you enable the **Non-empty Comment field** option when configuring the **Monitoring** interface object, the alarm situation isn't closed until the operator comments on this situation and/or its actions. An alarm closes automatically if you eliminate the cause of this alarm, for example, the connection is lost and then restored.

If you configure a complex confirmation of alarm acceptance, then an additional dialog window appears when you accept an alarm. To confirm the alarm acceptance, click the **OK** button, to cancel the action, click the **Cancel** button.



Confirmations that are automatically accepted by the *Server of Control* aren't transferred to alarms.

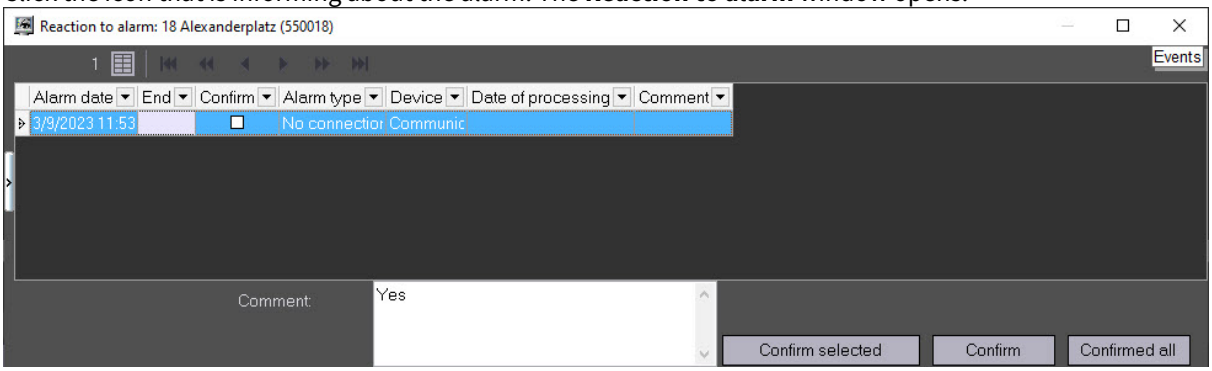
> **Note**
>
> If the operator doesn't accept the short alarm for five days, it is accepted automatically.

The **Reaction to alarm** window displays no more than 10000 alarm situations; to view other events, use the navigation button in the lower right corner.

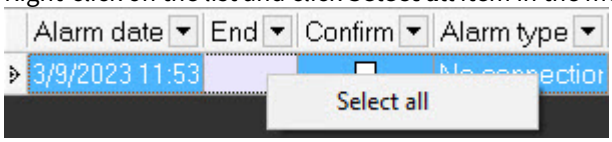
2.6.2 Confirming multiple same-type alarms

To accept several alarms, or all alarms of an object, or all alarms of all objects, simultaneously, do the following:

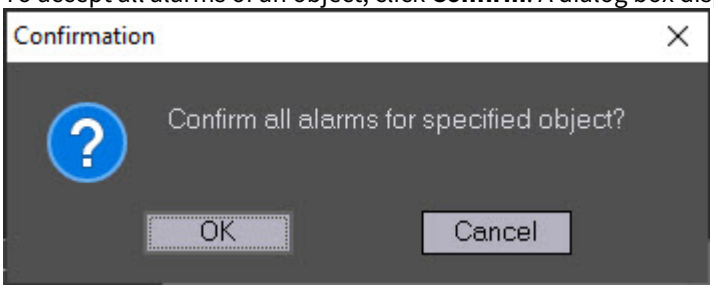
1. Click the icon that is informing about the alarm. The **Reaction to alarm** window opens.



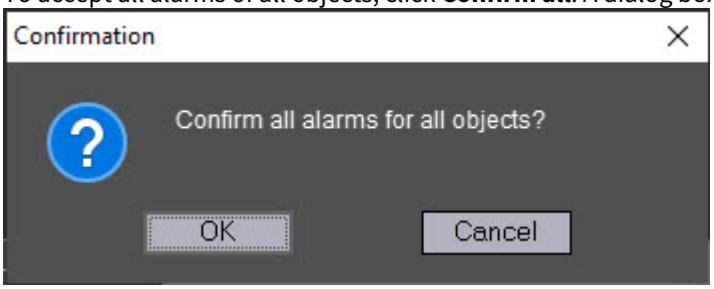
2. To accept several similar alarms, proceed as follows:
   a. Select several alarms from the list in one of the following ways:
      i. Use the left mouse button and the Ctrl or Shift key.
      ii. Right-click on the list and click **Select all** item in the menu.



   b. Fill in the **Comment** field if necessary.
   c. Click **Confirm selected**.
3. To accept all alarms of an object, click **Confirm**. A dialog box displays to confirm the action. Click **OK**.



4. To accept all alarms of all objects, click **Confirm all**. A dialog box displays to confirm the action. Click **OK**.



> **Note**
>
> If a comment is required but the **Comment** field is empty, the **Confirm selected, Confirm** and **Confirm all** buttons are inactive.

Multiple alarms are now confirmed.

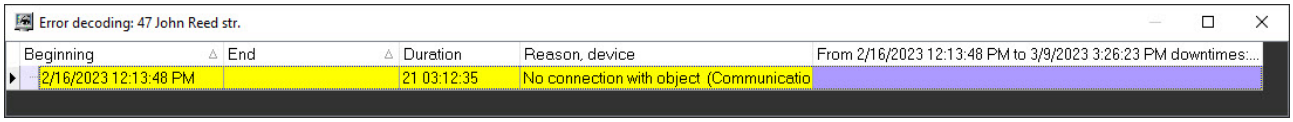
If a simple confirmation of alarm acceptance is configured, then only one confirmation is sent to the *Agent of Control* when a group of similar alarms is accepted on the *Server of Control*. If there should be a complex confirmation, then several alarms of the same type cannot be accepted. Each alarm is to be processed individually.

If all alarms of one or all objects are confirmed, simple or complex confirmation settings are ignored and no confirmation is sent to the *Agent of Control*.

2.6.3 Additional information on alarms

You can get additional information on alarms by clicking on the object name.

The **Error decoding** window opens.



Alarms caused by different reasons can overlap, creating common alarm periods for the object. In the table, they are shown in gray. If an alarm is still active, its **End** column is empty.

If there are too many alarms, not more than 200 alarms are shown in the **Error decoding** window. To view other events, use the navigation buttons and the additional tool **View from date** in the lower-right corner.

2.6.4 Alarm types

The following table contains all the alarm types that are controlled by the Monitoring PSIM system by default. For **Communication channel** alarm group: if *Agent Of Control* connects to *Server of Control* via the TCP/IP protocol and it has connected to it before, the **Device** field shows the object's IP address.

Alarm group	Alarm type	Device	Comment
Communication channel	No connection with the object	Communication channel	*Agent of Control* connects to *Server of Contro*l in client mode
	No connection with the Monitoring PSIM agent	Local video system	*Agent of Control* connects to *Server of Control* in server mode
Hardware	Disk failure	101:Disk name	*Axxon PSIM*'s settings contain the names of the disks to record video archive on. This alarm occurs when one of these disks does not exist or has the wrong type. The correct type for a disk: fixed, removable, or network.

102:Disk size	Error when computing the free disk space
103:VIDEO folder	The VIDEO folder is not present
104:Number of disks=0	No disks were selected in *Axxon PSIM* for recording the video archive.
105:Disk error	An unknown disk error was received from *Agent of Control*

	UPS signal	1000:PowerChute started 1001:PowerChute stopped 1002:Connection restored 1003:Power restored 1004:Self-Test passed 1005:Administrative shutdown 1006: Shutdown canceled 1007:Battery charged 1009:Battery changed 1013:Allowed overload 1014:RTC Started 1015:RTC Finished 1016: Shutdown in process 1102:Normal temperature 2000:Power is off 2001:Shutdown performed 2002:Low power 2003:Battery discharging 2004:RTC Aborted 2007:High power 3000:Connection lost 3001:Overload 1004:Self-Test not passed	

		3003:Battery discharged 3004:Connection lost - battery 3016:Change battery 3107:High temperature	
Videosystem software	Software error	Core software	psim.exe\psim64.exe unloaded
		Base software (video)	video.run unloaded or hanging
		Registry	The registry does not have the data necessary for *Agent of Control* to work
		Database	Error when connecting to the *Axxon PSIM* database
Size of archives	Small archive size	Archive 1 … Archive N	The archive depth requirements are not met (see Info on archives).
Cameras	Camera is off	Camera 1 … Camera N	Camera is not working: there is no signal from camera or the connection is lost
SFA	Vibration detector signal	Vibration detector	The four sensors that cannot be renamed on *Agent of Control* i. e. they must be used according to their names (Vibration detector, Lock, etc.).
	Lock sensor signal	Lock	
	Overheat detector signal	Overheat detector	
	Additional sensor signal	Additional sensor	
	Additional sensor signal	EXT. SENSOR	12 sensors whose names must be renamed on *Agent of Control* These names are shown in the **Device** column. By default, the following line will be shown: EXT. SENSOR

	Computer restarted normally	Computer	Logged off from Windows normally before restarting
	Computer restarted abnormally	Computer	The computer was restarted without logging off from Windows correctly (power off)

Note

Periods of information updating in the interfaces can vary for particular alarm types – see Appendix 1. Data update periods summary.

For the **ACS** and **Detections** alarm groups, no data is sent from *Agent of Control.*

The alarms tracked by the *Monitoring PSIM* system can be of two types:

1. Long-term.
2. Short-term.

Long-term alarms are alarms that have a start and end time (for example, **Camera is off**/**Camera is on**, **No connection with object**/**Connection with object**).

Short-term alarms have no duration. They inform about occurred events, such as **Vibration detector triggered** or **Computer restarted normally**. These alarms are not included when the system's performance indicators are calculated.

Alarms that are configured as described above (in the motion detector example) are always short-term. For short-term alarms, the **End** field is immediately filled with a time shifted by one second from the alarm detection time. Confirmed short-term alarms are shown in the **Control panel** for 10 minutes. Long-term alarms include the following alarm types:

- No connection with object;
- No connection with monitoring agent;
- Disk failure;
- Software error;
- Small archive size;
- Camera is off;
- Object disarmed (this alarm type becomes available when you activate the special mode of *Monitoring PSIM* operation with *ACFA PSIM* (see Configuring the special mode of Monitoring operation with ACFA PSIM), or when you enable the object status monitoring on the *Agent of Control* side (see Configuring alarms for monitoring the object state on the Agent of Control side).

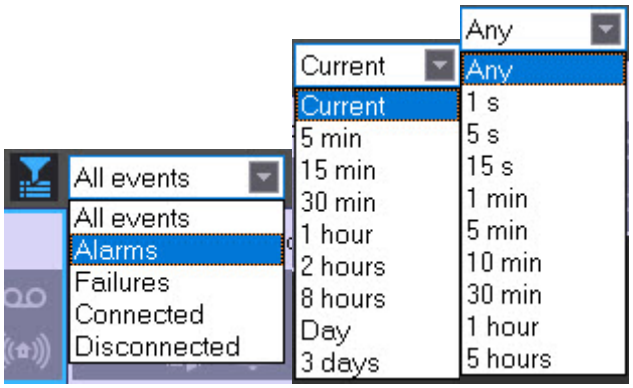
2.6.5 Defining user alarm types

For the **ACS** and **Detections** alarm groups, by default no data is sent from *Agent of Control*. These alarm groups, as well as **Hardware** and **SFA**, can be used for designating their respective alarm types. For how to define user alarm groups, see the document Monitoring PSIM. Administrator's Guide.

2.6.6 Configuring the displayed number of alarms

The number of objects shown in the **Control panel** is defined by the current filter. You must enable the filter by clicking the button  (**Turn filter on/off**). The first drop-down list defines condition for filtering by alarms,

failures, presence or absence of connection; the second drop-down list defines the condition "Show only objects with errors for last..." and the third one defines the condition "Show only objects with errors lasting longer than...".



In the window's upper-left corner, you can see the two numbers: 1) the total number of objects and 2) the number of objects shown in the **Control panel** after you click the button.

2.7 Viewing video data on alarms

2.7.1 Indication of video data presence

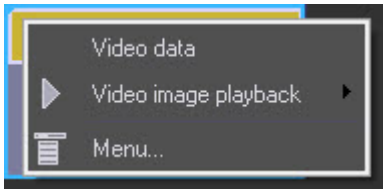
In *Monitoring PSIM* software, the alarms can be followed by video data, such as video clips and video frames.

If there are loaded but not viewed yet video data, the name of the object on the **Control panel** is colored in yellow.

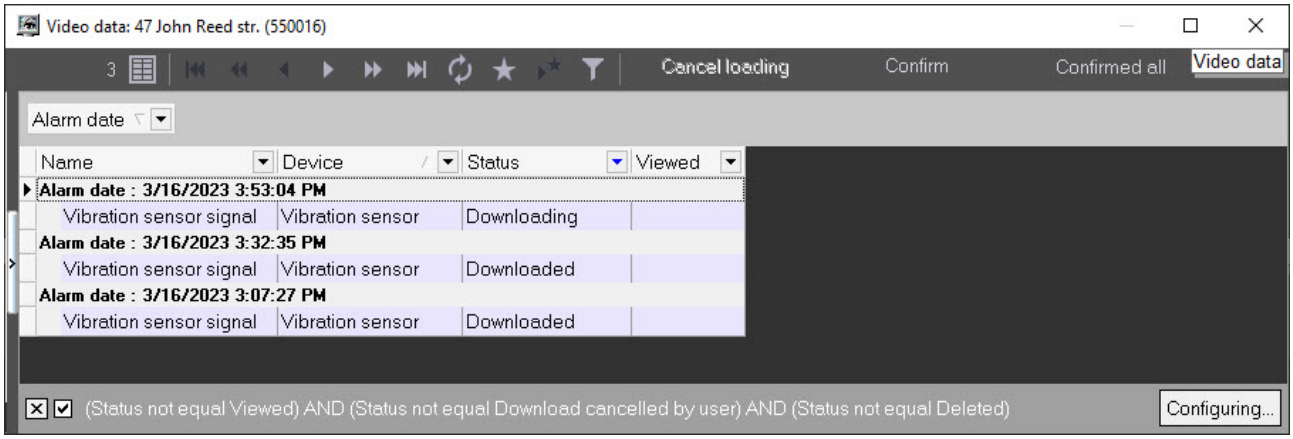
2.7.2 Viewing video data

To view all received video data, select the **Video data** menu item in the object context menu.

> **Note**
>
> If you select the appropriate *Monitoring PSIM* settings (see Administrator's Guide, the Configuring reaction to snapshots and videos section), the video data can be opened automatically as soon as you receive it.
> If you attach too many videos to alarms, there can be difficulties with opening the **Video data** window. You speed up the process of its opening by using the **ClearVideoDataPeriod** registry key that determines the number of hours from the appearance until the deletion of the video data from the **Video data** window (see Vertical sollutions, for information on how to work with the registry, see Working with Windows OS registry).

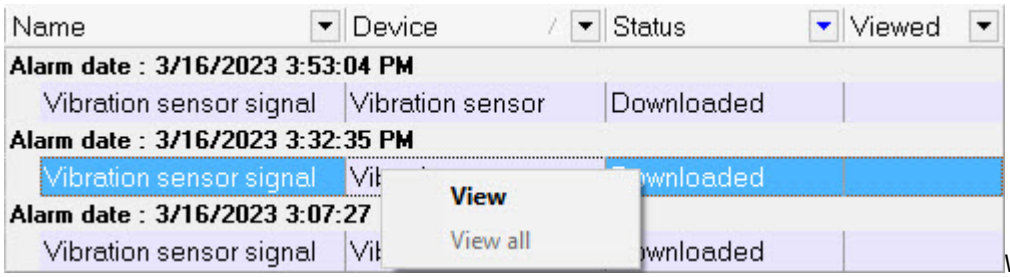


The **Video data** window opens. This window displays the information about the video data. Also, in this window, you can cancel the data loading if it isn't complete by using the **Cancel loading** button.



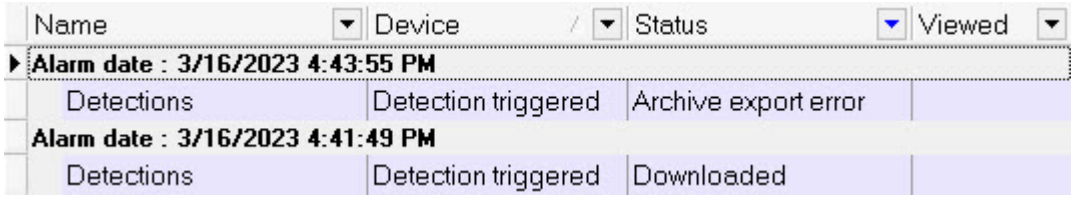
If you want to make the forced information update in the **Video data** window, click the  button.

To open the loaded video data, right-click the row corresponding to the required video data and select the **View** menu item. If the data loading isn't complete or it is deleted from the disk, this menu item is inactive.



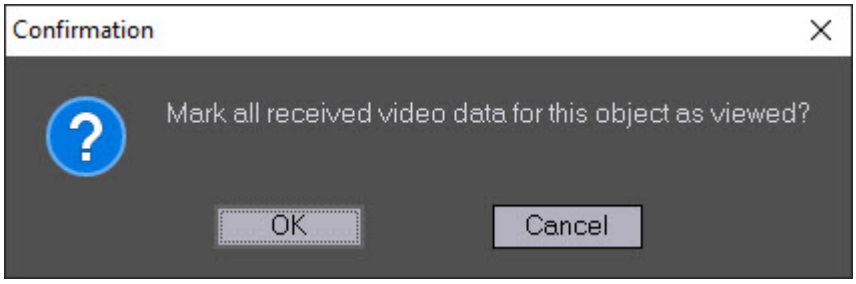
When you select the **View** menu item, a video is opened with the *<Axxon PSIM installation directory>\Vhost\SYSTEM\JPEGViewer.exe* program, and a video clip is opened with the *Axxon Player* utility. The video data status changes to **Data viewed**, and the **Viewed** column displays the time of the video data viewing.

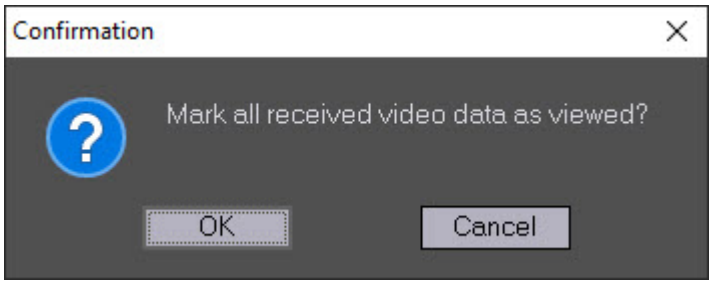
If you fail to export the video data from the video archive, then the **Status** column displays the **Archive export error** message.



To cancel the data loading with the **Downloading** or **Archive export error** statuses, click the **Cancel loading** button. After that, the status of such video data changes to **Download cancelled by user** and it is no longer displayed in the list if the default filter is set (see Setting video data list filter).

To mark all objects' video data as viewed, click the **Confirm** button. To mark all video data of all objects as viewed, click the **Confirmed all** button. The dialog window for confirming the video data viewing of one or several objects is displayed. Click the **OK** button to confirm.



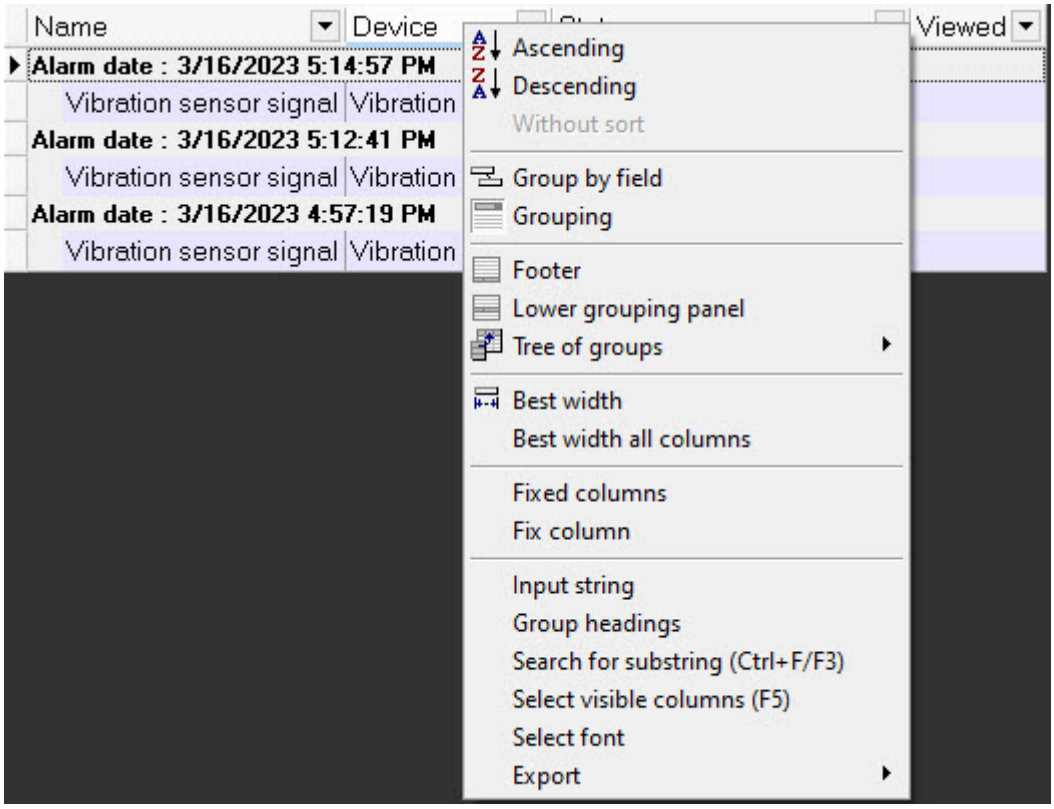


As a result, the object title is no longer displayed in yellow on the control panel. The status of all video data changes in the way specified below, and they are no longer displayed in the list if the default filter is set (see Setting video data list filter):

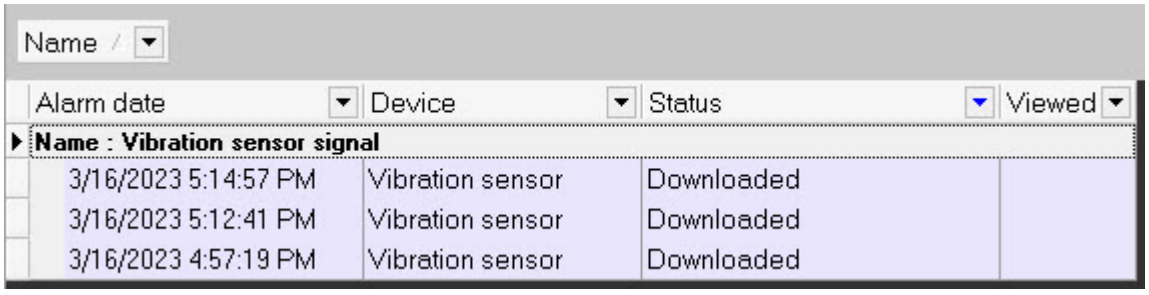
- From **Downloaded** to **Viewed**;
- From **Archive export error** to **Download cancelled by user**.

2.7.3 Video data grouping setup

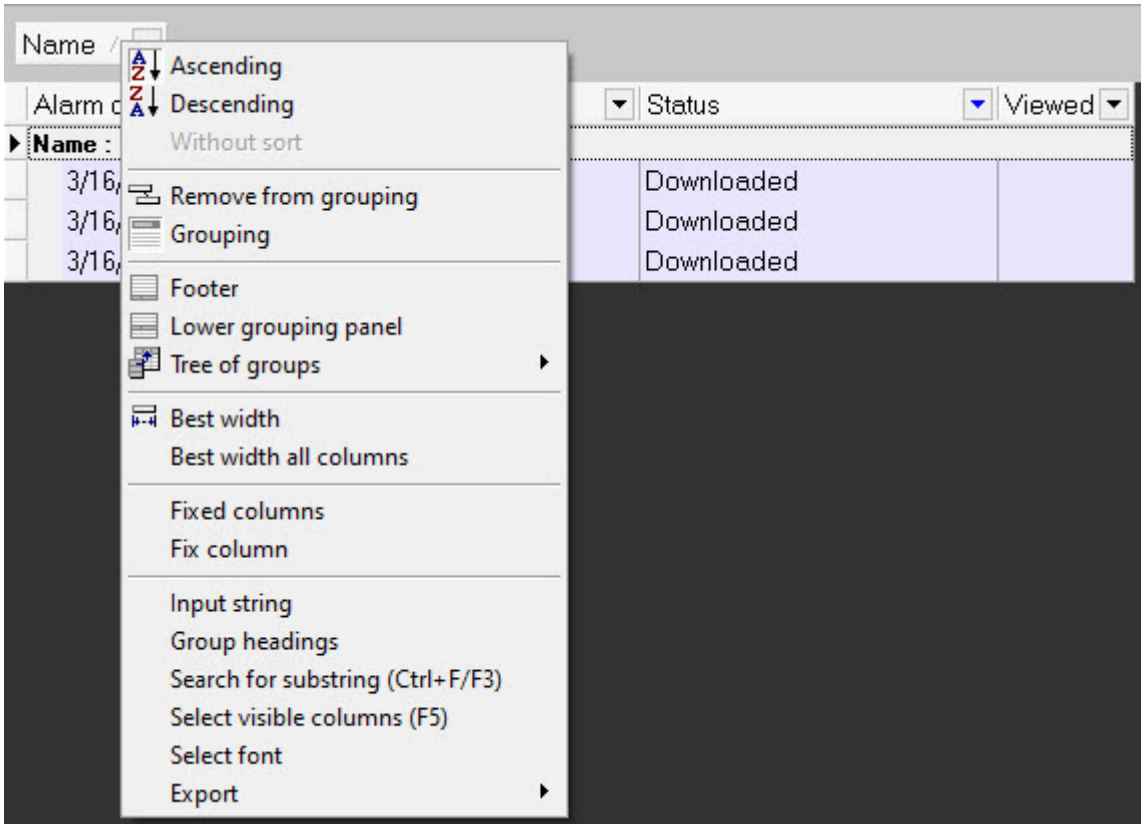
By default, video data are grouped by alarm time. If necessary, it is possible to set video data grouping by other parameters. To do so, in the context menu of a column, by which one need to group the data, select **Group by field**.



Data will be grouped by selected field. In the upper part of the dialog box the fields by which the video data are grouped are displayed - a grouping area. To view this area one can also select the **Grouping** item in a column context menu.



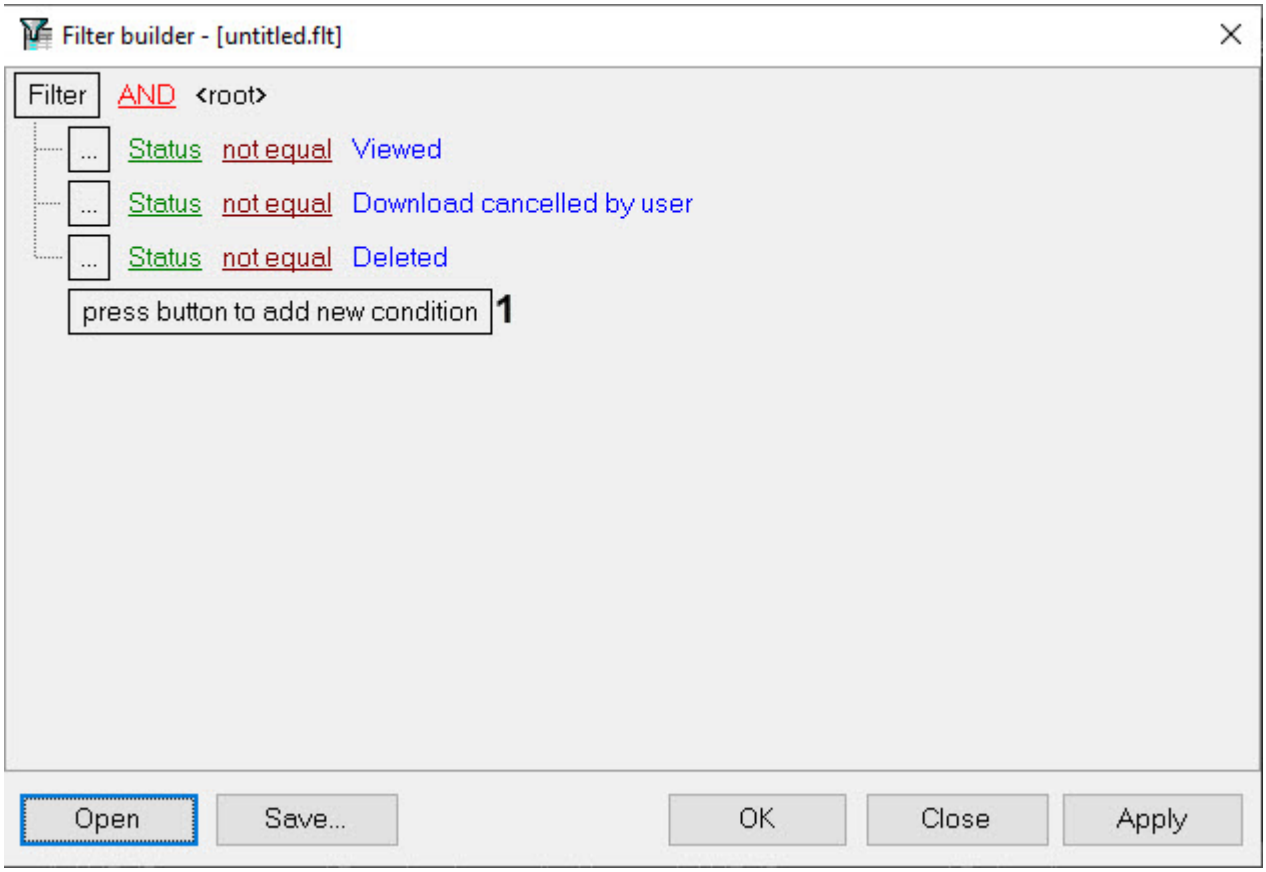
To cancel grouping by a field, right-click on it and select **Remove from grouping**.



2.7.4 Setting video data list filter

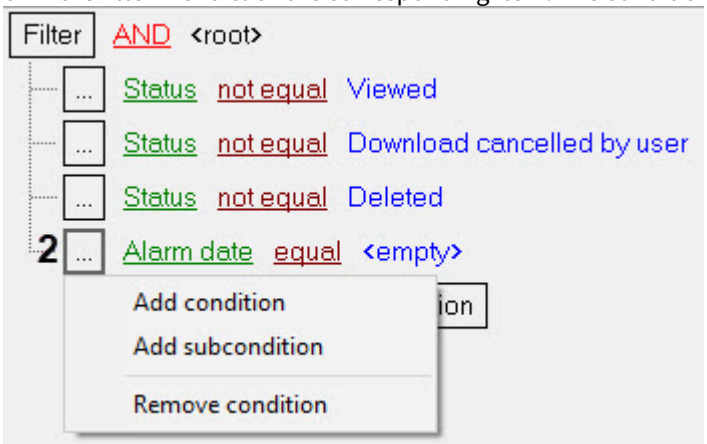
By default, in the **Video data** dialog box the data are not displayed, which has been viewed or for which downloading has been canceled by a user. To display all the video data, unset the check box in the lower left corner of the **Video data** window.

It is also possible o setup the filter for video data displaying. To open the filter setup dialog box, in the **Video data** dialog box click **Configuration...** or  . The **Filter builder** dialog box opens.



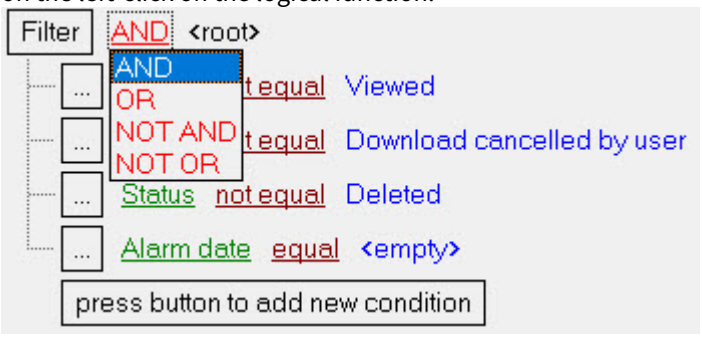
When configuring the filter, one may need to perform the following operations:

1. Add a condition or subcondition. To add a condition click the **press button to add new condition** button (**1**) or in the filter menu click the corresponding item. The condition menu opens by clicking the **...** or **Filter** (**2**).

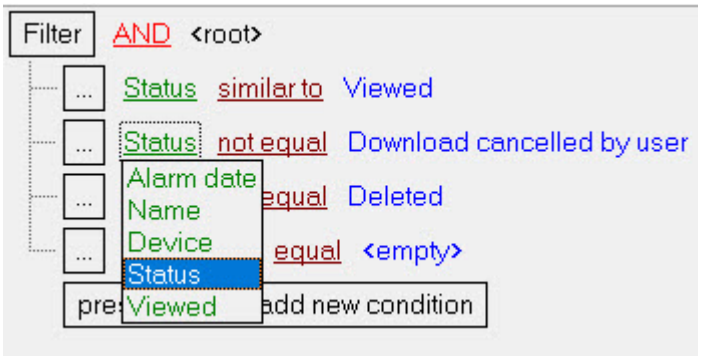


2. Remove a condition. To remove a condition, click the corresponding item in the condition menu.

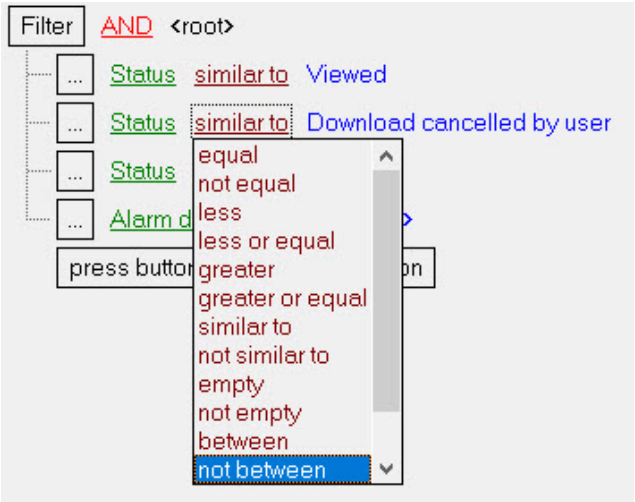
3. Select a logical function for combining conditions. A drop-down list for selecting the logical function opens on the left-click on the logical function.



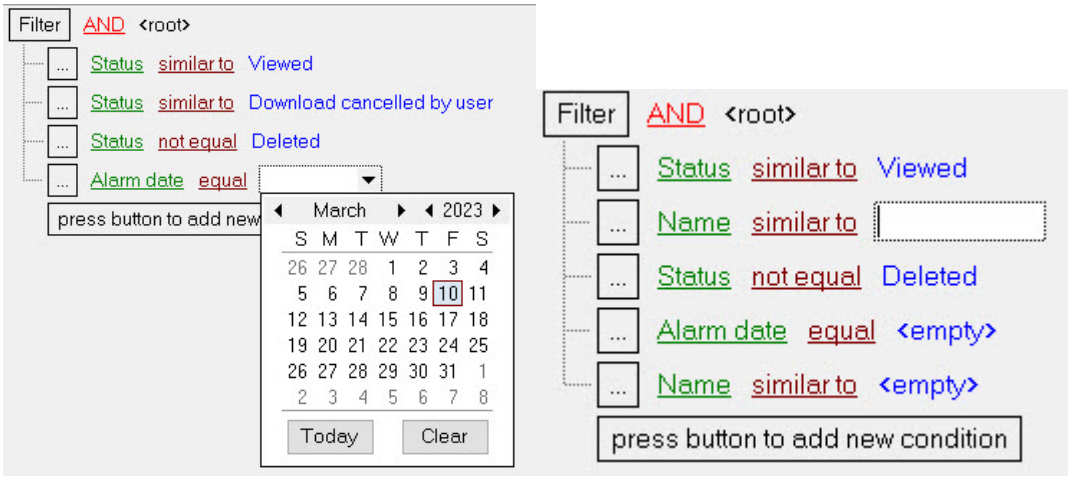
4. Select a field for comparison. A drop-down list for selecting the field for comparison opens on the left-click on the field name.



5. Select a method of comparing. A drop-down list for selecting the method of comparing opens on the left-click on the method name.



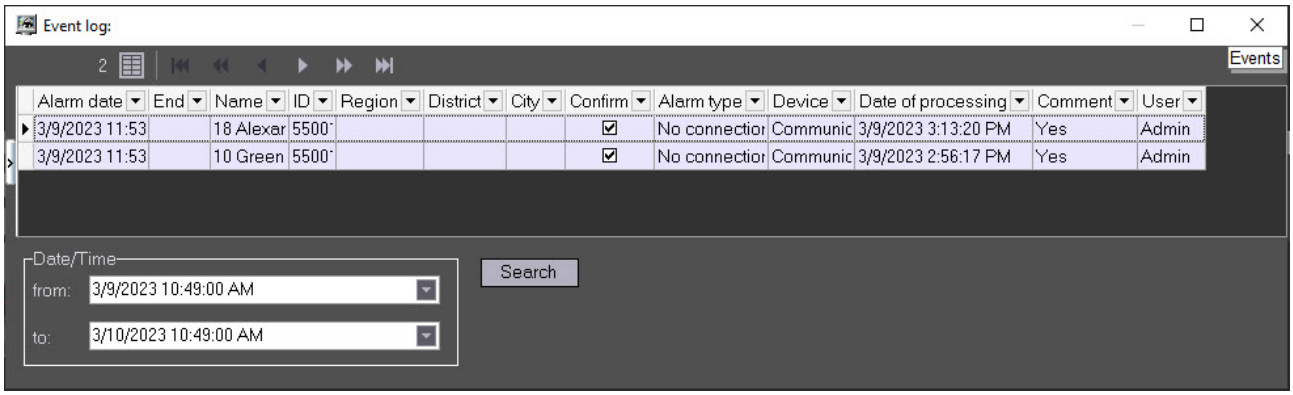
6. Select a value for comparing with. A way to select the value depends on the field type. For example, a date can be set using a calendar, a name can be entered in a field, etc.



After completing settings, the filter can be saved to a file with the .flt extension by clicking the **Save...** button. This file can then be opened using the **Open** button.

2.8 Event log

To view all the events registered in *Monitoring PSIM*, click the button (**Event log**). The **Event log** window opens. You can sort and filter this table by any column. By default, it is sorted by **Alarm date** descending, i.e. the newest events are in the top of the list.



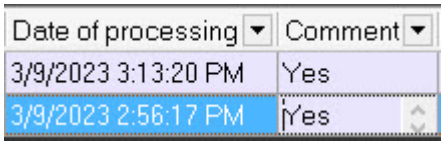
Note.

If the **Owners panel** is in use, then events from the objects that belong to the owner selected on the **Owners panel** are displayed in the **Event log** window. To view the events from all system objects, call this window on the **Owners panel** – see Viewing Event log for all objects.

2.8.1 Viewing comments

If an operator enters a multi-line comment when he closes an alarm, only the first line is shown in the **Comment** column in the **Event log** window.

To view the entire comment, left-click the "up" and "down" arrows in the cell.



2.8.2 User that confirmed an alarm

By default, all the alarms confirmed by an operator are registered by the Admin user. However, a user with certain privileges can be created in the **Users** tab. Then, when an operator starts *Axxon PSIM* using this user's account, all the confirmed events are registered using this user.

2.8.3 Event display period

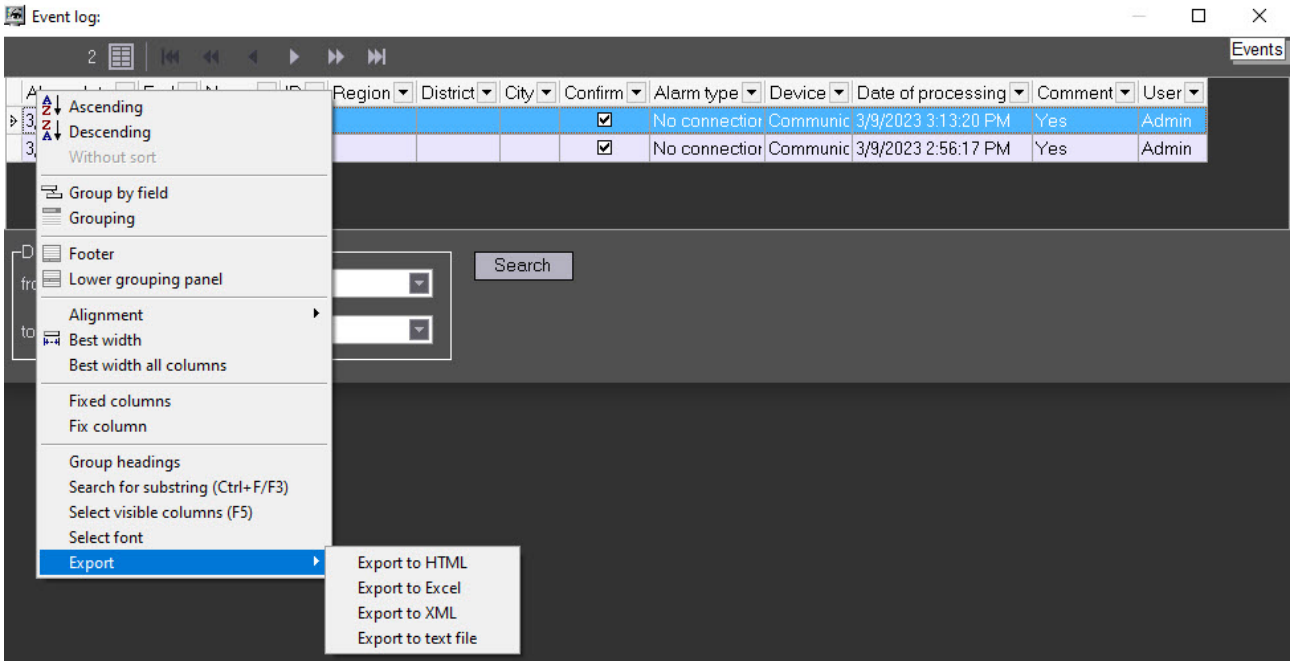
By default, the alarms for the last 24 hours are shown. To view events for any other period, set **from** and **to** date and time in the **Date/Time** group, then click **Search**.

If the number of events exceeds 10000, use the navigation buttons for viewing.

> **Note.**
>
> You can change the maximum number of events displayed in the **Event log** without navigation buttons using the **MAXRECORDSONPAGE** registry key (see Registry keys reference guide).

2.8.4 Exporting the event log

To export the event log, open the context menu for a column of the table in the **Event log** window.



2.8.5 Configuring the position of the event log's columns

The columns' context menu contains the **Best width all columns** command. Select this command to set such a width for each column that fits all the column's content.

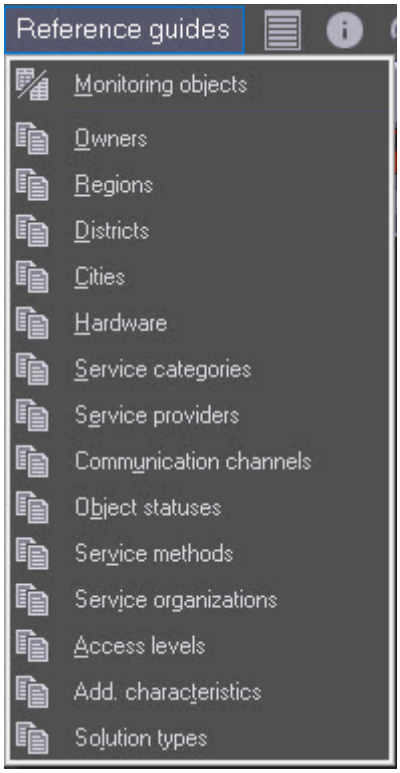
If not all the columns are visible in the **Event log** window, a scrolling GUI element appears. When you scroll, the columns that must be visible all the time (for example, **Alarm date**, **Date of processing**) are moved. To lock the position of such columns, use the **Fix column** command from the same context menu.

You change the position of the columns. To do that, click on the heading of the column that you want to move and drag it to another place.

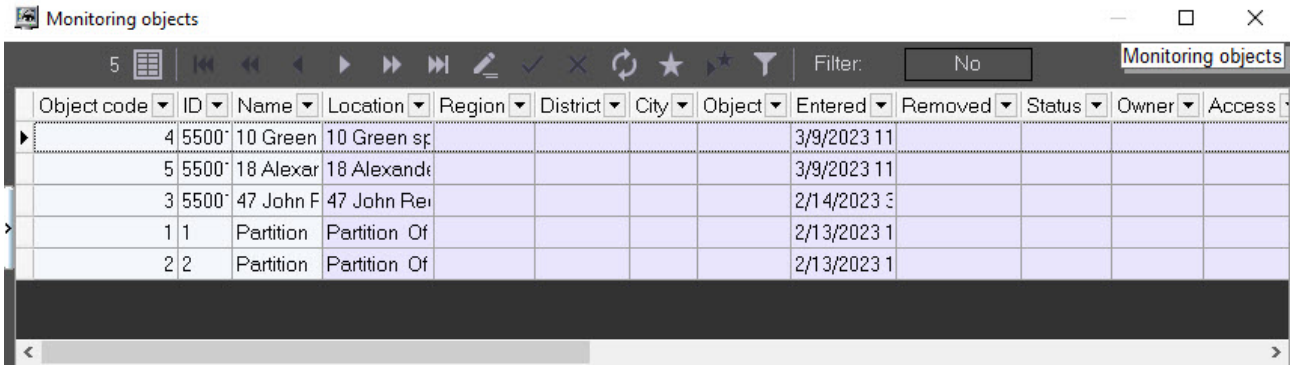
2.9 Regulatory and reference information

2.9.1 Viewing regulatory and reference information

Monitoring PSIM keeps regulatory and reference information for all objects. To view this information, click **Reference guides** and select the **Monitoring objects** menu item.

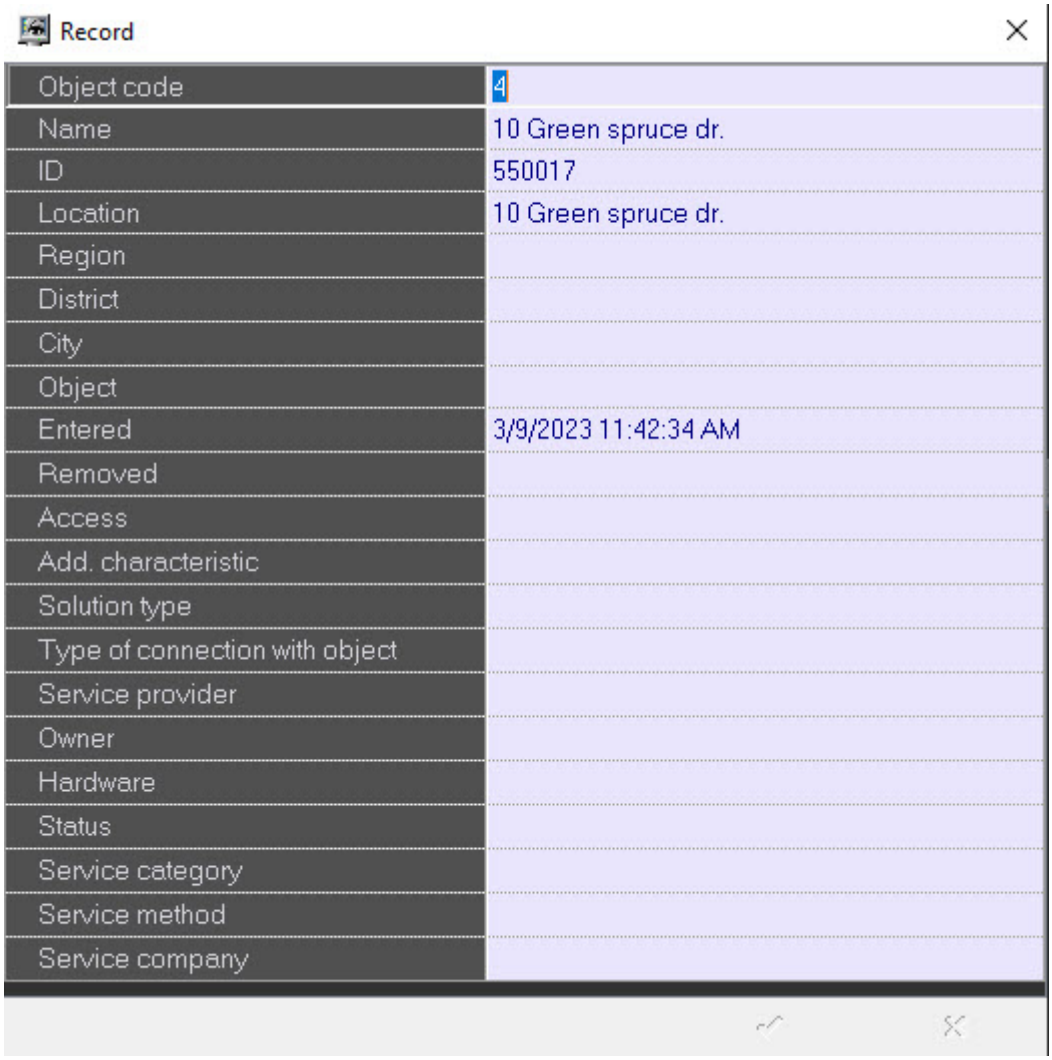


The **Monitoring objects** window opens. It contains all the objects created in the system.



2.9.2 Editing regulatory and reference information

If you double click on a record, a form opens. Here you can fill in regulatory and reference information for the object.

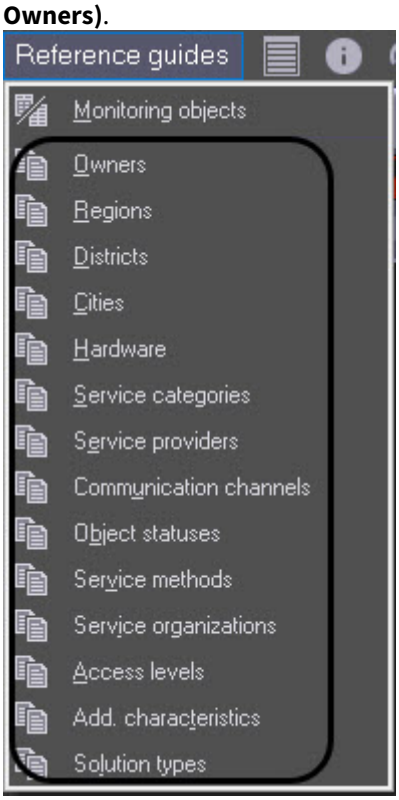


Some fields offer default values and some do not. This means that the corresponding reference book is empty and it must be filled out (see the Filling out reference books section).

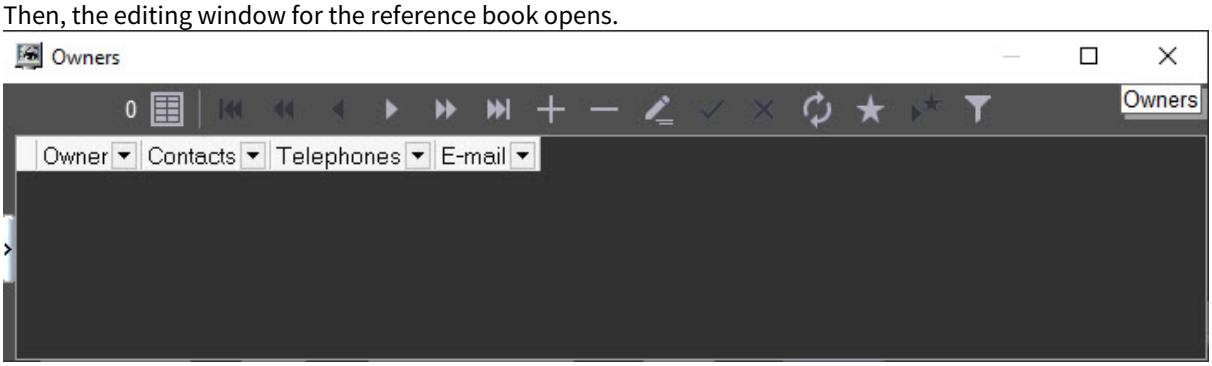
2.9.3 Filling out reference books

To fill out a reference book:

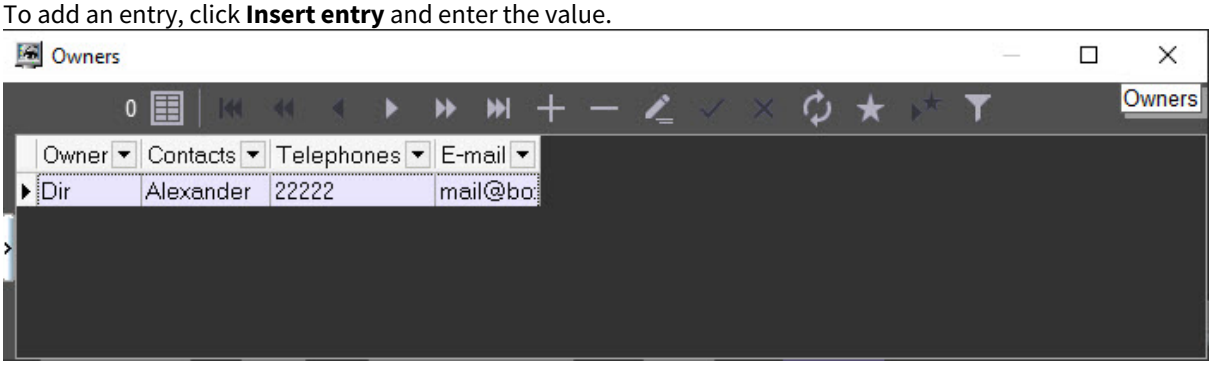
1. Click **Reference guides**. A window opens. In the window, select the required reference book (for example, **Owners**).



2. Then, the editing window for the reference book opens.



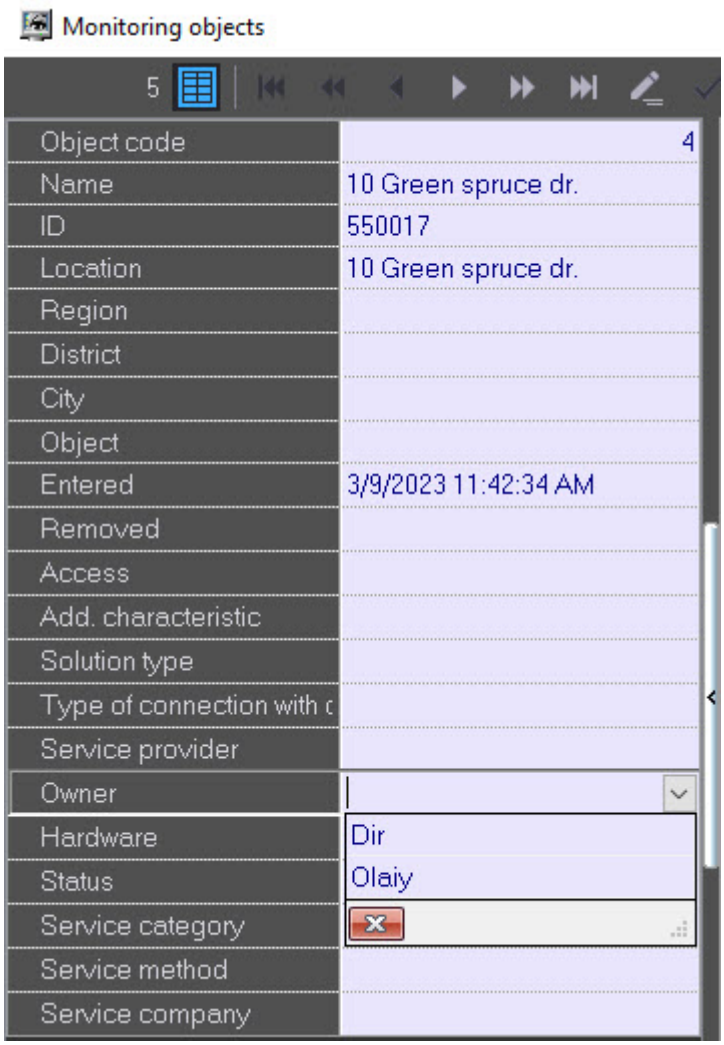
3. To add an entry, click **Insert entry** and enter the value.



4. Click **Save**.

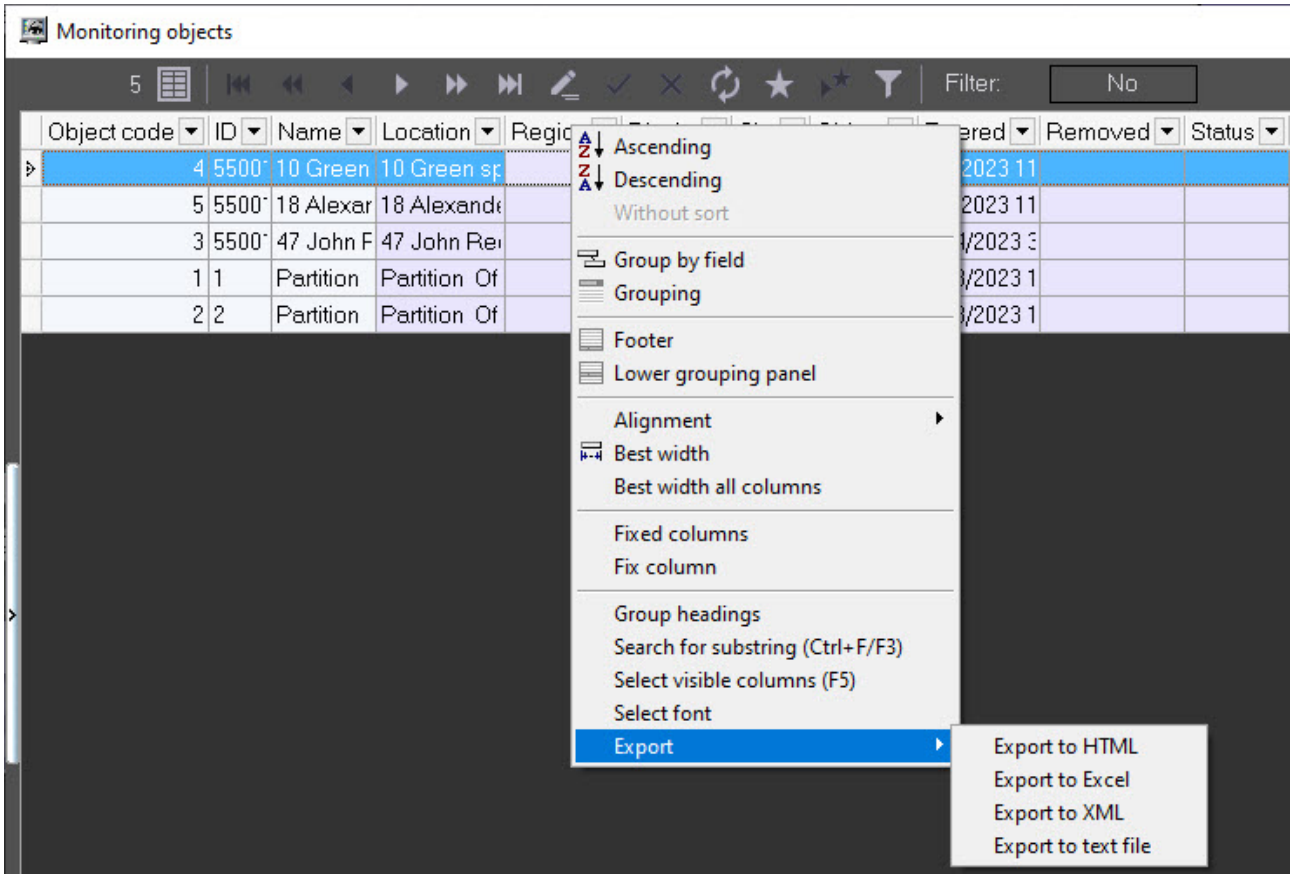
You can edit any reference book like this.

After you add a value to a reference book, you can use it for filling in the corresponding field for regulatory and reference information.



2.9.4 Column context menu in the Monitoring objects window

Right-click on the heading of any column in the **Monitoring objects** window. A context menu opens. You can use this menu for different actions, in a way similar to the actions with the event log (see Exporting the event log and Configuring the position of the event log's columns).



2.10 Viewing live video and archive from objects

You can view the live video and archives of objects in one of the following ways:

1. Viewing video from a specific camera.
2. Viewing video from all cameras created at the *Agent of Control*.
3. Viewing video from all cameras of the selected partition of control.
4. Creating user layouts and viewing video from selected cameras that are added to the **Partition of control**.

> **Note**
>
> For information on how to select cameras for displaying the live and archive video from the **Control panel**, refer to Administrator's Guide, the Configuring the camera list section.

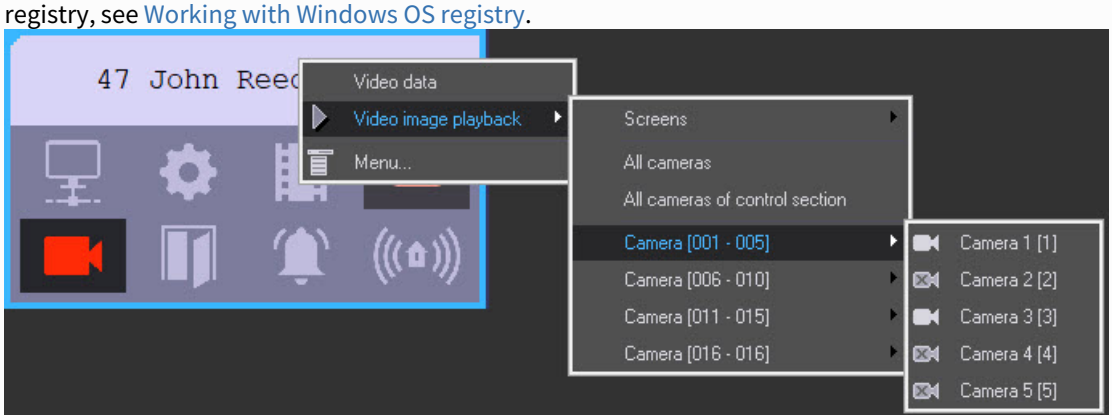
To select the mode for viewing the live video and archive, right-click the area with the object name.

The context menu with the **Video image playback** item appears, in which you must select:

- The camera name for viewing video from a separate camera;

> **Note**
>
> The large number of cameras makes it inconvenient for you to select a specific one from the list. To simplify the camera access, use grouping that you can enable using the **GroupingCameras** registry key, the set value of which is specified by the number of cameras in the group. For more

information about the registry key, see Vertical solutions. For information on how to work with the registry, see Working with Windows OS registry.

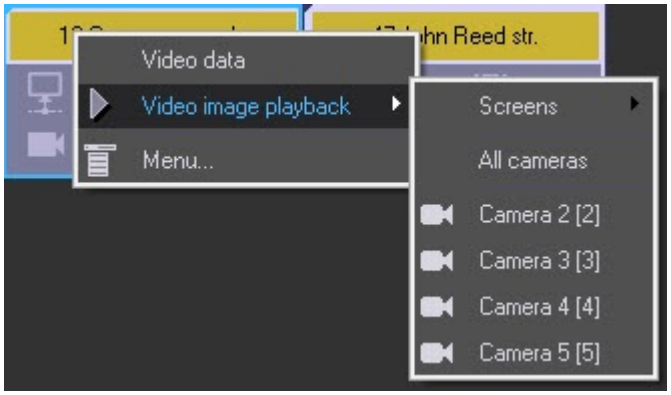


- **All cameras** to view video from all cameras created on the *Agent of Control* side;
- **All cameras of partition of control** to view video from all cameras of the selected partition of control;
- **Screens** to select a layout.

For more information on how to view video, see the corresponding sections.

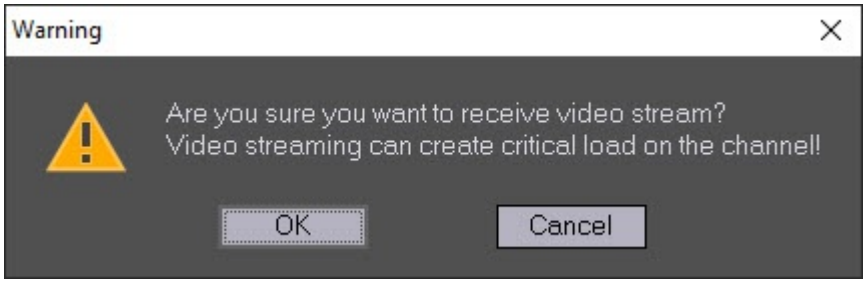
Note

- The **All cameras** menu item is available if the user has no restrictions on viewing some cameras—see Configuring the Monitoring interface object.
- The **All cameras of partition of control** menu item is available if the **Viewing live video from all cameras (add.)** option is enabled in the **Monitoring** interface object setting.
- The **Video image playback** menu item becomes available only after an object connects to *Monitoring PSIM* for the first time. Before that, this menu item is absent.



The list of cameras corresponds to the list of cameras specified when you configure the **Partition Of Control** object. Camera names in the context menu, as well as IDs specified in the square brackets, correspond to the camera names and IDs on the *Agent of Control*.

If you configure *Monitoring PSIM* in the appropriate way, then after you select the mode of viewing the live video, the warning is displayed, indicating that the video stream transmission can create a serious load on the channel. If you really want to view the live video, click **OK** in the **Warning** window. To cancel viewing the live video, click the **Cancel** button.



Attention!

You can restrict the operator's access to the camera's functional menu and its items, to the **CamMonitor** buttons, and to the **CamMonitor** control via the keyboard and mouse (for more details, see Registry keys reference guide, the Monitoring PSIM section. For details on how to work with the registry, see Working with Windows OS registry).

2.10.1 Playing back live video and archive from a specific camera

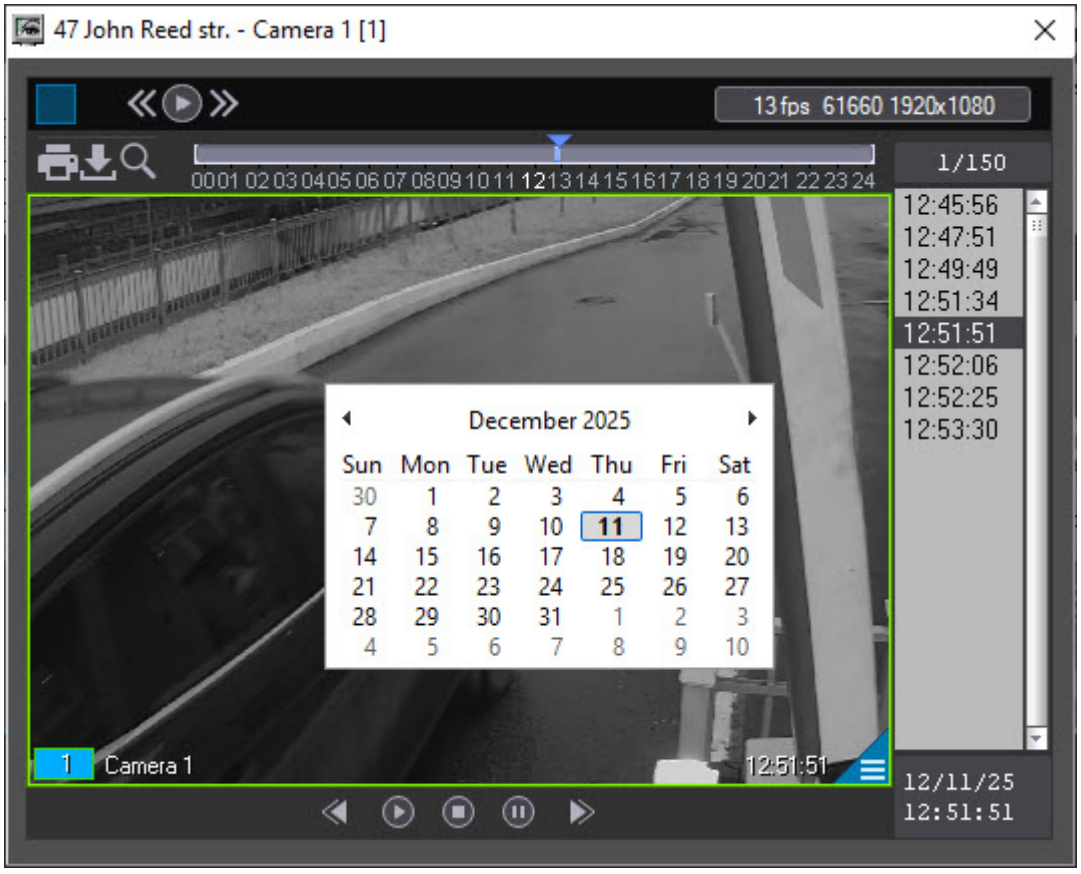
To play back live video and an archive from a specific camera, select the name of the corresponding camera in the **Video image playback** menu (see Viewing live video and archive from objects).

After you select a camera, a window opens. Wait for several seconds for the video to start.

The window's title shows the description of the object, the camera name, and the camera ID in brackets. You can access the archive using the standard method for *Axxon PSIM*.

Note

- To view live video in full-screen mode, double-click it.
- To exit the full-screen mode and go back to the window playback mode, do the following:
  - double-click the video using the right mouse button. You can use it both for specific cameras and for "All cameras" or "All cameras of the partition of control" modes;
  - double-click the left mouse button while holding down the Ctrl key. You can use it only for specific cameras or layouts.
    For details on how to work with surveillance windows and archives, see Axxon PSIM. Operator's Guide.
- When you view live video, the frame rate can be limited by the settings of the **Monitoring** interface object (the **Video stream speed** parameter), see Monitoring PSIM. Administrator's Guide.
- By default, videos and frames are exported to the <*Axxon PSIM* installation directory>\export folder. To change the folder for the exported videos and frames, specify the required path in the **StreamViewerExportPath** registry key (see Registry keys reference guide; for more details on how to work with the registry, see Working with Windows OS registry).
- By default, the StreamViewer live video viewer module runs with normal (medium) priority. To lower the priority, change the value of the **StreamViewerLowestPriority** registry key (see Registry keys reference guide; for more details on how to work with the registry, see Working with Windows OS registry).

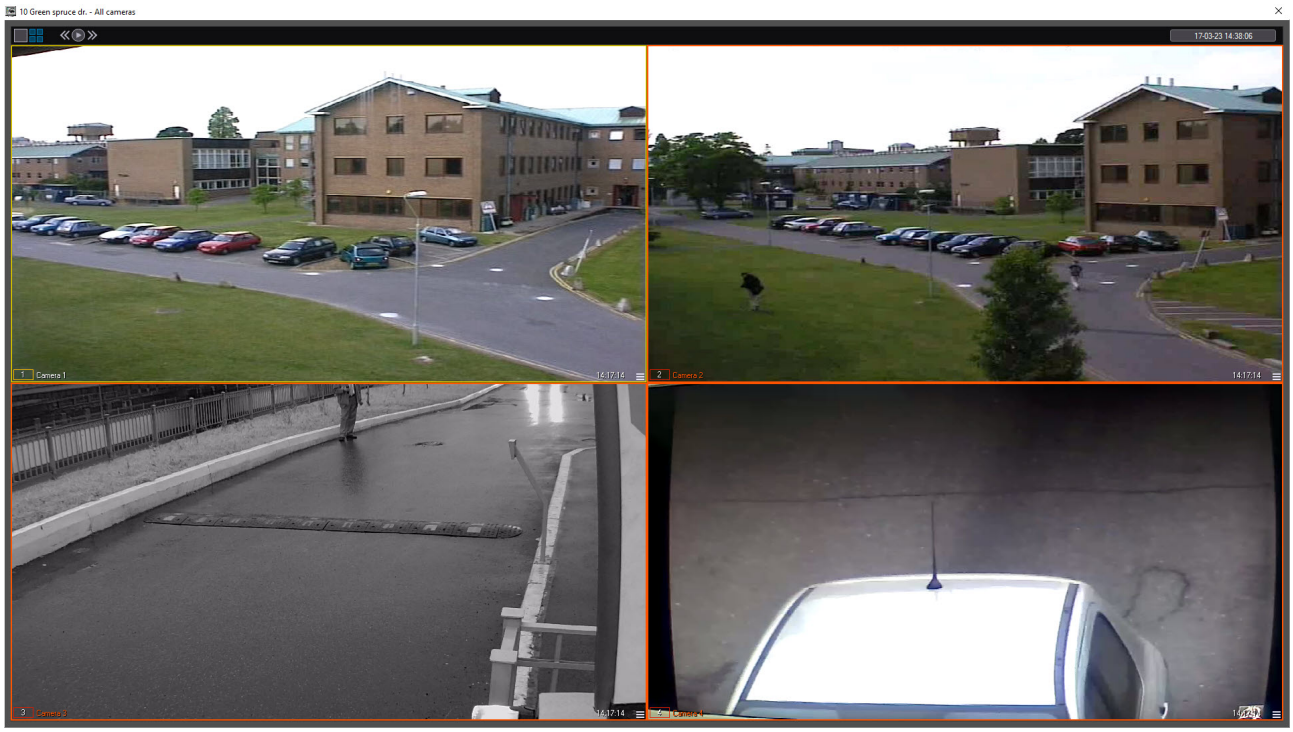


2.10.2 Viewing live video and archive from all cameras created on the Agent of Control

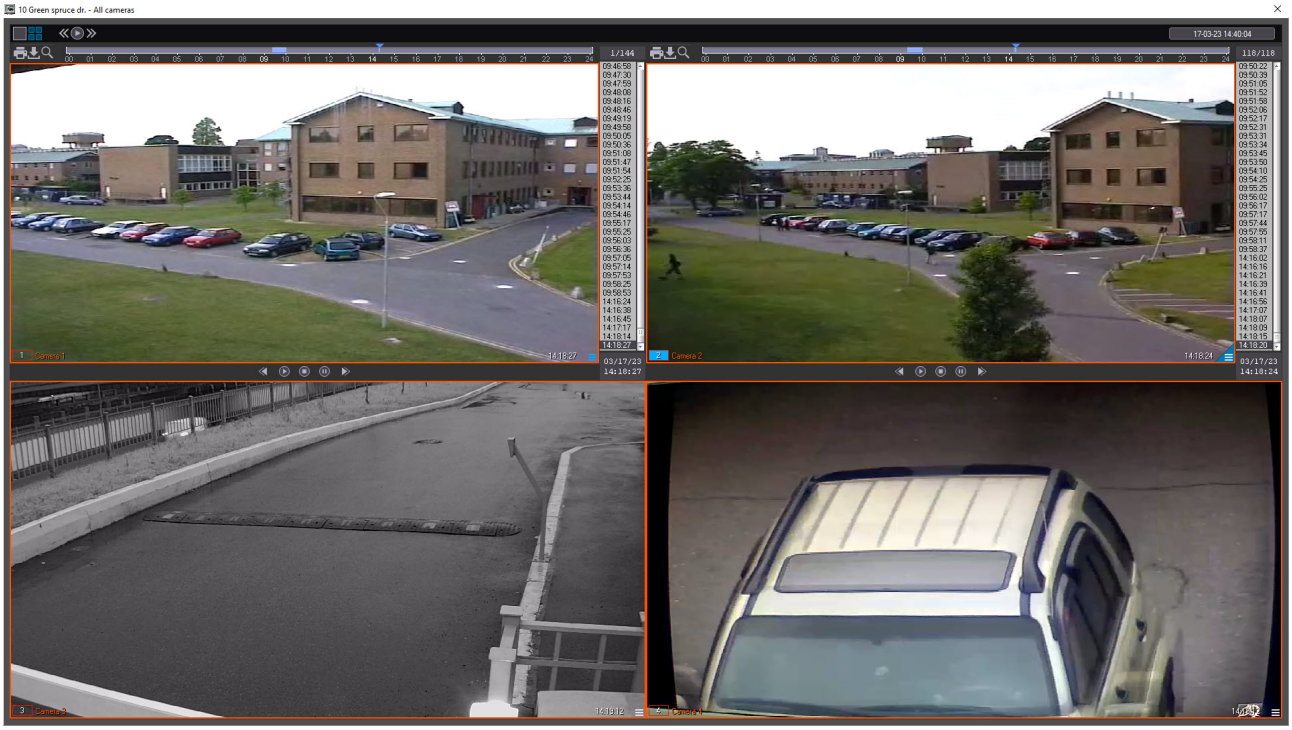
To play back live video and archive from all cameras created at the *Agent of Control*, select the **All cameras** item in the **Video image playback** menu (see Viewing live video and archive from objects).

> **Note**
>
> The **All cameras** menu item is available if the user has no restrictions on viewing some cameras — see Configuring the Monitoring interface object.

As a result the dialog box with viewing tiles for all cameras created at the *Agent of Control*.



Use the button in the bottom right corner of the viewing tile to enter the archive mode and the button to exit the archive mode.

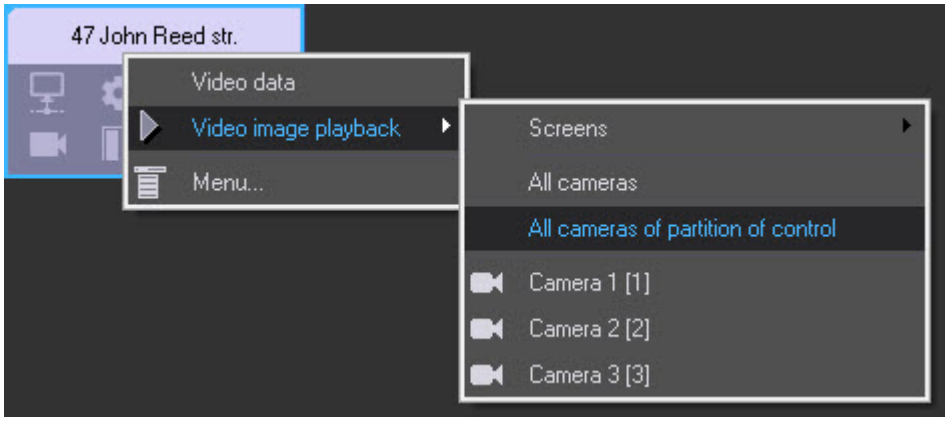


Live video and archive playback control functions are the same that those used in the Video monitor in *Axxon PSIM*. One can switch between viewing tiles as well as start manual and auto paging. Find details on these functions in *Axxon PSIM software package. Operator's Guide*. The latest version of this document is available in AxxonSoft documentation repository.

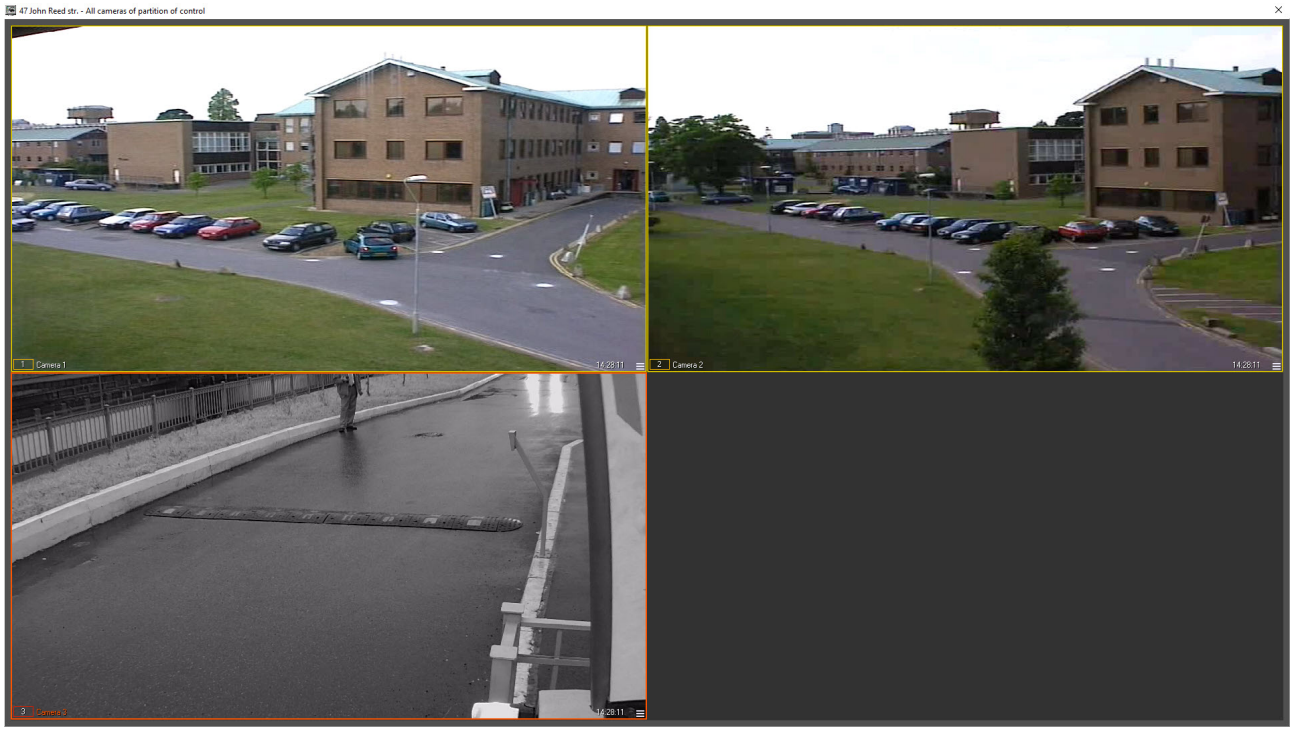
2.10.3 Viewing video from all cameras of the selected partition of control

> **Important!**
>
> To be able to view video from all cameras of the selected partition of control, it is necessary to set the **Viewing live video from all cameras (add.)** check box when configuring the **Monitoring** interface object (for details, see Configuring the Monitoring interface object).

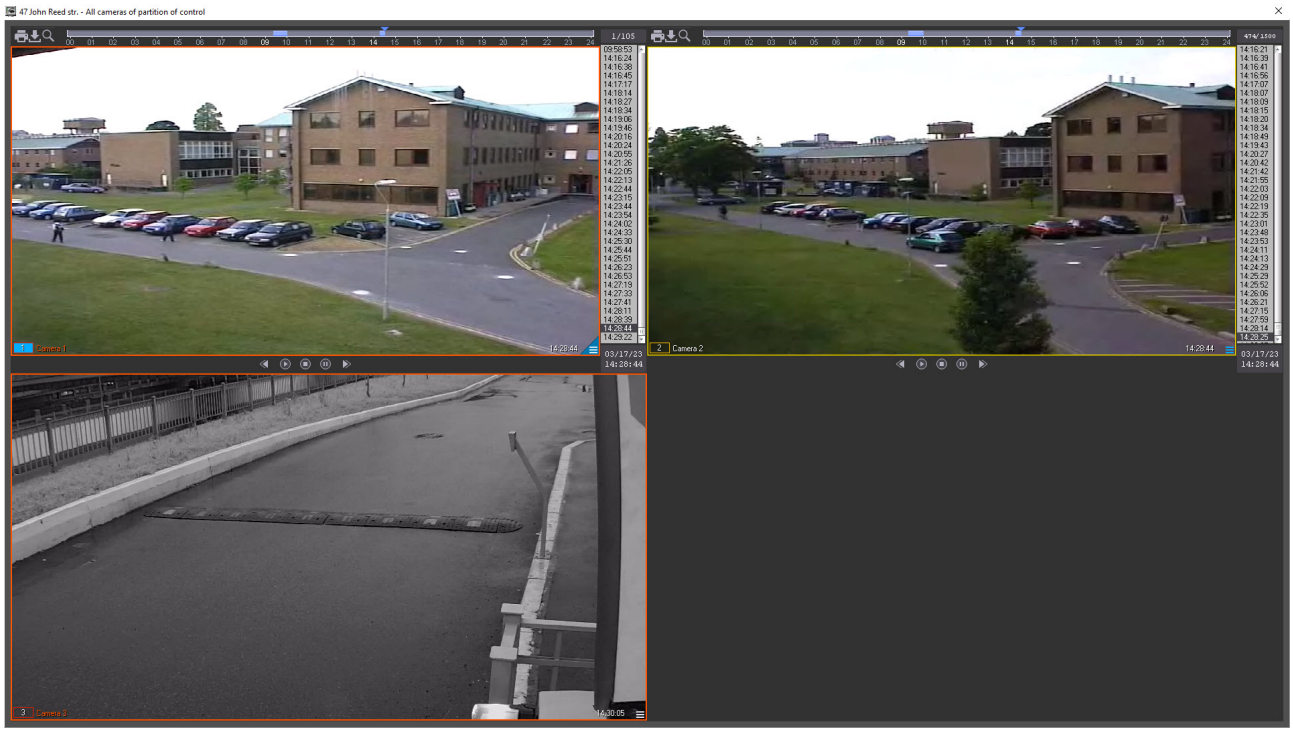
To view video from all cameras, it is necesary to select the **All cameras of partition of control** item in the object's **Video image playback** context menu (see Viewing live video and archive from objects).



As a result the dialog box with viewing tiles for all cameras of the selected partition of control will be displayed.



Use the button in the bottom right corner of the viewing tile to enter the archive mode and the button to exit the archive mode.



Live video and archive playback control functions are similar with the ones used in the Video monitor in *Axxon PSIM*, except it is not possible to switch between viewing tiles and start manual and auto paging. Find details on these functions in *Axxon PSIM software package. Operator's Guide*. The latest version of this document is available in AxxonSoft documentation repository.

2.10.4 Playing back live video and archive from selected cameras

Creating, editing and deleting layouts

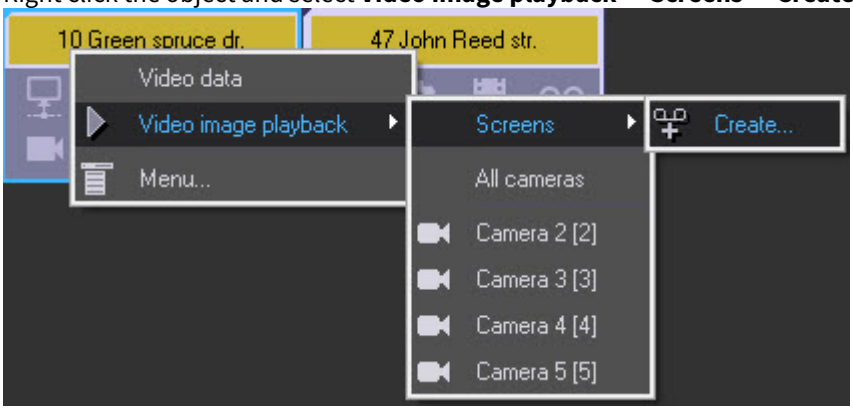
On the page:

Layout represents the list of cameras the user can select in order to play back live video and archive (see Viewing live video and archive from objects).

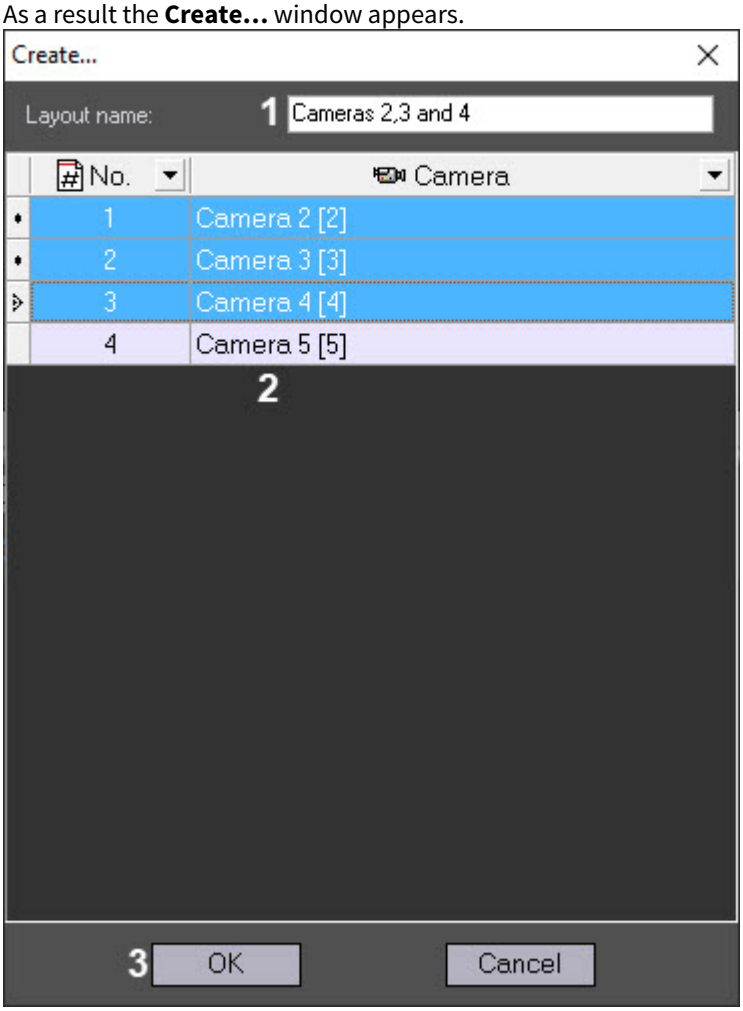
Creating layout

Create a layout as follows:

1. Right click the object and select **Video image playback -> Screens -> Create...** in the context menu.

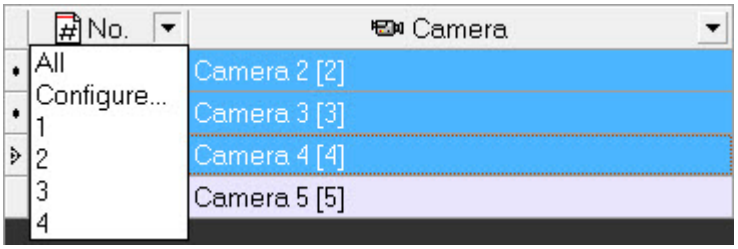


2. As a result the **Create…** window appears.

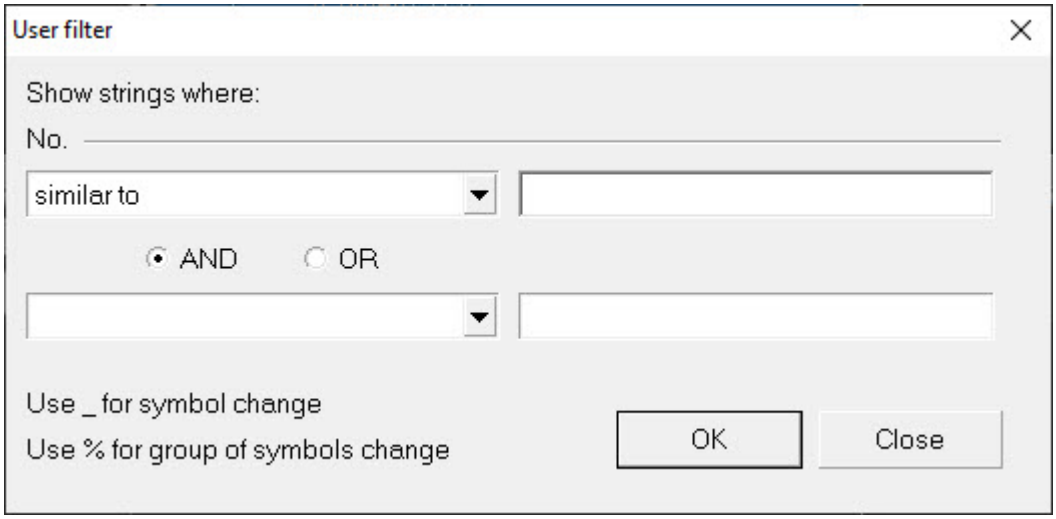


3. Specify the **Layout name** (**1**).
4. Select one or several cameras to be added to the layout. To select several cameras left click the corresponding lines in the table and hold down the Ctrl key on the keyboard (**2**).

   The filter can be applied to the camera list. Click the button in the column title and select the filter values:



   The **User filter** box appears when selecting the **Configure** item – one can set conditions to show cameras in the list.



5. Click the **OK** button (**3**).

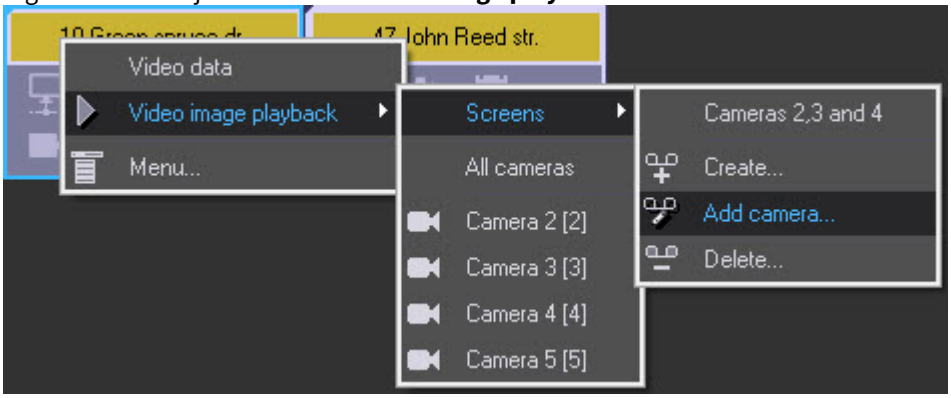
As a result the created layout is available in the **Video image playback -> Screens** menu.

The layout is now created.

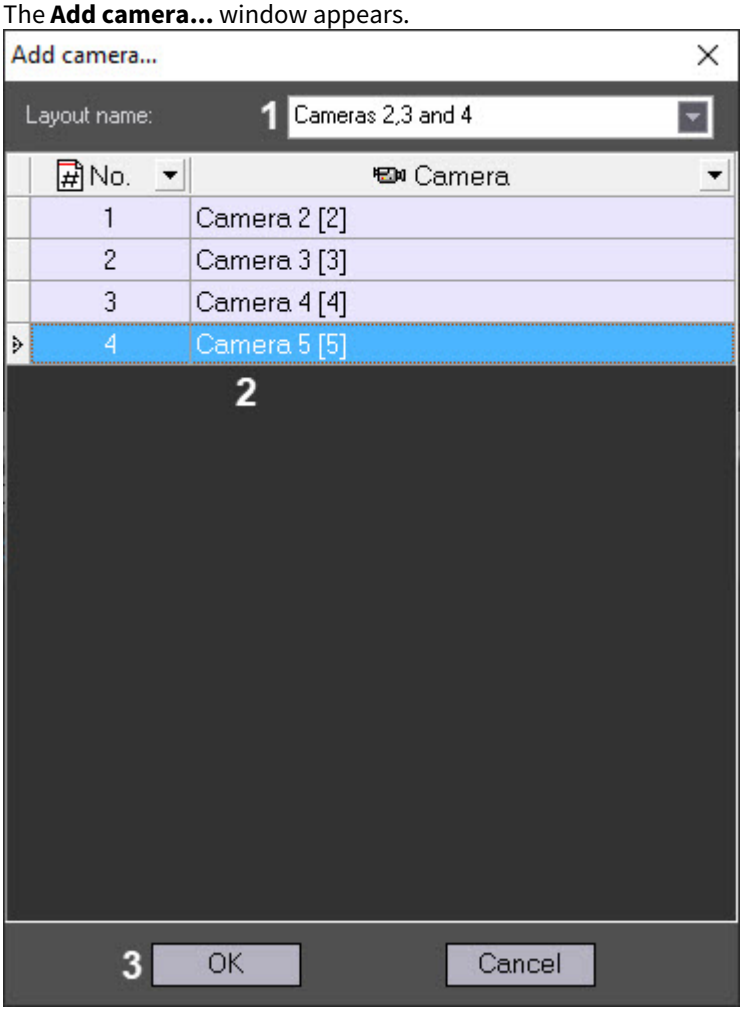
Adding camera to layout

Add a camera to the layout as follows:

1. Right click the object and select **Video image playback -> Screens -> Add camera...** in the context menu**.**



2. The **Add camera...** window appears.



3. In the **Layout name** dropdown list select the layout the cameras are to be added to (**1**).
4. Select one or several cameras to be added to the layout. To select several cameras left click the corresponding lines in the table and hold down the Ctrl key on the keyboard (**2**).

> **Note**
>
> The camera list filter can be applied the same way as when creating the layout – see Creating layout above.

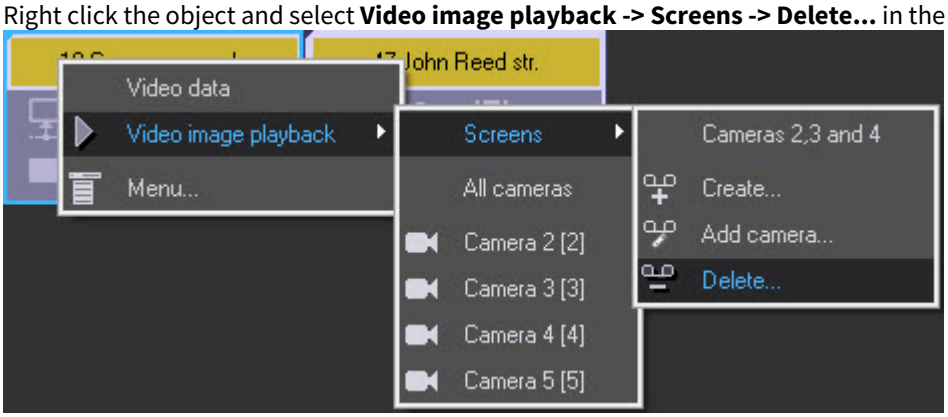
5. Click the **OK** button (**3**).

Cameras are now added to the layout.

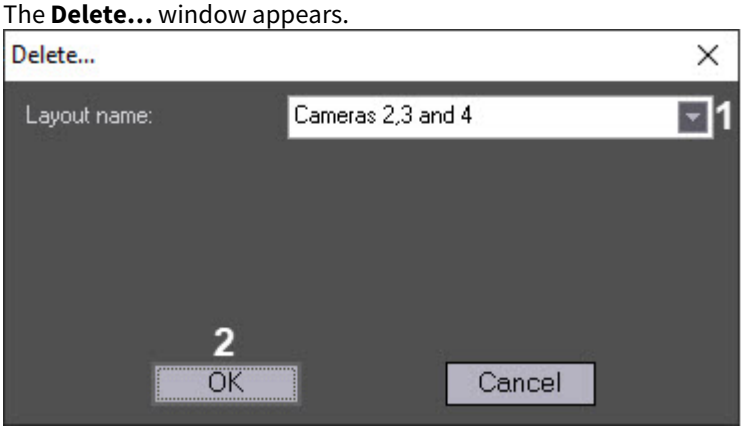
Deleting layout

Delete the layout as follows:

1. Right click the object and select **Video image playback -> Screens -> Delete...** in the context menu.



2. The **Delete...** window appears.



3. In the **Layout name** dropdown list select the layout that is to be deleted (**1**).
4. Click the **OK** button (**2**).

The layout is deleted.

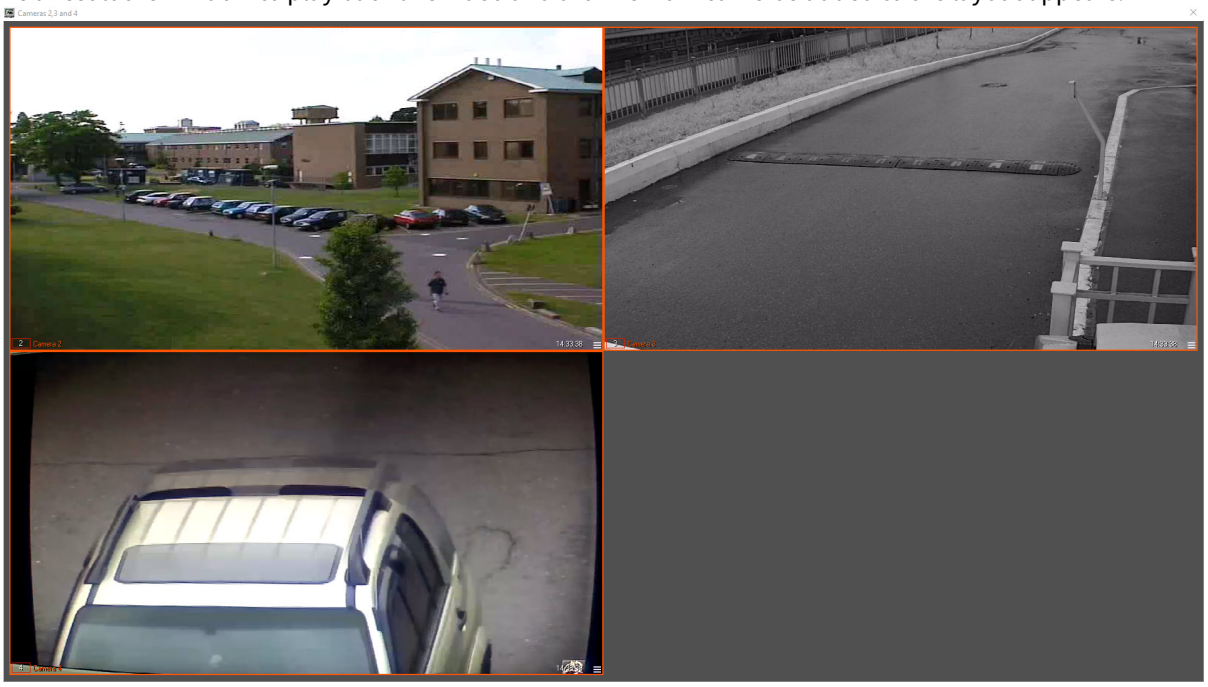
Selecting layout for display

Select the layout that is to be displayed as follows

1. Right click the object on the control panel, select **Video image playback -> Screens** in the context menu and select the name of the required layout in the menu.

> **Note.**
>
> If there is no layout in the list, then create one – see Creating, editing and deleting layouts.

2. As a result the window to play back live video and archive from cameras added to the layout appears.



The camera control functions on the layout are the same as those used in the Video surveillance monitor. In particular, it is possible to change the position of the Video surveillance windows on the layout by dragging with the left mouse button. Such changes will be saved after the layout is closed and displayed when it is opened again.

In addition, the function of gradually increasing the Video surveillance window by double clicking with the left mouse button is supported. For more information, see Altering the number of windows in the *Axxon PSIM software package. Operator's Guide*. The most current version of this document is available in the AxxonSoft documentation repository.

Example

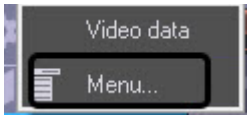
For example, there is a layout of 9 cameras (3x3). When you double-left-click the upper left camera, its image will not increase to the full screen, but will take the position of the nearest right and lower camera. If you double-left-click again, the image will be expanded to the entire Video Surveillance Monitor window.

Use the button in the bottom right corner of the viewing tile to enter the archive mode and the button to exit the archive mode.

Archive playback control functions are the same that those used in the Video monitor in *Axxon PSIM*. Find details on these functions in *Axxon PSIM software package. Operator's Guide*. The latest version of this document is available in AxxonSoft documentation repository.

2.11 Starting external applications from the Control panel

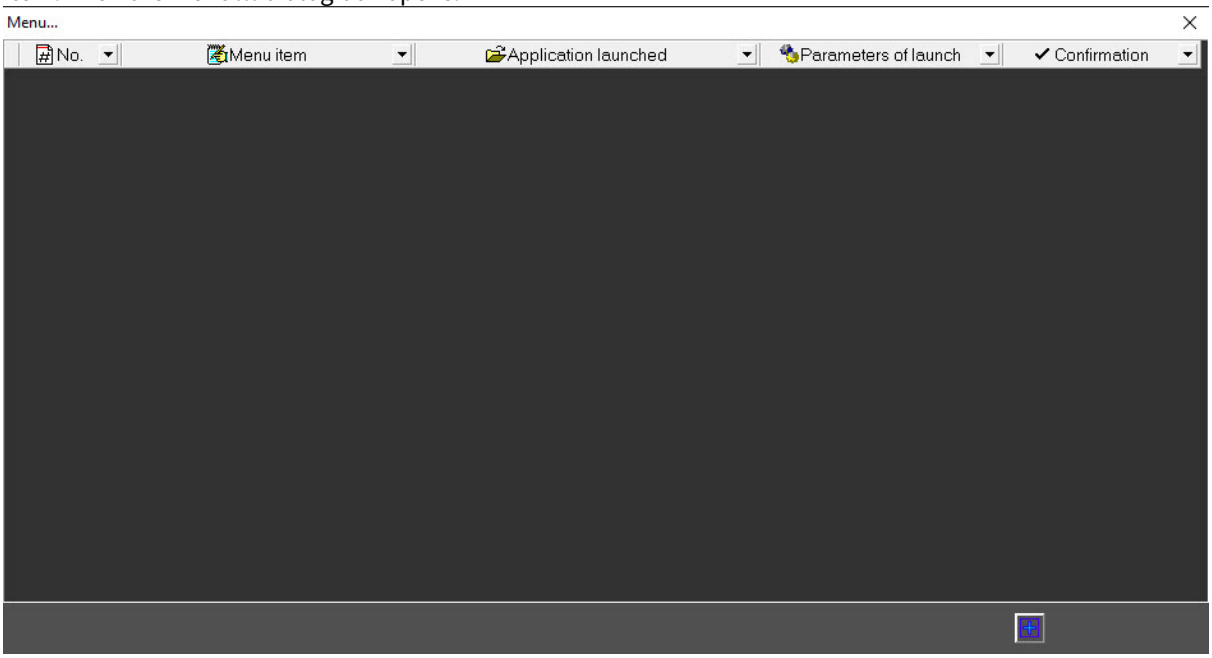
You can use the **Menu**... item of the context menu to launch external applications from the **Control panel**.



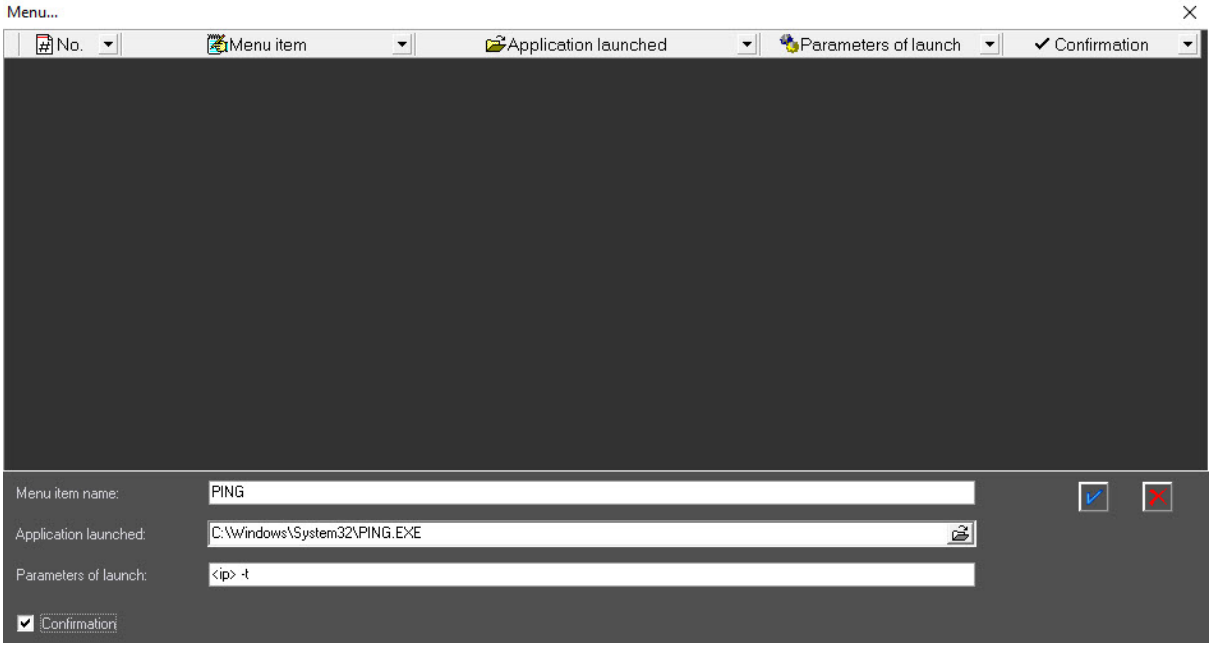
You use the IP address of any object.

For example, if you want to ping any object, follow these steps:

1. Right-click the area that contains the object's name. The context menu opens. Select the **Menu...** menu item. Then the **Menu...** dialog box opens.

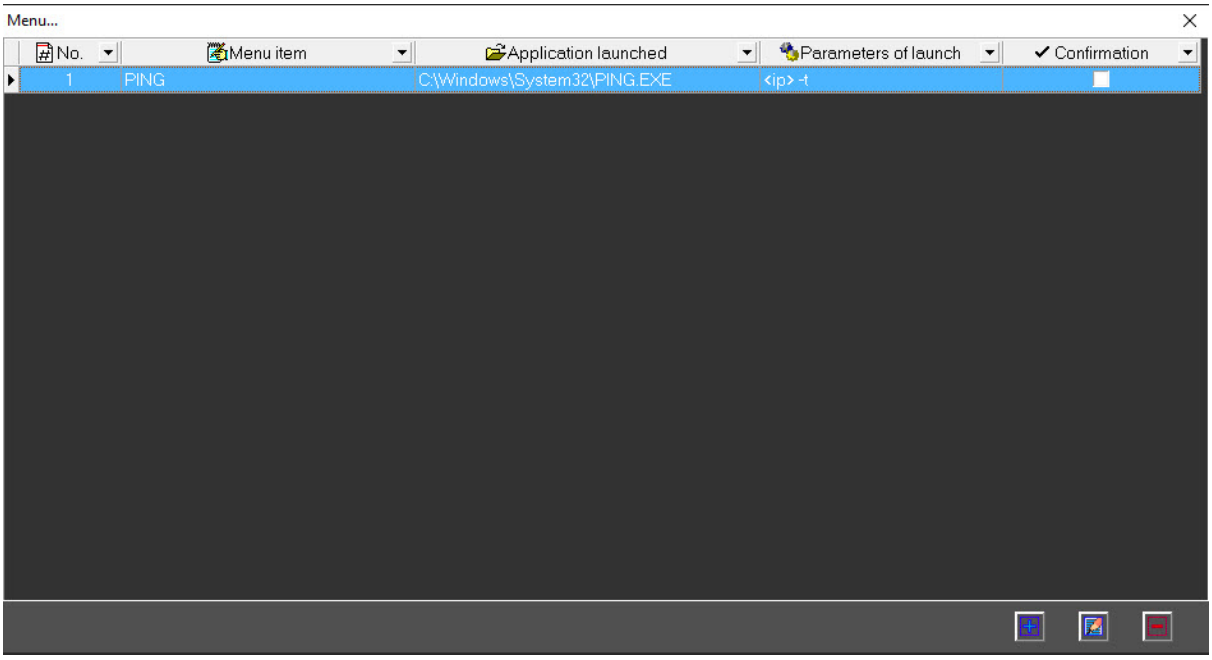


2. In this dialog box, click the button  (**Add record**) and enter values as shown in the following figure.



The **<ip>** string is a reserved expression. When application is called, the real IP address is inserted. Type this string in lowercase.

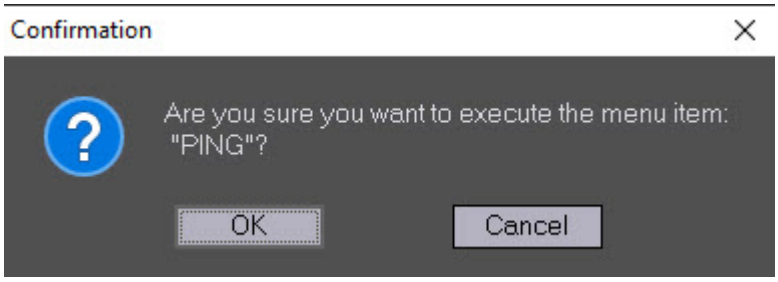
3. Click the button  (**OK**). The **Menu...** window shows a new entry that describes the new context menu item.



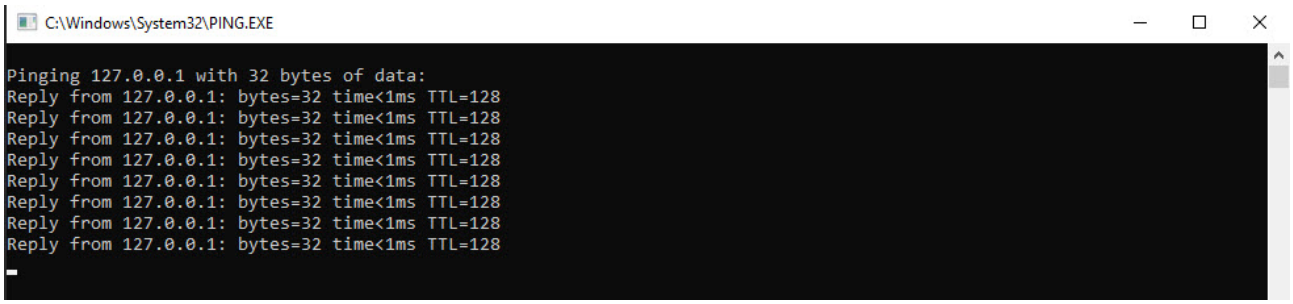
Now, when you right-click on the area with the object name, a context menu will appear with the newly

created **PING** item.

If the **Confirmation** checkbox was set, the dialog box opens to confirm the command execution when you select this menu item. Click **OK** to confirm or **Cancel** if you do not want to execute the action.



After confirmation, the **PING.EXE** program is started in a separate window.



For objects that connect to *Monitoring PSIM* via RS-232 or objects that never connected to it yet, the 127.0.0.1 value will be used instead of **<ip>**.

The same way you can create menu items that start other external applications (such as Radmin, etc.).

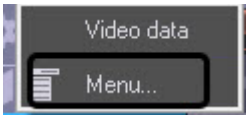
2.12 Executing ad hoc command on the Agent of Control by the operator of Server of Control

Ad hoc commands can be executed on the *Agent of Control* using the **Menu...** context menu item on the **Control panel**.

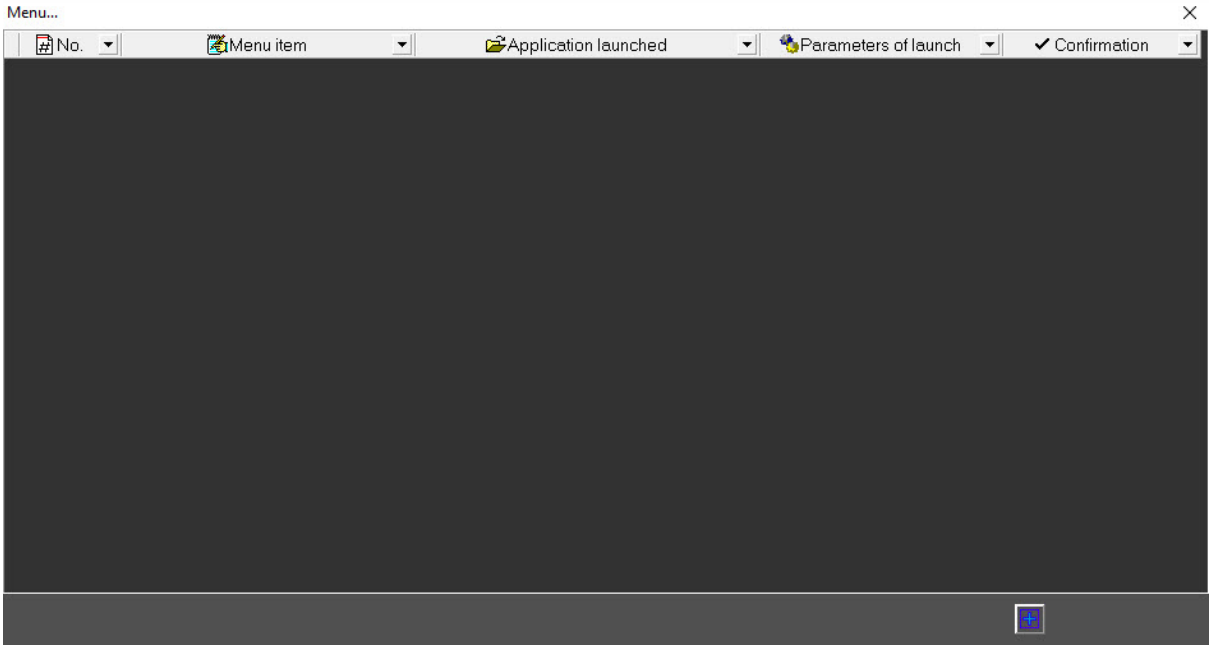
> **Important!**
>
> Scripts to process incoming commands are to be created on the *Agent of Control*. See Sample script for processing Server of Control command on Agent of Control section of Administrator's Guide.

Configure command sending on the *Server of Control* as follows:

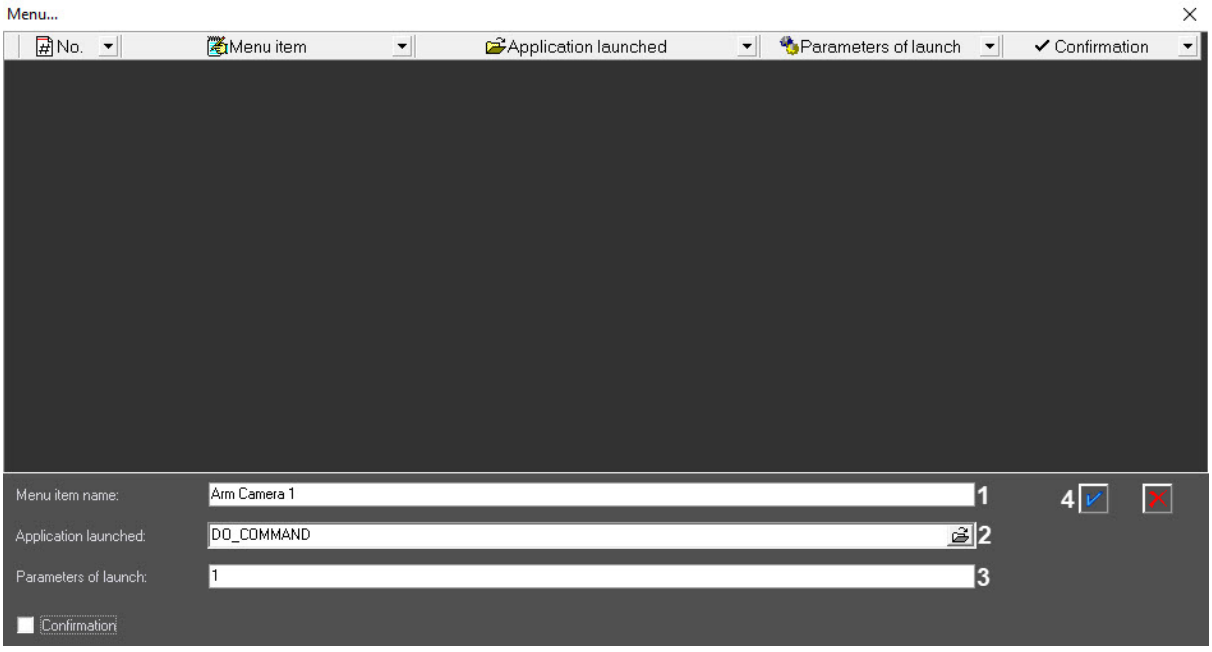
1. Right-click the area that contains the object's name and select the **Menu...** item in the appeared context menu.



2. The **Menu...** dialog box opens.

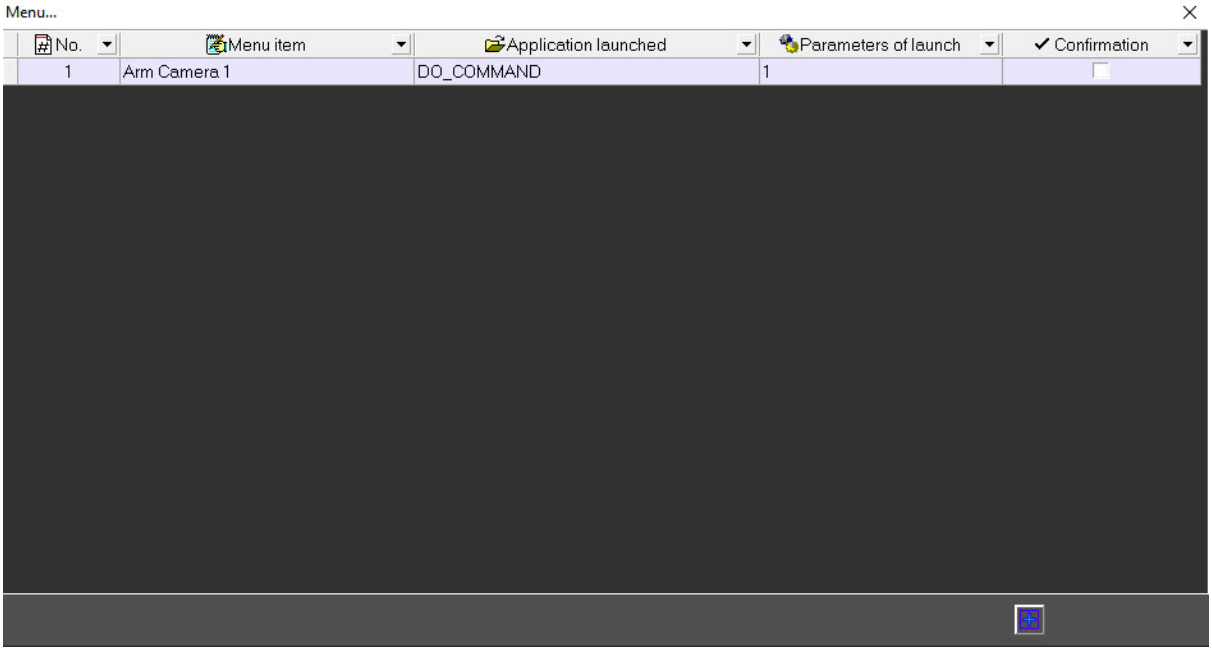


3. Click the  button to add a new men item. The fields used to configure menu item will be displayed.



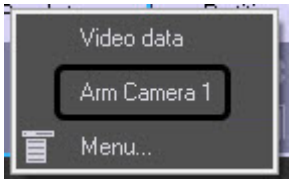
4. In the **Menu item name** field enter the menu item name that will be displayed in the context menu on the **Control panel** (**1**).
5. Enter DO_COMMAND in the **Application launched** field (**2**).
6. Enter the value for param0<> parameter in the **Parameters of launch** field (**3**). Using the value of this parameter in the script created on the *Agent of Control* one can find out what command is to be executed.

7. Click the  button (**4**). The command will be added to the list of commands in the **Menu...** dialog box.



8. Repeat steps 3-7 for all required commands and parameters.
9. Close the **Menu...** dialog box.

The added commands will be displayed in the context menu on the **Control panel**.



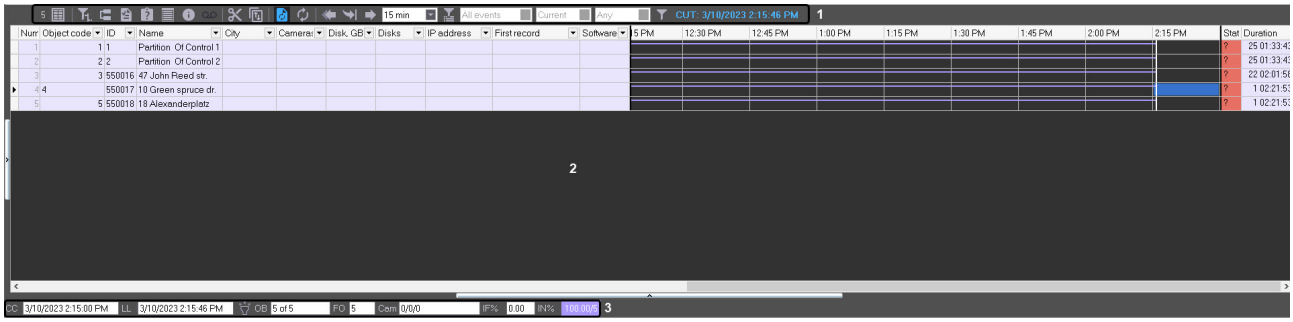
Command sending is now configured on the *Server of Control*.

3 Log panel

3.1 Log panel interface

The **Log panel** has three main parts:

1. Control buttons panel.
2. Working area.
3. Status bar.



> **Note**
>
> By default, the dark interface theme is set for the **Log panel**. To set the light interface theme, change the **OldLogPanel** parameter value to **1** (for details on this parameter, see Registry keys reference guide. For details on working with the registry, see Working with Windows OS registry).

3.1.1 Color definitions for events

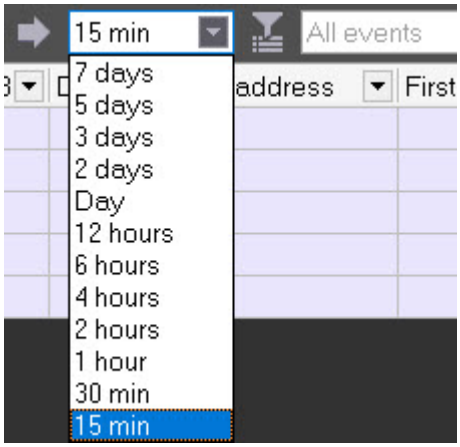
In the **Log panel,** alarms are shown as color stripes in a table. Each alarm type has its own color. You can learn the meaning of the colors by clicking the button  (**Information about symbols**). When you click this button, the information window opens.

Vertical stripes mean short-term errors and horizontal stripes mean long-term errors (hardware failure).

Note.

Alarm types are described in the Alarm types section.

The length of a stripe shows the alarm's duration in accordance with the selected scale. The scale is a time period for one column.



3.1.2 Moving through the list of alarms

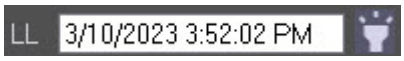
Each column's heading always contains the start time for the column's time period. Use the Left and Right keys and the horizontal scrollbar to move to any date within the loaded data.

To quickly move to the required date and time, use the button  (**Go to date**). Use the button  (**To end**) if you want to move to the end time of the last download. Use the button  (**To beginning of current error**) if you want to move to the start of the current error.

The data is loaded to the system at certain times only, so there is a need to refresh the data shown on the screen automatically. For that, you can use the button  (**Auto update**). If this button is in the pressed state, new alarm data is searched in the database. If such data is found, the view is refreshed and you can see the end of the shown data.

The date and time of the last update of the data displayed on the screen are indicated in the upper right corner of the window in the current update time (**CUT**) field (for more information on **CUT**, see Current Update Time).

If the **Auto update** button is in the unpressed state, the current view can get outdated. In this case, the date of the last download exceeds the **CUT**. To show this, a "bulb" flashes in the status bar.



The "bulb" shows that the current view is outdated and that you can refresh it with the button  (**Update date**). The list is also refreshed when you move to the end, select and apply a filter, and in many other cases.

3.1.3 Ignoring object

Ignored objects are never shown on the screen. For how to work with ignored objects, see the Ignoring objects section.

3.1.4 Status bar

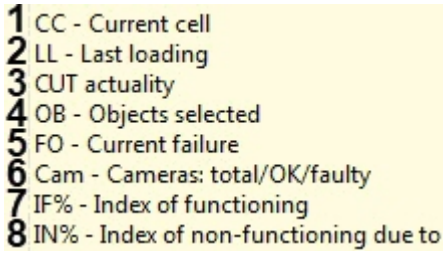
On this page:

General information

The status bar displays:

- **CC** - the start of the displayed period for the current cell column.
- **LL** - the time when the data was last loaded into the database.
- **OB** - the total number of "not ignored" objects.
- **FO** - the number of objects with hardware problems displayed at a given time.
- **Cam** - the camera statistics: total number of cameras at the facilities/number of working cameras/number of faulty cameras.
- **IF%** - the video surveillance system functioning rate.
- **IN%** - the video surveillance system non-functioning rate by reasons.

You can hover the mouse cursor directly over the status bar to display a tooltip.



Attention!

If filtering is enabled, then in order to calculate rates (**IF%** and **IN%**) and camera statistics (**Cam**) only for filtered objects, click  (**Count indexes and cameras only in filtered table strings**).

Functioning and non-functioning rates

Note

Functioning (**IF%**) and non-functioning (**IN%**) rates are calculated only for “not ignored” objects. For “ignored” objects, rates are not calculated and the filter is never used (see Ignoring object). Zero values of non-functioning rates are not shown on the status bar.
Rates (**IF%** and **IN%**) are not calculated if **Alarms**, **Failures** or **Disconnected** filter is enabled (see Number of alarms displayed).

Functioning rate (**IF%**) is calculated according to the following formula:

(1-Nnf/Na)*100, where

- **Nnf** is the number of objects that do not function properly;
- **Na** is the total number of objects.

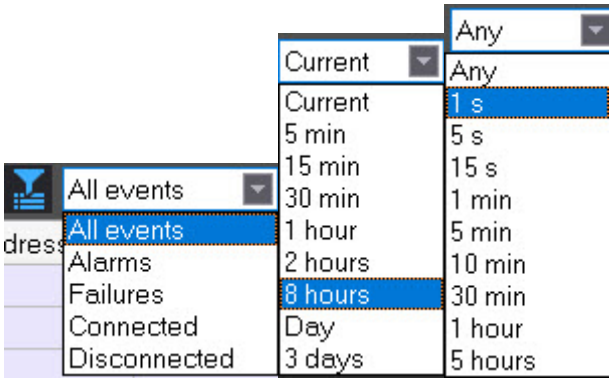
The non-functioning rate (**IN%**) for a particular reason is calculated according to the following formula:

(Nnfbr/Na)*100, where

- **Nnfbr** is the number of objects that do not function properly for this particular reason;
- **Na** is the total number of objects.

3.2 Number of alarms displayed

The number of objects displayed on the **Log panel** or **Control panel** is determined by the current filter if it is enabled with the filtering button (**Enable/disable filters**).



The left list displays only the objects with alarms or failures, the connected or disconnected objects only. The middle list displays time periods. If there was an alarm during the selected period, it is included on the list. The right list displays the alarm durations that trigger the filter. For example, if you set the filter to "Current"-"1 minute", only those objects are displayed that are currently in the alarm state and that have already been in this state for one minute or more. If you set the filter to "Day"-"5 hours", only those objects are displayed that have at least once been in the alarm state in the last 24 hours and that were in this state for at least five hours.

To calculate the rates (**IF%** and **IN%**) and camera statistics (**Cam**) only for the filtered objects, click the button (**Count indexes and cameras only in filtered table strings**). If the **Alarms**, **Failures** or **Disconnected** filter is enabled, rates are not calculated.

3.3 Object status

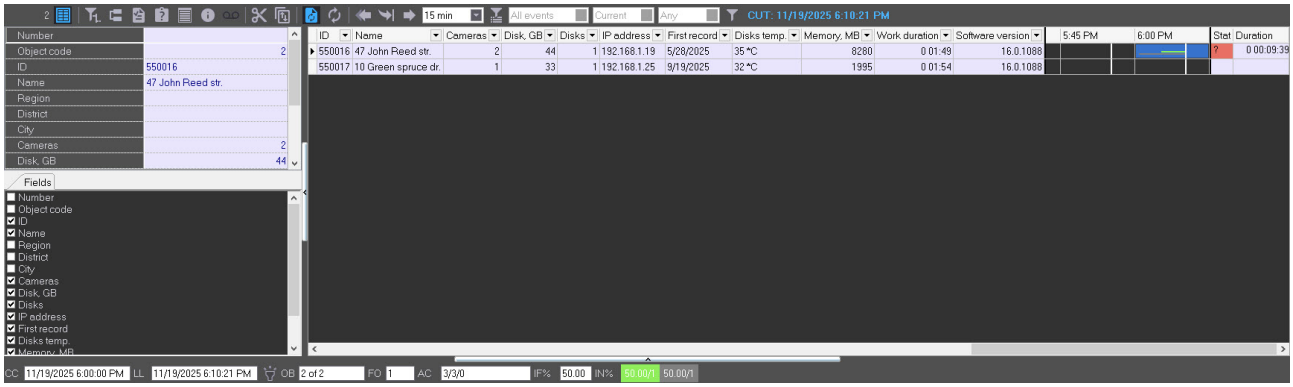
The **Status** column shows the objects' status. Its color and contents are explained in the **Information about symbols** panel (see the Color definitions for events section). Note that the **Status** column in the **Log panel** is shown in red only if there is at least one current long-term alarm.

3.4 Alarm duration

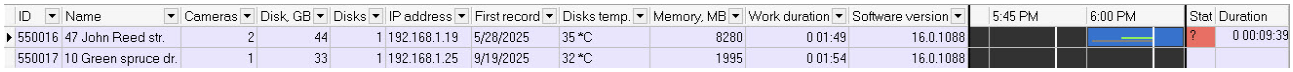
The table's last column (**Duration**) shows the duration of the current alarm for an object in days hh:mm:ss format.

3.5 Information about an object

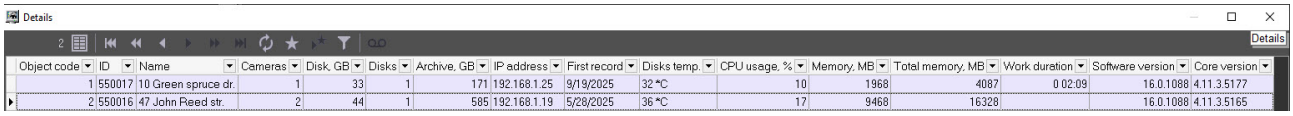
When you click the button (**Show Inspector Ctrl+I**), a special area appears. The upper part of this area contains short information about the selected object.



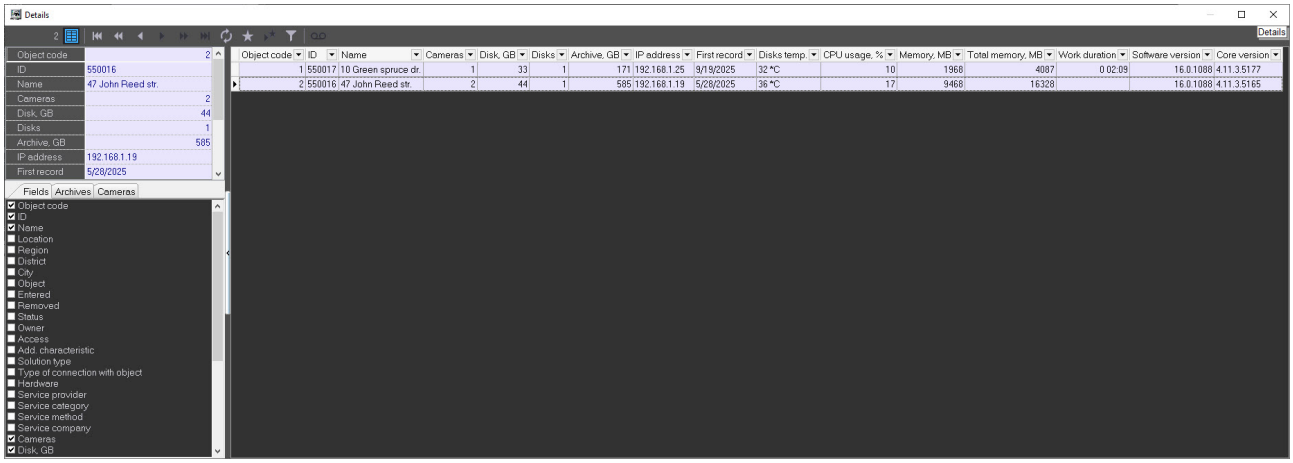
The lower part contains the **Fields** tab. The information on the selected parameters is displayed as columns in the main list of the log panel.



For detailed information about an object, select it in the log panel and click the  button (**Show details**). The **Details** window opens.



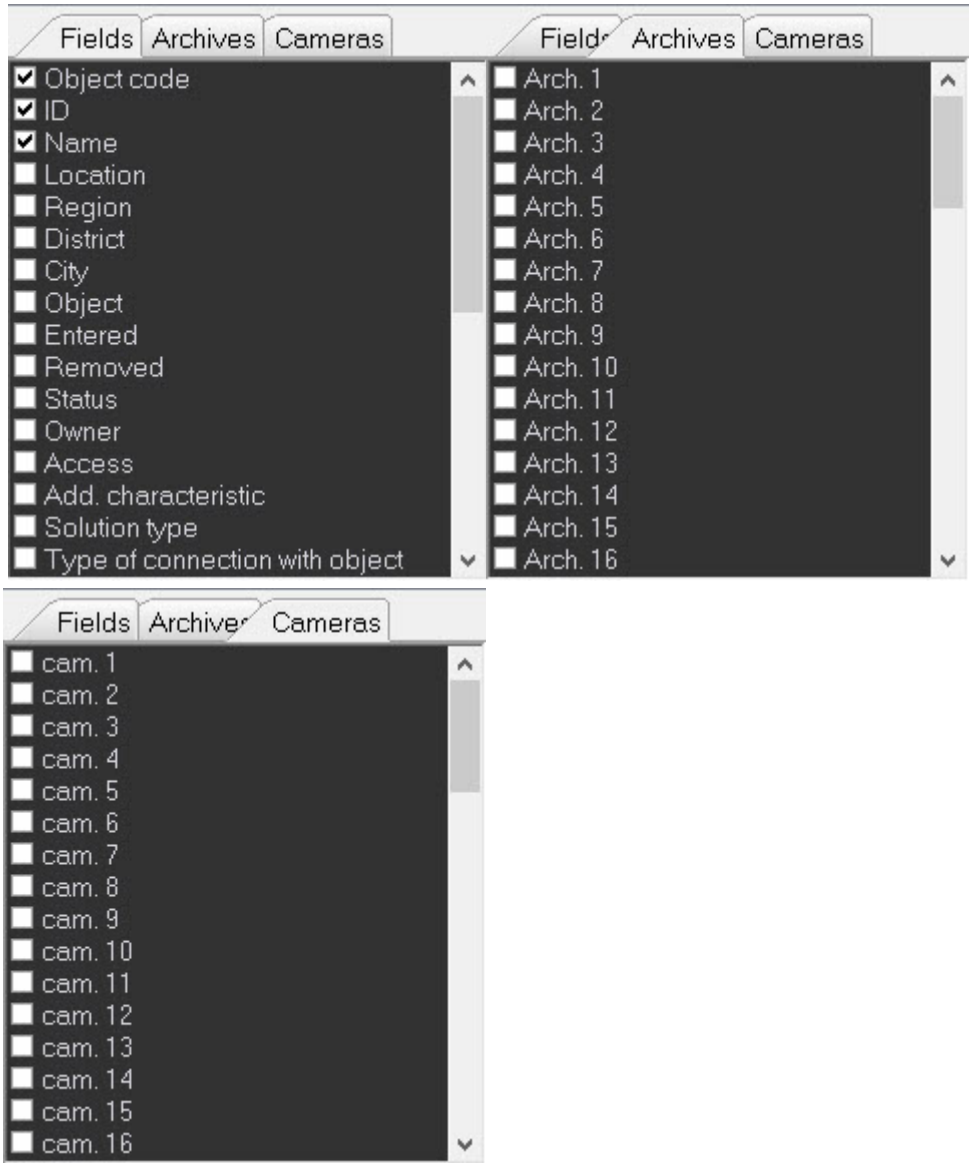
When you click the  button (**Show Inspector Ctrl+I**) in the **Details** window, a special area appears. The upper part of this area contains information about the selected object.



> **Note**
>
> When you use the owner panel, the **Details** window displays information about only those objects that belong to the owner selected in the owner panel. To view detailed information about all objects in the system, open this window from the owner panel—see Viewing details on alarms for all system objects.

The lower part of the area contains three tabs: **Fields**, **Archives**, and **Cameras**. Information on the selected parameters is displayed as columns in the main list of the **Details** window.

The **Archives** and **Cameras** tabs.



The data in the **Cameras**, **Disk, GB**, **Disks**, **Archive, GB**, and **Software version** fields and in all fields in the **Archives** and **Cameras** tabs are filled in automatically when packets with technical information are received from the objects. If these fields are empty for an object, it means that the object has never connected yet.

The **Cameras** field displays the number of cameras for the object.

The **Disk, GB** field displays the total amount of free space in GB of all logical disks on which the video archive is recorded.

The **Disks** field displays the number of logical disks on which the video archive is recorded.

The **Archive, GB** field displays the total size in GB allocated for the archive.

The **Software version** field displays the version of the *Agent of Control* installed at the facility.

The fields in the **Archives** tab display the current depth of the video archive in days for each camera.

Note

For detailed information on the archives of the selected object, see Info on archives.

The fields in the **Cameras** tab display the current status of each camera (**on**/**off**).

The **IP address** field displays the IP address of the object.

The **First record** field displays the date of the very first entry in the video archive from all cameras.

The **Disks temp.** field displays the temperature of the hard disks separated by a comma if there are several disks.

The **CPU usage,%** field displays the CPU load as a percentage (updated every 15 minutes).

Note

Starting with Windows 8, the calculation of CPU load in the Task Manager has changed, so corresponding changes have also been made to the *Agent of Control*:

- For Windows 8 and newer OS, the **% Processor Utility** counter is used for the CPU usage calculation.
- For older operating systems, the **% Processor Time** counter is used.

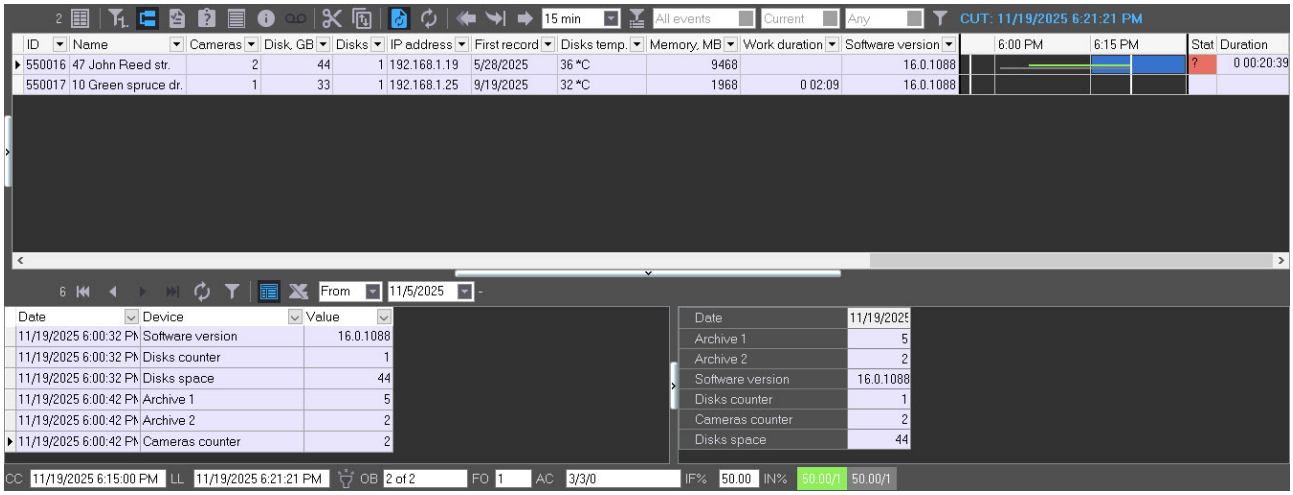
The **Memory, MB** field displays the amount of available physical memory in MB.

The **Work duration** field displays the time of continuous operation of the psim.exe\psim64.exe process on the object in the format "d hh:mm",
where "d" is a day, "hh" is hours, and "mm" is minutes.

The **Total memory, MB** field displays the total size of physical memory in MB.

The **Core version** field displays the base *Axxon PSIM* version at the facility.

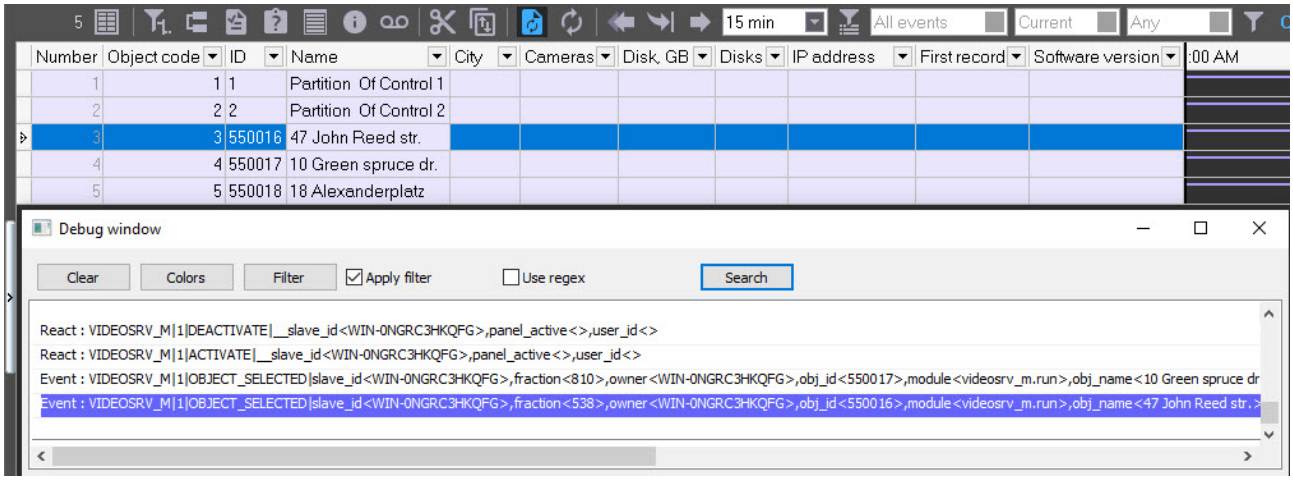
When you click the button (**Show characteristics of devices**), a special area appears. There you can see changes in the values of the fields described above (**Cameras**, **Disk, GB**, **Disks**, **Archive, GB**, **Software version**, and others).



3.6 Selecting an object on the Log panel

When you select an object on the **Log panel**, the **VIDEOSRV_M|n|OBJECT_SELECTED|obj_id<id>,obj_name<name>** event is sent to *Axxon PSIM,* where **n** is the index number of the **Monitoring** interface object, **id** is the object identifier, **name** is the object name.

You can view the event in the **Debug window** (see Enabling the Debug window).

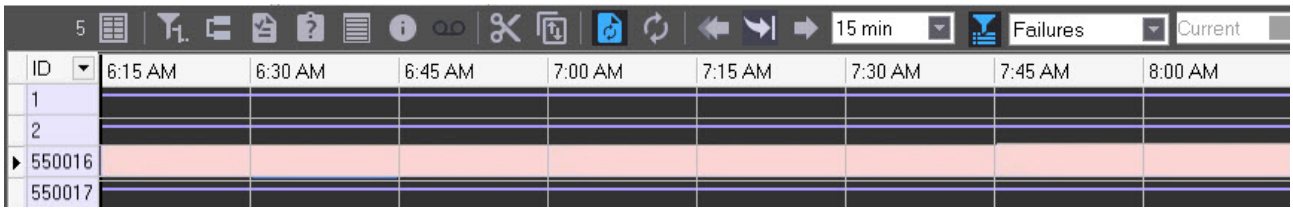


This feature can be used to create various scenarios using scripts, for example, to display an object scheme when it is selected in the **Monitoring** interface object. In this scenario, the operator selects an object in the *Monitoring PSIM* interface, and a pre-created diagram or map of the selected object is displayed on another monitor. Objects are visualized using scripts; for this, the **OBJECT_SELECTED** event from the **VIDEOSRV_M** object is processed.

When you select an object on the **Control panel** (see Selecting an object on the Control panel), the event is sent to *Axxon PSIM* in the similar way.

3.7 Exceeding the allowed number of failures

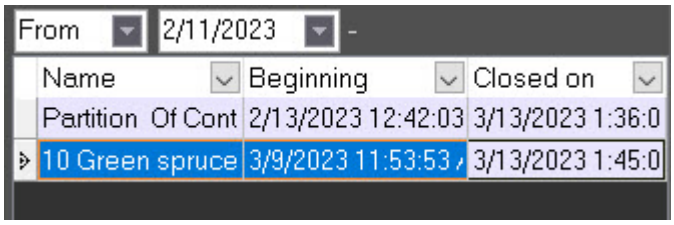
If the number of failures for a displayed object exceeds 500, then alarms for the object have no details and its background gets pink.



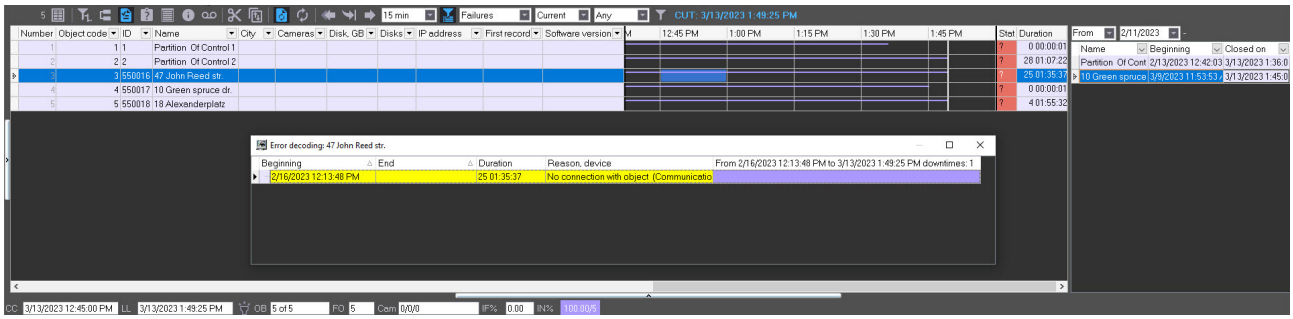
The number of failures is calculated not for each interval, but for a range of intervals. Consider the case depicted in the figure. Here, the calculation is performed for eight columns of 15 minutes. Even if the maximum number of failures is exceeded in three columns, the background of all eight columns gets pink.

3.8 Forcing the confirmation of alarms

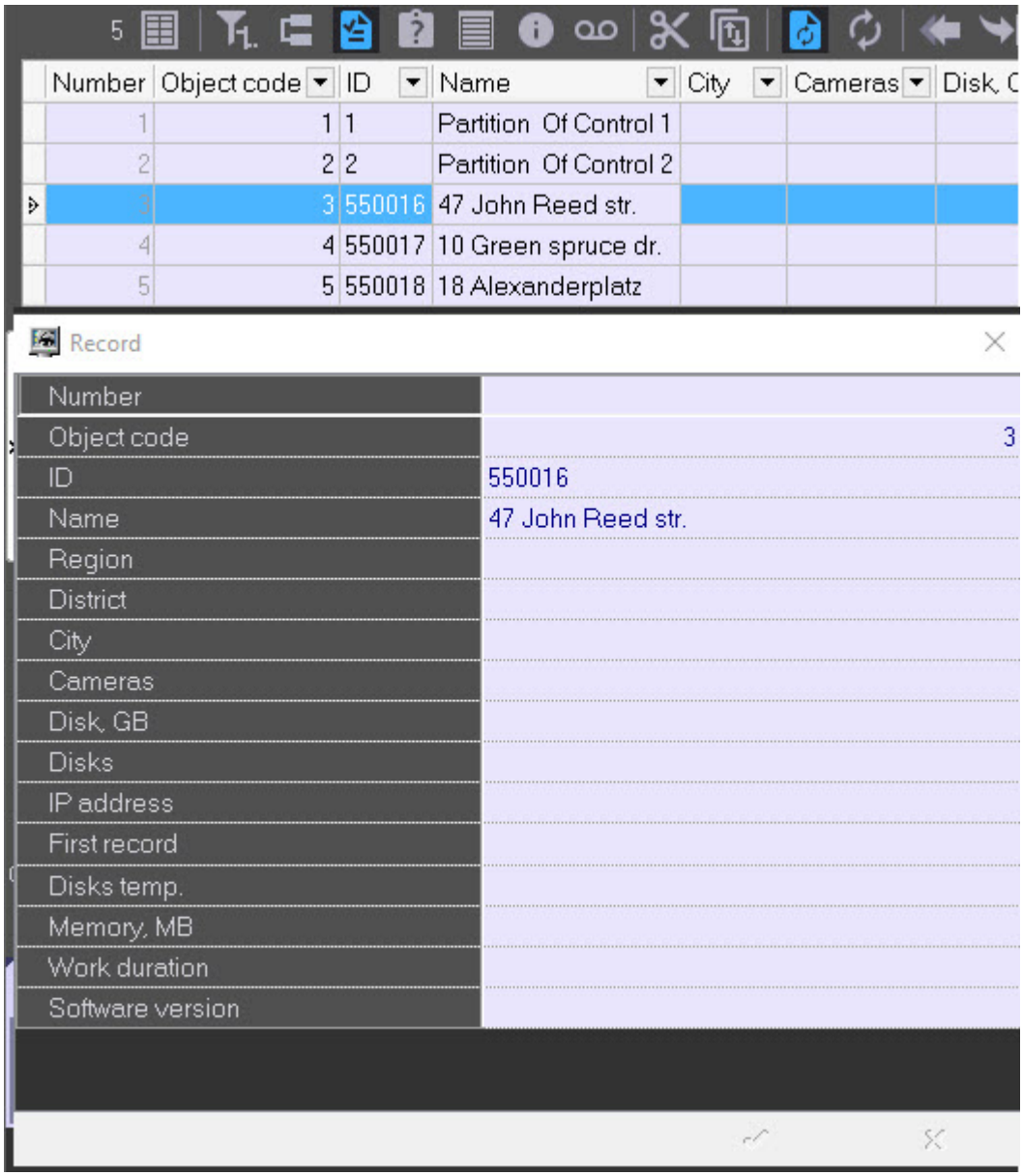
Sometimes an alarm must not be considered as an alarm. To close the alarm forcibly, click the button  (**Close error forcibly**). To see the list of errors closed in such a way, click the button  (**Show closed errors**). An additional table in the right part of the screen.



You can double click on an entry in the alarm display area to see the dialog box with an explanation for the errors for the time period of this cell.



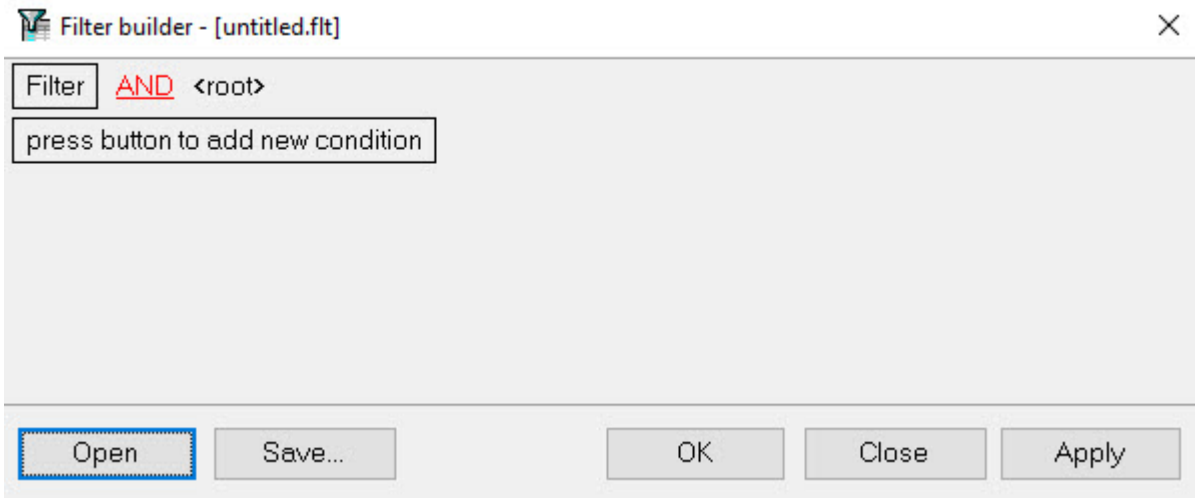
You can double click the area with regulatory and reference information to open the dialog form with a short description of device data.



3.9 Custom filter in the Log panel

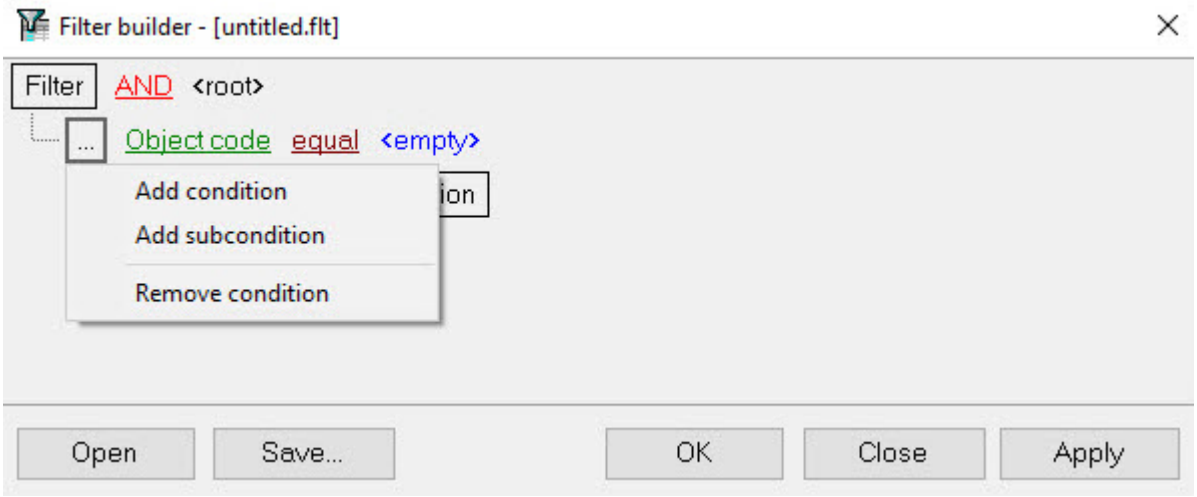
In addition to the basic filters by the time of registration and the duration of the alarms (see Number of alarms displayed), it is possible to configure a custom filter to display certain alarms depending on the conditions. This filter is applied to both the **Log panel** and the **Control panel**.

Click  to set up the custom filter. The **Filter builder** dialog opens.



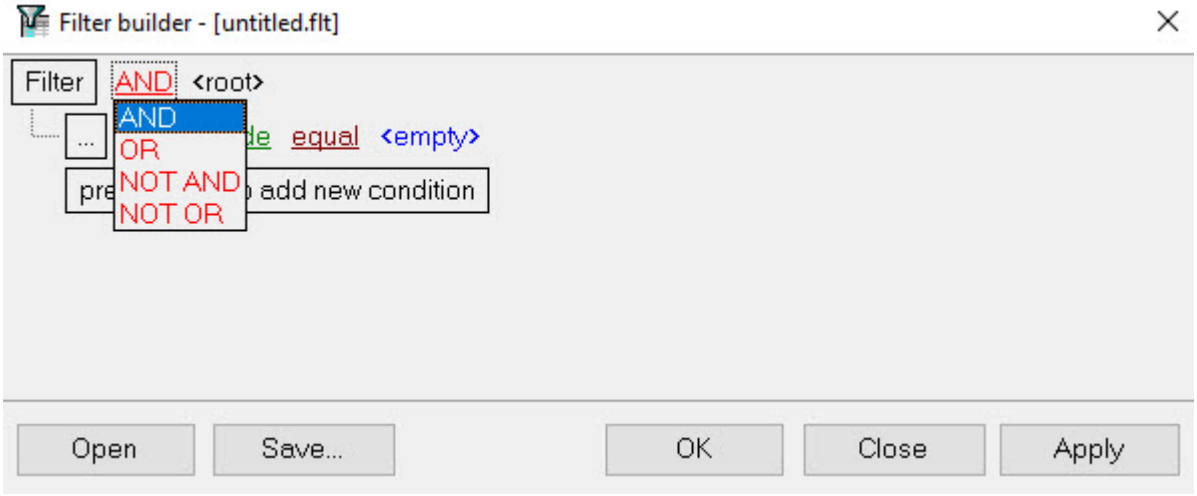
The following operations can be required for setting the filter:

1. Add a condition or subcondition. To add a condition click the **press button to add new condition** button or in the filter menu click the corresponding item. The condition menu opens by clicking the  or **Filter** button.

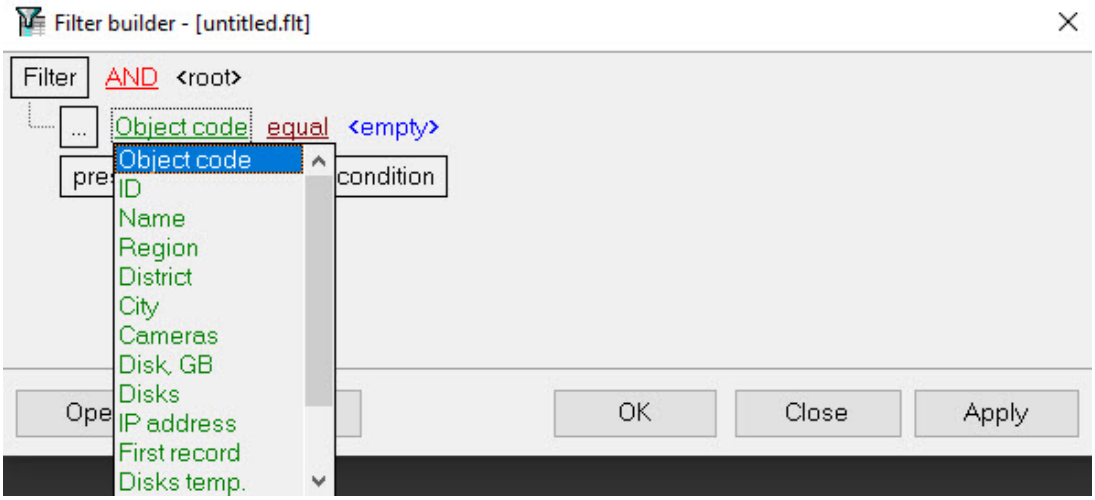


2. Remove a condition. To remove a condition, click the corresponding item in the condition menu.

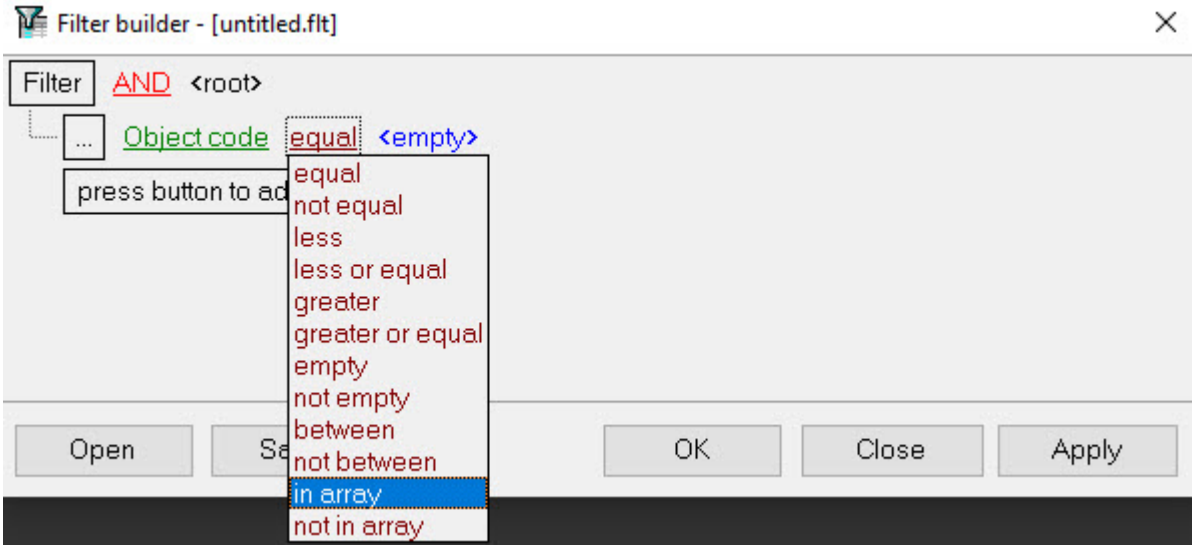
3. Select a logical function for combining conditions. A drop-down list for selecting the logical function opens on the left-click on the logical function.



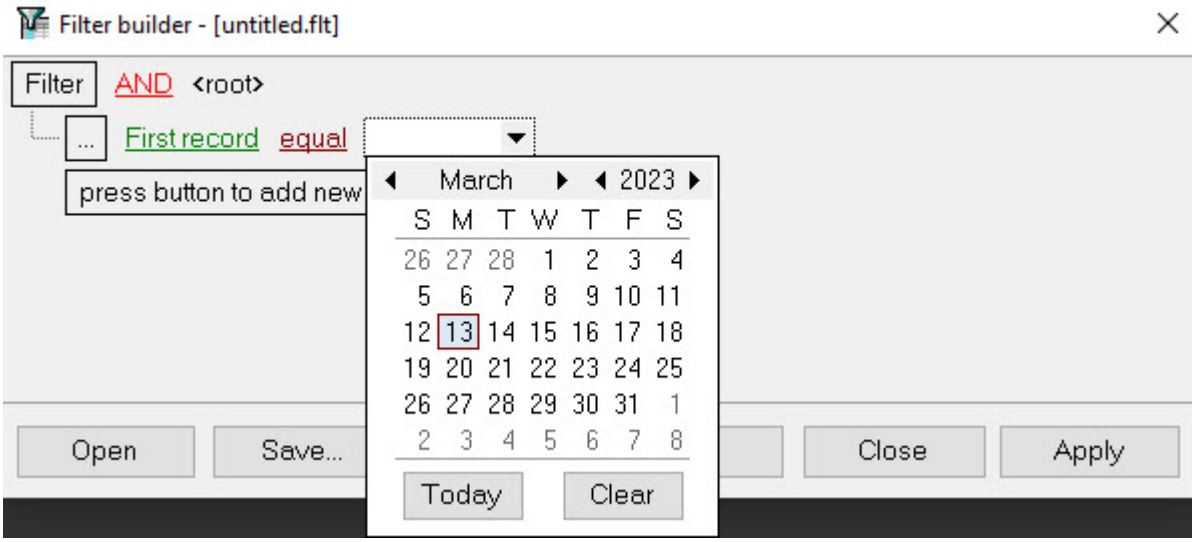
4. Select a field for comparison. A drop-down list for selecting the field for comparison opens on the left-click on the field name.



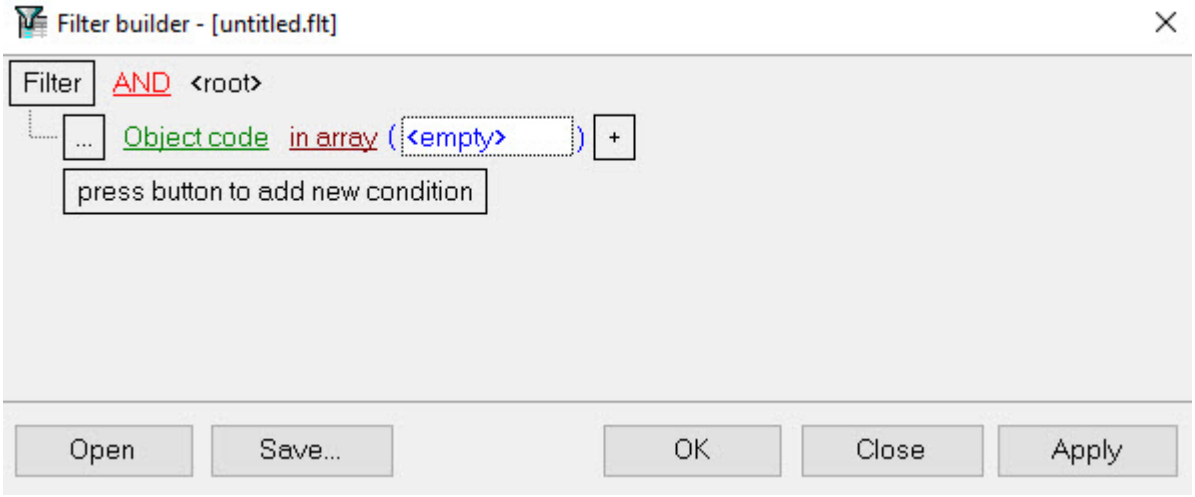
5. Select a method of comparing. A drop-down list for selecting the method of comparing opens on the left-click on the method name.



6. Select a value for comparing with. A way to select the value depends on the field type. For example, a date can be set using a calendar, a name can be entered in a field, etc.
Data selection:



An array of values:



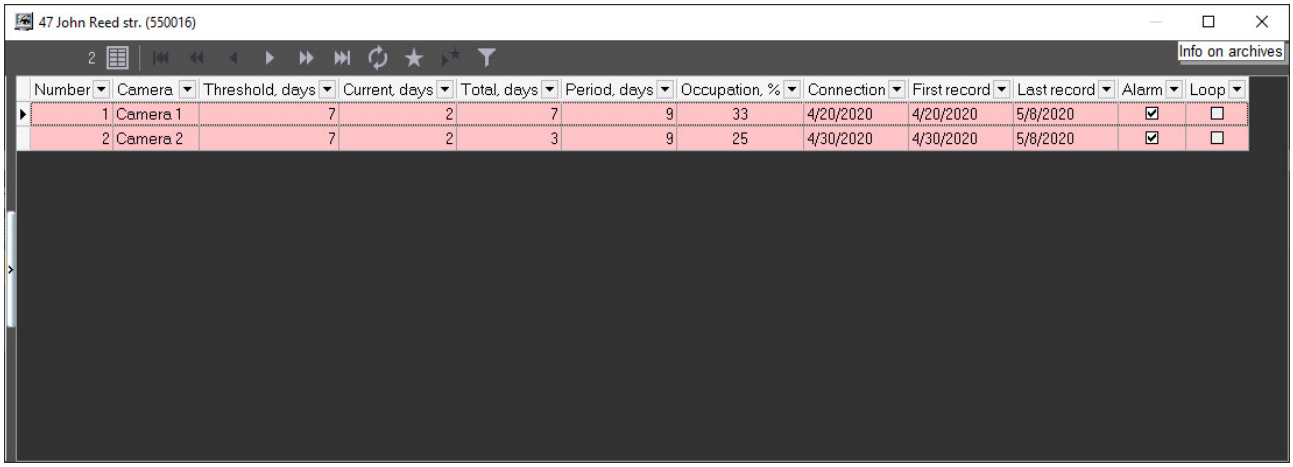
After completing settings, the filter can be saved to a file with the .flt extension by clicking the **Save...** button. This file can then be opened using the **Open** button.

The custom filter on the **Log panel** can be set by a script – see Monitoring PSIM Administrator's Guide, section Sample script for setting custom filter in the Log panel.

3.10 Info on archives

To display information on archives, select an object and click the  (**Info on archives**) button.

As a result, the information on the archives of all cameras of the selected object will be displayed in a new window.



Number	Camera	Threshold, days	Current, days	Total, days	Period, days	Occupation, %	Connection	First record	Last record	Alarm	Loop
1	Camera 1	7	2	7	9	33	4/20/2020	4/20/2020	5/8/2020	☑	☐
2	Camera 2	7	2	3	9	25	4/30/2020	4/30/2020	5/8/2020	☑	☐

The information on archives includes:

Number — video camera number.

Camera — video camera name.

Threshold, days — required archive depth on video camera. This is the **Keep archive for (days)** parameter specified in the *Partition of Control* settings.

Current, days — current archive depth.

Total, days — total archive size for all time.

Period, days — the period for which the archive is monitored. If the archive is monitored for all time (the default setting of *Agent of Control*), then this value equals to **0**.

Occupation, % — fullness of the archive in percent. The parameter is calculated by the formula: the number of days from the oldest archive entry to the current date, in which the archive exists, divided by the number of days from the oldest archive entry to the current date, and multiplied by 100.
If the archive was not recorded at all, then the parameter **Occupation, %** = 0. If this value is close to 100%, then there is no empty space in the archive.

Connection — video camera connection date.

First record — the date of the earliest record in the archive.

Last record — the date of the latest entry in the archive.

Alarm — indication that the current archive depth does not meet the requirements. If the archive is in an alarm state, then it is highlighted in red.

An archive alarm is generated when the following two conditions are met simultaneously:

- Current video archive depth (**Current, days** column) < **Keep archive for (days)**;
- ("Current date" - "Camera connection date" (**Connection** column)) > **Keep archive for (days)**.

Loop — a sign that the camera is recording on the loop.

The *Agent of Control* calculates the size of the video archive depth for each video camera every 15 minutes.

Note

An example of calculating the current video archive depth:
Suppose that the following parameters for **Camera 1** object were set when the list of cameras was configured (see Configuring the camera list):

- **Keep archive for (days)** = 7
- **Gaps in the archive (days)** = 1
- **Camera connection date** = 04/20/2020

Suppose that at the time of the current date 05/10/2020, the video was recorded to the archive on the following days: 04/20, 04/21, 04/22, 04/28, 04/30, 05/07, 05/08. That is, the total archive size = 7 days (the **Total, days** column).
The size of the current video archive depth (the **Current, days** column) is calculated as follows:

- In the date range from (Current date - X) to Current date, the search is performed for days on which the archive was recorded, where X is the number of days = **Keep archive for (days)** + **Gaps in the archive (days)** + 1. In the current example X = 7 + 1 + 1 = 9 (the **Period, days** column).
- In the date range 05/02/2020 - 05/10/2020 (for the last 9 days), the archive is present only on 05/07/2020 and 05/08/2020.

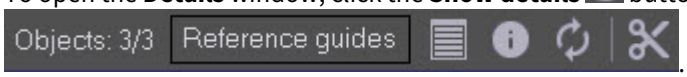
Thus, the video archive depth for the **Camera 1** object = 2 days (the **Current, days** column).
Size of the current archive occupancy (**Occupation, %** column) for the **Camera 1** object is calculated as follows:
Total, days * 100/(Current date - **First record** + 1).
7 * 100/21 = 33%.

3.11 LPs' blacklist transmission

On the page:

The operator of the *Server of Control* and *Additional workplace* modules can transmit the LPs' blacklist using the **Monitoring** interface object from the **Details** window of the log or control panel.

To open the **Details** window, click the **Show details** button on the toolbar of the log or control panel

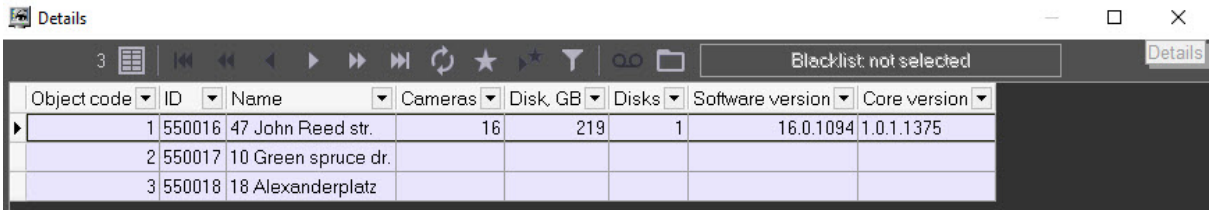


.

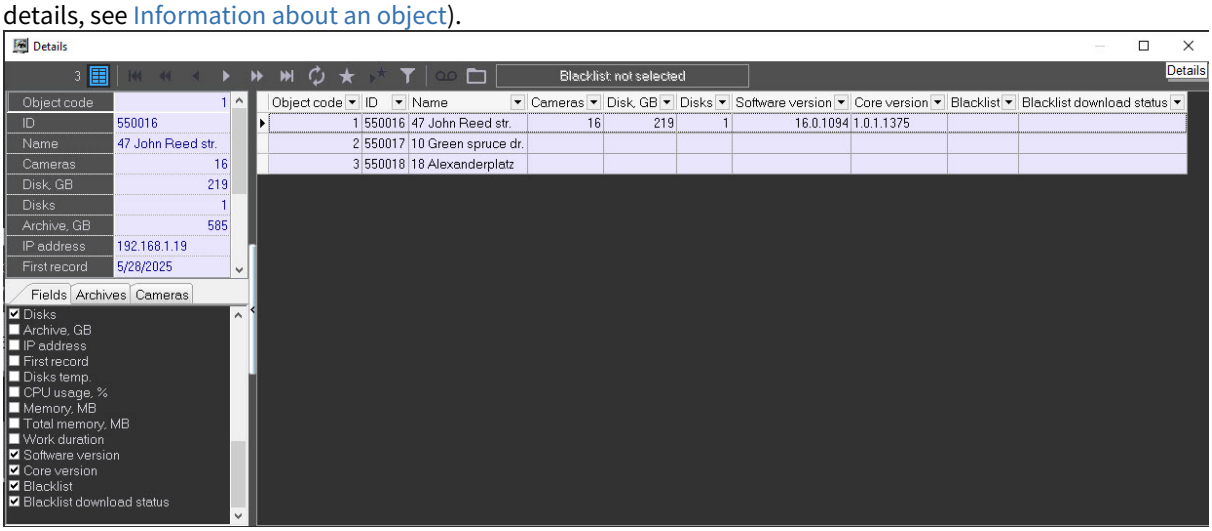
By default, the blacklist transmission is disabled.

3.11.1 Transmitting the LPs' blacklist

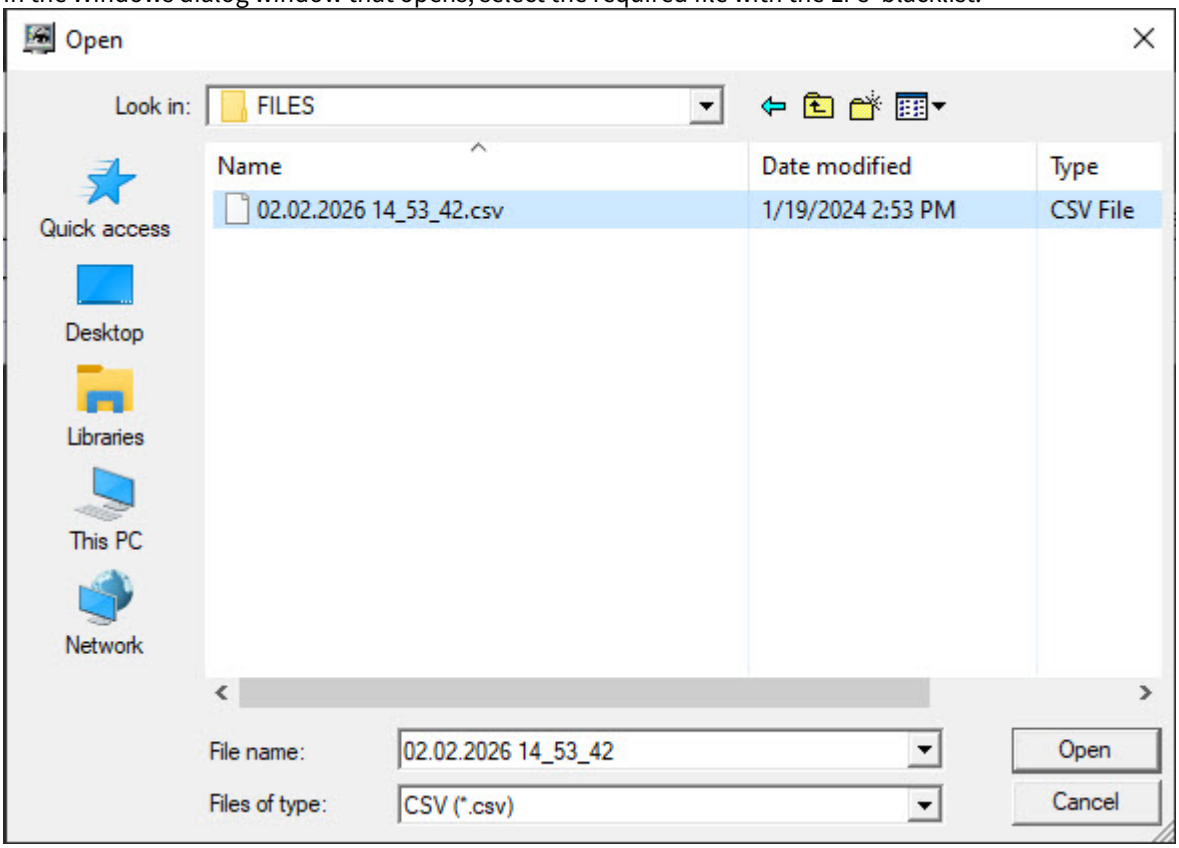
1. To enable the ability to transmit the LPs' blacklist, set the **1** value of the **CarPlatesBlackList** registry key (see Vertical sollutions, for more information on working with the registry, see Working with Windows OS registry).
   As a result, the **Blacklist** and **Select file** buttons are displayed on the toolbar of the **Details** window.



2. Enable the visibility of other **Blacklist** and **Blacklist download status** columns on the **Fields** tab (for more details, see Information about an object).



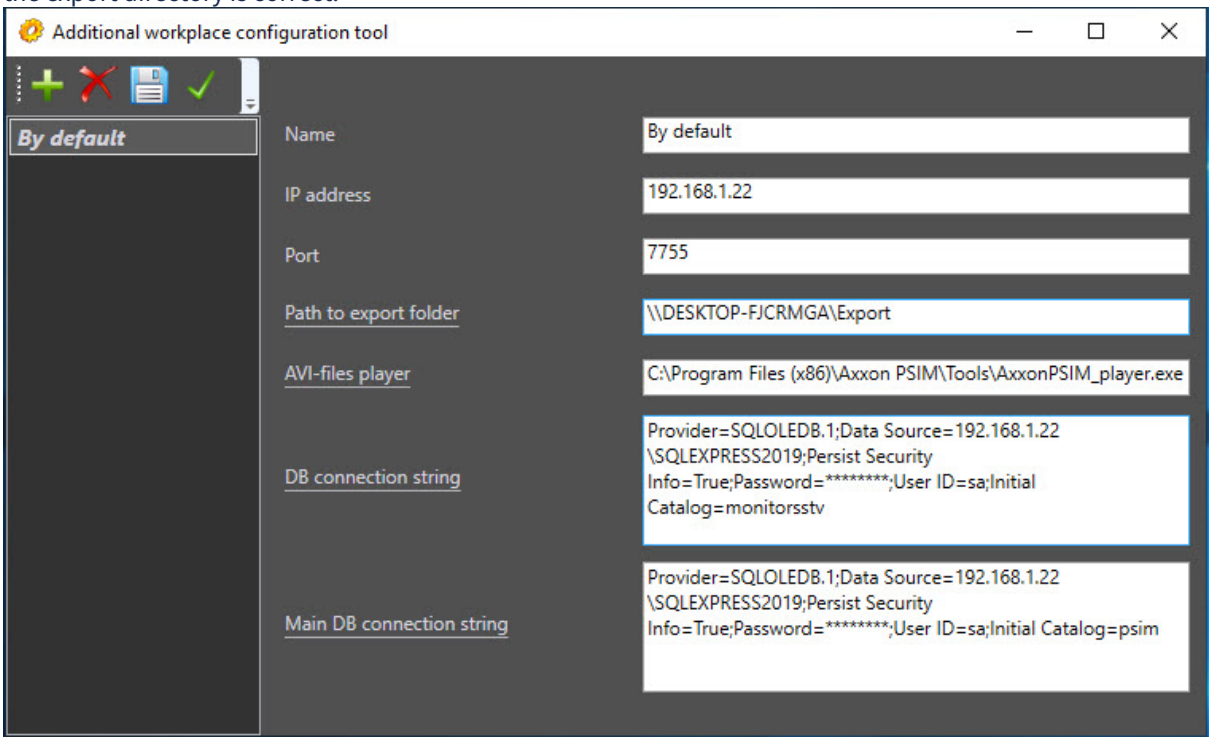
3. Click the **Select file** button at the top of the toolbar.
4. In the Windows dialog window that opens, select the required file with the LPs' blacklist.



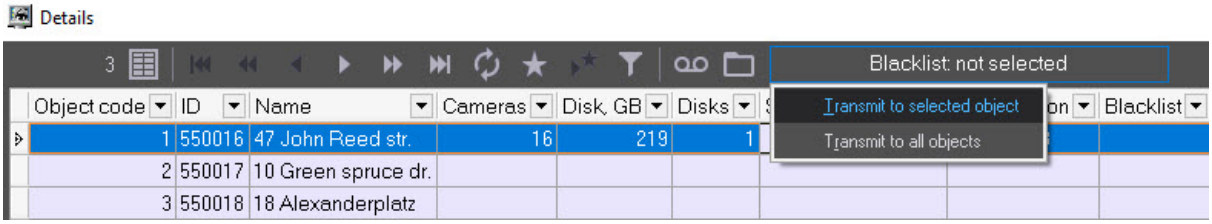
Note

The blacklist file format must match the export/import file format of the *Auto PSIM* "Active tracking" database (for more details, see Creating the Active tracking database).
Files whose names exceed 23 characters are ignored.

The selected file is copied to the *Server of Control* export directory that is located by default at C:\Export. If the operator of the *Additional workplace* module performs this operation, then make sure that the path to the export directory is correct.



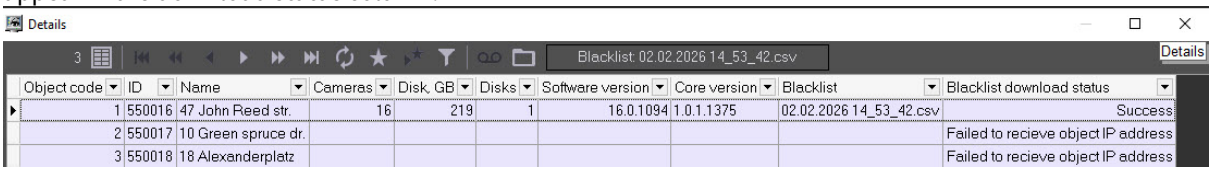
5. Select where to send the LPs' blacklist file by clicking the **Blacklist: Transmit to selected object** or **Transmit to all objects** button.



If you try to send the LPs' blacklist without specifying a file, the corresponding error message appears.

After you select the **Transmit to all objects** menu item, the *Server of Control* module sends the LPs' blacklist file to all system *Agents of Control* in parallel. If the sending to *Agent of Control* is successful and the loading to the database is without errors, the **Blacklist** column displays the name of this accepted file, and the **Blacklist download status** column displays the **Success** row. If there are mistakes during the loading, they

appear in the download status column.



Object code	ID	Name	Cameras	Disk, GB	Disks	Software version	Core version	Blacklist	Blacklist download status
1	550016	47 John Reed str.	16	219	1	16.0.1094	1.0.1.1375	02.02.2026 14_53_42.csv	Success
2	550017	10 Green spruce dr.							Failed to recieve object IP address
3	550018	18 Alexanderplatz							Failed to recieve object IP address

Transmitting the LPs' blacklist is complete.

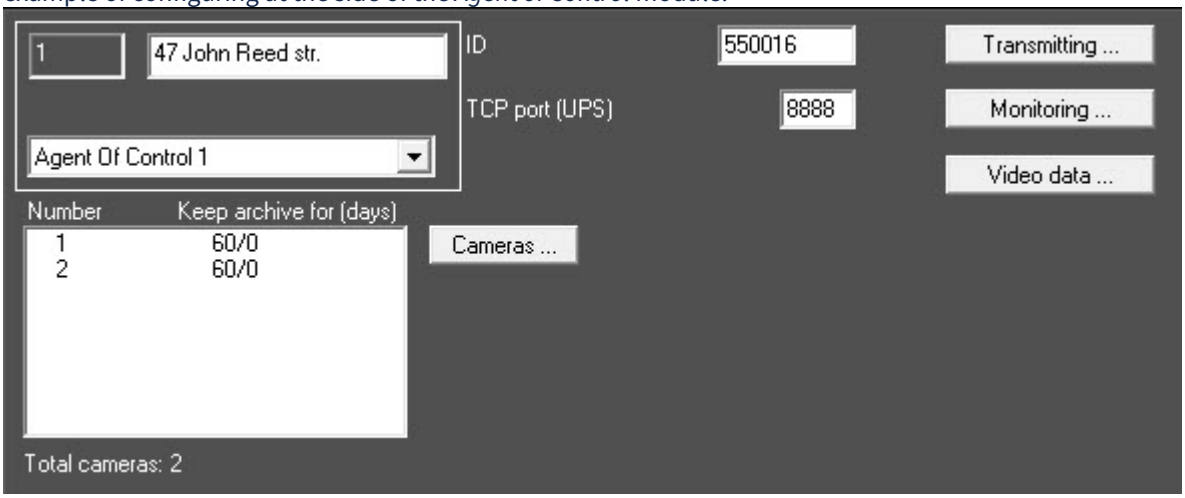
3.11.2 The list of errors when loading the LPs' blacklist file

Error code	Error description	Error source	Comment
0	Success		
1	Failure in main database	*Agent of Control*	
2	Failure in license plate database	*Agent of Control*	
3	Blacklist file processing failure	*Agent of Control*	Possibly, the incorrect file format
4	Error opening main database	*Agent of Control*	
5	Error opening license plate database	*Agent of Control*	
6	No **External LP database** object found in setting	*Agent of Control*	You don't install *Auto PSIM* or create the **External LP database** object on the computer with the *Agent of Control* module
7	Failure in MonitorSSTV database	*Server of Control*	
8	Error opening MonitorSSTV database	*Server of Control*	
9	Failed to receive blacklist file name	*Server of Control*	The MonitorSSTV database has no information about the blacklist name

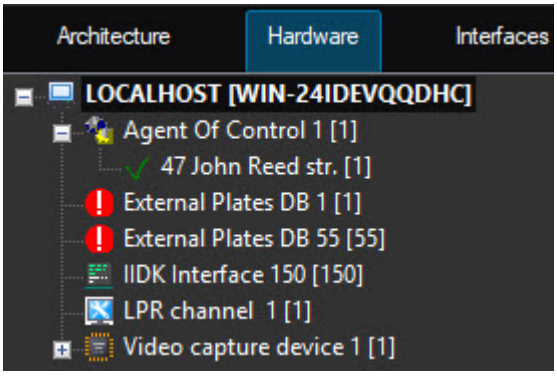
Error code	Error description	Error source	Comment
10	Failed to receive object IP address	*Server of Control*	The *Agent of Control* module doesn't still connect to the *Server of Control* module
11	Error opening blacklist file	*Server of Control*	The blacklist file is absent in the export directory. The possible reason is that you select this file on the *Additional workplace* module with the export directory configured impoperly
12	Error connecting to object	*Server of Control*	You fail to connect to the *Agent of Control* module via TCP/IP to the port 8888 (by default)
13	Error transmitting data to object	*Server of Control*	

3.11.3 Features of transmitting the LPs' blacklist

1. By default, the *Server of Control* module connects to the 8888 port of the *Agent of Control* module. The example of configuring at the side of the *Agent of Control* module.



   If you change this setting on the side of any *Agent of Control* module, you can specify another port number on the *Server of Control* side by using the **TcpPortForBlackList** registry key for all *Agent of Control* modules and the **TcpPortForBlackList<ID>** key for separate *Agent of Control* modules (see Vertical sollutions, for more information on working with the registry, see Working with Windows OS registry).
2. The operation with the **External Plates DB** object of a lower number is performed on the *Agent of Control* module.

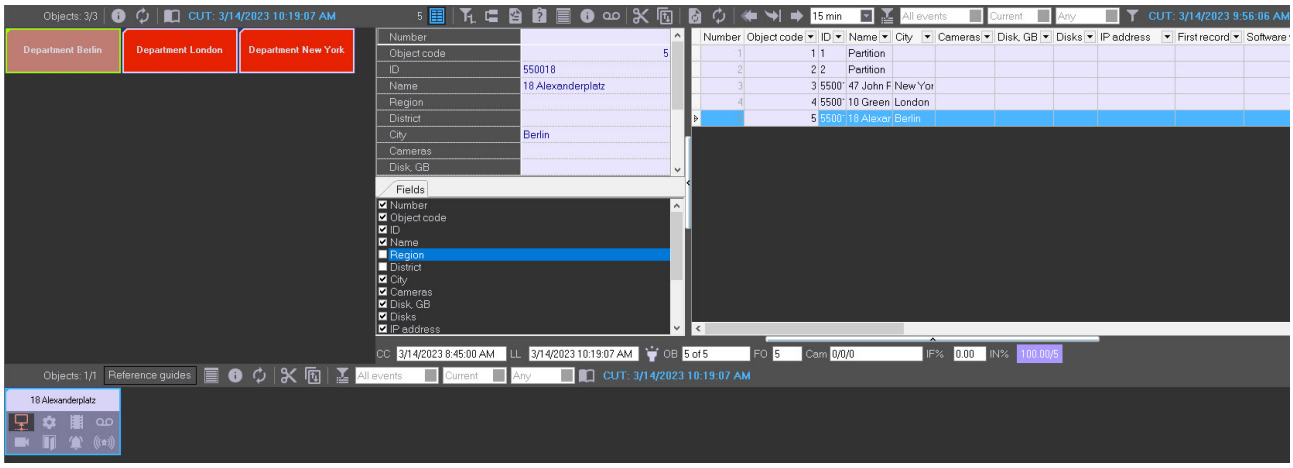


3. You can only view the values of the **Blacklist** and **Blacklist download status** fields in the **Details** window on the *Central Server of Control* and the *Additional workplace of CSC* modules but cannot load the LPs' blacklist file to *Agents of Control*.

4 Owners panel

4.1 Owners panel interface

The **Owners panel** always operates along with the **Control panel**. The **Owners panel** interface is shown on the figure.



Owners are represented on the panel as rectangles. The color of the rectangle indicates whether there are alarms on the objects that belong to the owner:

1. White (there are no errors on the objects that belong to the owner);
2. Red (on the objects that belong to the owner there are errors and alarms that are not confirmed by the operator);
3. Pink (on the objects that belong to the owner there are errors that are confirmed by the operator).

Left-click the owner, the rectangular is framed blue and only those objects that belong to the owner are shown on the **Control panel**.

Depending on the rights of the current user specified during the system setup (see the Configuring the Monitoring interface object section of the Administrator's Guide), not all owners registered in the system may be displayed on the **Owners panel**. The information on the displayed and total number of owners is presented in the upper left part of the **Owners panel**.

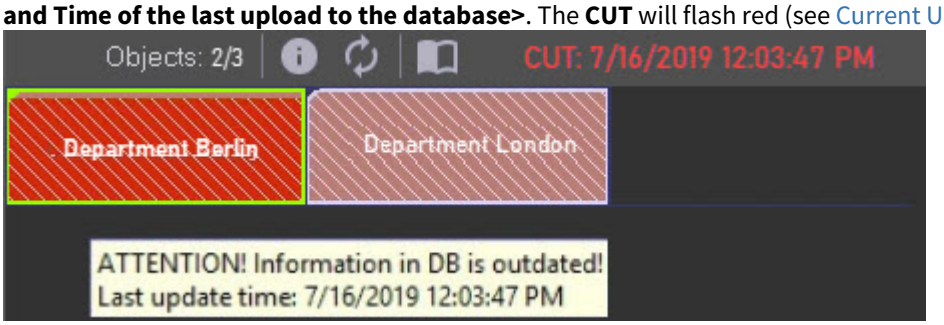
Information on the **Owners panel** is updated after every data loading from the database. The date and time of the last update of the data displayed on the screen is indicated in the upper right corner of the window in the Current Update Time (**CUT**) field. To update the displayed data, click the  button. If there are new data in the database, they will be displayed on the **Owners panel**.

According to the user rights set at the stage of system configuration (see Configuring the Monitoring interface object section of Administrator's Guide), not all the owners registered in the system can be displayed on the **Owners panel**. Information on the displayed and total number of owners is shown in the upper-left of the **Owners panel**.

By default, if the **MonitorSSTV** database has not been updated for more than 30 minutes, for example, due to a *Data Loader* malfunction or if the communication module (license restrictions) has stopped working on the *Server of Control*, then:

1. On the *Server of Control*, all owners will be covered with diagonal lines. When you hover over such an owner, a contextual prompt will appear: **ATTENTION! Information in DB is outdated! Last update time: <Date**

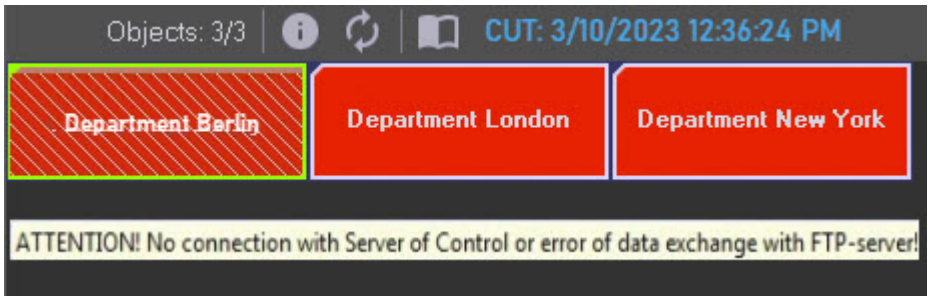
and Time of the last upload to the database>. The **CUT** will flash red (see Current Update Time).



2. On the *Central Server of Control*, only the *Servers of Control* with outdated info will be covered with diagonal lines. When you hover over such an owner, a similar contextual prompt will appear. However, the **CUT** will remain blue and will not flash.

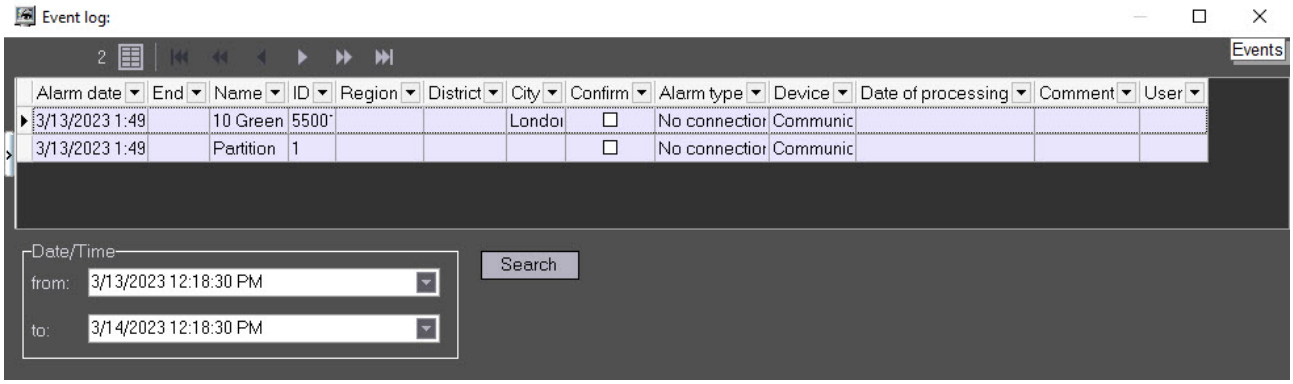
> **Note**
>
> To change the waiting time for updating the **MonitorSSTV** database, after which the corresponding indication on the *Server of Control/CSC* will appear, it is necessary to set the required time value in minutes for the **LastLoadThreshold** registry key (for details, see Registry keys reference guide, for more information about working with the registry, see Working with Windows OS registry).

If there is no connection between the *Central Server of Control* and the *Server of Control,* or if there is a problem in data exchanging with the FTP server (for example, an incorrect password), then only the *Servers of Control* with this problem will be covered with diagonal lines. When you hover over such an owner, a contextual prompt will appear: **ATTENTION! No connection with Server of Control or error of data exchange with FTP server!** The **CUT** will remain blue and will not flash.



4.2 Viewing Event log for all objects

To view all the events logged in the *Monitoring PSIM* software package click the (**Event log**) button on the **Owners panel**. The **Event log** window appears. This table can be sorted by any column or the column can be filtered.



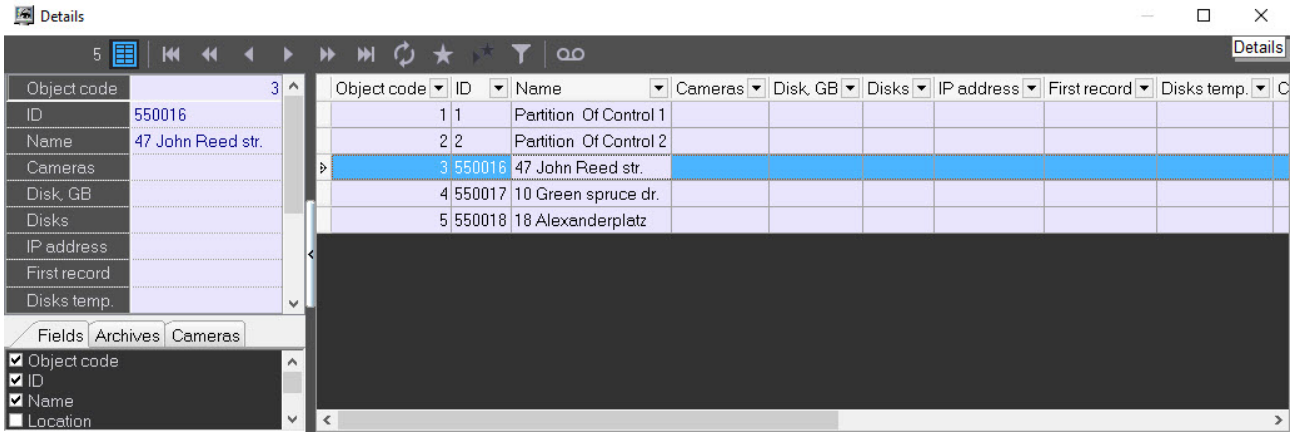
Note.

To view all the events logged for objects that belong to the selected owner, call the **Event log** window on the **Control panel** – see Event log.

Use the **Event log** window in the same way as you use it on the **Control panel** – see Event log.

4.3 Viewing details on alarms for all system objects

To view the details about all system objects click the button on the **Owners panel**. The **Details** window appears.



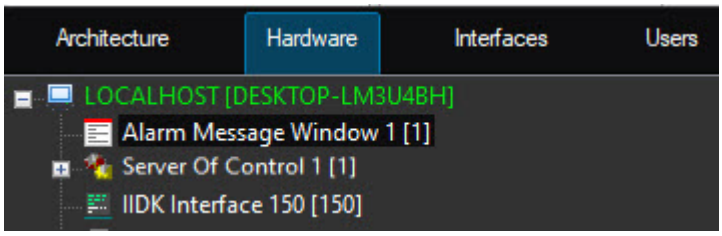
Note.

To view all the events logged for objects that belong to the selected owner, call the **Details** window on the **Control panel**.

Use the **Details** window in the same way as you use it on the **Control panel** and **Log panel** – see Information about an object.

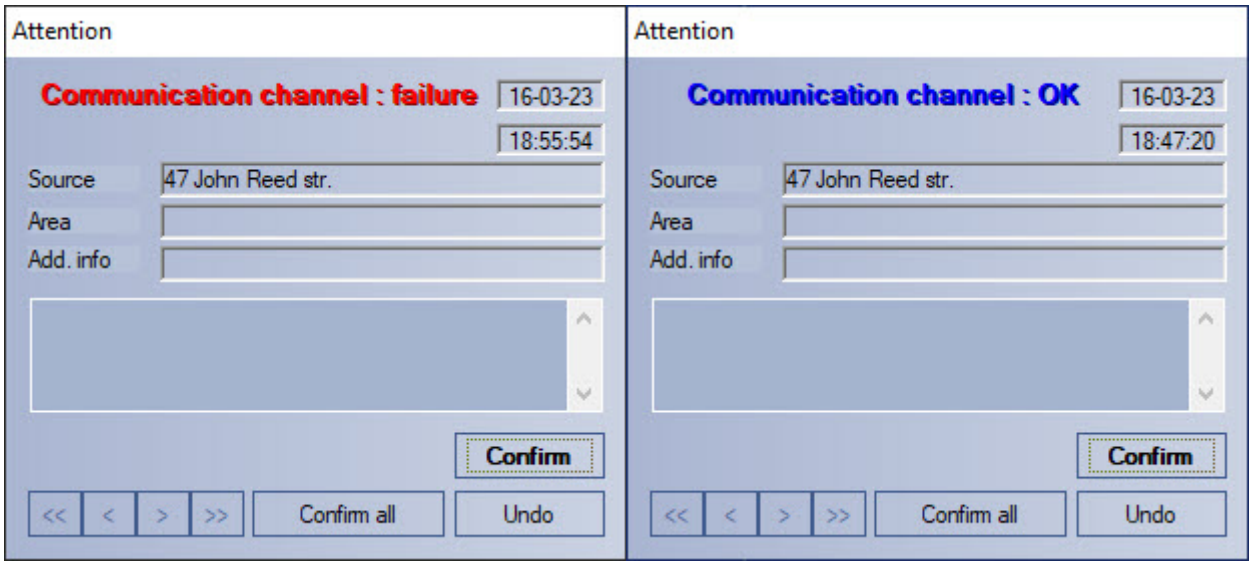
5 Alarm message window

To attract the extra attention to alarm situations use the **Alarm Messages Window** object.

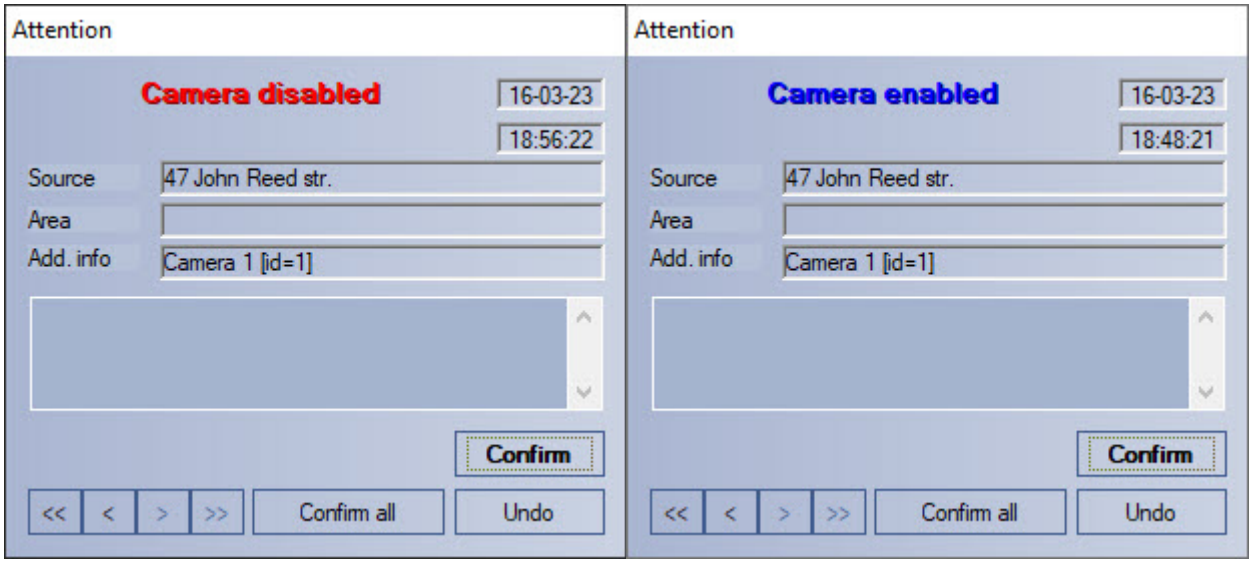


If there is the **Alarm Message Window** object in the settings tree of *Axxon PSIM* software, the alarm situations will be displayed in the **Control panel** and **Log panel** interface objects and in the separate pop-up window. Examples of such pop-up windows are displayed in figures.

Alarm messages for Communication channel:



Alarm messages for camera enabling and disabling:


Attention
Camera disabled
16-03-23
18:56:22
Source
47 John Reed str.
Area
Add. info
Camera 1 [id=1]
Confirm
<<
<
>
>>
Confirm all
Undo
Attention
Camera enabled
16-03-23
18:48:21
Source
47 John Reed str.
Area
Add. info
Camera 1 [id=1]
Confirm
<<
<
>
>>
Confirm all
Undo

6 Search in archive

6.1 Purpose of the Search in archive component

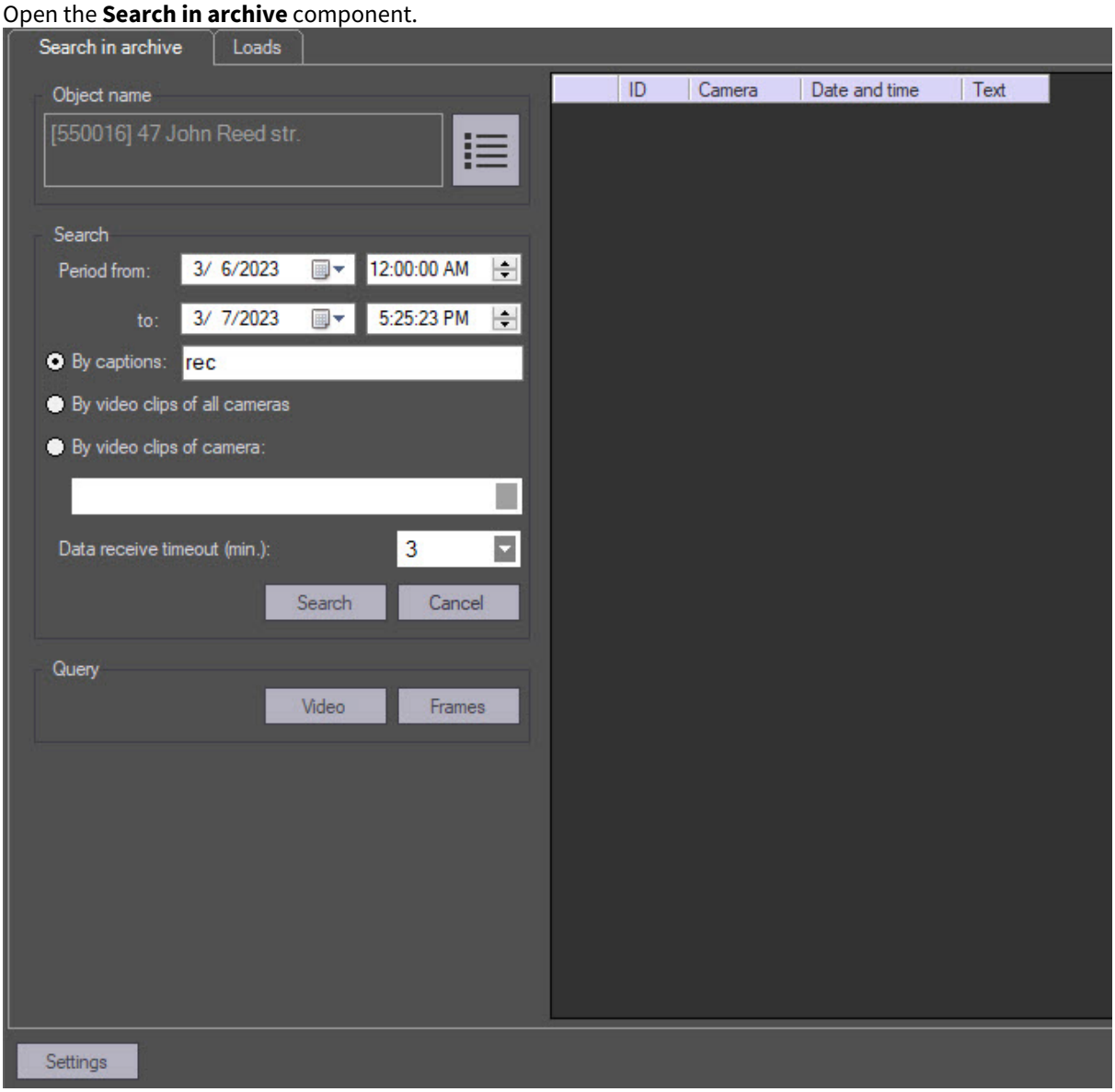
The **Search in archive** component allows you to do the following:

1. Make and send requests for searching video frames with subtitles and receive video search results.
2. Make and send requests for video frames with or without subtitles and receive video search results.
3. Make and send requests (based on video search results) to an object's video archive, receive and view request results (video frames or video clips).
4. View and prints request results (video frames or video clips).

6.2 Request to a video archive by subtitles

To send a request to a video archive by subtitles (**By captions** mode), follow these steps:

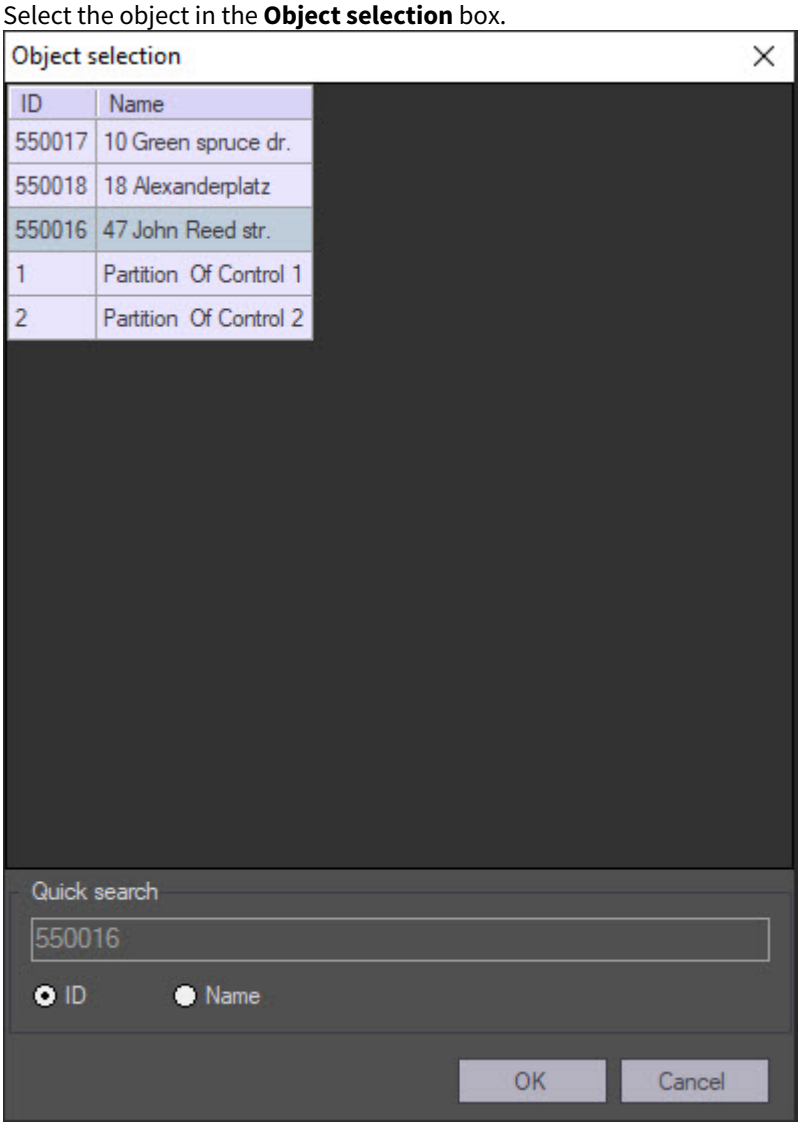
1. Open the **Search in archive** component.



2. Select an object as follows:

   a. Click  in the **Object name** group.

b. Select the object in the **Object selection** box.



c. For quick search by object identification number, set the switch in the bottom of the box to **ID** and enter the number in the **Quick search** field. The match, if found, is displayed in the **Quick search** field while the corresponding object is automatically selected in the list.

d. For quick search by object name, set the switch in the bottom of the box to **Name** and enter part or full name in the **Quick search** field. The match, if found, is displayed in the **Quick search** field while the corresponding object is automatically selected in the list.

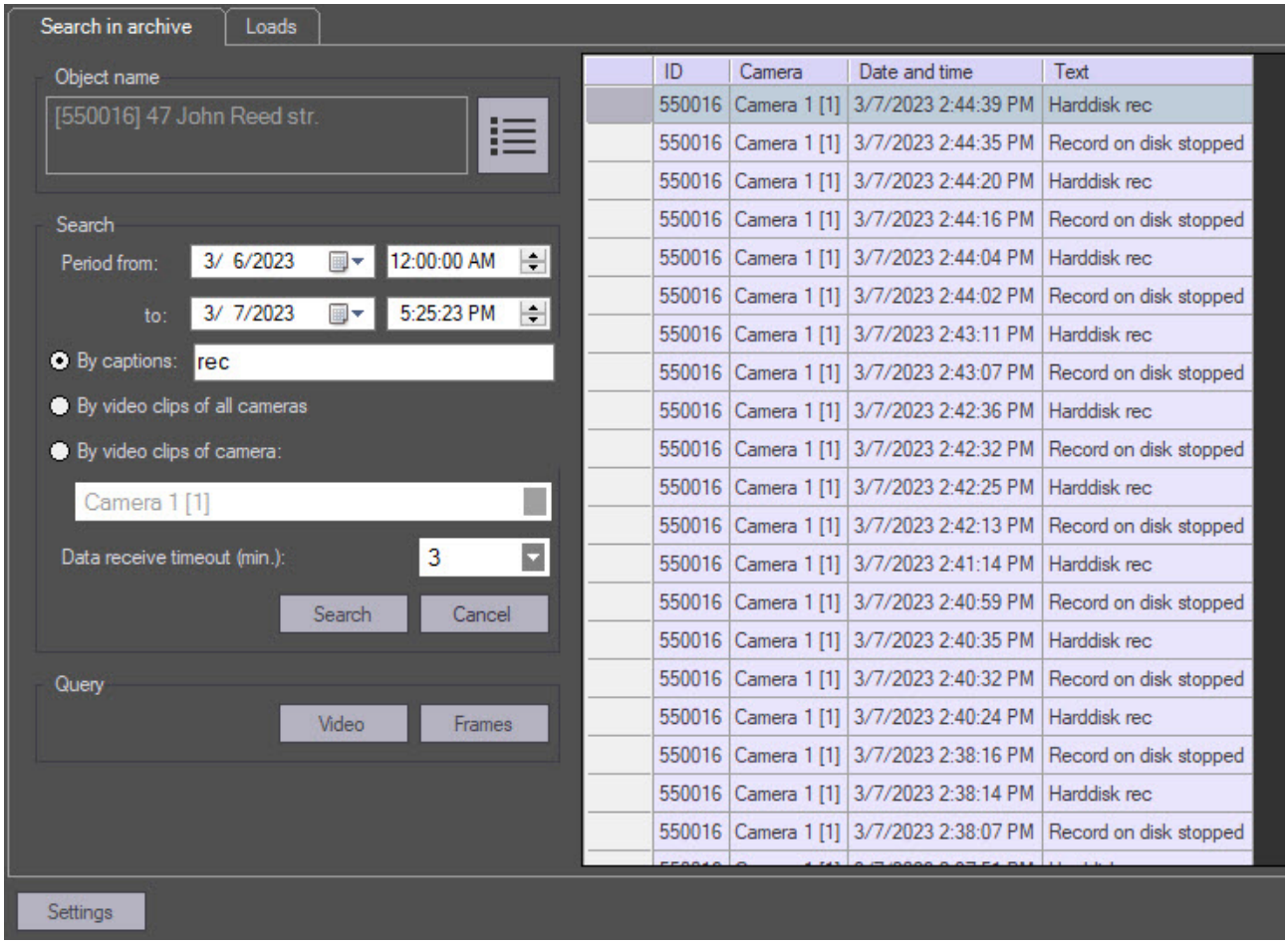
3. Make a request for archive search by using the following parameters:
   a. In the **Period from:** field, set the date and time for the start of the search period.
   b. In the **to:** field, set the date and time for the end of the search period.
   c. Click the **By captions** option button.
   d. Enter any keyword (available only if you click **By captions**).

> **Note**
>
> - The **By captions** field is auto-filled. Each keyword entered in this field will be stored in the database and will be automatically inserted into the field upon retyping.
> - To use the * symbol while searching by titles to search for any number of any characters, for example: card*.

4. Set the waiting time by using the **Data receive timeout (min.)** field.
5. Click **Search**.

> **Note**
>
> You can cancel the search at any moment by clicking **Cancel**.

6. If the search completes successfully, the search result is displayed as a list of lines. The number of lines in that list is limited to 500.



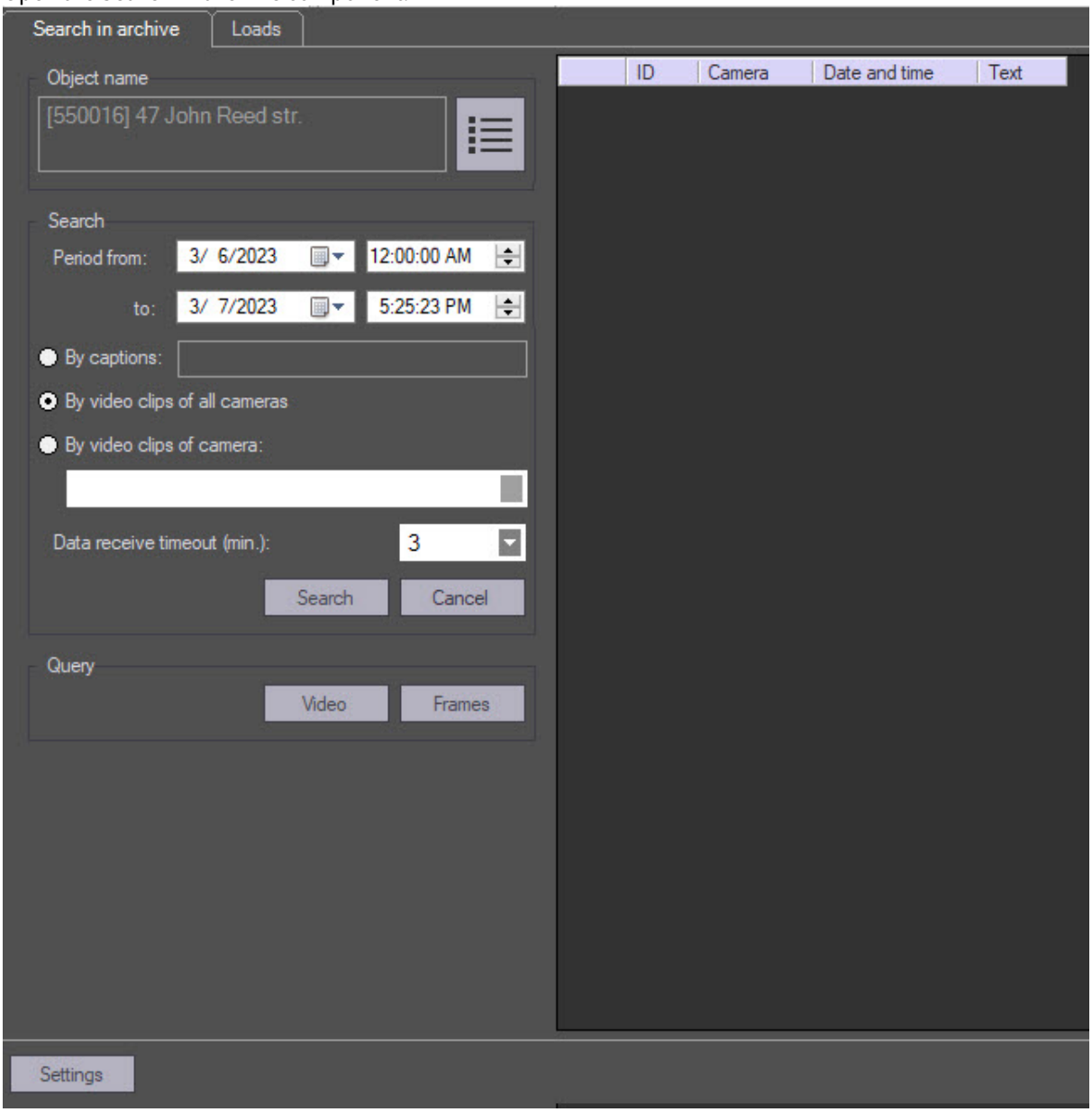
You can also make a request to the archive based on received data (see Request for video frames from an object).

> **Attention!**
>
> This data is requested from *Axxon PSIM*'s database at the object. If you want to change how long this data is stored, set the **Events archive length** parameter at the **Security zone** section at the **Programming** tab.

6.3 Request to a video archive by video clips

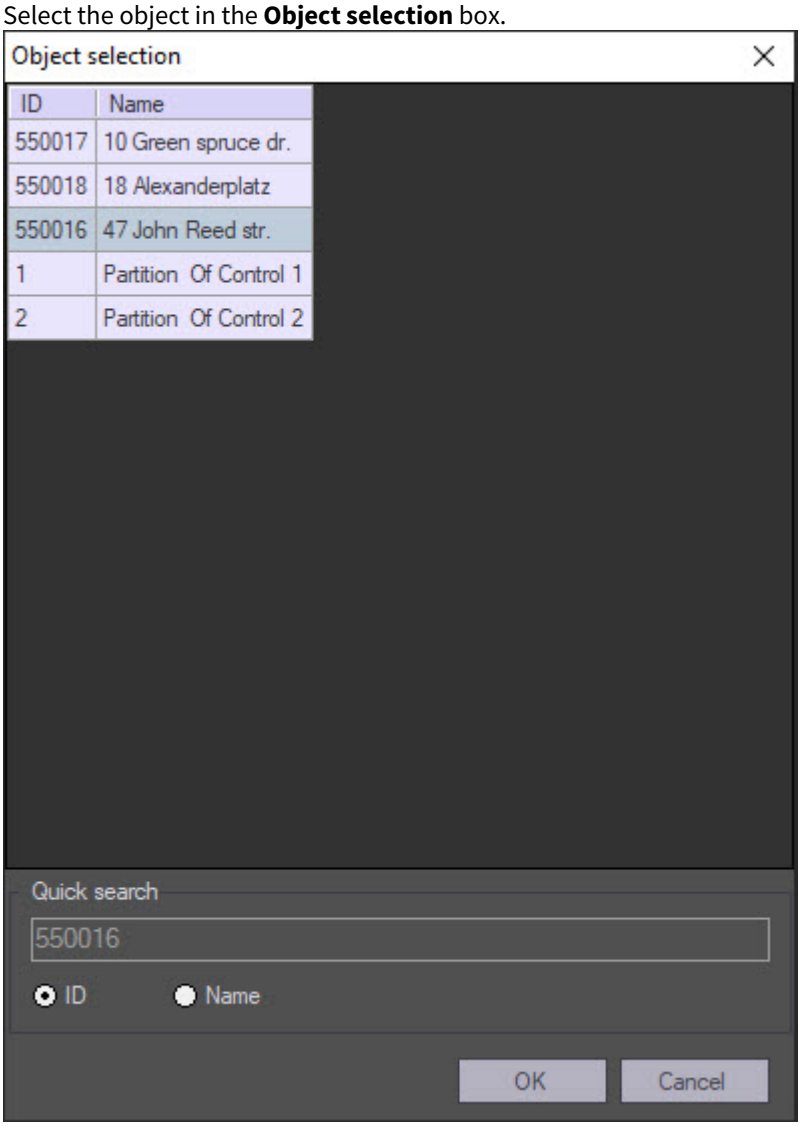
To send a request to the video archive by clips, follow these steps:

1. Open the **Search in archive** component.



2. Select an object as follows:
   a. Click  in the **Object name** group.

b. Select the object in the **Object selection** box.



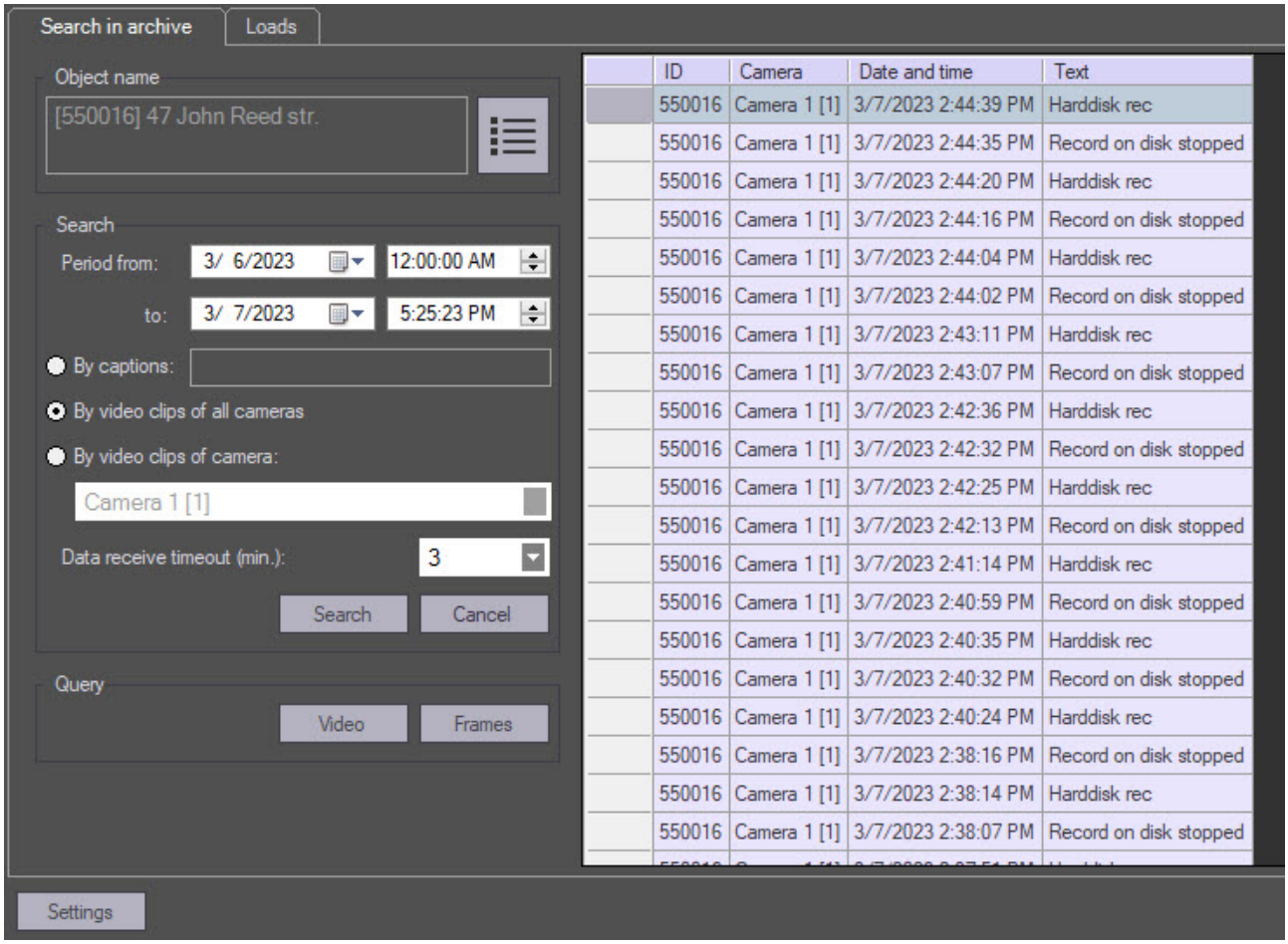
c. For quick search by object identification number, set the switch in the bottom of the box to **ID** and enter the number in the **Quick search** field. The match, if found, is displayed in the **Quick search** field while the corresponding object is automatically selected in the list.

d. For quick search by object name, set the switch in the bottom of the box to **Name** and enter part or full name in the **Quick search** field. The match, if found, is displayed in the **Quick search** field while the corresponding object is automatically selected in the list.

3. Make a request for archive search by using the following parameters:
   a. In the **Period from:** fields, set the date and time for the start of the search period.
   b. In the **to:** fields, set the date and time for the end of the search period.
   c. Click the **By video clips on all cameras** option button.

> **Note.**
>
> To search by video clips on a certain camera, click the **By camera clips** option button. Then select the ID of the required camera from the drop-down list.

4. Click **Search**. If the search completes successfully, the search result is displayed as a list of lines. The number of lines in that list is limited to 500.



You can also make a request to the archive based on received data (see Request for video frames from an object).

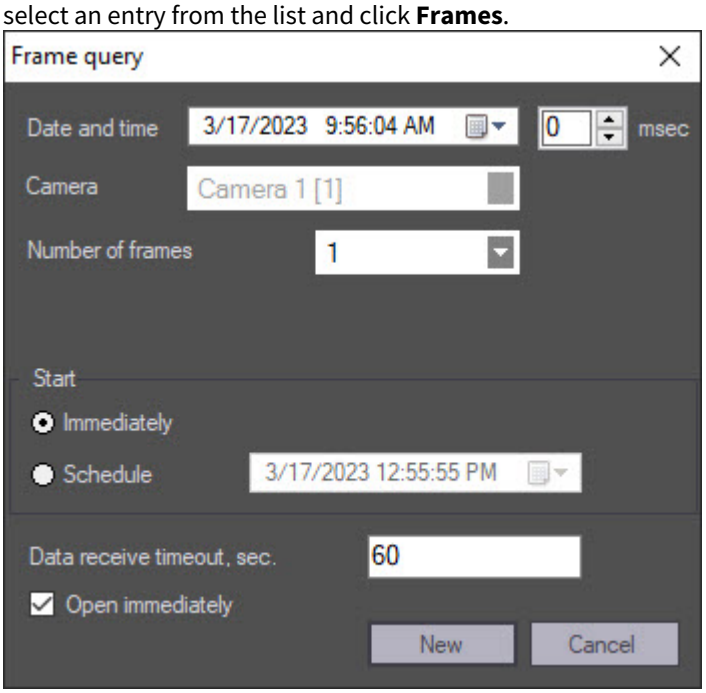
> **Attention!**
>
> This data is requested from *Axxon PSIM*'s database at the object. If you want to change how long this data is stored, set the **Events archive length** parameter at the **Security zone** section at the **Programming** tab.

6.4 Request for video frames from an object

You can use received data to request video frames from archives. To do this, follow these steps:

1. Search by titles or clips as described above.
2. The search results are shown as a list of entries. Right click on the required entry. A context menu opens. The menu has two items: **Video query** and **Frame query**.

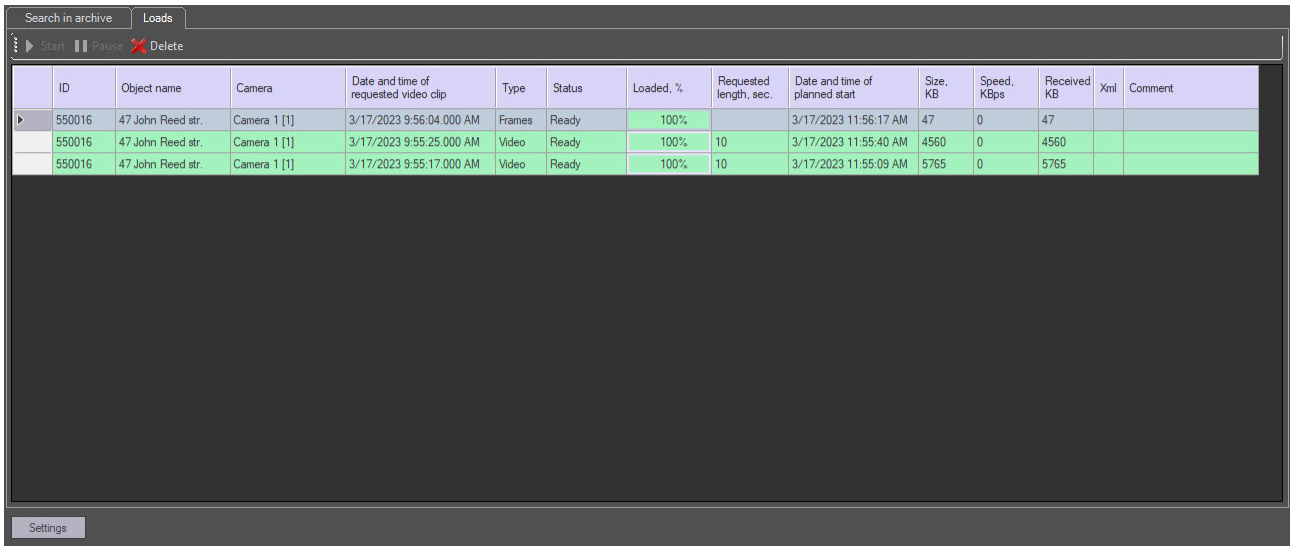
3. Select the **Frame query** item. The dialog form for the request opens. There is another way to open this form: select an entry from the list and click **Frames**.

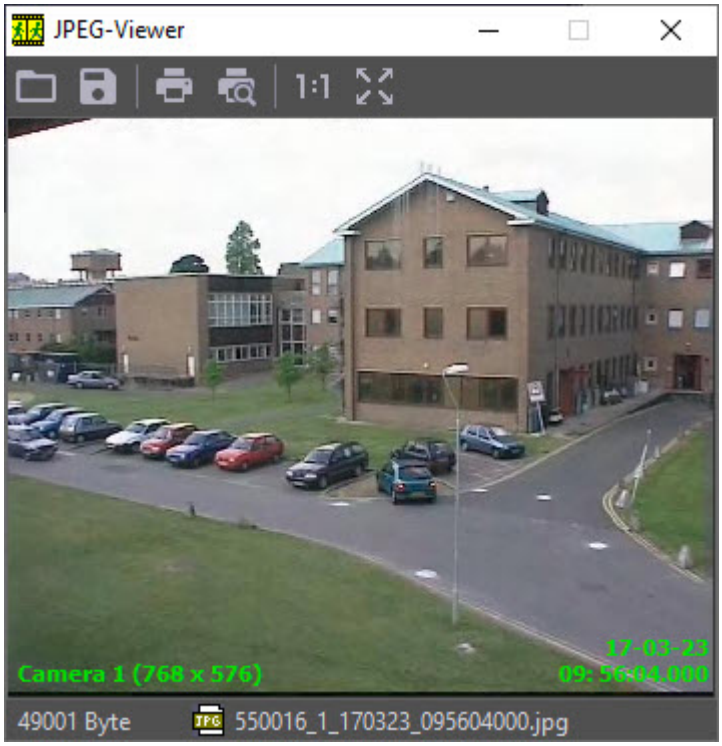


4. The **Date and time** and **Camera** fields are filled in automatically.
5. If you want to make a request with millisecond accuracy, use the **msec** field.
6. If you select more than one frame, the parameter **Interval between frames** appears. Then enter the interval between frames (with millisecond accuracy).
7. In the **Start** area, select the time for sending the request: click either the **Immediately** option button or **Schedule** option button.
8. Set the waiting time by using the **Data receive timeout, sec.** field.
9. If the check box **Open immediately** is selected, the data is put into the video archive and shown immediately. Otherwise, the data is only sent to the archive. To view such data, use the **Monitoring reports** component.
10. After you fill in all the fields, click **New**.
11. You will get to the **Downloads** tab where the task performance process is displayed. If the data is loaded successfully and the **Open immediately** check box is selected, the loaded frame is shown on the screen.

Note.

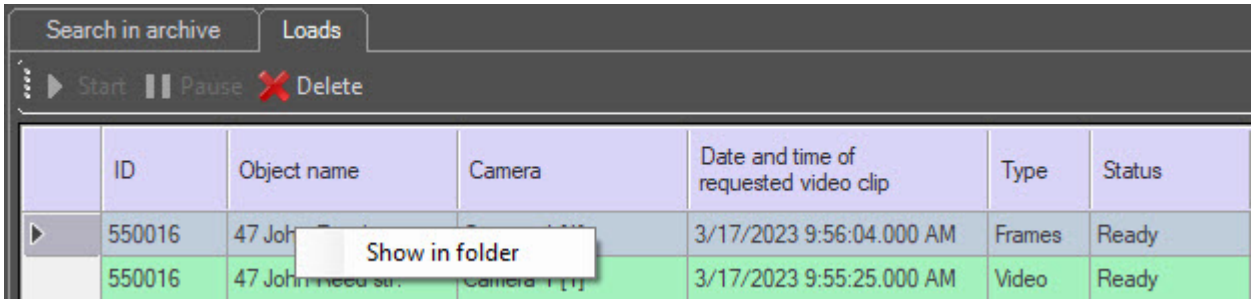
In case data have stopped coming during the download, for example if connection with the object is lost, download will be restarted after a random time interval from 1 to 60 seconds. In case of the attempt failure, attempts will be made at intervals of 1 minute.
Information on the time remaining to the restart is displayed in the **Comment** field. Any time you can restart loading manually using the **Start** button.





Irrespective of the frame size, it is displayed at 352x288 in the opened window. To view the image in the original resolution, click the **Original size** button  . To view the image in full screen mode click the **Full screen** button  .

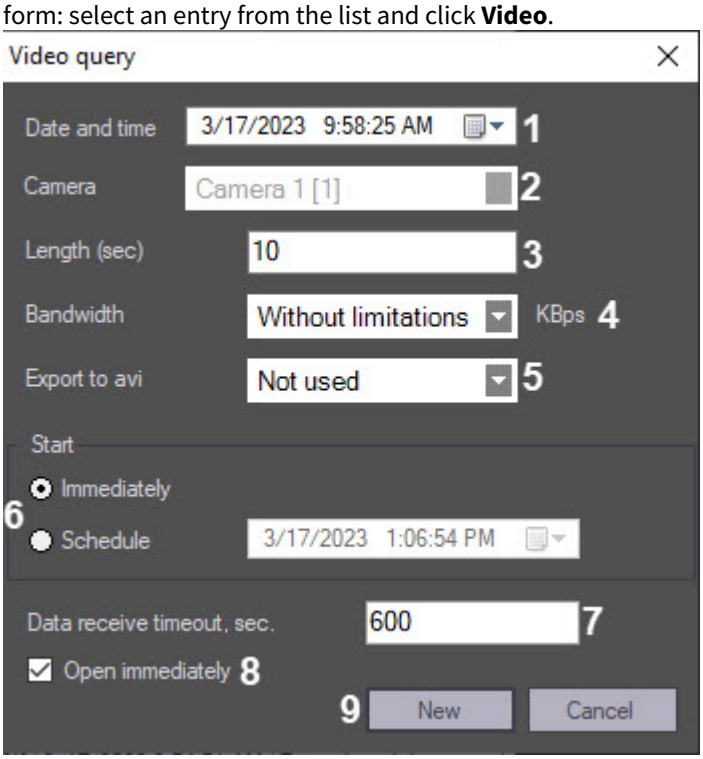
If frames are downloaded correctly, it is possible to go to the folder with these frames. For this right-click the corresponding frame and select the **Show in folder** item.



6.5 Request for video clips from objects

The **Search in archive** component allows you to request small video clips from an object on the *Agent of Control* side. For that, follow these steps:

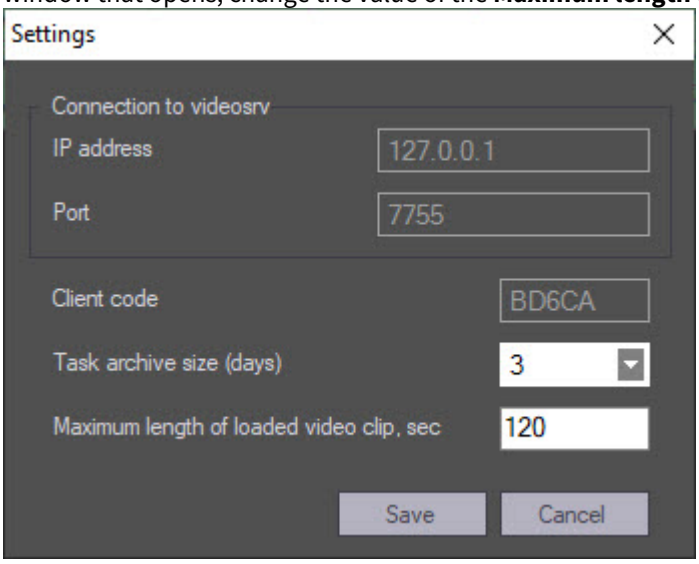
1. Search by titles or clips as described above.
2. The search results are shown as a list of entries. Right click on the required entry. A context menu opens. The menu has two items: **Video query** and **Frame query**.
3. Select the **Video query** menu item. A dialog form for the request opens. There is another way to open this form: select an entry from the list and click **Video**.



4. The **Date and time** (**1**) and **Camera** (**2**) fields are filled in automatically.
5. Use the **Length (sec)** field (**3**) to limit video clips.

> **Note.**
>
> If the **Not used** value is selected in the **Export to avi** parameter (**5**), then one or more clips will be exported which contain the specified time interval relative to the date and time. In the context of a single clip, it's impossible to request only a part of it.

If you try to set the value of the **Length (sec)** field to over 120, the value of 120 is offered. This is done to remind the user that such requests can export a big data file from a video archive on *Agent of Control* side. If you want to turn this limitation off, click **Settings** in the lower-left area of the **Search in archive** area. In the window that opens, change the value of the **Maximum length of loaded video clip, sec** field.



6. If you want to decrease network load, set the **Bandwidth __ KBps** field (**4**) to the appropriate value.
7. The **Export to avi** parameter (**5**) allows you to select the format and codec of the requested video clip:
   a. **Not used** – the video clip will be exported as an archive with a set of directories and files from the VIDEO folder.
   b. **Original** – the video clip will be exported to an avi-file without transcoding.
   c. **Xvid** – the video clip will be exported to an avi-file with the Xvid codec.
   d. **DivX** – the video clip will be exported to an avi-file with the DivX codec.
   e. **x264** – the video clip will be exported to an avi-file with the x264 codec.

   Attention!

   The export to an avi-file with the specified codec is performed on the *Agent of Control* side using the **AviExport.run** module and the required codec should be installed. Otherwise, an error **Frame or video clip is not found (archive export error)** will be received.

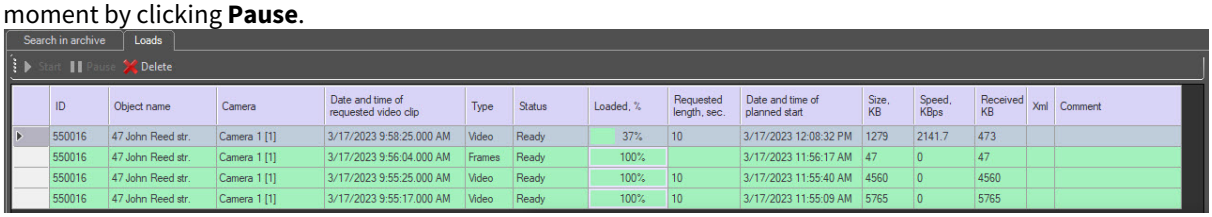
8. In the **Start** area, select the time for sending the request: **Immediately** or **Schedule** (**6**).
9. Set the waiting time by using the **Data receive timeout, sec.** field (**7**).

   Attention!

   If you request a clip that is longer than one minute, you have to increase the value of the **Data receive timeout, sec.** parameter. It is necessary to do it, because it takes time to export a large video clip on the *Agent of Control* side.

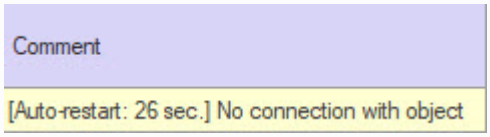
10. If the **Open immediately** check box (**8**) is selected, the data is put into the video archive and shown immediately. Otherwise, the data is only sent to the archive. To view such data, use the **Monitoring reports** component.
11. After you fill in all the fields, click **New** (**9**).
12. You will get to the **Loads** tab where the task performance process is displayed. While the video clip is being downloaded, it file size, loaded size, and transfer rate are shown. You can pause the download at any

moment by clicking **Pause**.



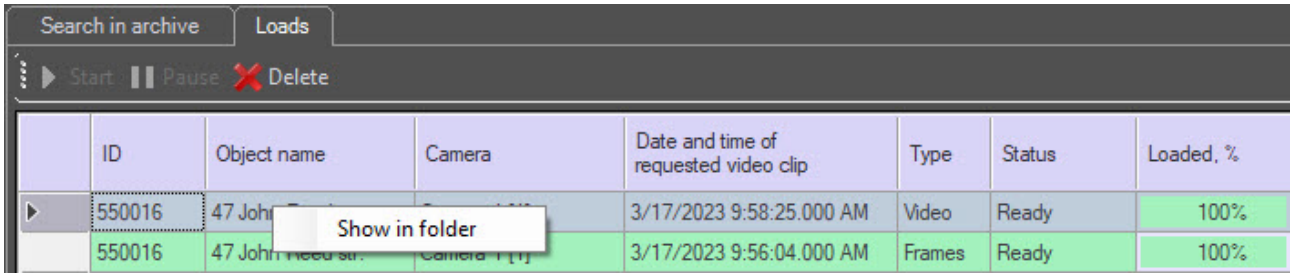
Note.

In case data have stopped coming during the download, for example if connection with the object is lost, download will be restarted after a random time interval from 1 to 60 seconds. In case of the attempt failure, attempts will be made at intervals of 1 minute. Information on the time remaining to the restart is displayed in the **Comment** field. Any time you can restart loading manually using the **Start** button.



13. If the **Open immediately** check box was selected, then the downloaded clip will be played in the following way:
    a. on the *Server of Control* and the *Additional workplace* using the Axxon Player utility, if the **Not used** value was selected in the **Export to avi** parameter.
    b. on the *Server of Control* using the program specified in the **AVI-files player** parameter (see Configuring reaction to snapshots and videos), if a value other than **Not used** was selected in the **Export to avi** parameter.
    c. on the *Additional workplace* using the program specified in the **AVI-files player** parameter (see Interface of Additional workplace configuration tool), if a value other than **Not used** was selected in the **Export to avi** parameter.

The successfully completed task is marked in green. Double click such entry to see the corresponding frame or play the corresponding video clip. It is also possible to go to the folder with downloaded videos. For this right-click the corresponding frame and select the **Show in folder** item.



The **Search in archive** component supports the download resume function. If the connection to **Agent Of Control** breaks during a download, the task status changes to **Network Error** after two minutes' time-out. The **Comment** field shows the information that the data is no longer being transferred. Ten seconds later the system start periodic attempts to resume the download. It tries to do it every minute. After the connection to **Agent Of Control** is reestablished, the data is downloaded not from the beginning, but from the point where the connection was lost. The download resume function uses temporary files. They are saved both on *Agent of Control* and on *Server of Control*. These files are stored for three days. After that, they are removed. For example, if you start a download, then click **Pause**, and resume the download five days later, the download starts from the beginning.

Note

To change the storage period for the temporary files, it is necessary to create the **StoreVideoFiles** string parameter in the Windows OS registry and set the required number of days as its value.
For details, see Registry keys reference guide, for more information about working with the registry, see Working with Windows OS registry.
Then it is necessary to restart the Videosrv.exe module.

If you want to remove old tasks from the task list, go to **Loads** tab and click **Delete** button. Tasks are stored in the database for max. 100 days. If you want to limit the number of tasks that are shown in the **Loads** tab, use the **Task archive size (days)** parameter in the **Settings** window opened by **Settings** button in the lower left corner of the **Search in archive** screen (see step 5).

Attention!

If *Axxon PSIM* closes, all tasks with the **Loading** status are paused. Start these tasks manually to resume download.

6.6 Automated video clip loading

6.6.1 Video clip request file

The data source for loading video clips is the .xml text file. The uniqueness of the name of this file is provided by the third party system that forms this file.

The request file includes the following parameters:

Name	Description
ID	**Partition Of Control** object identification number.
DateTimeBegin	Date and time of recording start and search by titles start in the following format: DD-MM-YYYY hh:mm:ss
DateTimeEnd	Date and time of search by titles end in the following format: DD-MM-YYYY hh:mm:ss *Note. To be used if the Titles parameter is not set to 0*
Length	The length of the requested video clip. Possible values: 1-9999
DateTimeExecute	Date and time to execute the request of the video clip in the following format: DD-MM-YYYY hh:mm:ss *Note. If 0 is set for this parameter, the request is executed immediately.*

Cam	Camera sequence number from top to bottom. The need to use the camera sequence number rather than the internal number is due to the fact that the internal camera number is not transmitted from older system versions. Example. There are 3 cameras on the *Agent of Control*: 1. Number = "1". Name= "Camera 1. Door" 2. Number = "3". Name = "Window" 3. Number = "5". Name = "Arch" The cameras are added to the **Partition Of Control** in the following order: 1. "Camera 1. Door" 2. "Arch" 3. "Window" Cameras are displayed on Server of Control in the corresponding order. Thus, to get a video from the camera "Arch", the parameter **Cam** should be equal to 2. *Note. If you specify 0, the video clips are downloaded from all object video cameras added while setting the Agent of Control.*
Titles	A string to search by titles. The string should not be longer than 40 characters. Use * to search for any number of characters, for example: • sala* − the search by this strings returns all titles with words beginning with "sala", e.g. "salad", "salamander"; • salad − the search by this strings returns the titles with the word "salad" only; • sala − the search by this strings returns no titles unless they include exact match. *Note 1. If you specify a value of 0, no titles will be searched. Also, in this case, the parameters OnlyWithTitles and DateTimeEnd are shall not be used.* *Note 2. If you specify an empty string, the search will be performed by any titles.* *Note 3. To use the characters in the search string as characters only, not as markup, use the CDATA section.*
OnlyWithTitles	Download video clip if titles found only. Possible values: 0 — video clip is downloaded 1 — video clip is not downloaded
DownloadSpeed	Download speed of the video in KB / sec. Possible values: 0-1000 *Note. If you specify a value of 0, then the download speed is not limited.*

See the example of the file on the picture below.

```
<?xml version="1.0" encoding="utf-8" ?>
<Settings>
  <ID>550016</ID>
  <DateTimeBegin>28-03-2017 12:00:00</DateTimeBegin>
  <DateTimeEnd>28-03-2017 19:00:00</DateTimeEnd>
  <Length>10</Length>
  <DateTimeExecute>0</DateTimeExecute>
  <Cam>1</Cam>
  <Titles><![CDATA[Vibro*]]></Titles>
  <OnlyWithTitles>1</OnlyWithTitles>
  <DownloadSpeed>0</DownloadSpeed>
</Settings>
```

6.6.2 Operating principle of automated video clip loading

Note.

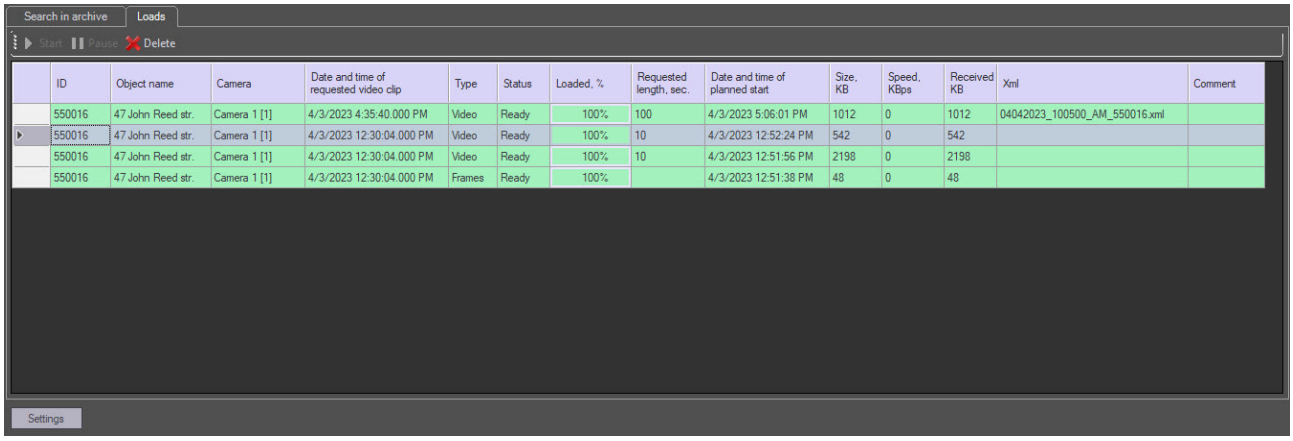
See Video clip request file for description of request file.
See note in Configuring automated video clip loading for description of folders.

The *Search in archive* module scans the **In** directory for the request files every 10 seconds. When the request file appears, the task is set up to load the video clip according to the contents of this file. At this point, the request file is moved to the **In\Work** directory. If the **Titles** parameter is set to a value other than 0, the query for finding titles in the specified time period from **DateTimeBegin** to **DateTimeEnd** is pre-executed. If the search is successful, a request is generated to load the video, in which the date and time of the first record in the title search results is specified as the date and time of the beginning of the export from the archive.

If the request file could not be read or the request file parameters are incorrect, then the it is moved to the **OutError** directory. If the request was correctly generated, but the video was not downloaded for any reason, then the request file is transferred to the **OutFail** directory. If the video clip is successfully downloaded, the request file is moved to the **OutSuccess** directory.

During the creation of the task, the **query_M.log** text log file is created in the **In** directory for the request files, where **M** is the current month. This log file stores information about all the movement of request files and errors during their execution.

On the **Loads** tab in the interface of the *Search in archive* module, there is an **Xml** column. If the download task was generated based on the request file, this field will indicate the name of the file.



7 Monitoring reports

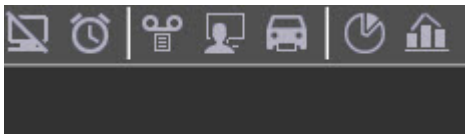
7.1 Purpose of monitoring reports

The *Monitoring reports* module automates the processing of statistical information of the system operation using the following report types:

1. Report on system failures.
2. Report on alarm events.
3. Video report.
4. Report on operator actions.
5. Statistics report.
6. The group of statistical reports by owners.
7. Vehicle LP reports.

You can limit access to any of these reports during the system configuration, see Configuration of the Monitoring reports object.

The **Monitoring reports** window:



Note

You can set the date and time format that are present in any reports using the language system settings.

Each report window contains a toolbar:

The toolbar items are described in the table below.

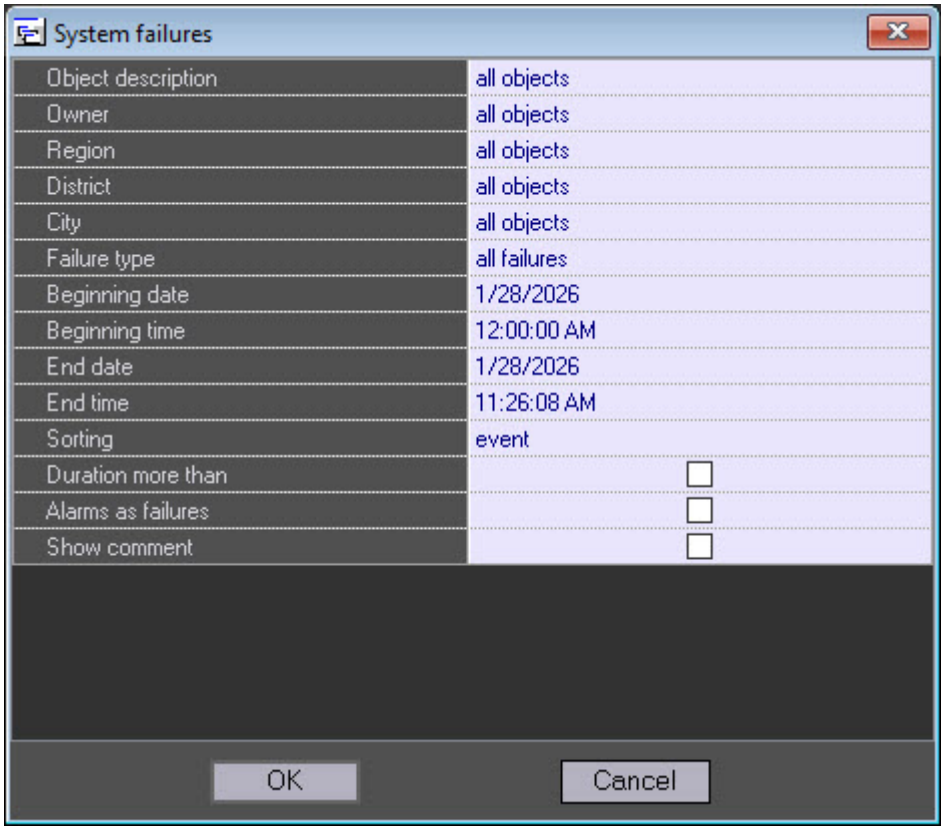
Element number	Element	Description
1	The **Zoom** field	Zoom
2	The button	Open report
3	The button	Save report
4	The button	Print
5	The button	Find text in report

Pay attention to the **Save report** and **Open report** buttons. For example, if you don't have an available printer at the place of installing the *Monitoring reports* component or if the created report must be saved in e-form so that you can later print it, then you can save a report as a file with the "FRP","XLS", "XML","RTF", or "HTML" extension. Later, you can open this report file at any workplace.

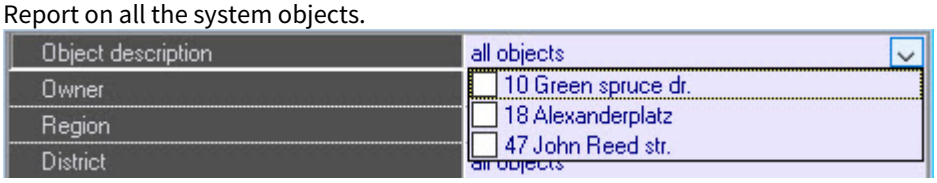
7.2 Report on system failures

To create a report, click the **System failures** button.

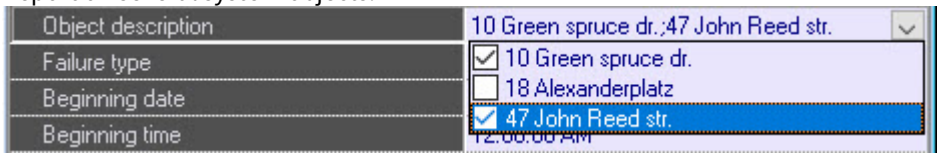
In the settings window that opens:



1. From the **Object description** drop-down list, select one of three modes of creating a report:
   a. Report on all the system objects.



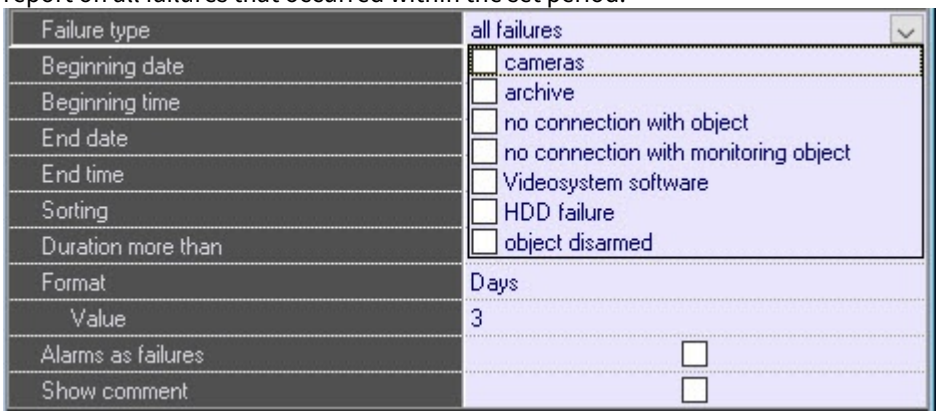
   b. Report on one system object.
   c. Report on several system objects.



2. Select the required values from the **Owner** drop-down list. This information is set on the control settings panel (for more details, see the Editing regulatory and reference information page), as well as depends on

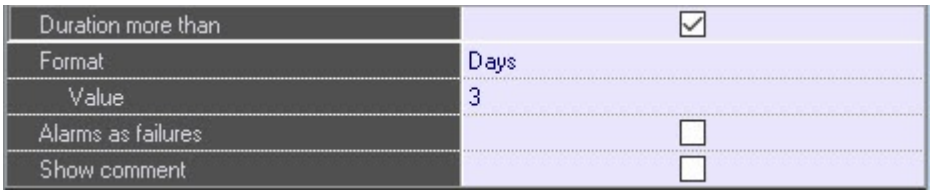
the configured filter by owners in the **Monitoring reports** interface object (for more details, see Configuration of the Monitoring reports object). If you select a specific object (see step 1), then this parameter is hidden in the settings window.

3. From the **Region**, **District**, and **City** drop-down lists, select those regions, districts, and cities where the objects are placed. This information is set on the control settings panel (for more details, see the Editing regulatory and reference information page). If you select a specific object (see step 1), then this parameter is hidden in the settings window.
4. From the **Failure type** drop-down list, select the options by which a report is created. You can also create a report on all failures that occurred within the set period.



5. Set the values of the **Beginning date**, **Beginning time**, **End date**, and **End time** fields to specify the time range of failure occurrences by which a report is created.
6. From the **Sorting** drop-down list, select one of two modes:
   a. **event**—sorting by failures (cameras, archives, and so on).
   b. **time**—sorting by the event beginning time.

7. Set the **Duration more than** checkbox so that a report displays only failures with the duration more than the set value. By default, the checkbox is cleared, that is, all failures within the set time interval get to report.
8. If you set the **Duration more than** checkbox, the following fields are displayed:
   a. **Format**—from the drop-down list, select the units to measure the failure duration: **Days**, **Hours**, **Minutes**, **Seconds**.
   b. **Value**—enter the failure duration.



9. If you want to create a report on alarms in the same way as on failures, that is, to specify the beginning of the alarm, its end, and its duration, then set the **Alarms as failures** checkbox (for more details, see Alarms as system failures report).
10. Set the **Show comment** checkbox to display failure reports in the comment (see Processing alarms).
11. Click the **OK** button.

As a result, a report about system failures is created.
Example of a report on all failures (the **Duration more than** checkbox isn't set):

Report issue date: 1/28/2026 11:17:33 AM

Report - system failures

Object: all objects report
Period: from 1/28/2026 12:00:00 AM to 1/28/2026 11:15:24 AM
Owner: all objects
Region: all objects
District: all objects
City: all objects
Failure type: all failures

Event	Beginning	End	Duration
Object: "10 Green spruce dr." (550017)			
No connection with object (Communication channel) Comment:	1/28/2026 11:14:07 AM	Continues	0d. 00h. 03m. 26s.
Object: "18 Alexanderplatz" (550018)			
No connection with object (Communication channel) Comment:	1/28/2026 11:14:07 AM	Continues	0d. 00h. 03m. 26s.
Object: "47 John Reed str." (550016)			
Camera off (Camera 2) Comment:	1/28/2026 10:48:52 AM	Continues	0d. 00h. 28m. 41s.
No connection with object (192.168.1.19) Comment:	1/28/2026 10:58:04 AM	1/28/2026 10:58:22 AM	0d. 00h. 00m. 18s.
Software error (Basic software) Comment:	1/28/2026 11:07:16 AM	1/28/2026 11:08:57 AM	0d. 00h. 01m. 41s.
Software error (Basic software (Video)) Comment:	1/28/2026 11:11:48 AM	1/28/2026 11:14:09 AM	0d. 00h. 02m. 21s.
Software error (Basic software) Comment:	1/28/2026 11:11:58 AM	1/28/2026 11:14:09 AM	0d. 00h. 02m. 11s.
Archive size not enough (Camera 1) Comment: ok	1/28/2026 10:48:52 AM	Continues	0d. 00h. 28m. 41s.

Example of a report on failures with the duration greater than the **Duration more than** 10 minutes set value:

Report issue date: 1/28/2026 11:19:30 AM

Report - system failures

Object:	**all objects report**
Period:	**from 1/28/2026 12:00:00 AM to 1/28/2026 11:15:24 AM**
Owner:	**all objects**
Region:	**all objects**
District:	**all objects**
City:	**all objects**
Failure type:	**all failures**
Duration:	**0d. 00h. 10m. 00s.**

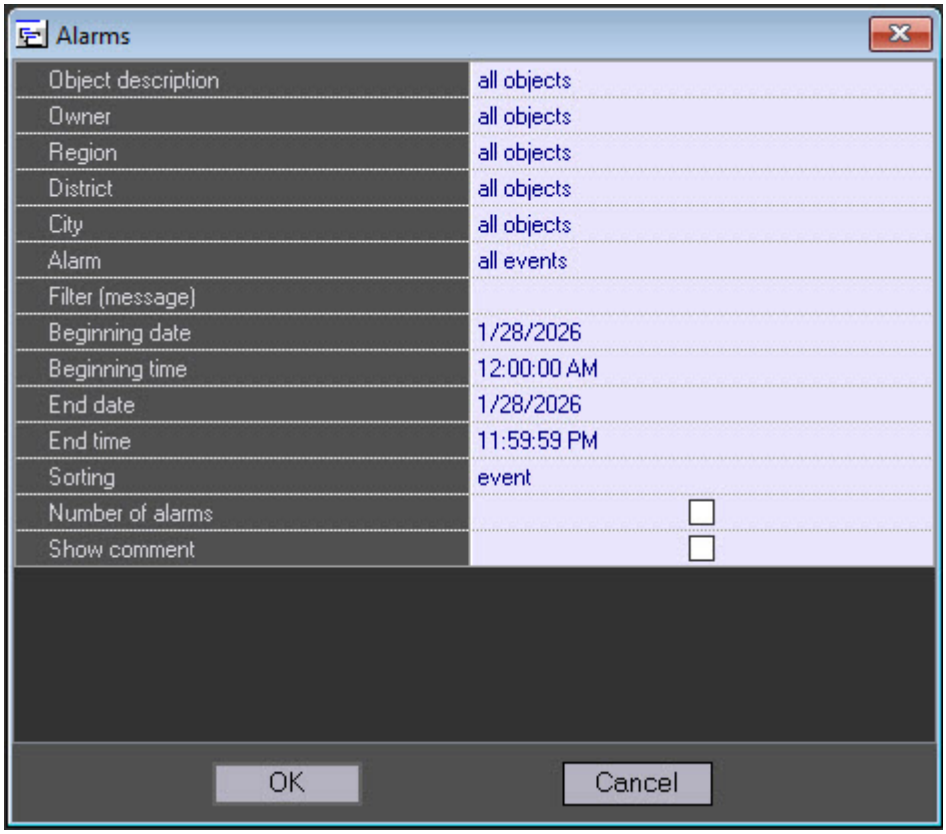
Event	Beginning	End	Duration
Object: "47 John Reed str." (550016)			
Camera off (Camera 2)	1/28/2026 10:48:52 AM	Continues	0d. 00h. 30m. 38s.
Archive size not enough (Camera 1)	1/28/2026 10:48:52 AM	Continues	0d. 00h. 30m. 38s.

The new **Duration** field appears in the common data at the top of the page.
Creating a report about system failures is complete.

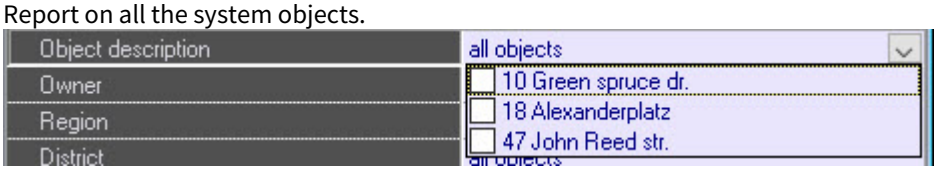
7.3 Report on alarm events

To create a report, click the **Alarms** button.

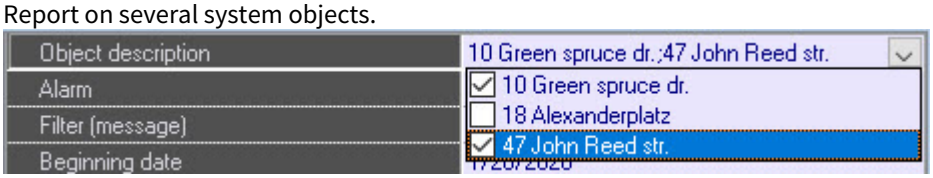
In the settings window that opens:



1. From the **Object description** drop-down list, select one of three modes of creating a report:
   a. Report on all the system objects.

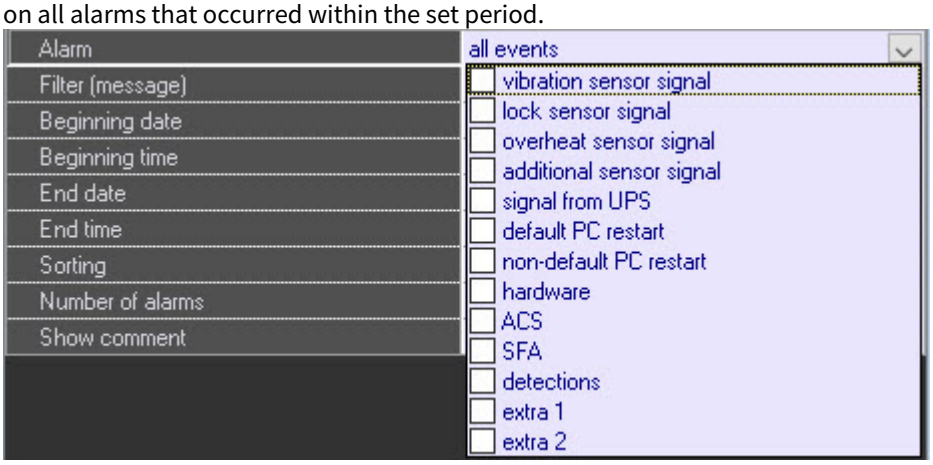


   b. Report on one system object.
   c. Report on several system objects.



2. Select the required values from the **Owner** drop-down list. This information is set on the control settings panel (for more details, see the Editing regulatory and reference information page), as well as depends on the configured filter by owners in the **Monitoring reports** interface object (for more details, see Configuration of the Monitoring reports object). If you select a specific object (see step 1), then this parameter is hidden in the settings window.
3. From the **Region**, **District**, and **City** drop-down lists, select those regions, districts, and cities where the objects are placed. This information is set on the control settings panel (for more details, see the Editing regulatory and reference information page). If you select a specific object (see step 1), then this parameter is hidden in the settings window.

4. From the **Alarm** drop-down list, select the alarms by which a report is created. You can also create a report on all alarms that occurred within the set period.



5. In the **Filter (message)** field, set, if necessary, the text filter by the messages of monitored alarms (see Configuration for associating events with certain alarm groups).

> **Note**
>
> The **Filter (message)** field is auto-filled. Each text filter entered in this field is stored in the database and automatically inserted into the field upon retyping.

6. Set the values of the **Beginning date**, **Beginning time**, **End date**, and **End time** fields to specify the time range of alarm occurrences by which a report is created.
7. From the **Sorting** drop-down list, select one of two modes:
   a. **event**—sorting by events (**Vibration sensor signal**, **Lock sensor signal**, and so on).
   b. **time**—sorting by the event beginning time.

8. Set the **Number of alarms** checkbox to create a report about the number of alarm events within the set period specified in step 6. By default, the checkbox is cleared, that is, a report is created by all alarms throughout the specified time interval without counting their number.
9. If you set the **Number of alarms** checkbox, the following fields are displayed:
   a. **Format**—from the drop-down list, select the time format when several recurring alarms are considered as one: **Days**, **Hours**, **Minutes** (the default value), **Seconds**.
   b. **Duplicate filter**—specify the period when several recurring alarms are considered as one. The default value is **5**. If the value of the **Duplicate filter** field equals **0**, the number of all alarms specified in step 6 are counted.

10. Set the **Show comment** checkbox to display alarm reports in the comment (see Processing alarms).
11. Click the **OK** button.
    As a result, a report about alarm events is created.

Example of a report on all alarm events (the **Number of alarms** checkbox isn't set):

Report issue date: 1/28/2026 3:48:40 PM

Report - alarms

Object:	all objects report
Period:	from 1/28/2026 12:00:00 AM to 1/28/2026 11:59:59 PM
Owner:	all objects
Region:	all objects
District:	all objects
City:	all objects
Alarm:	all events

Event	Time
Object: "47 John Reed str." (550016)	
Default PC restart	1/28/2026 3:44:12 PM
Detections (Camera 1 disarmed)	1/28/2026 3:44:42 PM
Detections (Camera 1 disarmed)	1/28/2026 3:47:26 PM

Example of a report on the number of alarm events with the set duplicate filter that equals one day:

Report issue date: 1/28/2026 3:50:19 PM

Report - alarms (count)

Object:	all objects report
Period:	from 1/28/2026 12:00:00 AM to 1/28/2026 11:59:59 PM
Owner:	all objects
Region:	all objects
District:	all objects
City:	all objects
Filter (duplicates):	1d. 00h. 00m. 00s.
Alarm:	all events

Event	Count
Object: 47 John Reed str. (550016)	
Detections (Camera 1 disarmed)	1
Default PC restart	1
Total:	**2**

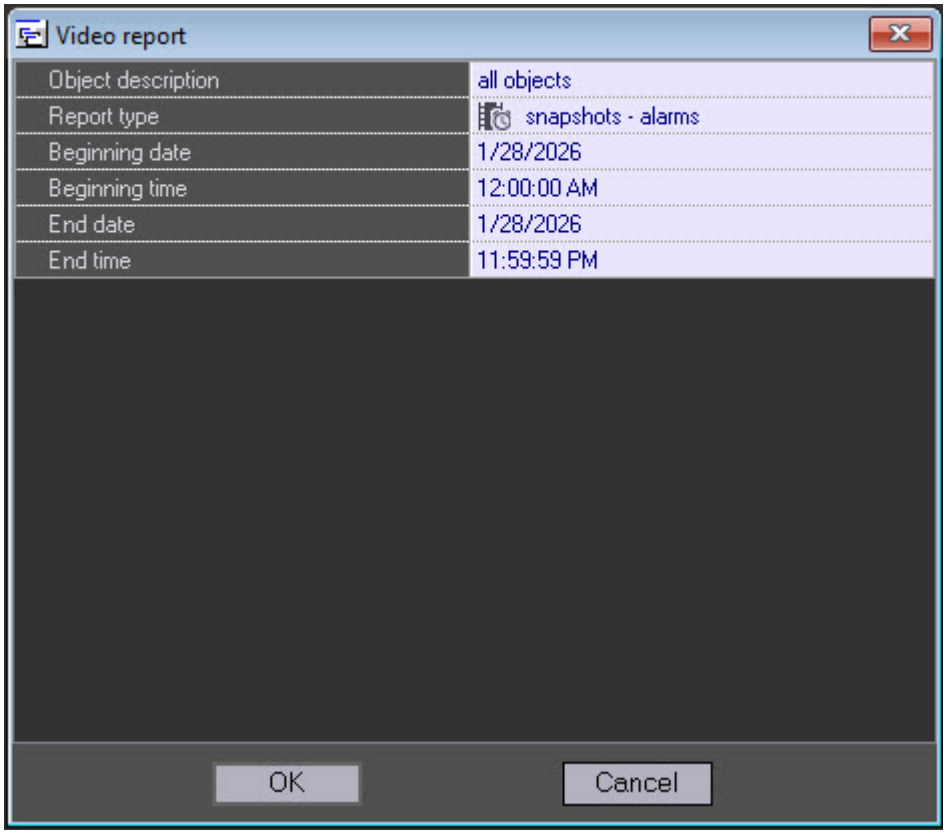
The new **Duplicate filter** field appears in the common data at the top of the page.

Creating a report about alarms is complete.

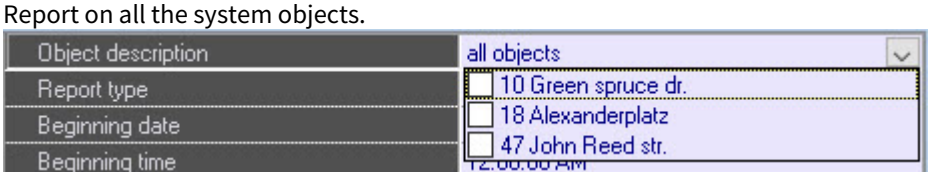
7.4 Video report

To create a report, click the **Video report** button.

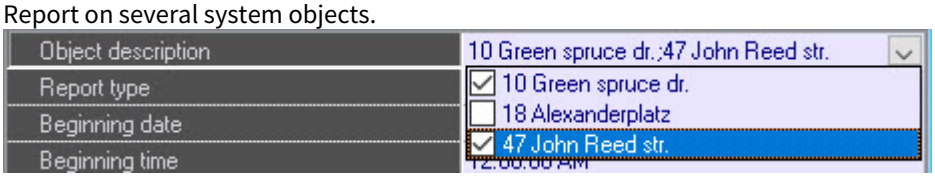
In the settings window that opens:



1. From the **Object description** drop-down list, select one of three modes of creating a report:
   a. Report on all the system objects.



   b. Report on one system object.
   c. Report on several system objects.

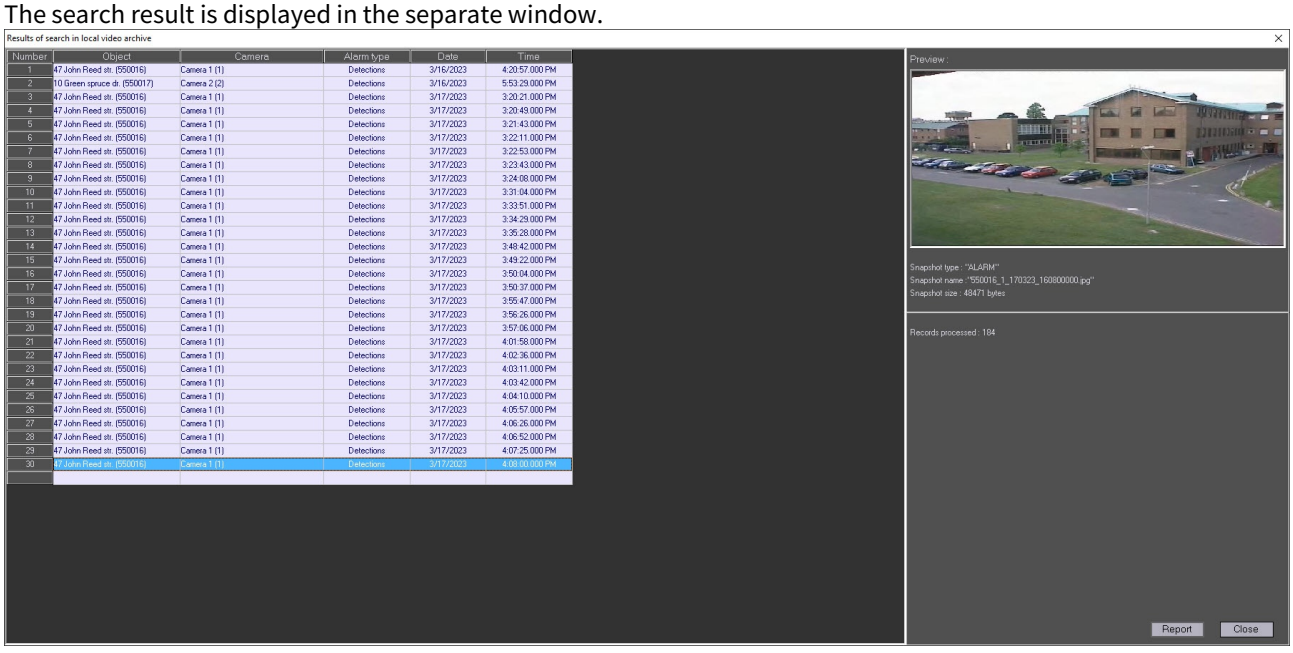


2. From the **Report type** drop-down list, select one of the four available report options:

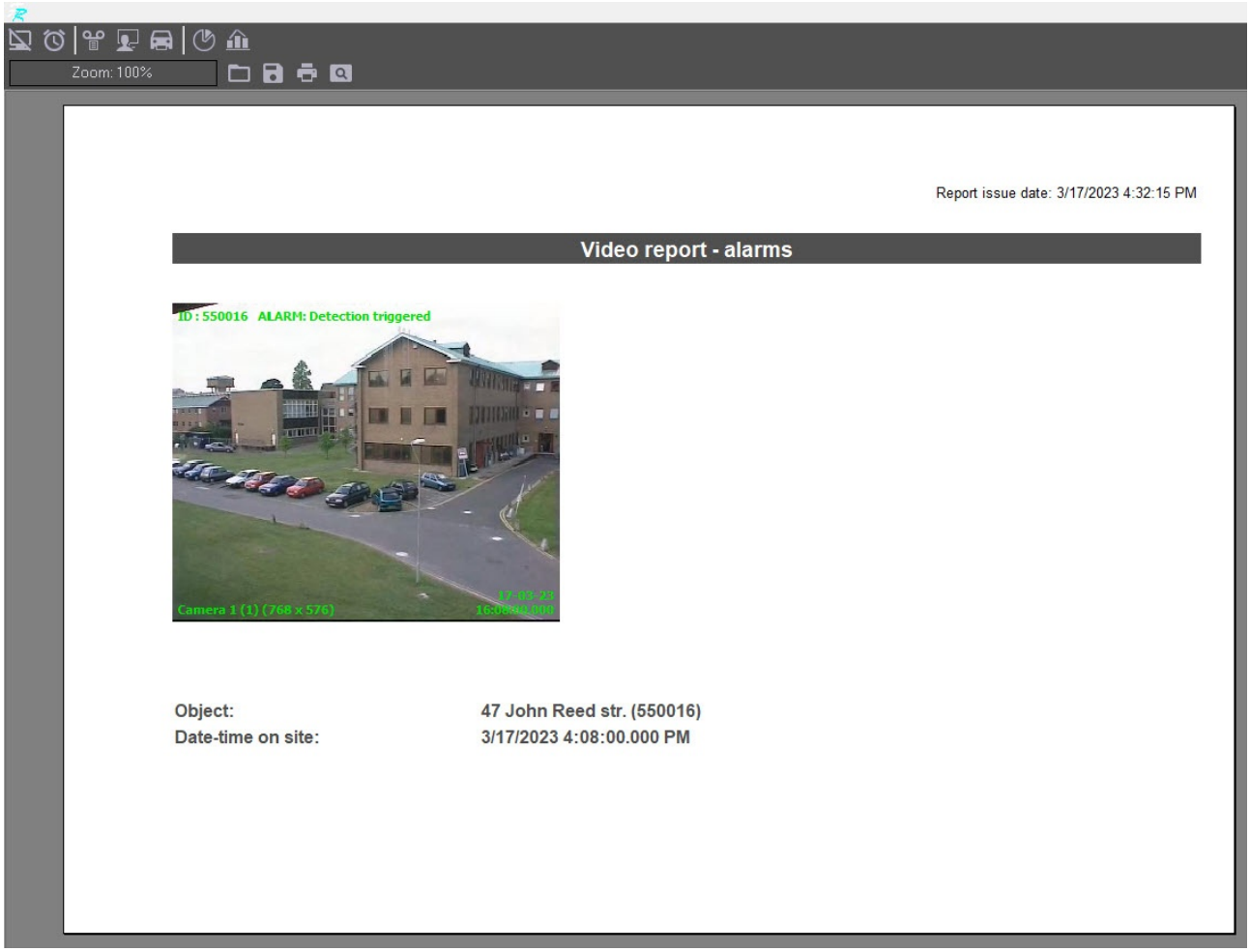
   a. **snapshots – alarms**. These are snapshots received after an alarm sensor generates an event on an object (**Vibration sensor signal**, **Lock sensor signal**, and so on).
   b. **snapshots – other**. These are snapshots received during the arbitrary request to the video archive. If you select the **snapshots – other** report type, the **Camera** drop-down list is displayed, where you can select all cameras or a specific one.

   c. **video clips – alarms**. These are video clips received after an alarm sensor generates an event on an object.
   d. **video clips – other**. These are video clips received during the arbitrary request to the video archive.
3. Set the values of the **Beginning date**, **Beginning time**, **End date**, and **End time** fields to specify the time range of the video archive on which a report is created.
4. Click the **OK** button.

The search result is displayed in the separate window.



After you select a frame, click the **Report** button. A report is displayed in the separate window.



Amid the search results of video clips, you can select any clip and view it via the *Axxon Player* utility by clicking the **View** button.

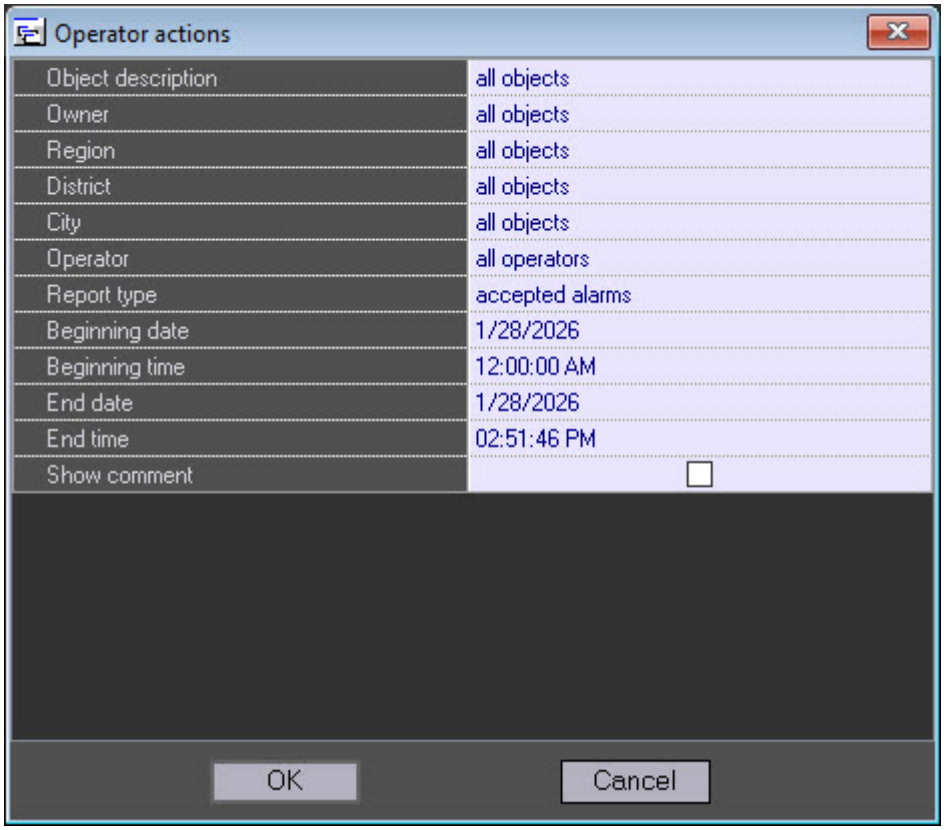
The search of video frames and video clips is performed according to the archive time and not by the time of files downloading to the computer and amid those files that were downloaded earlier using the *Search in archive* module or those that are received with alarms.

Creating the video report is complete.

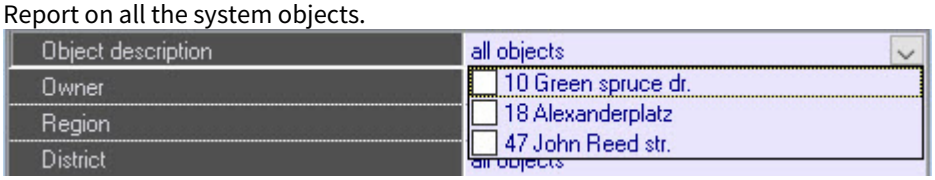
7.5 Report on operator actions

To create a report, click the **Operator actions** button.

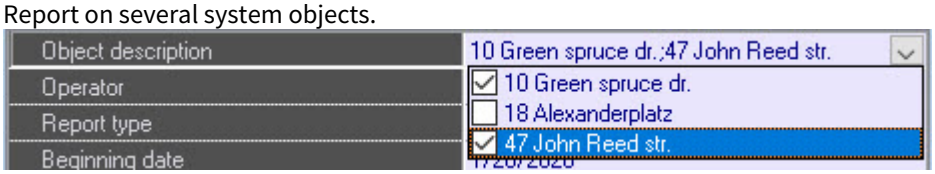
In the settings window that opens:



1. From the **Object description** drop-down list, select one of three modes of creating a report:
   a. Report on all the system objects.



   b. Report on one system object.
   c. Report on several system objects.



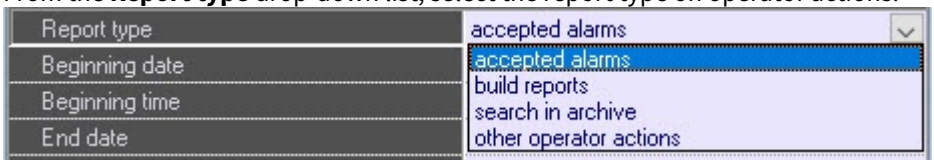
2. Select the required values from the **Owner** drop-down list. This information is set on the control settings panel (for more details, see the Editing regulatory and reference information page), as well as depends on the configured filter by owners in the **Monitoring reports** interface object (for more details, see Configuration of the Monitoring reports object). If you select a specific object (see step 1), then this parameter is hidden in the settings window.
3. From the **Region**, **District**, and **City** drop-down lists, select those regions, districts, and cities where the objects are placed. This information is set on the control settings panel (for more details, see the Editing regulatory and reference information page). If you select a specific object (see step 1), then this parameter is hidden in the settings window.

Note

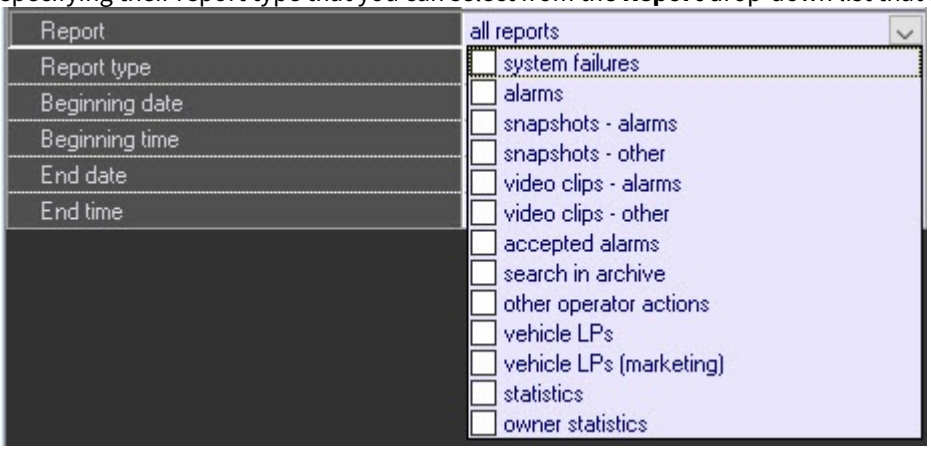
The **Owner**, **Region**, **District**, and **City** parameters are displayed only when you select the **accepted alarms** and **search in archive** report types in step 5.

4. From the **Operator** drop-down list, select the operators whose actions must be used for creating a report.
   a. **all operators**—report on all operator actions.
   b. **auto close**—an alarm closes automatically (the option is available only if you select the **accepted alarms** report types in step 5).
   c. **administrator**—report on administrator actions.

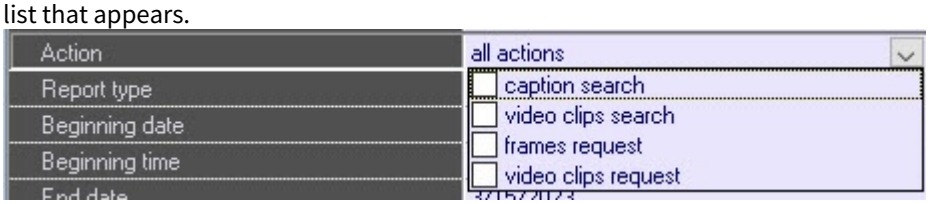
5. From the **Report type** drop-down list, select the report type on operator actions.



   a. **accepted alarms**—a repost receives the information about when and which user accepts an alarm or group of alarms and the specified comments.
   b. **build reports**—a report receives the information about when and which user creates reports, specifying their report type that you can select from the **Report** drop-down list that appears.

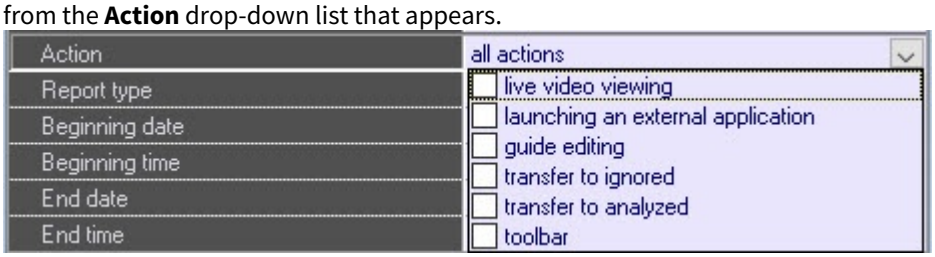


   c. **search in archive**—a report receives the information about when and which user performed actions during the operation of the *Search in archive* module that you can select from the **Action** drop-down list that appears.



   d. **other operator actions**—a report receives the information about when and which user performed any other actions (clicking buttons, working with cameras, archives, and so on) that you can select

from the **Action** drop-down list that appears.



6. Set the values of the **Beginning date**, **Beginning time**, **End date**, and **End time** fields to specify the time interval by which a report is created.
7. Set the **Show comment** checkbox to display alarm reports in the comment (see Processing alarms).

> **Note**
>
> This parameter is displayed only if you select the **accepted alarms** report types in step 5.

8. Click the **OK** button.
   As a result, a report on operator actions is created.

The example of a report on operator actions of the **accepted alarms** type:

Report issue date: 1/30/2026 11:44:46 AM

Report - accepted alarms

Object:	**all objects report**
Operator:	**all operators**
Period:	**from 1/29/2026 12:00:00 AM to 1/30/2026 11:45:00 AM**
Owner:	**all objects**
Region:	**all objects**
District:	**all objects**
City:	**all objects**

Event	Beginning	Accepted	Reaction time	Operator
Object: "47 John Reed str." (550016)				
Default PC restart	1/29/2026 2:25:32 PM	1/30/2026 11:41:49 AM	0d. 21h. 16m. 17s.	administrator
Default PC restart	1/30/2026 11:34:57 AM	1/30/2026 11:41:49 AM	0d. 00h. 06m. 52s.	administrator
No connection with object (192.168.1.19)	1/29/2026 5:24:20 PM	1/29/2026 5:24:26 PM	0d. 00h. 00m. 06s.	auto close
Software error (Basic software)	1/29/2026 5:04:08 PM	1/29/2026 5:09:41 PM	0d. 00h. 05m. 33s.	auto close
Software error (Basic software (Video))	1/28/2026 6:53:57 PM	1/29/2026 2:23:57 PM	0d. 19h. 30m. 00s.	auto close
Software error (Basic software)	1/28/2026 6:54:08 PM	1/29/2026 2:23:57 PM	0d. 19h. 29m. 49s.	auto close
No connection with object (192.168.1.19)	1/28/2026 6:54:17 PM	1/29/2026 2:23:57 PM	0d. 19h. 29m. 40s.	auto close

The example of a report on operator actions of the **build reports** type:

Report issue date: 1/30/2026 11:46:50 AM

Report - build reports

Object: all objects report
Operator: all operators
Period: from 1/28/2026 12:00:00 AM to 1/30/2026 11:45:00 AM
Report: all reports

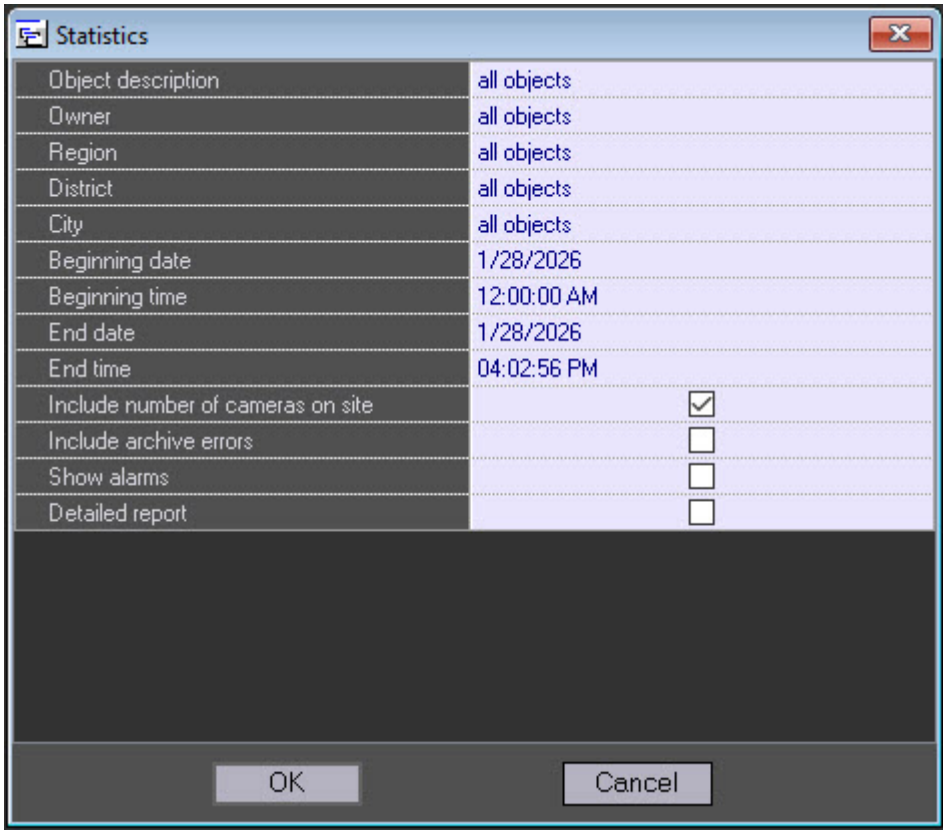
Report	PC	Time	Period	Detail
Operator: "Administrator"				
Accepted alarms	WIN-24IDEVQQDHC	1/30/2026 11:44:46 AM	1/29/2026 12:00:00 AM - 1/30/2026 11:45:00 AM	all operators
Accepted alarms	WIN-24IDEVQQDHC	1/30/2026 11:44:01 AM	1/29/2026 12:00:00 AM - 1/30/2026 11:37:51 AM	all operators
Accepted alarms	WIN-24IDEVQQDHC	1/30/2026 11:42:34 AM	1/29/2026 12:00:00 AM - 1/30/2026 11:37:51 AM	all operators
Alarms	WIN-24IDEVQQDHC	1/28/2026 3:50:19 PM	1/28/2026 12:00:00 AM - 1/28/2026 11:59:59 PM	Number of alarms: all events
Alarms	WIN-24IDEVQQDHC	1/28/2026 3:48:40 PM	1/28/2026 12:00:00 AM - 1/28/2026 11:59:59 PM	all events
Alarms	WIN-24IDEVQQDHC	1/28/2026 3:45:48 PM	1/28/2026 12:00:00 AM - 1/28/2026 11:59:59 PM	all events
Alarms	WIN-24IDEVQQDHC	1/28/2026 3:44:14 PM	1/28/2026 12:00:00 AM - 1/28/2026 11:59:59 PM	all events
Alarms	WIN-24IDEVQQDHC	1/28/2026 3:34:20 PM	1/28/2026 12:00:00 AM - 1/28/2026 11:59:59 PM	all events
System failures	WIN-24IDEVQQDHC	1/28/2026 3:34:15 PM	1/28/2026 12:00:00 AM - 1/28/2026 3:34:14 PM	all failures
Alarms	WIN-24IDEVQQDHC	1/28/2026 3:27:07 PM	1/28/2026 12:00:00 AM - 1/28/2026 11:59:59 PM	all events
Alarms	WIN-24IDEVQQDHC	1/28/2026 3:26:59 PM	1/28/2026 12:00:00 AM - 1/28/2026 11:59:59 PM	all events
Alarms	WIN-24IDEVQQDHC	1/28/2026 3:20:25 PM	1/28/2026 12:00:00 AM - 1/28/2026 11:59:59 PM	all events
System failures	WIN-24IDEVQQDHC	1/28/2026 3:20:20 PM	1/28/2026 12:00:00 AM - 1/28/2026 3:20:18 PM	all failures
Alarms	WIN-24IDEVQQDHC	1/28/2026 3:18:19 PM	1/28/2026 12:00:00 AM - 1/28/2026 11:59:59 PM	all events
System failures	WIN-24IDEVQQDHC	1/28/2026 11:19:30 AM	1/28/2026 12:00:00 AM - 1/28/2026 11:15:24 AM	all failures
System failures	WIN-24IDEVQQDHC	1/28/2026 11:17:33 AM	1/28/2026 12:00:00 AM - 1/28/2026 11:15:24 AM	all failures
System failures	WIN-24IDEVQQDHC	1/28/2026 11:16:01 AM	1/28/2026 12:00:00 AM - 1/28/2026 11:15:24 AM	all failures
System failures	WIN-24IDEVQQDHC	1/28/2026 11:15:25 AM	1/28/2026 12:00:00 AM - 1/28/2026 11:15:24 AM	all failures
System failures	WIN-24IDEVQQDHC	1/28/2026 11:06:04 AM	1/28/2026 12:00:00 AM - 1/28/2026 11:06:01 AM	all failures

Creating a report on operator actions is complete.

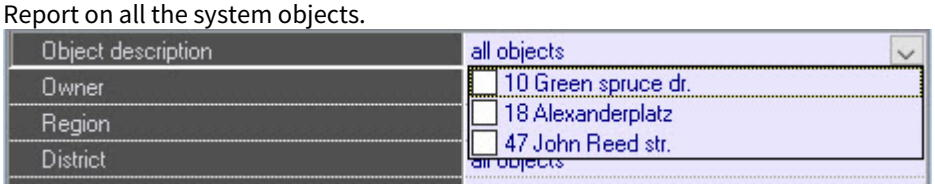
7.6 Statistics report

To create a report, click the **Statistics**  button.

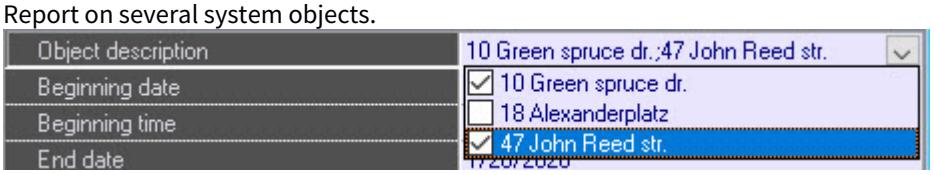
In the settings window that opens:



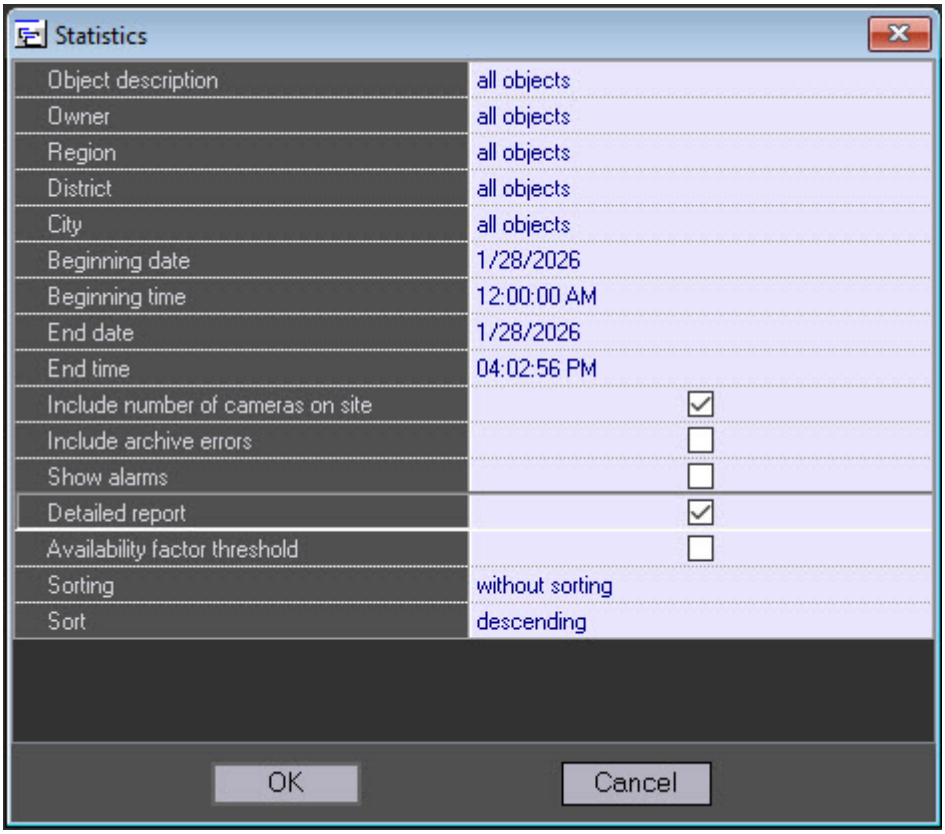
1. From the **Object description** drop-down list, select one of three modes of creating a report:
   a. Report on all the system objects.



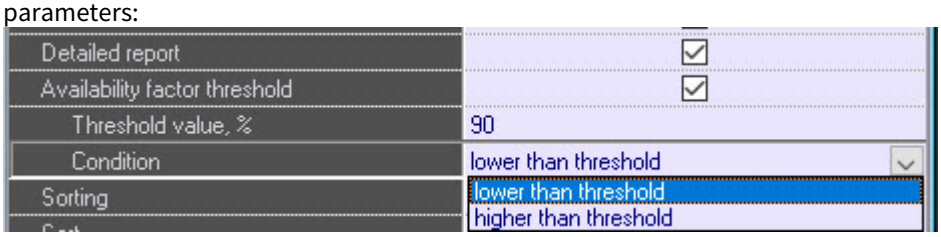
   b. Report on one system object.
   c. Report on several system objects.



   When you select a report on all objects or on several objects, the **Detailed report** checkbox is displayed. By default, the **Detailed report** checkbox is cleared, that is, the system creates the common statistic report. If you set the **Detailed report** checkbox, then the system creates a detailed statistic report and displays the **Availability factor threshold**, **Sorting**, and **Sort** parameters.

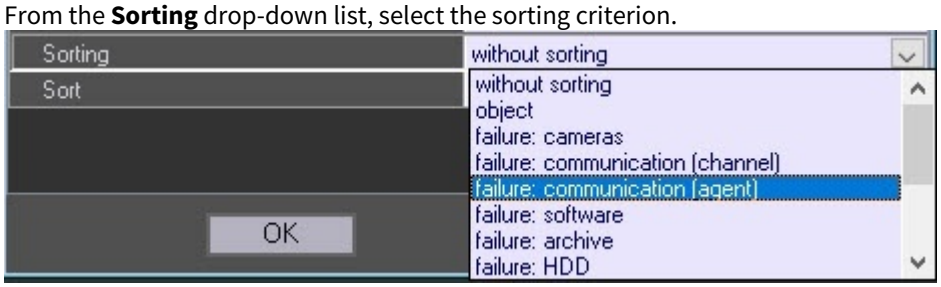


i. Set the **Availability factor threshold** checkbox to filter objects by the additional condition, the availability factor threshold value, to display the **Threshold value, %** and **Condition** parameters:

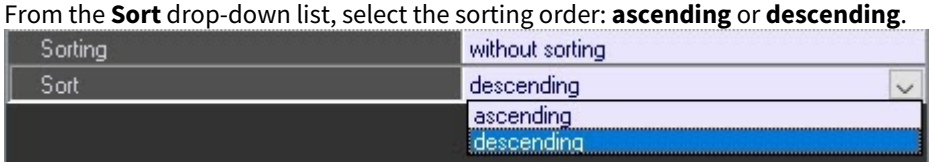


- In the **Threshold value, %** field, specify the threshold value as a percentage in the range from 0 to 100;
- From the **Condition** drop-down list, select the condition of objects filtering: **lower than threshold** or **higher than threshold**.

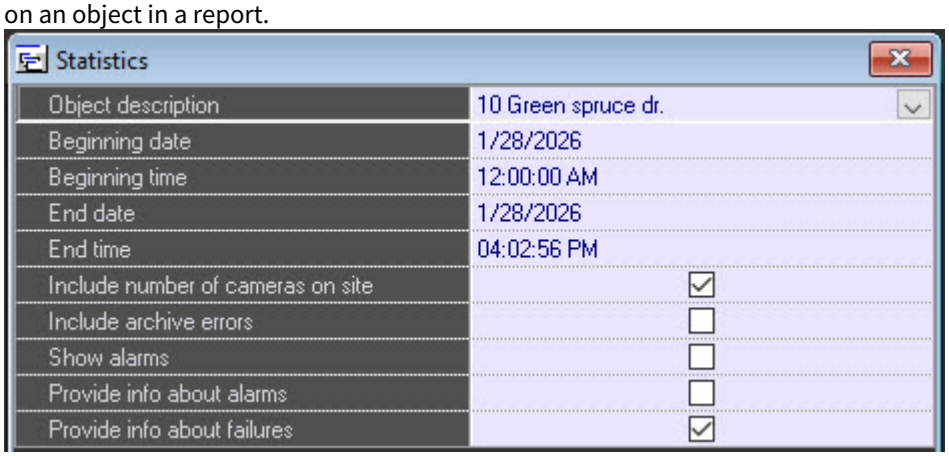
ii. From the **Sorting** drop-down list, select the sorting criterion.



iii. From the **Sort** drop-down list, select the sorting order: **ascending** or **descending**.



d. Report on one system object.
When you select a specific object, the **Provide info about alarms** and **Provide info about failures** parameters are displayed, where:
   i. Set the **Provide info about alarms** checkbox to include the detailed information about alarms on an object in a report.
   ii. Set the **Provide info about failures** checkbox to include detailed information about failures on an object in a report.



2. Select the required values from the **Owner** drop-down list. This information is set on the control settings panel (for more details, see the Editing regulatory and reference information page), as well as depends on the configured filter by owners in the **Monitoring reports** interface object (for more details, see Configuration of the Monitoring reports object). If you select a specific object (see step 1), then this parameter is hidden in the settings window.
3. From the **Region**, **District**, and **City** drop-down lists, select those regions, districts, and cities where the objects are placed. This information is set on the control settings panel (for more details, see the Editing regulatory and reference information page). If you select a specific object (see step 1), then this parameter is hidden in the settings window.
4. Set the values of the **Beginning date**, **Beginning time**, **End date**, and **End time** fields to specify the time interval by which a report is created.
5. Set the **Include number of cameras on site** checkbox to calculate unavailability factors, taking into account the total number of cameras on an object.
6. Set the **Include archive errors** checkbox to take into account unavailability factors by archives when you calculate the unavailability factor of the entire system.
7. Set the **Show comment** checkbox to add information about alarm events on system objects to a report.
8. Click the **OK** button.

Example of a statistic report on one object:

Report issue date: 1/30/2026 12:08:28 PM

Object statistics

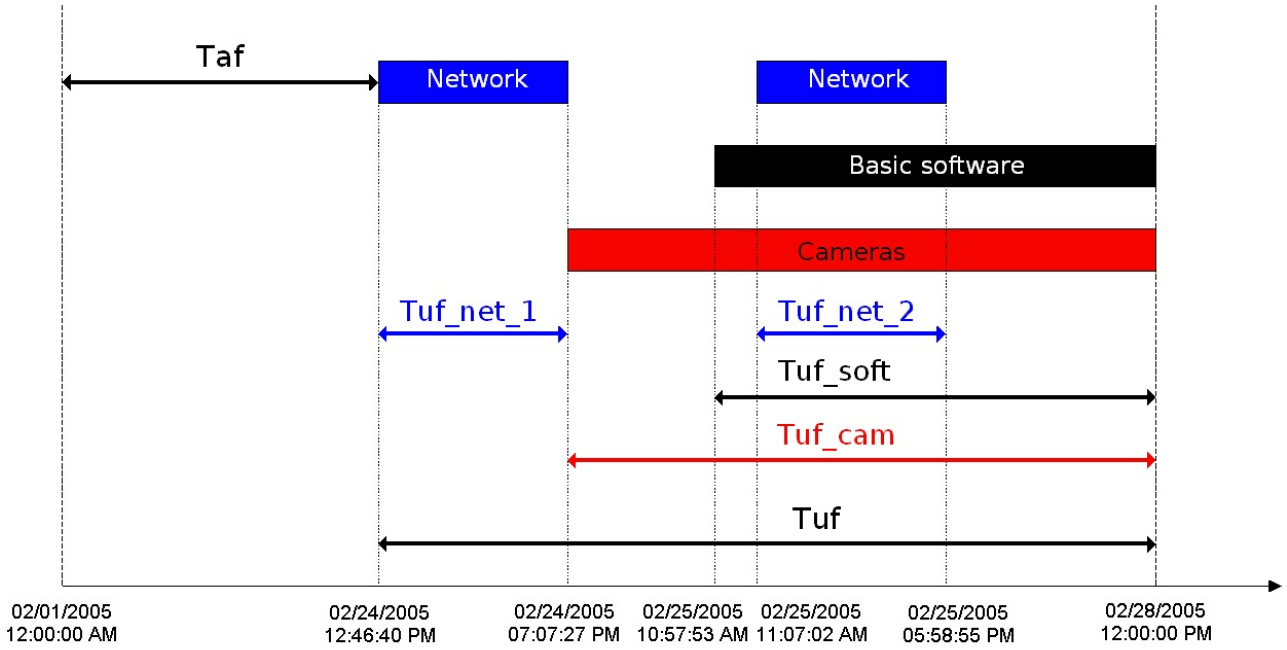
Object: 47 John Reed str. (550016)
Period: from 1/28/2026 12:00:00 AM to 1/30/2026 12:01:12 PM
Owner: London
Region:
District:
City:
Period length: 2d. 12h. 01m. 12s. **Cameras: 16**
Exploitation length: 2d. 01h. 14m. 01s.

Number and duration of failures:

Camera failures:	(25d. 20h. 17m. 44s.)	14
Connection lost (communication channel):	(0d. 19h. 36m. 56s.)	4
Connection lost (agent):	(0d. 00h. 00m. 00s.)	0
Videosystem software failure:	(1d. 15h. 19m. 16s.)	5
Insufficient archive size:	(1d. 20h. 18m. 24s.)	1
HDD failure:	(0d. 00h. 00m. 00s.)	0
Total:		**24**

Object availability factor:	**9.8 %**
Object unavailability factor (communication:communication channel):	**39.8 %**
Object unavailability factor (communication:agent):	**0.0 %**
Object unavailability factor (software):	**79.9 %**
Object unavailability factor (camera):	**78.7 %**
Object unavailability factor (HDD):	**0.0 %**

The following figure shows an example of different failures at the object by which availability and unavailability factors are calculated.



In this example, the statistic report is created during the period from 12 a.m. on February 1, 2005, to 12 p.m. on February 28, 2005. The availability factor of an object is calculated as a ratio between the duration of the period when the object was functioning and the duration of the period by which a report is created:

Rr = Taf/(Taf+Tuf)

The considerable types of failure (that take part in calculation) are used:

- connection;
- basic software;
- cameras.

In our example, the object unavailability factors for these failures are calculated according to the formulas given below.

The unavailability factor of the (connection) object:

Rn_c = (Tuf_net_1 + Tuf_net_2)/(Taf+Tuf)

The unavailability factor of the (software) object:

Rn_sw = Tuf_soft/Taf+Tuf

The unavailability factor of the (cameras) object:

Rn_cam = Tuf_cam/Taf+Tuf

Generally, in the used model, the general *Rn* unavailability factor isn't equal to the sum of unavailability factors by separate failures.

The following figure shows the example of the general report for the entire system.
Availability and unavailability factors are calculated as the arithmetic mean.

Report issue date: 1/30/2026 12:13:33 PM

System statistics

Number of objects:	**3 (availability factor lower than 90 %)**
Period:	**from 1/30/2026 12:00:00 AM to 1/30/2026 12:01:12 PM**
Owner:	**all objects**
Region:	**all objects**
District:	**all objects**
City:	**all objects**
Duration:	**0d. 12h. 01m. 12s.**

Number of failures:

Camera failures:	1
Connection lost (communication channel):	2
Connection lost (agent):	0
Videosystem software failure:	0
Insufficient archive size:	1
HDD failure:	0
Total:	**4**

System availability factor:	**0.0 %**
System unavailability factor (communication:communication channel):	**66.7 %**
System unavailability factor (communication:agent):	**0.0 %**
System unavailability factor (software):	**0.0 %**
System unavailability factor (camera):	**33.3 %**
System unavailability factor (HDD):	**0.0 %**

When you create a detailed report for the entire system, except for the general information page, the table with detailed data for each object is displayed.

Object	Number of failures						RC, %	UF_com (chan.), %	UF_com (agent), %	UF_sw, %	UF_cam, %	UF_hdd, %
	Cameras	Com. (chan.)	Com. (agent)	Software	Archive	HDD						
10 Green spruce dr.	0	1	0	0	0	0	0	100	0	0	0	0
47 John Reed str.	1	0	0	0	1	0	0	0	0	0	100	0
18 Alexanderplatz	0	1	0	0	0	0	0	100	0	0	0	0

Attention!

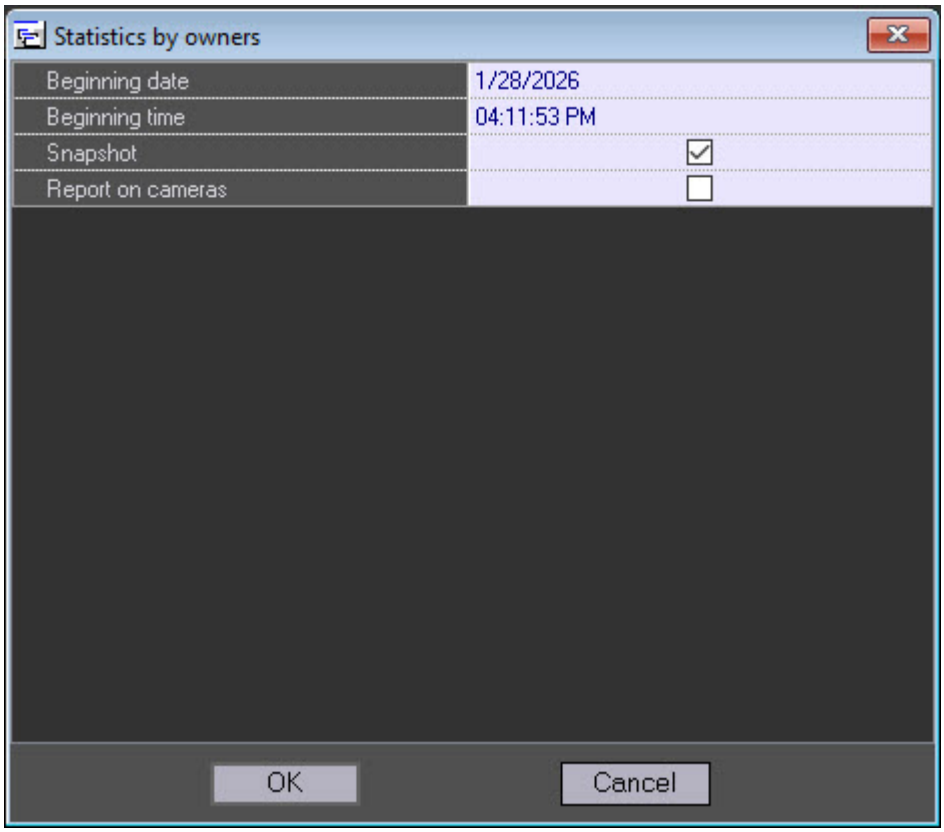
If the number of failures for any object exceeds 1000 throughout the specified period, this object is excluded from the statistic report across the entire system, however, it gets on the list of such problem objects.

Creating the statistical report is complete.

7.7 Statistics by owners

To create a report of this group, click the **Statistics by owners** button.

In the settings window that opens:



You can create three report types:

1. The **Statistics by owners** report for the selected day.
   a. In the **Beginning date** field, specify the date at which a report is created.
   b. Clear the **Snapshot** checkbox. By default, the checkbox is set.
   c. Click the **OK** button.
   A report is created for the entire selected day.
2. The **Statistics by owners** report for the selected moment of time.
   a. In the **Beginning date** field, specify the date at which a report is created.
   b. In the **Beginning time** field, specify the report time in the HH:MM:SS format.
   c. Click the **OK** button.

> **Note**
>
> The **Statistics by owners** reports for the selected day and for the selected moment of time are created only by objects with the **Owner** field filled in the **Monitoring objects** reference documentation (see the Regulatory and reference information section).

3. **Report on cameras**.
   a. Set the **Report on cameras** checkbox. By default, the checkbox is cleared.
   b. Click the **OK** button.
   As a result, a report on cameras at the current moment is created.

The following figure shows the example of the statistical report by owners for the selected day.

Report issue date: 1/30/2026 12:27:31 PM

Statistics by owners (from 1/29/2026 12:00:00 AM to 1/29/2026 11:59:59 PM)

	Owner name	Total objects (total with errors)	General availability factor, %	Unavailability factor in % (number)					
				Cameras	Connection with object	Connection with monitoring agent	Software error	Archive	HDD error
1	Bristol	2 (2)	0.0	0.0 (0)	100.0 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
2	London	1 (1)	0.0	100.0 (1)	60.0 (1)	0.0 (0)	60.4 (1)	100.0 (1)	0.0 (0)
	TOTAL :	3 (3)	0.0	33.3 (1)	86.7 (3)	0.0 (0)	20.1 (1)	33.3 (1)	0.0 (0)

The example of creating the statistical report by owners for the selected moment of time.

Report issue date: 1/30/2026 12:25:10 PM

Statistics by owners (from 1/30/2026 12:25:07 PM to 1/30/2026 12:25:08 PM)

	Owner name	Total objects (total with errors)	General availability factor, %	Unavailability factor in % (number)					
				Cameras	Connection with object	Connection with monitoring agent	Software error	Archive	HDD error
1	Bristol	2 (2)	0.0	0.0 (0)	100.0 (2)	0.0 (0)	0.0 (0)	0.0 (0)	0.0 (0)
2	London	1 (1)	0.0	100.0 (1)	0.0 (0)	0.0 (0)	0.0 (0)	100.0 (1)	0.0 (0)
	TOTAL :	3 (3)	0.0	33.3 (1)	66.7 (2)	0.0 (0)	0.0 (0)	33.3 (1)	0.0 (0)

The example of creating a report by cameras.

Report issue date: 1/30/2026 12:29:28 PM

Report on cameras

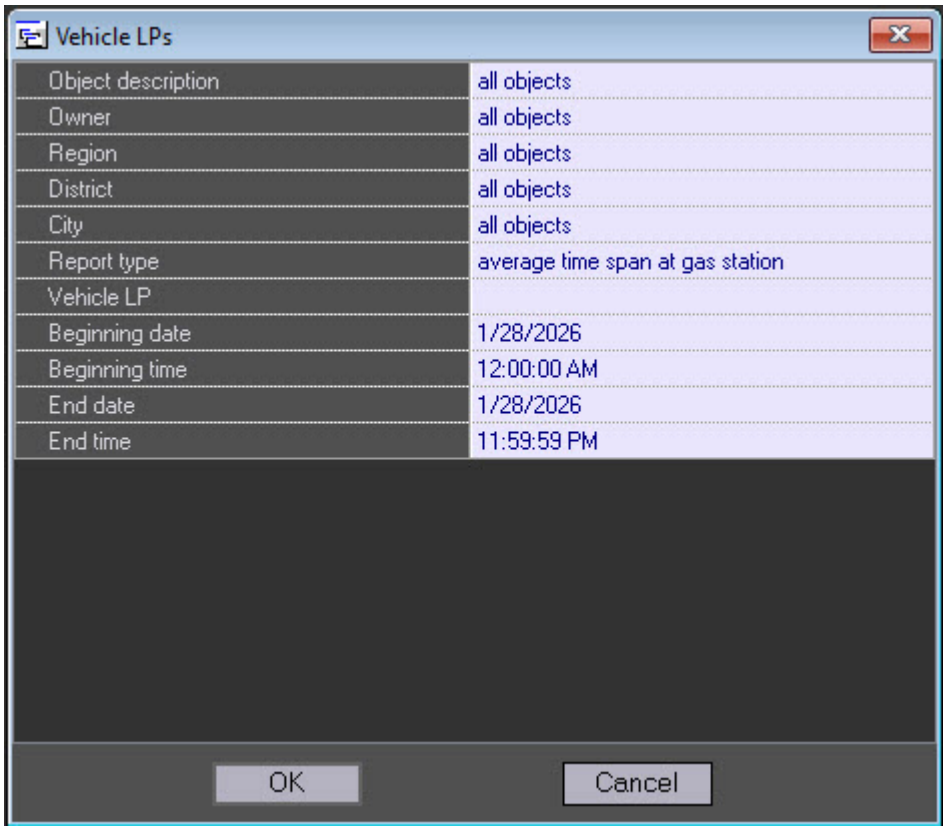
	Object	Address	Video cameras		
			Installed	Out of them faulty	Percentage of faulty video cameras
London					
1	47 John Reed str. (550016)	47 John Reed str.	16	14	87%
		Total:	**16**	**14**	**87.50%**
		Total for all objects:	**16**	**14**	**87.50%**

Creating reports of the **Statistics by owners** group is complete.

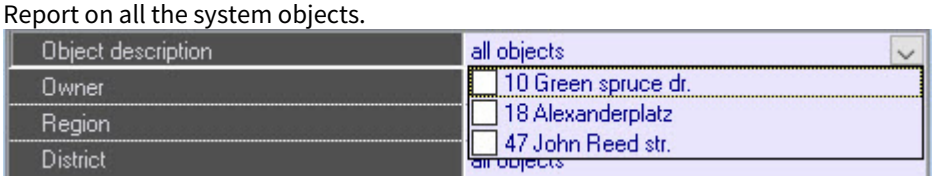
7.8 Vehicle LPs report

To create a report, click the **Vehicle LPs** button.

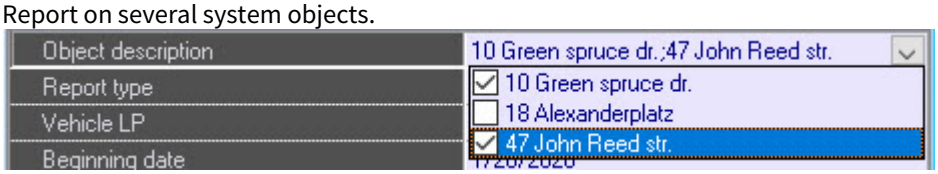
In the settings window that opens:



1. From the **Object description** drop-down list, select one of three modes of creating a report:
   a. Report on all the system objects.



   b. Report on one system object.
   c. Report on several system objects.



2. Select the required values from the **Owner** drop-down list. This information is set on the control settings panel (for more details, see the Editing regulatory and reference information page), as well as depends on the configured filter by owners in the **Monitoring reports** interface object (for more details, see Configuration of the Monitoring reports object). If you select a specific object (see step 1), then this parameter is hidden in the settings window.
3. From the **Region**, **District**, and **City** drop-down lists, select those regions, districts, and cities where the objects are placed. This information is set on the control settings panel (for more details, see the Editing

regulatory and reference information page). If you select a specific object (see step 1), then this parameter is hidden in the settings window.

4. From the **Report type** drop-down list, select one of three available report types: **average time span at gas station**, **number of vehicles**, or **list of LPs**.

5. In the **Vehicle LP** field, specify the LP number of the vehicle that you want to include in a report. You can specify the LP number fully or use the mask that contains the following characters:
   - **%**—to replace the group of characters. For example, if you specify **T4%**, the report includes information on vehicles with LPs starting with **T4**;
   - **_**—to replace one character.

   > **Note**
   >
   > The **Vehicle LP** field is auto-filled. Each LP number entered in this field is stored in the database and is automatically inserted into the field upon retyping.

6. Set the values of the **Beginning date**, **Beginning time**, **End date**, and **End time** fields to specify the time interval by which a report is created.
7. Click the **OK** button.
   As a result, a vehicle LP report is created.

The example of a report on the average time span at a gas station:

Report issue date: 2/3/2026 9:27:34 AM

Report - average time span at gas station

Object:	all objects report
Period:	from 2/3/2026 12:00:00 AM to 2/3/2026 11:59:59 PM
Owner:	all objects
Region:	all objects
District:	all objects
City:	all objects
Total average time:	3 min. (total vehicles: 9)

Object	Average time (min.)	Number of vehicles
47 John Reed str.	3	9

The example of a report on the average time span at a gas station for a vehicle with the **L08578U** license plate:

Report issue date: 2/3/2026 9:31:05 AM

Report - average time span at gas station

Object:	all objects report
Period:	from 2/3/2026 12:00:00 AM to 2/3/2026 11:59:59 PM
Owner:	all objects
Region:	all objects
District:	all objects
City:	all objects
Total average time:	3 min. (total vehicles: 5)
Vehicle LP:	L08578U

Object	Average time (min.)	Number of vehicles
47 John Reed str.	3	5

The example of a report on the average time span at a gas station for vehicles whose license plates end at **30**:

Report - average time span at gas station

Object:	all objects report
Period:	from 2/3/2026 12:00:00 AM to 2/3/2026 11:59:59 PM
Owner:	all objects
Region:	all objects
District:	all objects
City:	all objects
Total average time:	3 min. (total vehicles: 1)
Vehicle LP:	%30S

Object	Average time (min.)	Number of vehicles
47 John Reed str.	3	1

The example of a report on the vehicle number:

Report issue date: 2/3/2026 9:38:37 AM

Report - number of vehicles

Object:	all objects report
Period:	from 2/3/2026 12:00:00 AM to 2/3/2026 11:59:59 PM
Owner:	all objects
Region:	all objects
District:	all objects
City:	all objects
Total vehicles:	28

Object	Number of vehicles
47 John Reed str.	28

The example of a report on the LP's list:

Report issue date: 2/3/2026 9:48:41 AM

Report - list of LPs

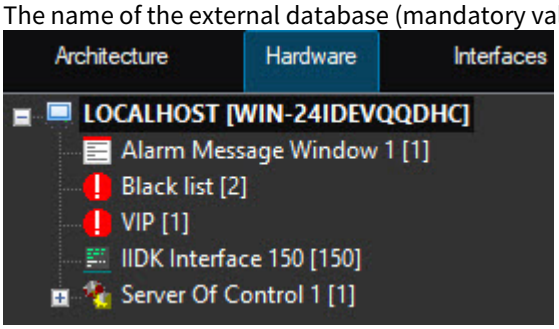
Object:	all objects report
Period:	from 2/3/2026 12:00:00 AM to 2/3/2026 11:59:59 PM
Owner:	all objects
Region:	all objects
District:	all objects
City:	all objects

Vehicle LP	Time (min.)	Note	Date of recognition
Object: "47 John Reed str." (550016)			
L08578U	3	VIP	2/3/2026 9:27:28 AM
L09292P	3		2/3/2026 9:27:18 AM
L01153T	3		2/3/2026 9:27:08 AM

The **Note** column is filled only for those vehicle LPs that are inserted in the external plates database.

Note includes:

1. The name of the external database (mandatory value)—**VIP** in the example.



Creating a report on vehicles' LPs is complete.

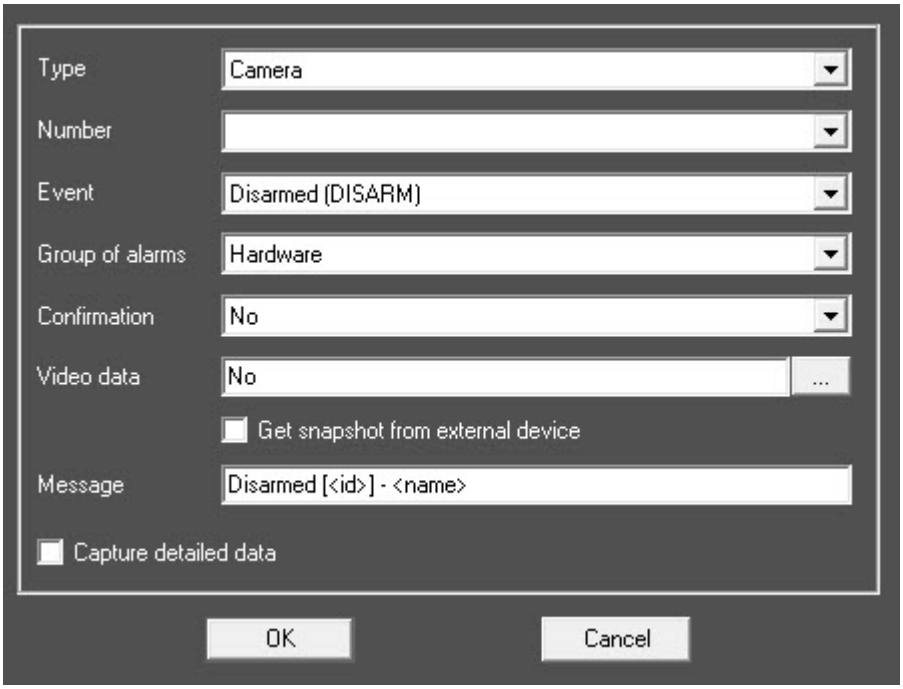
7.9 Alarms as system failures report

On the page:

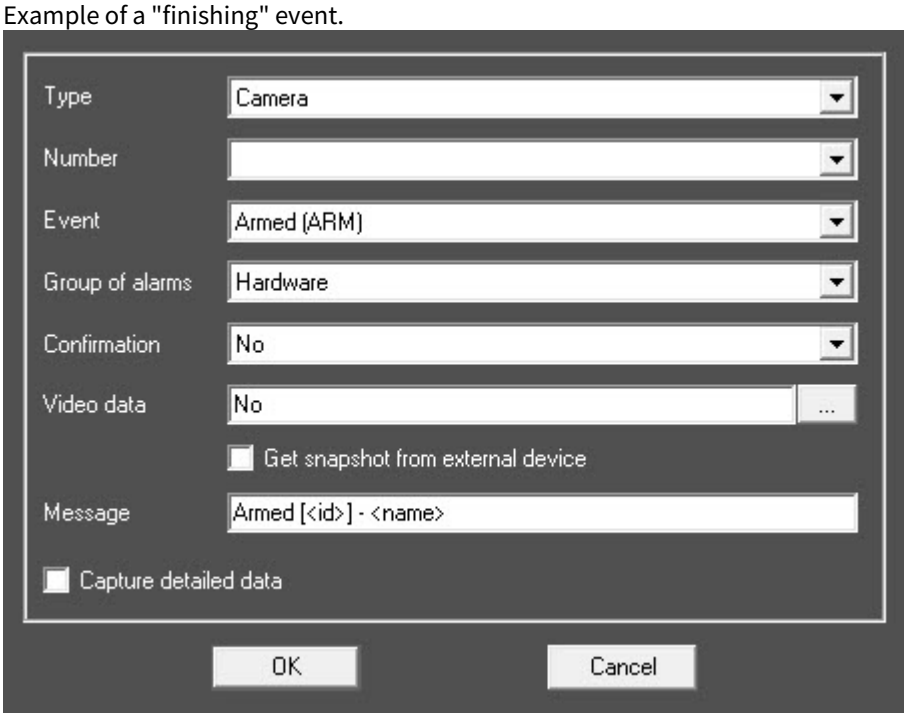
7.9.1 Generating a report on alarms as system failures

In *Monitoring PSIM,* you can generate a report on alarms as failures (see Report on system failures) by specifying the beginning of the alarm, its ending, and its duration. For this, the alarms must have starting and finishing events. To generate such a report on alarms as failures, do the following:

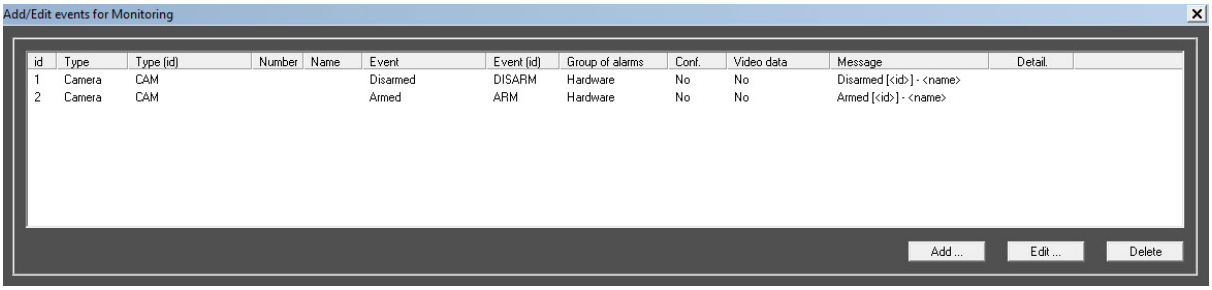
1. On the *Control Agent* side, add the interception of starting and finishing events. The format of the message must strictly correspond to the following template: **<Event name> [<id>] - <name>**, where instead of the <id>, specify the object number, and instead of the <name>, the object name.
Example of a "starting" event.



Example of a "finishing" event.



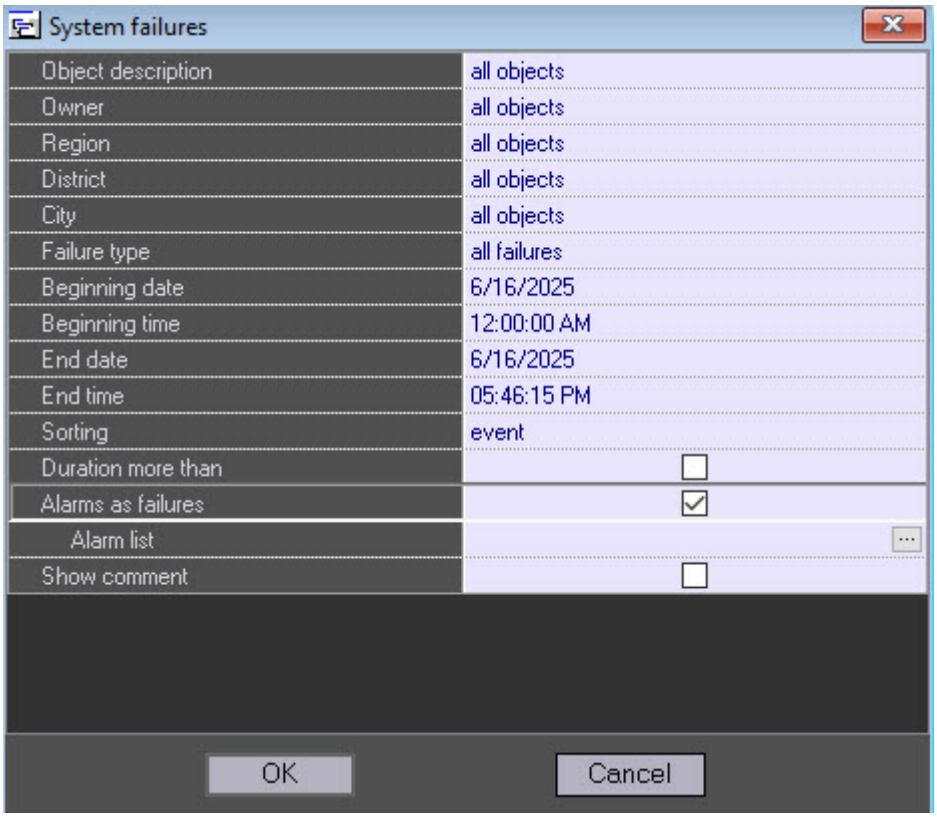
As a result, there is a list of two events.



Note

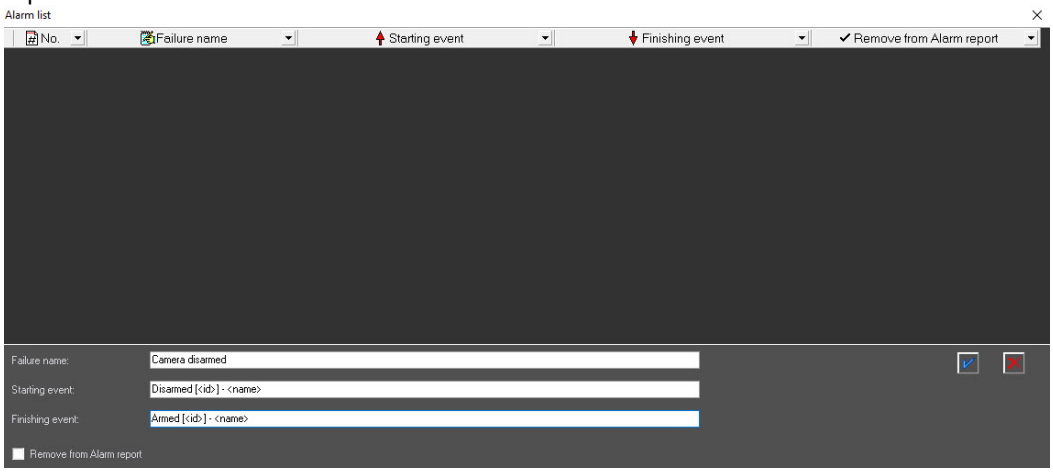
On the *Control Server* side, these alarms are registered as short-term.

2. On the *Control Server* side, create the **Monitoring reports** interface object.
3. On the toolbar of the **Monitoring reports** object, click the **System failures** button.
   The corresponding configuration form appears, in which you must:
   a. Set the **Alarms as failures** checkbox.



   b. Click the ... button to open the **Alarm list** window.
   c. In the **Alarm list** window:
      i. Click the  button to add an entry.

ii. In the **Failure name** field, specify the name of the failure, as it must appear in the failure report.



iii. In the **Starting event** line, specify the name of the starting event in full accordance with the template, as in step 1.

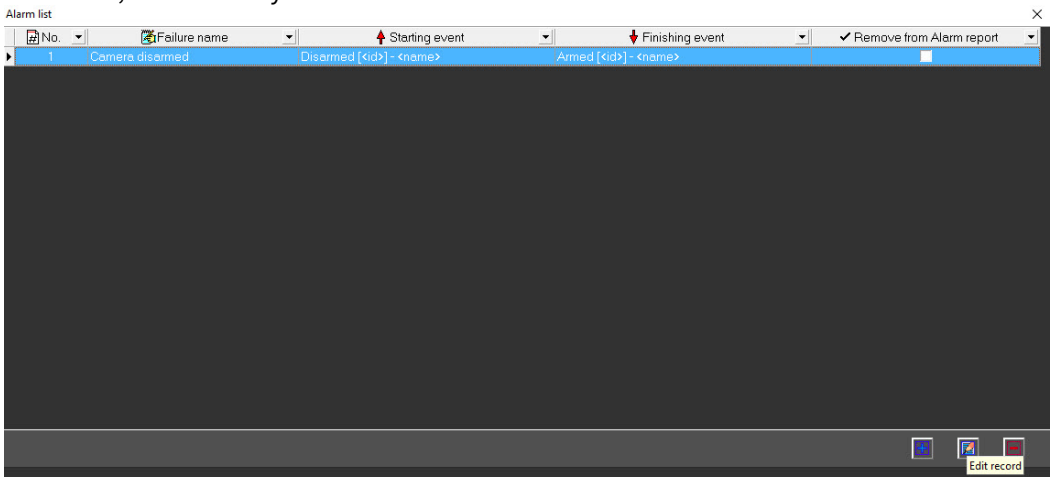
iv. In the **Finishing event** line, specify the name of the finishing event in full accordance with the template, as in step 1.

v. Set the **Remove from Alarm report** checkbox to prevent displaying the starting and finishing events when generating the "Alarm" report.

vi. Add an entry by clicking the  button.

> **Note**
>
> The button to add an entry appears only if you fill in all the data, and the description of the starting and finishing events contains the [<id>] - <name> template. Further, you can edit or remove the created entry.

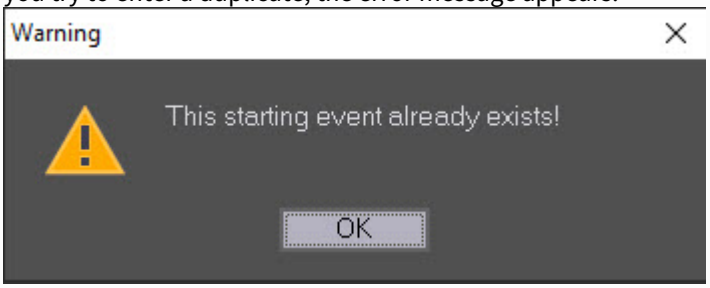
As a result, the new entry is added to the alarm list.



vii. Repeat steps i-vi for all alarms.

> **Note**

When you add the following entry, don't duplicate the values of the edited fields. If you try to enter a duplicate, the error message appears.



viii. Generate a report.
Example of an alarm report.

Report issue date: 6/16/2025 6:01:31 PM

Report - alarms

Object:	**all objects report**
Period:	**from 6/16/2025 12:00:00 AM to 6/16/2025 11:59:59 PM**
Owner:	**all objects**
Region:	**all objects**
District:	**all objects**
City:	**all objects**
Alarm:	**all events**

Event	Time
Object: "47 John Reed str." (550016)	
Hardware (Armed [1] - Camera 1)	6/16/2025 5:32:19 PM
Hardware (Armed [2] - Camera 2)	6/16/2025 5:32:26 PM
Hardware (Disarmed [1] - Camera 1)	6/16/2025 5:35:06 PM
Hardware (Disarmed [2] - Camera 2)	6/16/2025 5:40:18 PM
Hardware (Armed [2] - Camera 2)	6/16/2025 5:45:07 PM

Example of a report on failures with the **Alarms as failures** checkbox set.

Report issue date: 6/16/2025 6:03:33 PM

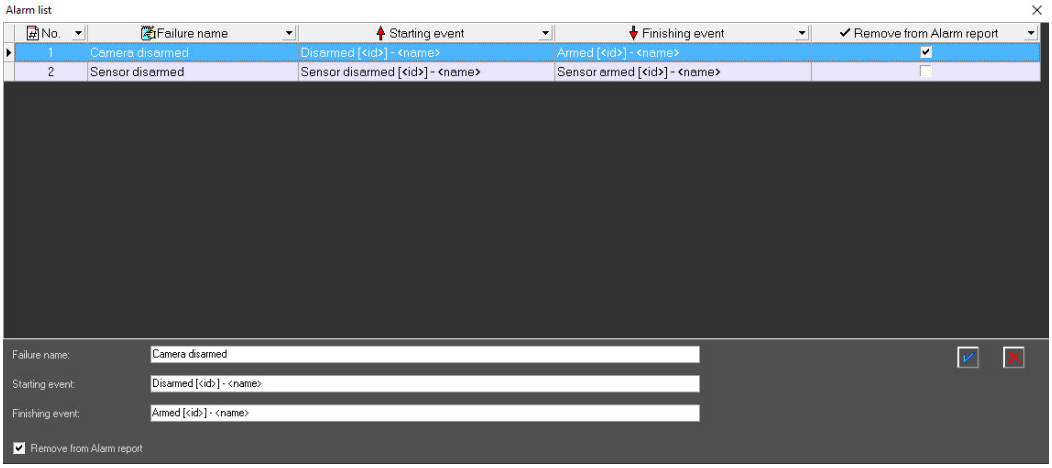
Report - system failures

Object:	**all objects report**
Period:	**from 6/16/2025 12:00:00 AM to 6/16/2025 6:03:28 PM**
Owner:	**all objects**
Region:	**all objects**
District:	**all objects**
City:	**all objects**
Failure type:	**all failures**

Event	Beginning	End	Duration
Object: "47 John Reed str." (550016)			
Camera disarmed (Camera 1)	6/16/2025 5:35:06 PM	Continues	0d. 00h. 28m. 27s.
Camera disarmed (Camera 2)	6/16/2025 5:40:18 PM	6/16/2025 5:45:07 PM	0d. 00h. 04m. 49s.

If you set the **Remove from Alarm report** checkbox in the **Alarm list** window, the

corresponding events aren't included in the alarm report.



Report issue date: 6/16/2025 6:20:51 PM

Report - alarms

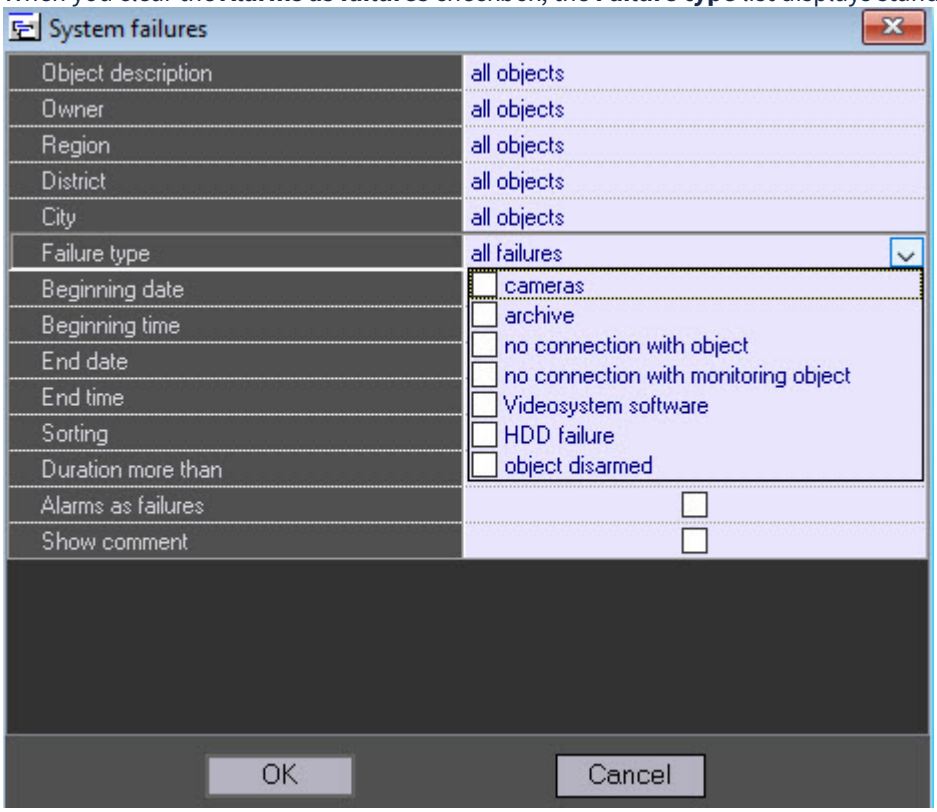
Object:	all objects report
Period:	from 6/16/2025 12:00:00 AM to 6/16/2025 11:59:59 PM
Owner:	all objects
Region:	all objects
District:	all objects
City:	all objects
Alarm:	all events

Event	Time
Object: "47 John Reed str." (550016)	
Default PC restart	6/16/2025 6:20:38 PM

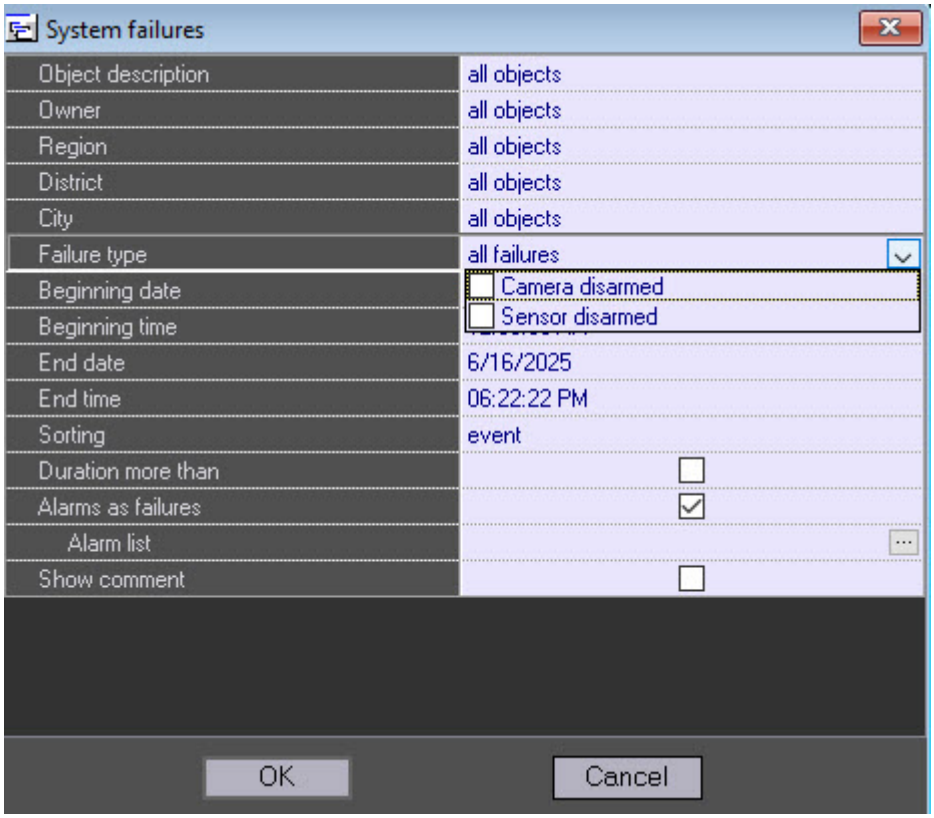
Generating a report on alarms as system failures is complete.

7.9.2 Features of generating a report on alarms as system failures

When you clear the **Alarms as failures** checkbox, the **Failure type** list displays standard failures.



When you set the **Alarms as failures** checkbox, the **Failure type** list displays failures described in the **Alarm list** window.



You can generate a report for all failures (**Failure type=all failures)** or several ones (in the **Failure type** field, select specific failure).

7.9.3 Example of a script for a timer with number 1, which triggers once a day

If the starting event is lost, the **Alarms as failures** incorrect report is created. To avoid this, we recommend using scripts on the *Control Agent* side to generate, for example, a starting or finishing event once a day, depending on the object's current state. For more details on how to create scripts, see Guide for creating scripts (programming). Example of a script for a timer with number 1, which triggers once a day.

```
if (Event.SourceType=="TIMER" && Event.SourceId=="1" && Event.Action=="TRIGGER")
{
  var msg = CreateMsg();
  msg.StringToMsg(GetObjectIds("CAM"));
  var count = msg.GetParam("id.count");
  var i;
  for(i = 0; i < count; i++)
  {
    if(GetObjectState("CAM", msg.GetParam("id." + i))=="DISARMED")
    {
      NotifyEventStr("CAM",msg.GetParam("id." + i),"DISARM","");
    }
    else
    {
      NotifyEventStr("CAM",msg.GetParam("id." + i),"ARM","");
    }
```

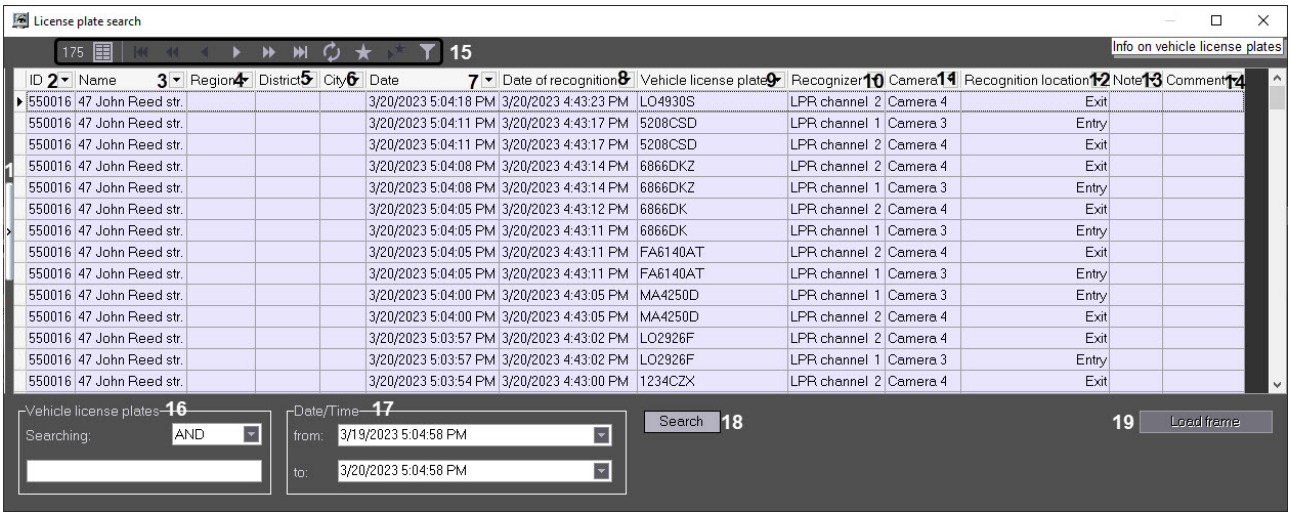
```
  }
}
```

8 Special operation mode joint with Auto PSIM

In the special operation mode joint with *Auto PSIM, Agent of Control* intercepts the **LP recognized** event and transfers information on this event to the *Server of Control*. This information is NOT visualized as an alarm but is saved in the *Server of Control* database. The **Info on vehicle license plates** button also becomes available to open **License plate search** window (see Viewing recognized LPs). This allows searching external plates databases.

8.1 Interface of the License plates search window

See appearance of the **License plates search** window on the picture below.



Description of the **License plates search** window interface:

1	The button similar to  (**Show inspector Ctrl+I**) in the license plates search panel. Opens custom information panel. Information on the selected event is shown in the top of this panel
2	Unique object ID is shown in the **ID** column (see Configuring Agent of Control and Configuring Server of Control)
3	Partition of control name is displayed in the **Name** column
4	The area where the object is installed is displayed in the **Region** column
5	The district where the object is installed is shown in the **District** column
6	The city where the object is installed is displayed in the **City** column
7	The date of alarm is displayed in the **Date** column (see also Data loading to the database)
8	Date when the frame from the camera was recognized is shown in the **Date of recognition** column

9	Vehicle LP is shown in the **Vehicle license plate** column
10	Name of the recognition module is shown in the **Recognizer** column
11	Name of the camera from which the frame was received is shown in the **Camera** column
12	Recognition point (entrance or exit) is shown in the **Recognition location** column
13	Name of the **External Plates DB** object is shown in the **Note** column
14	In the **Comment** column, the additional information for the LP is shown, if it was specified while adding the LP to the **External Plates DB**
15	License plates search panel (see Interface of the License plates search panel)
16	The **Vehicle license plates** area is intended to search for LPs by a known LP number or by mask with search conditions
17	The **Date/Time** area allows searching events for a specified period of time
18	Click **Search** button to run the search
19	The **Load frame** button is for downloading the frame on which the LP was recognized

8.2 Interface of the License plates search panel

See appearance of the **License plates search** panel on the picture below.

Description of the buttons on the **License plates search** panel:

 (**Show Inspector Ctrl+I**): when this button is pressed, a special area is displayed, at the top of which a brief information about the currently selected record is listed.

 (**First record**): when this button is pressed, the first registered event records are displayed.

 **Previous page**): when this button is pressed, the previous page with event records is displayed if present.

 (**Previous record**): when this button is pressed, the previous event record is selected relative to the currently selected record.

 (**Next record**): when this button is pressed, the next event record is selected relative to the currently selected record.

(**Next page**): when this button is pressed, the next page with event records is displayed if present.

(**Last record**): when this button is pressed, the last registered event records are displayed.

(**Update data**): when this button is pressed, the displayed data are updated.

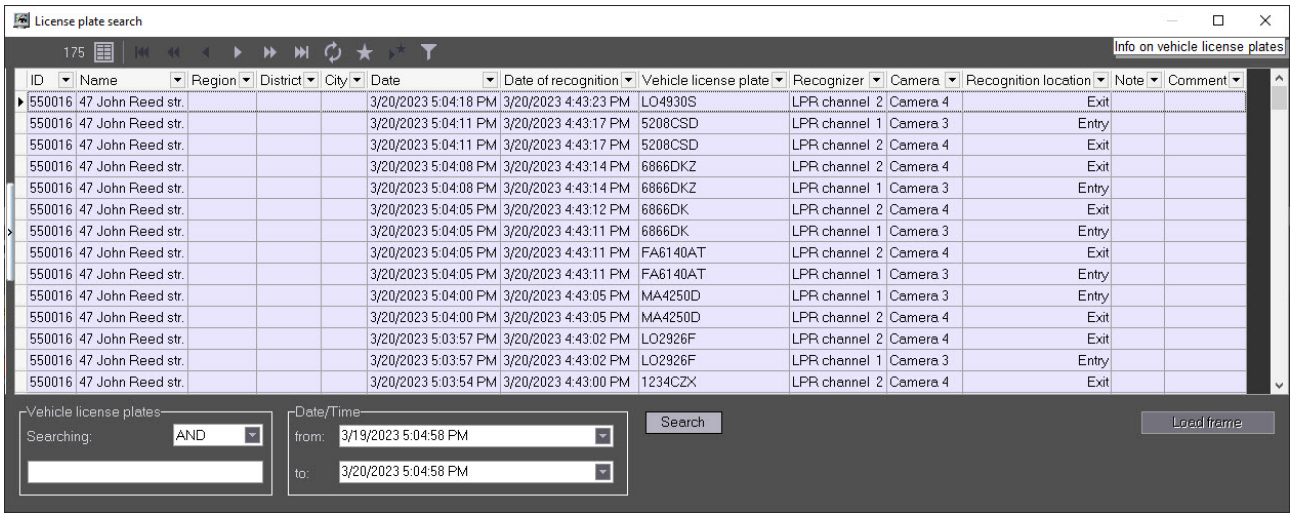
(**Define bookmark**): when this button is pressed, the current page with event records is added to the bookmark, which you can access later with the button (**Go to bookmark**).

(**Go to bookmark**): when this button is pressed, the page with event records that was previously added to the bookmark is opened.

(**Filter constructor**): when this button is pressed, the **Filter builder** window is opened (see Custom filter in the Log panel).

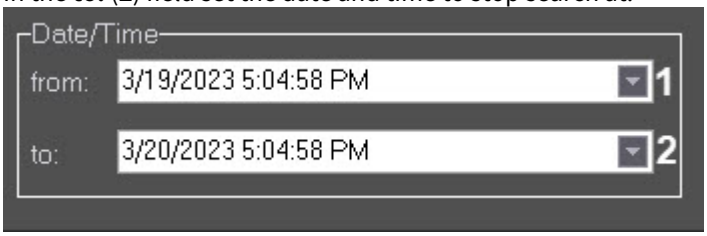
8.3 Viewing recognized LPs

In order to view details on recognized license plates, click the **Info on vehicle license plates** button on the **Log panel** or in the **Details** window in the **Monitoring** interface. The **License plates search** window opens.



In the **Date/Time** area in this window, the period to search LPs in can be specified. For this:

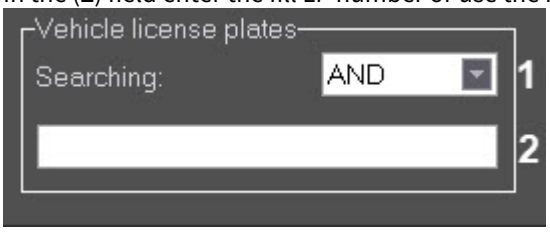
1. In the **from:** (**1**) field set the date and time to start search from.
2. In the **to:** (**2**) field set the date and time to stop search at.



3. Click **Search** (**3**) to run the search.

In the **Vehicle license plates** area, the search by a known LP number or by mask with search conditions can be performed. For this:

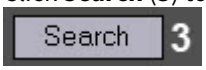
1. In the **Searching** field (**1**) choose the search condition: **AND** or **OR**.
2. In the (**2**) field enter the fill LP number or use the following mask symbols:



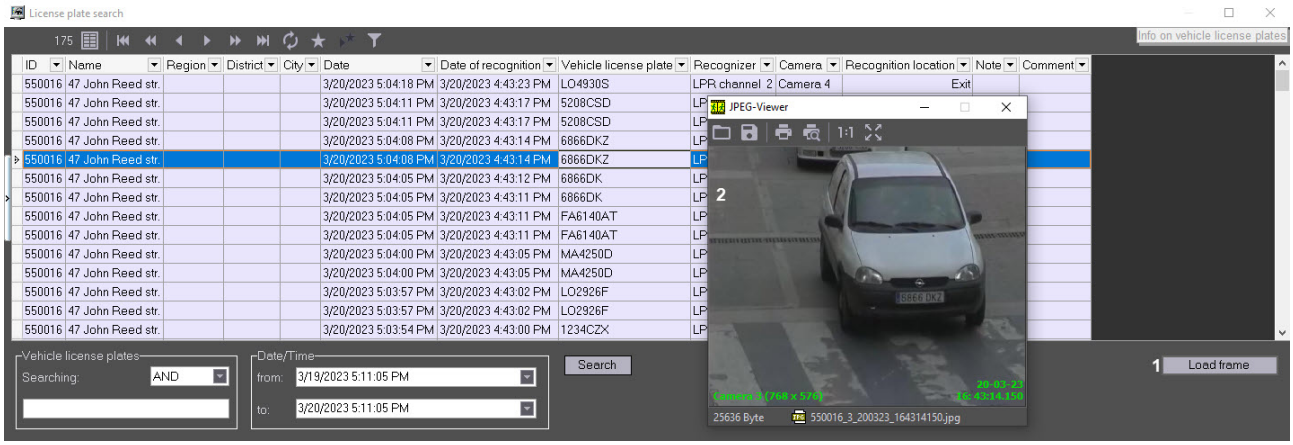
- **%** – to replace several characters;;
- **_** – to replace one character.

> **Note.**
>
> For example, when **T4%** is entered, the report is built for vehicles with LP starting from **T4**.

- Click **Search** (**3**) to run the search.

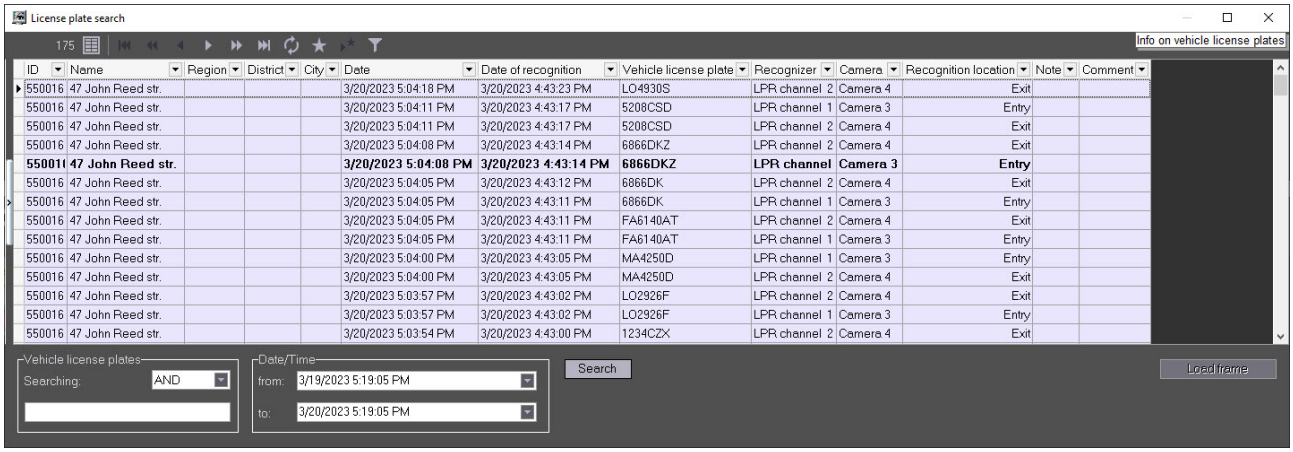


The frame on which the LP number was recognized can be downloaded. For that, select the record in the list and click **Load frame** (**1**). The frame is downloaded and displayed (**2**).



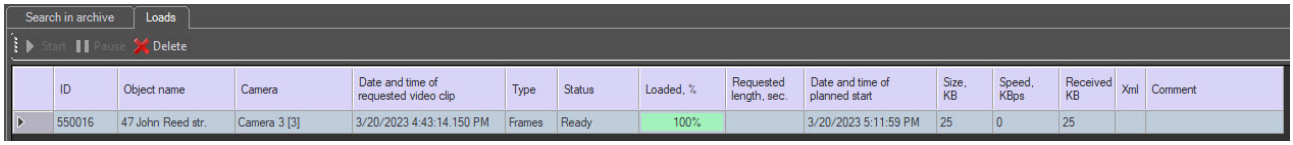
> **Important!**
>
> The **Search in archive** object on the **Interfaces** tab must be created to load frames from the **License plates search** window.

Records with frames already downloaded are highlighted in bold. These frames can be viewed any time by double clicking the record.



Note

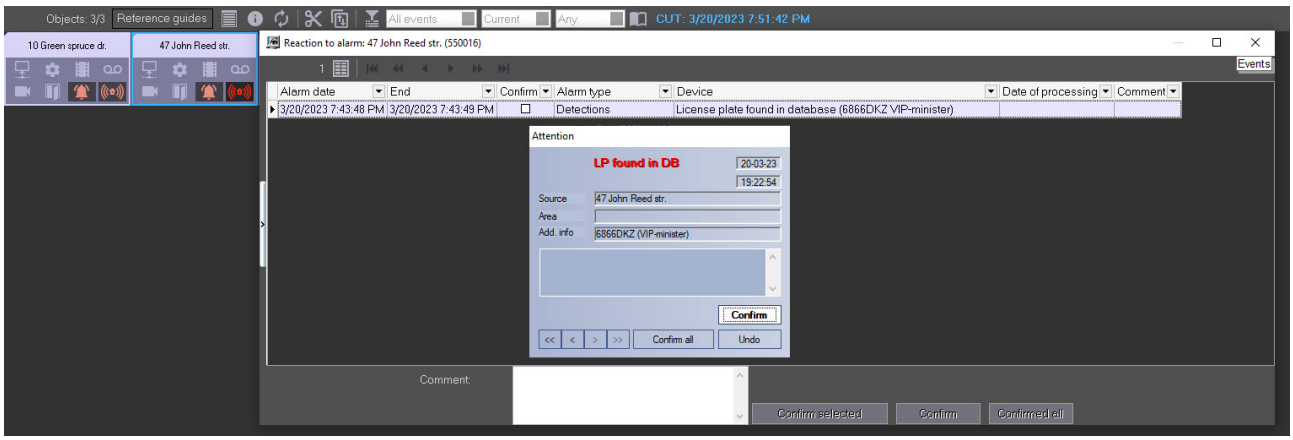
Information about frames downloading can be found in the **Search in archive** request log.



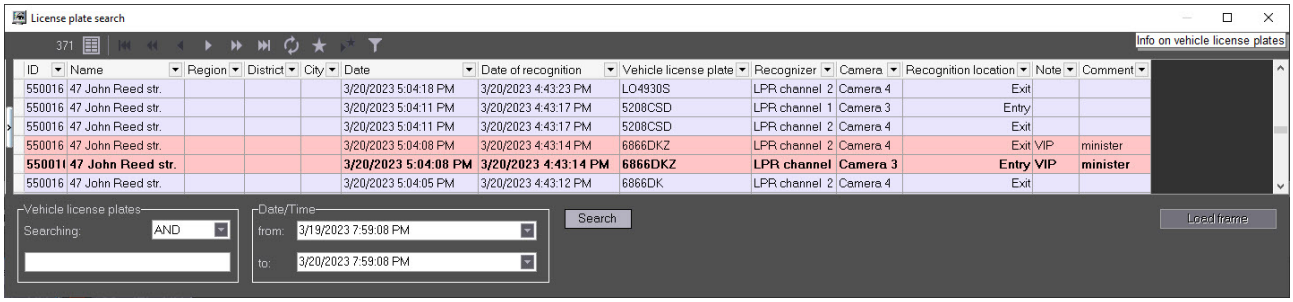
Upon receiving an event about the recognized number, *Server of Control* can search for a number in one or more external databases. An alarm is generated on *Server of Control* if the LP is found in the External DB. The alarm is sent to the *Agent of Control*.

Note.

The **Alarm Messages Window** object is to be created on the **Hardware** tab to visualize the alarm in a pop-up window (see Alarm message window).



The records of LPs found in an external DB are highlighted in red in the **License plates search** window. Name of the **External Plates DB** object is shown in the **Note** column. In the **Comment** column, the additional information for the LP is shown, if it was specified while adding the LP to the **External Plates DB**.



Note.

If connection is lost between *Server of Control* and *Agent of Control,* the *Agent of Control* stores the information on the recognized vehicle LPs locally. When the connection is restored, the *Agent of Control* sends saved LPs to *Server of Control*.

9 Appendix 1. Data update periods summary

9.1 Data loading from database to the interface objects

Information on **Control panel** and **Log panel** is updated every time data is loaded from the database. The time of the last download from the database is shown in the **CUT** field.

Periods of data updating are different for **Control panel** and **Log panel**:

1. **Control panel**.
    a. Data are updated from the database once a minute (by timer).
    b. At receiving of a command from *Data loader* to forcibly update information, which can appear after a new load to the database.
2. **Log panel**. Data are updated from the database once a minute (by timer).

To get the latest database information, click the button  (**Update data**). This forces the data to load.

9.2 Data loading to the database

The date of last load of data to the database (see section Moving through the list of alarms) is refreshed when changes in the database appear.

If there is no any change in the database in 5 minutes, the **CUT** field is forcibly updated and then is updated once a minute. At the same time there will be a gap from the current system time by 5 minutes. After coming of new information from any of the *Agent of Control*, the **CUT** become equal to the current system time of the computer.

Loading data to the database is performed by the *Data loader* for *Monitoring* module.

If files with technical information are received from *Agents of Control* (e.g. camera enabled), these files are loaded to the database with a period specified while configuring *Data loader* in the **Loading period (sec)** parameter, 10 seconds by default. If files with information on alarms are received from *Agents of Control* (e.g. vibration sensor triggered), this information is loaded to the database immediately.

After each load to the database, a message is sent to the **Control panel** interface component to update the information.

If, after receiving files with technical condition, *Server of Control* determines that object state has not changed, then nothing is loaded to the database. This is why the timer is used to forcibly update interfaces (see section Data loading from database to the interface objects).

In the **Alarm date** field in the interface objects, the time of alarm information load to the database after receiving it from the *Agent of Control* is displayed, not the time of alarm appearing at the site.

> **Note.**
>
> To enable alarm registration with the time it emerged on site, create the TimeAlarmFromAgent key in the Windows registry and set it to 1 (see Registry keys reference guide for more details on the key and the Working with Windows OS registry section of *Axxon PSIM* software. Administrator's Guide for more details on how to operate registry keys).

9.3 Sending data from Agent of Control to Server of Control

Agent of Control sends to *Server of Control* packages with its technical condition with a period set while setting the **Partition Of Control** object at the *Agent of Control* side using the **Ping frequency (s)** parameter (see *Monitoring*

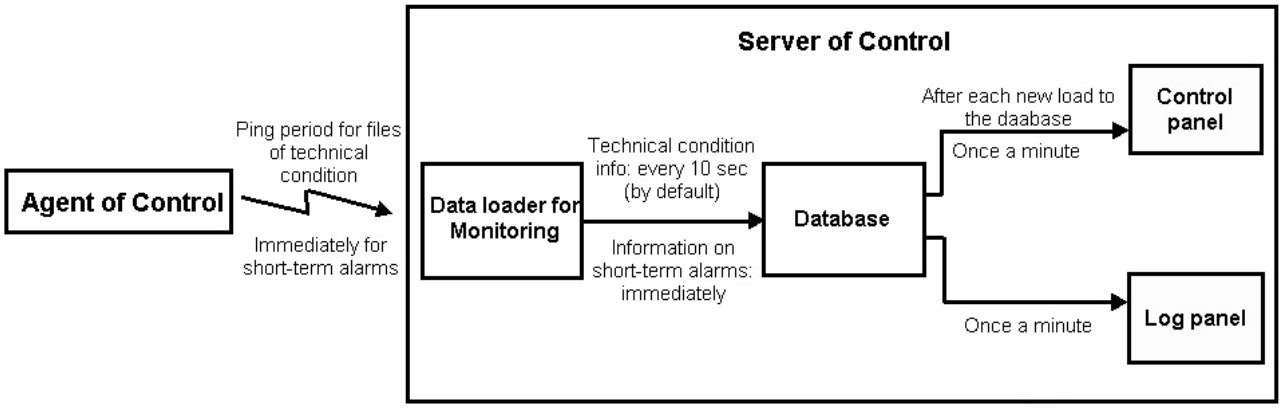
PSIM. Administrator's Guide, section Configuring communication between Agent Of Control and Server Of Control). The default ping frequency is 2 minutes (120 seconds).

Information on long-term alarms comes to the *Server of Control* from *Agent of Control* together with the information on technical condition, with the ping period.

Information about short-term alarms comes to the *Server of Control* immediately after they have appeared at the *Agent of Control.*

9.4 Data transmission scheme

The picture gives a general scheme of data transferring from *Agent of Control* to *Server of Control*.



9.5 Features of displaying information on short-term and long-term alarms

Information about long-term alarm can be not recorded into the *Monitoring PSIM* database and not displayed in its interfaces in the following cases:

1. If a long-term alarm had started and ended within two polls of *Agent of Control* (within the **Ping frequency (s)** interval, see *Monitoring PSIM*. Administrator's Guide, section Configuring communication between Agent Of Control and Server Of Control).
2. If a long-term alarm had started and ended when the connection between *Agent of Control* and *Server of Control* was lost.

When there is no connection with *Server of Control*, the short-term alarms are stored in the "holding" data files on the *Agent of Control*. When connection with *Server of Control* is restored, they are transferred to the *Server of Control*, stored in the *Monitoring PSIM* database and displayed in its interfaces.

9.6 Agent of Control technical condition data collection periods

Agent of Control technical condition data collection periods are given below:

1. Information on disk failures (the Disk failure alarm type) and its restoring is updated in the following cases:
   a. at *Agent of Control* startup and then every 15 minutes.
   b. at receiving local message SLAVE|NO_DISC (No disk for archive storage) from *Axxon PSIM* core.
   c. at receiving local message DISC_EXIST (Disk for archive storage found) from *Axxon PSIM* core.
   d. at receiving local message DISC_UNMOUNT (Disk unmounted) from *Axxon PSIM* core.
   e. at receiving local message DISC_MOUNT (Disk mounted) from *Axxon PSIM* core.

2. Information on archive size (the Small archive size alarm type) is updated at *Agent of Control* startup and then every 15 minutes.
3. Information on the computer normal and abnormal restarts is displayed in the interface within 5 minutes.
4. Information on free disk space is updated every 1 hour.
5. *Agent of Control* initiates the connection with *Server of Control* and once in a ping period (2 minutes by default) sends a package with technical data to the *Server of Control*. If *Server of Control* haven't been receiving any data from *Agent of Control* for 6 minutes, the **No connection** error is displayed for such object.

   Note

   The waiting timeout for receiving the packets with the technical state of *Agent of Control* can be adjusted. To do this:
   a. On the *Agent of Control* side, in the settings panel of the *Partition of Control*, add a one-character postfix to the identifier of this object (for example, if the *Partition of Control* has an identifier equal to **123**, then the identifier with the postfix will look like **123X**, where **X** is the specified postfix).
   b. On the *Agent of Control* side, it is recommended to adjust the *Server of Control* polling period so that it does not exceed the waiting timeout for receiving the packets with the *Agent of Control* technical condition (see Configuring communication between Agent Of Control and Server Of Control).
   c. On the *Server of Control* side, delete the existing *Partition of Control* with a **123** identifier.
   d. On the *Server of Control* side, create a new *Partition of Control* with a **123X** identifier.
   e. On the *Server of Control* side, for the **PostfixForTimeOut** registry key, set the value equal to the previously specified postfix. For the **TimeoutForPostfix** registry key, set the timeout value in minutes (for details, see Registry keys reference guide, for more information about working with the registry, see Working with Windows OS registry).
6. The video.run process status (hangup) is checked at startup of Videosrv.exe module and then every 15 minutes, and besides that each time the Videosrv.exe module reconnects with the *Axxon PSIM* software, i.e. if the *Axxon PSIM* software was shut down and started again.
7. Availability of running processes psim.exe/psim64.exe and Video.run is checked every 10 seconds.