Additional utilities for the Axxon PSIM software

PSIM 2.0 (english)

Last update 08/21/2025

Table of Contents

1 Summary of the Axxon PSIM utilities

Additional *Axxon PSIM* software utilities are separate software applications intended to perform additional operations when setting up and working with *Axxon PSIM* software. This document describes the following utilities:

2 The utility for reading video capture card code and dongle

2.1 The purpose of the CodeReader.exe utility

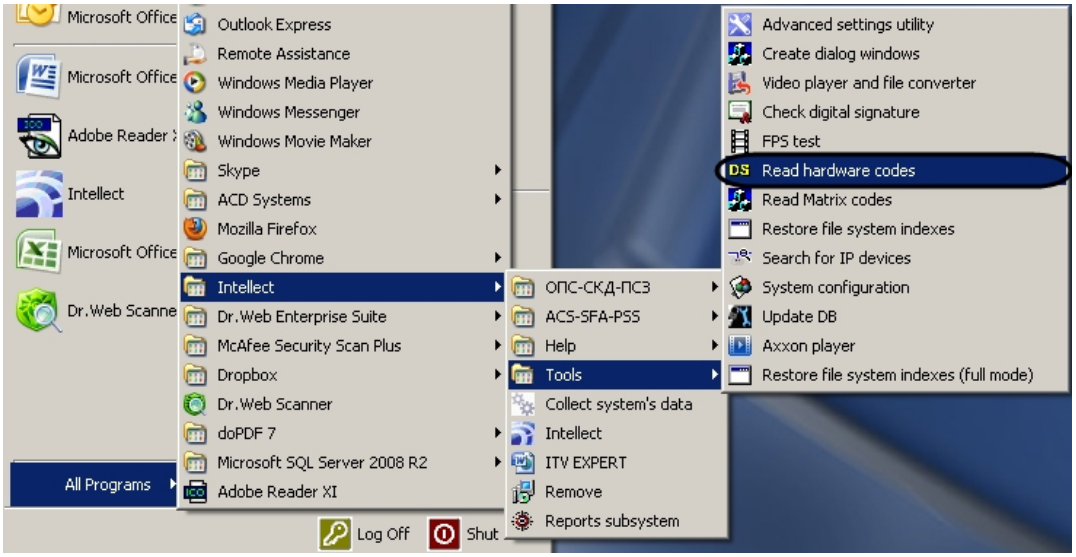
The CodeReader.exe utility is designed to read the dallas code of the cryptochip (chip) of the video capture card, which determines the card type, HID of computer and the number of the Guardant or MatrixLock dongle.

> **Note.**
>
> For proper operation of the utility Axxon PSIM™ is to be shut down.

2.2 Starting and shutting-down the utility

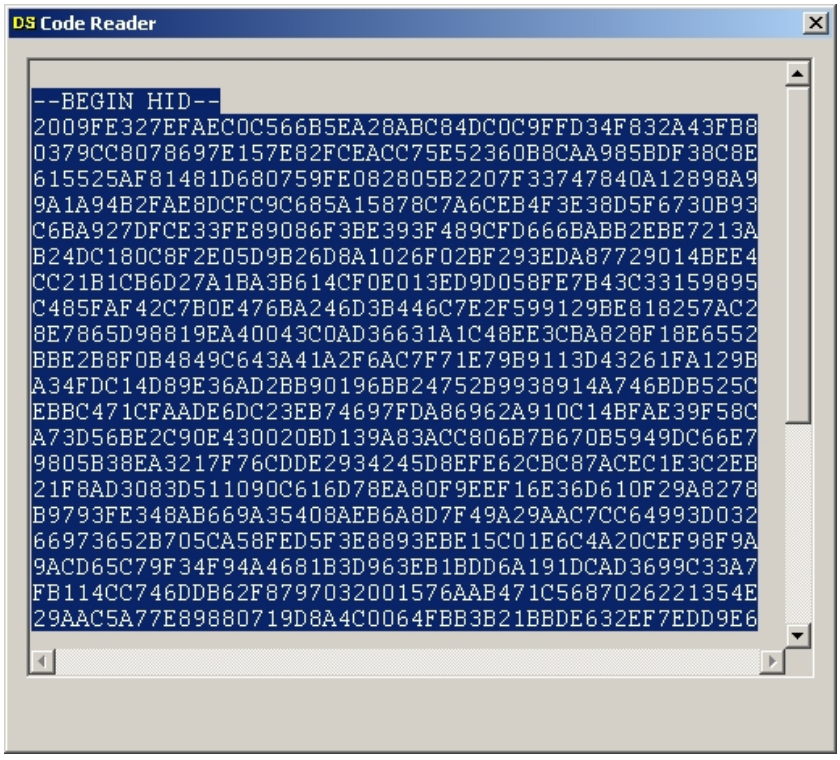
To start the CodeReader.exe utility, do one of the following:

1. Start the utility from the Windows taskbar. Click **Start,** then **All Programs**, then **Axxon PSIM,** then **Tools,** then **Read hardware codes**. The CodeReader.exe utility is available for the following types of Axxon PSIM™ installation: Server and Remote Admin Workstation.



2. Start the utility from the **Tools** folder of the *Axxon PSIM* folder. Example: C:\ Program Files\Axxon PSIM\Tools\CodeReader.exe.

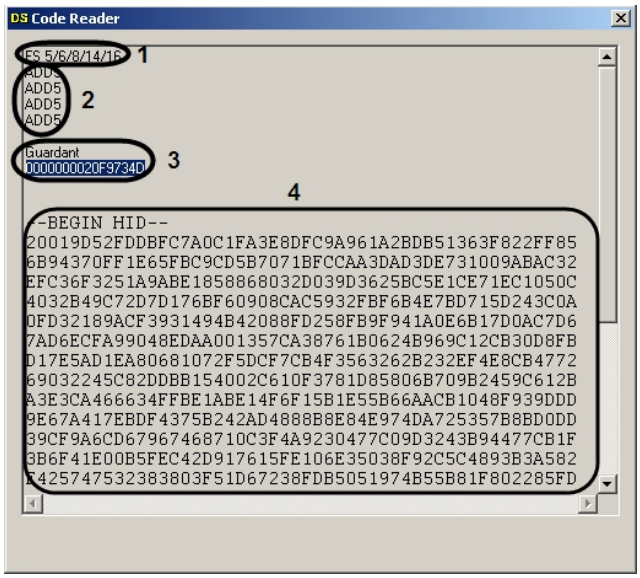
The Code Reader dialog box will open.



To shut down the CodeReader.exe utility, click the button.

2.3 Using the CodeReader.exe utility

The CodeReader.exe utility allows determining the type of installed video capture card by its dallas code(s), HID of computer, as well as the number of the Guardant or MatrixLock dongle. To read this information, start the utility (see the Starting and shutting-down the utility section). The type of video capture card, its dallas code(s) and the number of the Guardant/MatrixLock dongle and HID will be displayed in the Code Reader dialog box.



The number of dallas codes depends on the number of chips on the video capture card. Figure shows that the FS6 card with 4 chips has been used.

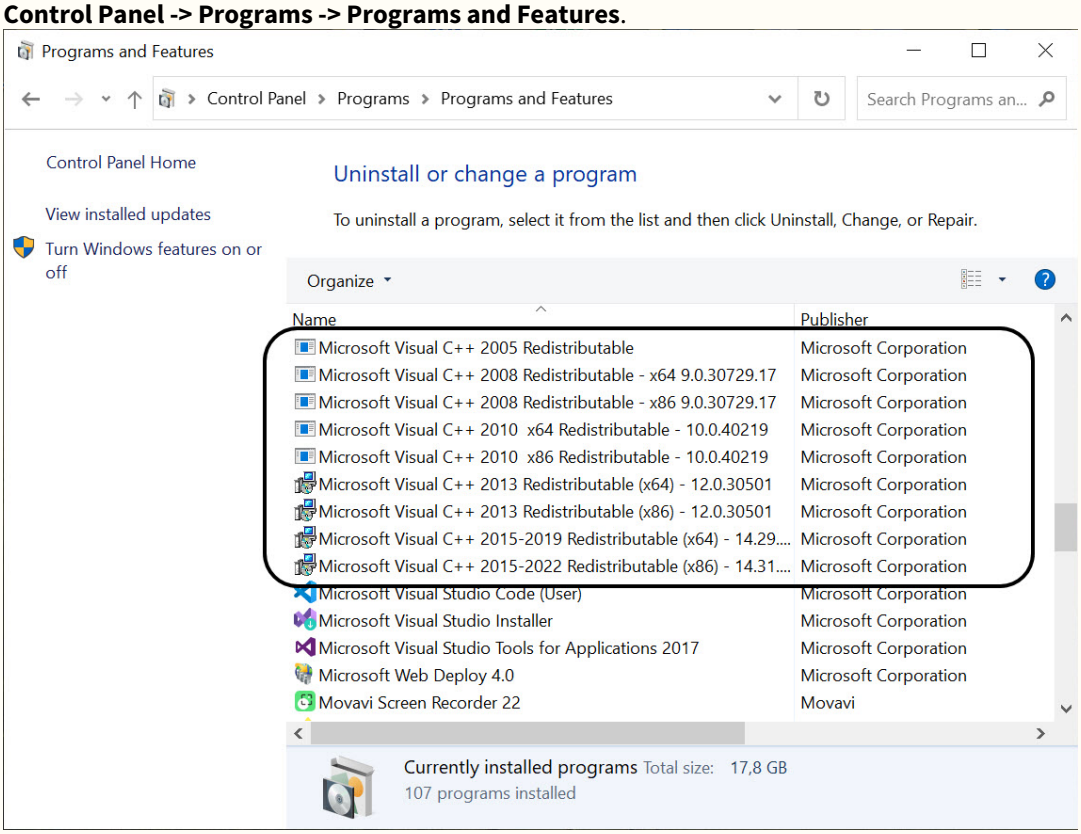
2.4 Portable version CodeReader_portable.exe

The portable version of the utility for reading the video capture card codes and dongles is the executable file CodeReader_portable.exe. This file can be downloaded from the official AxxonSoft website.

The CodeReader_portable.exe file can be launched on any computer even without *Axxon PSIM* installed.

Attention!

For the portable version of the utility to operate, you need to install the latest versions of the Visual C++ redistributable packages for Visual Studio.
To check the availability of the Visual C++ redistributable packages for Visual Studio, select **Start -> Control Panel -> Programs -> Programs and Features**.



If there are no redistributable packages, you can download them from the official website at: https://learn.microsoft.com/en-us/cpp/windows/latest-supported-vc-redist?view=msvc-170, or install the file that is available in *Axxon PSIM* installation directory in the **Redist -> Dotnet4.5** folder.

The purpose and interface of the portable version, as well as the procedure for working with it are similar to the standard version of the CodeReader.exe utility – see The utility for reading video capture card code and dongle.

3 Converter.exe utility for converting video and audio archives

3.1 The purpose of the Converter.exe utility

Important!

Correct operation of the Converter.exe utility on Windows 10 and newer OSes is not guaranteed.

The Conveter.exe utility is designed to play video and audio archives, and to convert them to standard formats: MPEG, DivX, etc.

Besides video and audio playback, Converter.exe utility is used for:

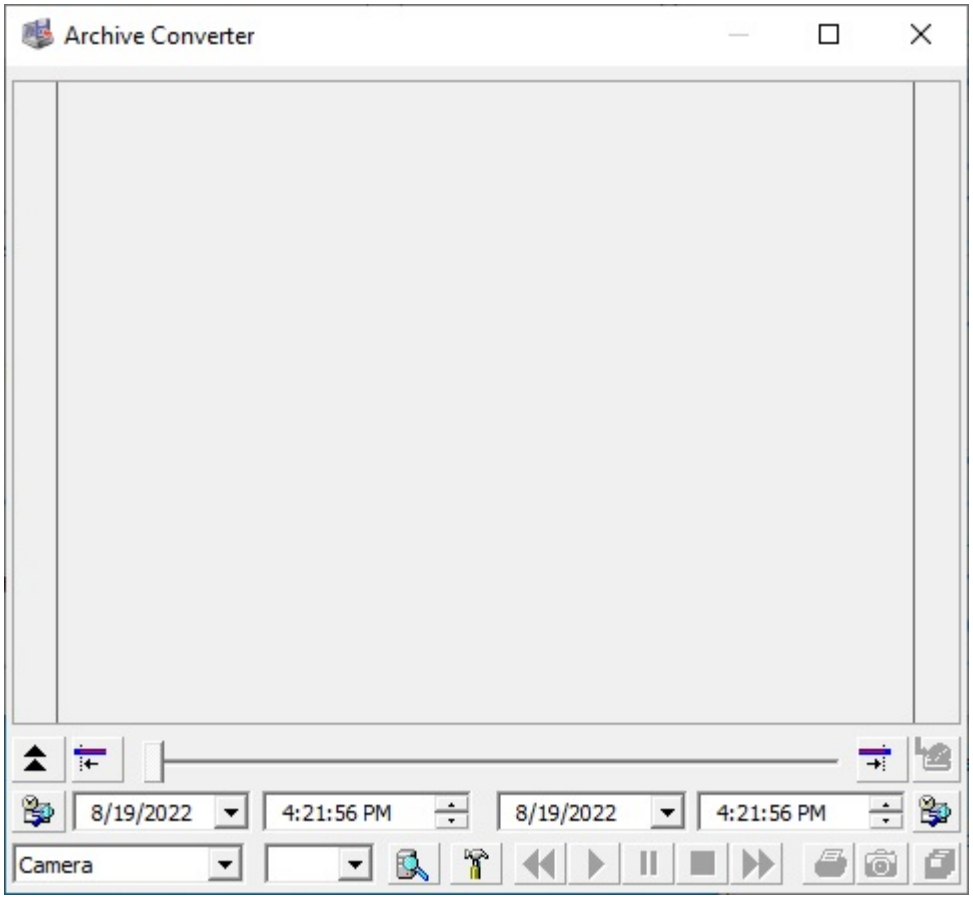
1. Converting audio and video files.
2. Copying the files from the archive to another folder with no data loss.

Note.

If video and audio were synchronized at the time of recording, the converted video file will contain sound track.

The utility can be started from the **Tools** folder of the *Axxon PSIM* program folder or from the **Start** menu: **Start -> Programs -> Axxon PSIM -> Utilities -> Playback and Conversion**.

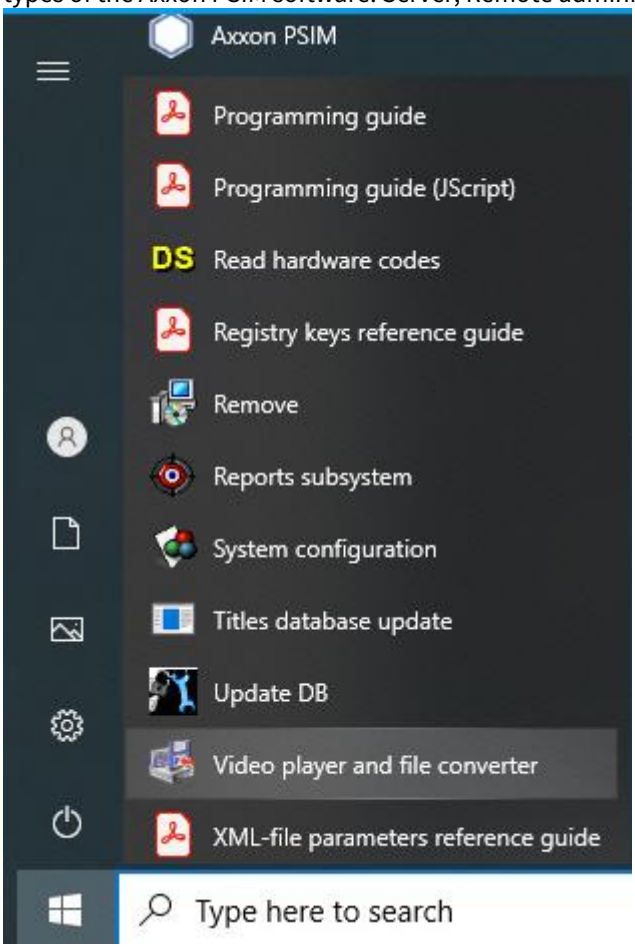
The utility dialog box is shown in the figure.



3.2 Starting and shutting-down the Converter.exe utility

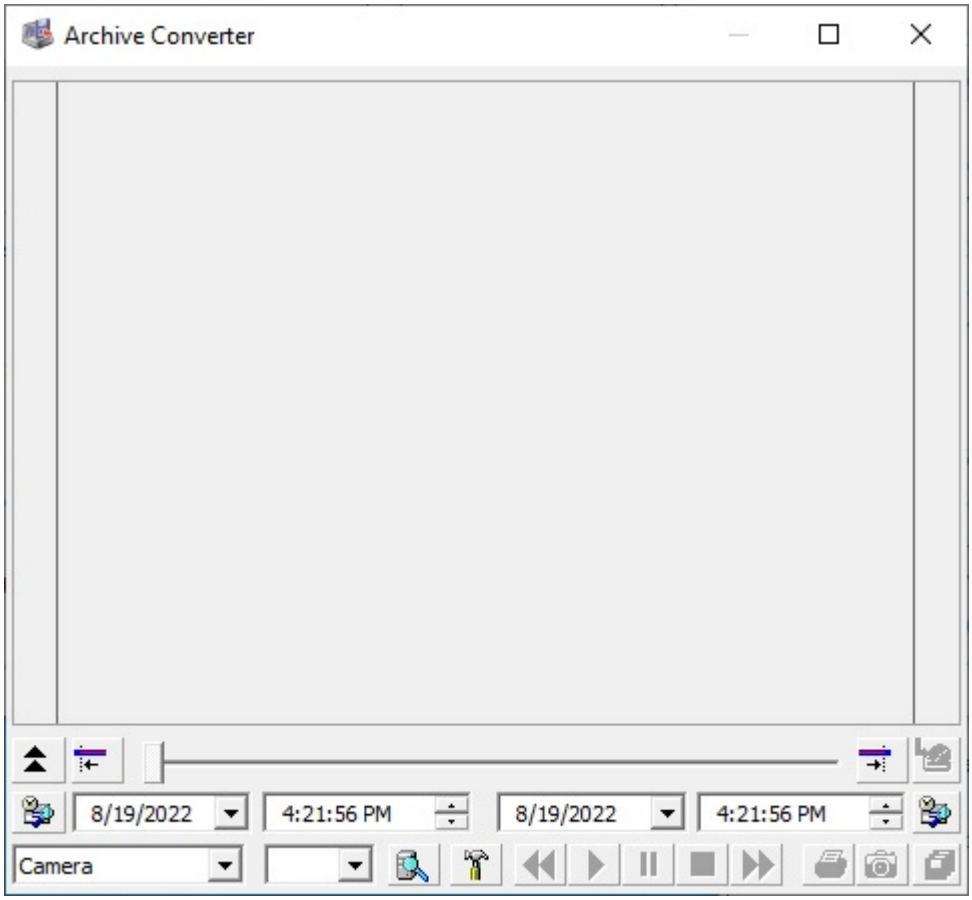
To start the Converter.exe utility, do one of the following:

1. Start the utility from the Windows taskbar. Click **Start**, then **Programs**, then **Axxon PSIM**, then **Video player and file converter**. The Converter.exe utility is available from the **Start** menu with the following installation types of the Axxon PSIM software: Server, Remote administrator workstation, Remote client.



2. Start the utility from the Tools folder of the *Axxon PSIM* program folder. Example: C:\Axxon PSIM\Tools\converter.exe.

Archive Converter dialog box will open.

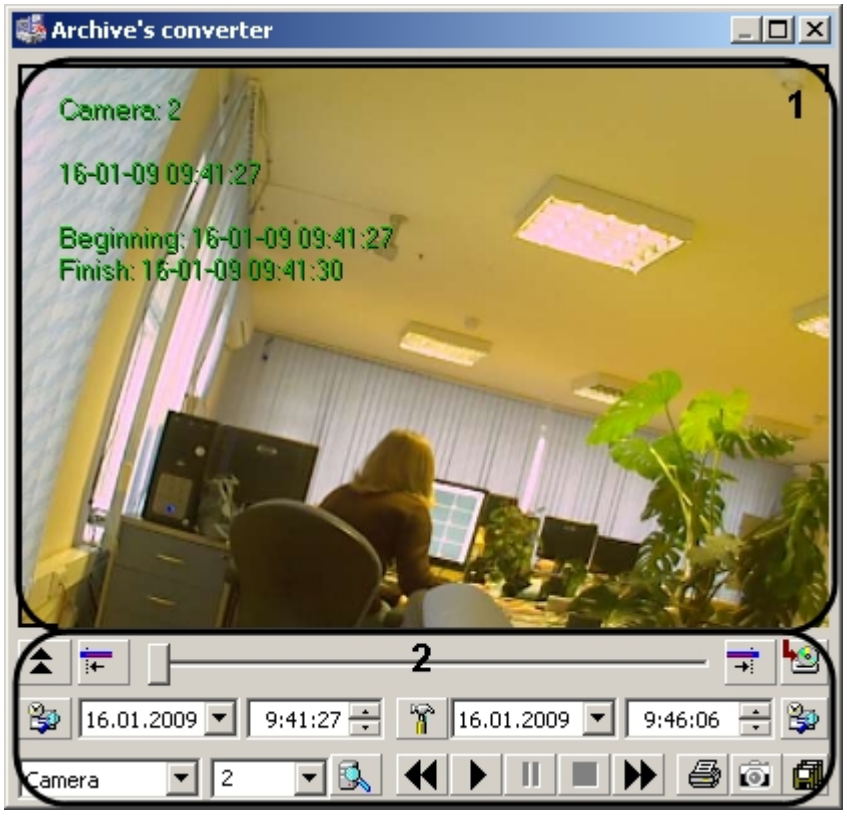


To close the Converter.exe utility, either click the cross button in the top right corner of the dialog box, or press Alt+F4 on the keyboard.

3.3 Converter.exe interface

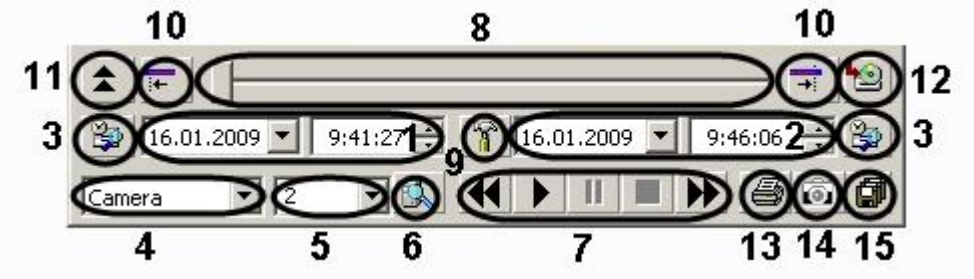
3.3.1 The Archive's Converter dialog box

The dialog box of the converter.exe utility is shown in the figure.



The Archive's Converter dialog box comprises of the following elements:

1. The screen to play back recordings (1);
2. The control panel for video and audio recordings playback (2).
   The elements of the control panel are described in the table.



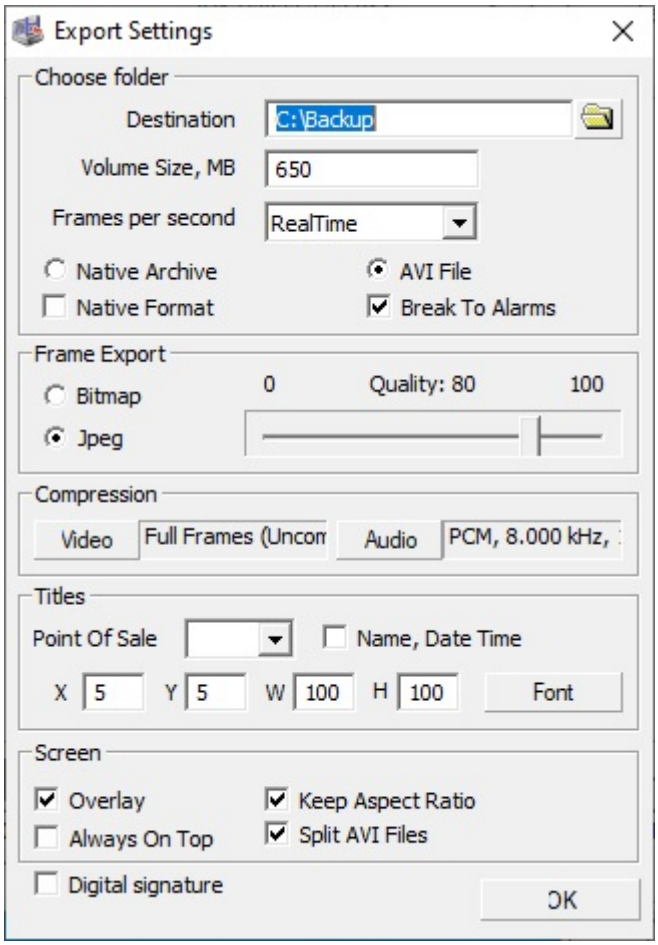
№	Element name	Description
1	Recording start date and time	Fields for entering the approximate start date and time of the video or audio recording
2	Recording end date and time	Fields for entering the approximate end date and time of the video or audio recording

№	Element name	Description
3	Go to first / last frame	Buttons for quick moving of the slider to the beginning or the end of the recording
4	Device	Drop-down list field for selecting the device (camera, microphone), for which the recording should be found in the archive
5	Device number	Drop-down list field for selecting the number of the device, for which the recording should be found in the archive
6	Search	Button for starting the search of recordings in the archive of the chosen device. The recordings are searched in the entire archive of the device. After the search is completed it is possible to specify the approximate beginning ang end date and time for required recording
7	Playback panel	The panel contains typical standard functions (from left to right): backward, play, pause, stop, forward
8	Time scale	The scale allows monitoring the playback progress and moving between the frames. To move between the frames, drag the slider or use the playback panel buttons in a per frame playback mode
9	Export setup	The button for opening the Export Setup dialog box
10	Exported recording limits	The buttons for setting the first and the last frames of the exported record
11	Hide/show the list	The button for hiding and showing the list of selected recordings
12	Add to list	The button for adding the selected recording (recording segment) to the list
13	Print frame	The button prints the current frame
14	Frame export	The button exports the current frame in a specified format. A dialog box opens for selecting the folder on the disk and entering the file name

№	Element name	Description
15	Export to AVI or archive	The button for starting the export of the recording (a recording segment) in the specified format. A dialog opens for selecting the device name, which made the recording. On export start, a folder is created for saving the exported recordings (by default, C:\Backup)

3.3.2 The Export Settings dialog box

To open the **Export Settings** dialog box, click the  button in the **Archive's Converter** window. The **Export Settings** dialog box will open, allowing to specify export parameters.



No	Parameter name	Field type	Description	Format	Default value	Value range
The **Choose folder** group						

No	Parameter name	Field type	Description	Format	Default value	Value range
1	Destination	Type-in the value	Type-in the folder on the disk to store the exported files (by default the **Backup folder** is created on disk C:)	-	-	-
2	Volume Size, MB	Type-in the value	Type-in the maximum value of the volume (file) size containing one or more recordings. If the size of recording for export exceeds the set one, then it will not be split. When the recording is added to the volume, the size of recording is expected to equal the mean value of sizes of all added recordings. A new recording is added to the volume if it does not exceed the volume size. A real size of recording can differ from the assumed one, therefore the volume size can exceed the assumed one. If the **Break To Alarms** checkbox is checked, each volume will contain one recording only. The field is disabled if the **Native Archive** parameter is activated	MB	650	0 to 2000 MB
3	Frames per second	Select in a drop-down list	Type-in the amount of grooming of the video recording	fps	RealTime	0.5; 1; 3; 5; 15; 30; RealTime

No	Parameter name	Field type	Description	Format	Default value	Value range
4	Native Archive AVI File	Select a radio-button	If the **Native Archive** radio-button is selected, then archive fragments will be exported keeping the creation time, but with no AVI conversion. If the **AVI File** radio-button is selected, then the fragment is converted to the AVI format using the specified codec	-	AVI File	1. Native Archive 2. AVI File
5	Break To Alarms	Checkbox	The checkbox is for selecting the way of storing the archive export fragments to volumes (files of specified size): the recordings for each alarm will be saved to separate volumes (files)	-	Unchecked	Unchecked – the file (volume) will contain a fragment of the size specified in the Volume Size, MB field Checked – the volume will contain a fragment related to one alarm only

No	Parameter name	Field type	Description	Format	Default value	Value range
6	Native Format	Checkbox	If the **Native Format** checkbox is checked, then video recordings are exported to AVI file without recompression, i.e. in the same format as in Axxon PSIM archive. To playback these AVI files on the computer without Axxon PSIM software package installed, install components from Axxon PSIM distributive beforehand: 1. \Redist\VC2005_SP1\vcredist_x86.exe 2. \Redist\CamMonitor\CamMonitorInstaller.exe ***Note.*** *To playback AVI files use Windows Media Player*	-	Unchecked	Unchecked – Axxon PSIM archive is exported to AVI file with recompression Checked - Axxon PSIM archive is exported to AVI file without recompression
The **Frame Expor**t group						
7	Bitmap Jpeg	Select a radio-button	If the Bitmap radio-button is selected, then the file is saved in Bitmap format. If the Jpeg radio-button is selected, then the file is saved in Jpeg format			
8	Quality	Set the slider	The parameter specifies the quality level of the exported file. The value of 100% results in no quality loss	%	80	0 to 100
The **Compression** group						

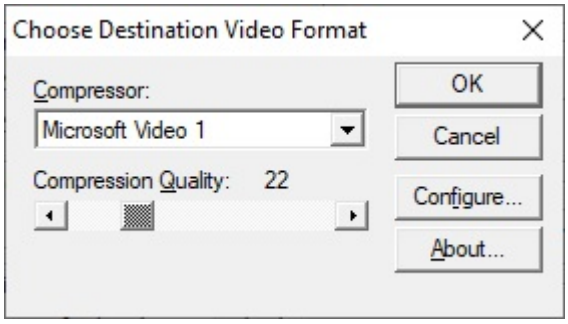
No	Parameter name	Field type	Description	Format	Default value	Value range
9	Video	Click the button	The button is for selecting and setting up the video codec used to compress video recordings. If the **Native Archive** radio-button is selected or the **Native Format** checkbox is checked, then this button is disabled	-		-
10	Field next to the Video button	Not to be edited	The field shows the info on selected video codec. If the **Native Archive** radio-button is selected, then this field is disabled	-	Full Frame (Uncompr-essed), Quality: 0	The list of codecs found by the utility
11	Audio	Click the button	The button is for selecting and setting up the quality of the exported audio. The **Native Archive** radio-button is selected, then this button is disabled	-	-	-
12	Field next to the Audio button	Not to be edited	The field shows the selected audio format	-	PCM, 8000 kHz; 16 bit; Mono	The list of quality levels detected
The **Screen** group						
13	Overlay	Checkbox	If the **Overlay** checkbox is checked, there is **DirectDraw** conversion	-	Checked	Checked – use **DirectDraw** for conversion Unchecked – do not use **DirectDraw** for conversion
14	Always On Top	Checkbox	If the **Always On Top** checkbox is checked, then **Converter** window is always over all other windows	-	Unchecked	Checked – the window is displayed on top Unchecked – the window is not displayed on top

No	Parameter name	Field type	Description	Format	Default value	Value range
15	Keep Aspect Ratio	Checkbox	If the **Keep Aspect Ratio** checkbox is checked, the aspect ratio of **Converter** window is fixed	-	Unchecked	Checked – 3:2 ratio is kept when the size of the dialog box is changed Unchecked – 3:2 ratio is not kept when the size of the dialog box is changed
16	Split AVI files	Checkbox	Activates export of selected video recordings to the separate AVI files. ***Note.*** *If the checkbox is not checked, video recordings from one camera are exported to one AVI file*	-	Checked	Checked - video recordings are exported to the separate AVI files Unchecked – video recordings are exported to one AVI file
17	Digital signature	Checkbox	Activates adding digital signature that is used for checking frame authenticity to exported frames. ***Note.*** *Checking frame authenticity is performed using SignCheck.exe utility (see* The SignCheck.exe utility for checking the authenticity of exported frames and video recordings *section)*	-	Unchecked	Checked – digital signature is added Unchecked – digital signature is not added

If a microphone was selected as a device in the dialog box of Converter.exe utility, only the **Audio** button and the **Screen** group are enabled.

3.3.3 A dialog box for choosing the video codec

The Video button in the **Export Setup** dialog box opens a dialog box for choosing a video codec to be used for video compression.



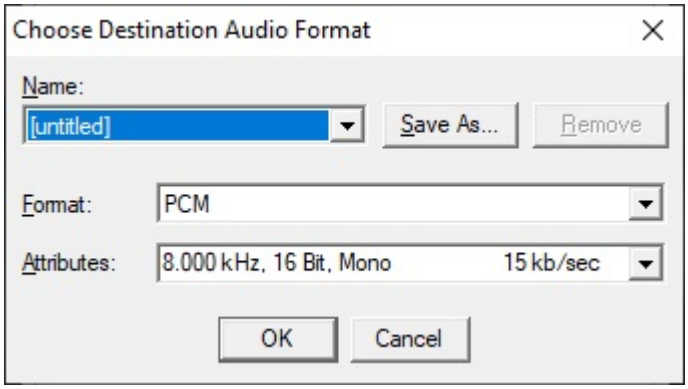
No	Parameter name	Field type	Description	Format	Default value	Value range
1	Compressor	Select from drop-down list	The button allows selecting and setting up the video codec used to convert and compress the video image	Codec name	Full frames (no compression)	All video codecs recognized by the operating system
2	Compression quality	Drag the slider	The slider allows setting the compression level. The zero position of the slider represents the highest compression and lowest quality. Changing this parameter is enabled if the codec is selected in the **Compression Program** field	%	0	0 to 100
3	Configure	Click the button	The button opens the settings panel of the video codec. See the codec manual for details	-	-	-
4	About	Click the button	The button opens an information box with codec details	-	-	-

Note.

If AVI format is used, the resultant file size should not exceed 2 GB.

3.3.4 A dialog box for choosing the audio format

The **Sound** button in the **Export Setup** dialog box opens a dialog box for choosing an audio format.



No	Parameter name	Field type	Description	Format	Default value	Value range
1	Name	Select from drop-down list	The field allows choosing the name for the selected audio format	Format name	Untitled	Untitiled CD Quality Radio Quality Telephone Quality Compact disk
2	Format	Select from drop-down list	The field for selecting the format	Format name	PCM	The list of audio formats used by the utility
3	Attributes	Select from drop-down list	The list of sound characteristics: playback/recording frequency (8000 kHz), digitizing level (8, 16, etc bits), channel type (mono/stereo)	Parame-ter values	PCM, 8000 kHz, Mono	The list of characteristics, recognized by the operating system

No	Parameter name	Field type	Description	Format	Default value	Value range
4	Save as…	Click the button	The button allows creating a unique name for the selected format. To save a format under a unique name: 1. Select **Untitled** in the **Name** field. 2. Select the values in the **Format** and **Attributes** fields. 3. Click the **Save As** button 4. Enter a unique name in the **Save This Format As** field and click **OK**. The newly created name will appear in the **Name** drop-down list.	String	-	-

3.4 Using the Converter.exe utility

3.4.1 General description of the Converter.exe utility

The Converter.exe utility is designed to convert and play back audio and video recordings from the archive and save them to a specified folder.

Using the Converter.exe utility includes:

1. Starting the utility (see Starting and shutting-down the Converter.exe utility).
2. Selecting an archive (see Selecting an archive to be played or converted).
3. Finding a recording in the selected archive (see Selecting an archive to be played or converted).
4. Playback of the recording (see Recording playback).
5. Finding the required recording fragment or frame (see Searching for a video recording).
6. Setting the export or conversion parameters (see Converting video and audio archives to AVI files).
7. Exporting the fragment or printing the frame (see Exporting recordings and frames).
8. Shutting-down the Converter.exe utility (see Starting and shutting-down the Converter.exe utility).

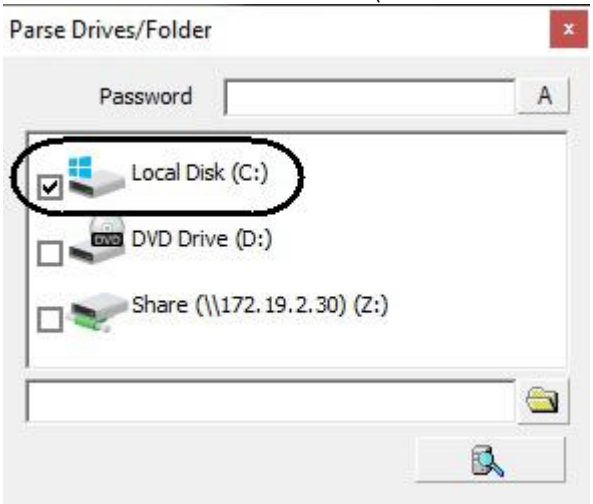
3.4.2 Selecting an archive to be played or converted

To search an archive for a recording, do the following:

1. Select the device the recording was made by, and its number (1).

2. Click the **Search** button (2).

3. Select the location of the archive (folder with archives for specific date and time) on an appropriate disk.



4. Click the  button.
5. Specify the time limits in the date/time fields (3).

The first frame of the required recording will be displayed in the video playback screen.

Note.

In case of searching for an audio recording, no visible signs of finding the recording will be shown. To check that a recording was found, play it.

Note.

Speed of records search directly depends on their number. The search process can take a lot of time if the archive depth is rather big and reading is performing from the network disk.

Note.

If video files that are to be opened were not recorded, but copied, then start the Convert.exe utility to open the archive (see The Convert.exe utility for correcting modification dates of video archives section):

- If the archive is created in the same time zone as it is viewed, then start the utility with the fullmode parameter:
  convert.exe fullmode
- If the archive is created in different time zone than it is viewed, then move the archive to the current time zone by starting the utility with the following parameters in the command prompt:
  convert.exe fullmode TZ +hh:mm
  where +hh:mm is the time shift between the current time zone and the time zone of the archive.

Otherwise, the folders with video files fail to open.

3.4.3 Searching for a video recording

After the approximate time interval is selected using the date/time fields, and the required archive is found, it may be necessary to find a particular fragment or frame to be played or exported.

Searching for a fragment in a recording

To find the required video fragment in the selected recording, do the following:

1. Click the **Play** () button in the playback control panel.
2. When the required fragment appears, click the **Pause** () button.
3. Click the **Fragment Start** () button to make the current frame the start of the fragment.
4. Click the **Play** () button in the playback control panel.
5. When the required fragment ends, click the **Fragment End** () button to make the current frame the end of the fragment. All subsequent frames will be omitted.

The resultant recording fragment will then be available for conversion or export, maintaining the format and the creation date.

Searching for a frame in a recording

To find a particular frame in the selected recording, do the following:

1. Click the **Play** () button in the playback control panel.
2. When the required frame appears, click the **Pause** () button to enter the per frame playback mode.

> **Note.**
>
> If the recording is to be played back in the per frame playback mode starting with the first frame, then click the **Pause** ( ) button instead of the **Play** ( ) button.

3. Keep clicking the **Fragment Forward** ( ) and **Fragment Back** ( ) buttons, to browse the frames until the required frame appears on the screen.

The resultant frame may be printed or used as a starting frame for a fragment (see Searching for a fragment in a recording section).

> **Note.**
>
> To quit the per frame playback mode, click the **Pause** ( ) button once more.

3.4.4 Recording playback

The recording selected by date and time, can be played in Converter.exe player using the playback control panel.

The panel contains five control buttons (left to right on the figure): **Back, Play, Pause, Stop, Forward**, allowing to play, pause, stop and browse the records.

1. If the **Stop** button is down (clicked), then it is possible to move between the recording segments by clicking the **Forward** or **Back** buttons. The recording segment means one of the following:
   - a segment of video recording between the commands to start and stop recording if the recording was initiated manually (for example, via a script or the camera's context menu);
   - a segment of video recording between the beginning and the end of the detection tool triggering, taking into account the periods of pre- and post-recording in case the recording was initiated by any detection tool.
2. A short press of the **Play** button starts playing the recording segment from start to end. If the recording contains several recording segments, the **Play** button should be clicked to play each of them.
3. To play a record consisting of several segments without stopping, press and hold the **Play** button for 1-2 seconds. The button then changes its appearance from to . To stop playback, click **Stop**.
4. To play the recording in the frame-by-frame mode: a) click **Play**, b) click **Pause**, c) keep clicking **Forward** or **Back** to view frames one by one.
5. To view the recording segment in accelerated mode click the **Play** button and then click the **Forward** to accelerate twice relatively the previous speed. The current playback speed is displayed in titles above video image.
6. To view the record section in slow motion, click the **Play** button and then click the **Back** to slow down twice relatively the previous speed. The current playback speed is displayed in titles above video image.

3.4.5 Converting video and audio archives to AVI files

Video and audio archives are converted into AVI format according to Converter.exe settings, using the **Export Setup** dialog box. The level of compression of the exported recording is determined by the following parameters:

1. **Frames Per Second** parameter – setting the parameters of the recording grooming;
2. **Video** button – selection of the video codec, in case of video archive export;
3. **Sound** button – set the sound quality parameters (frequency, bitrate, etc), in case of audio archive export.

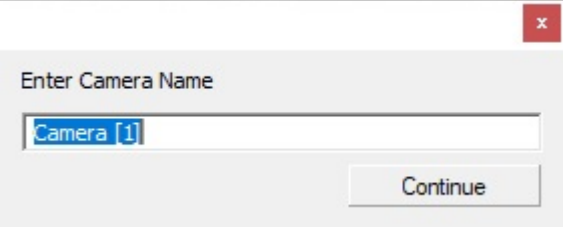
Note.

If AVI format is used, the resultant file size should not exceed 2 GB.

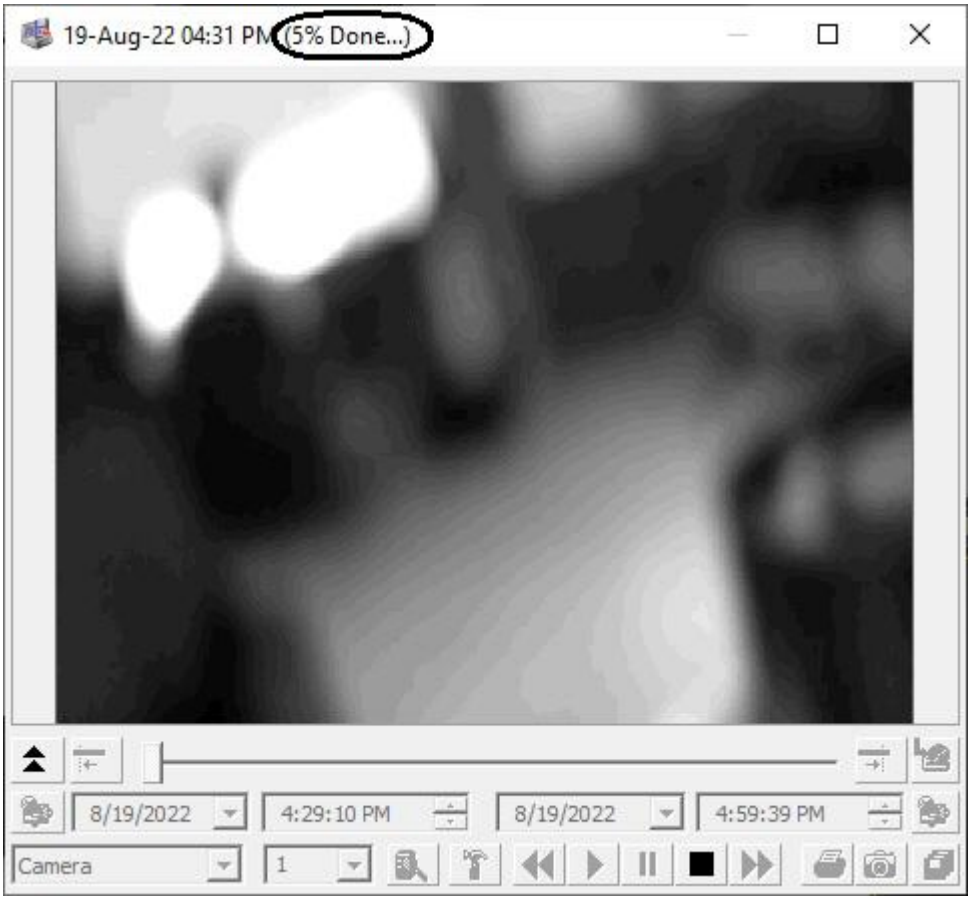
3.4.6 Exporting recordings and frames

Export of the recordings is one of the main functions of the Converter.exe utility. There are two ways of exporting records from an archive:

1. Export to AVI option converts (compresses) a recording and breaks it down into volumes (files of the size specified in the Export Setup dialog box).
   To export the recording as AVI, do the following:
   a. Find the recording in an archive (see the Selecting an archive to be played or converted section).
   b. In the **Export Setup** dialog box, select the **Export to AVI** radio-button.
   c. Click the **Video** or **Sound** button to specify the conversion parameters. Click the **OK** button.
   d. Click the **Export to AVI/Archive** button ( ) to start exporting.
   e. Enter the name of the device folder to save the recording to (1), then click **Continue** (2).



The export progress will be shown in the title bar of the Converter.exe window.



The title bar will read **Complete**, when exporting is completed. To verify the results, open the Backup folder and find the file named after the device from which archive the recording was exported.

2. The Export to Archive option allows copying the files from an archive to another location on the disk with no conversion, maintaining the recording creation date and an option for breaking it down into volumes.
   To export a recording in the same format as it is stored in the archive, do the following:
   a. Find the recording in the archive (see the Selecting an archive to be played or converted section).
   b. In the **Export Setup** dialog box, select the **Export to Archive** radio-button.
   c. Specify volume size in the **Export Setup** dialog box. Click the **OK** button.
   d. Click the **Export to AVI/Archive** button ( ) to start exporting.

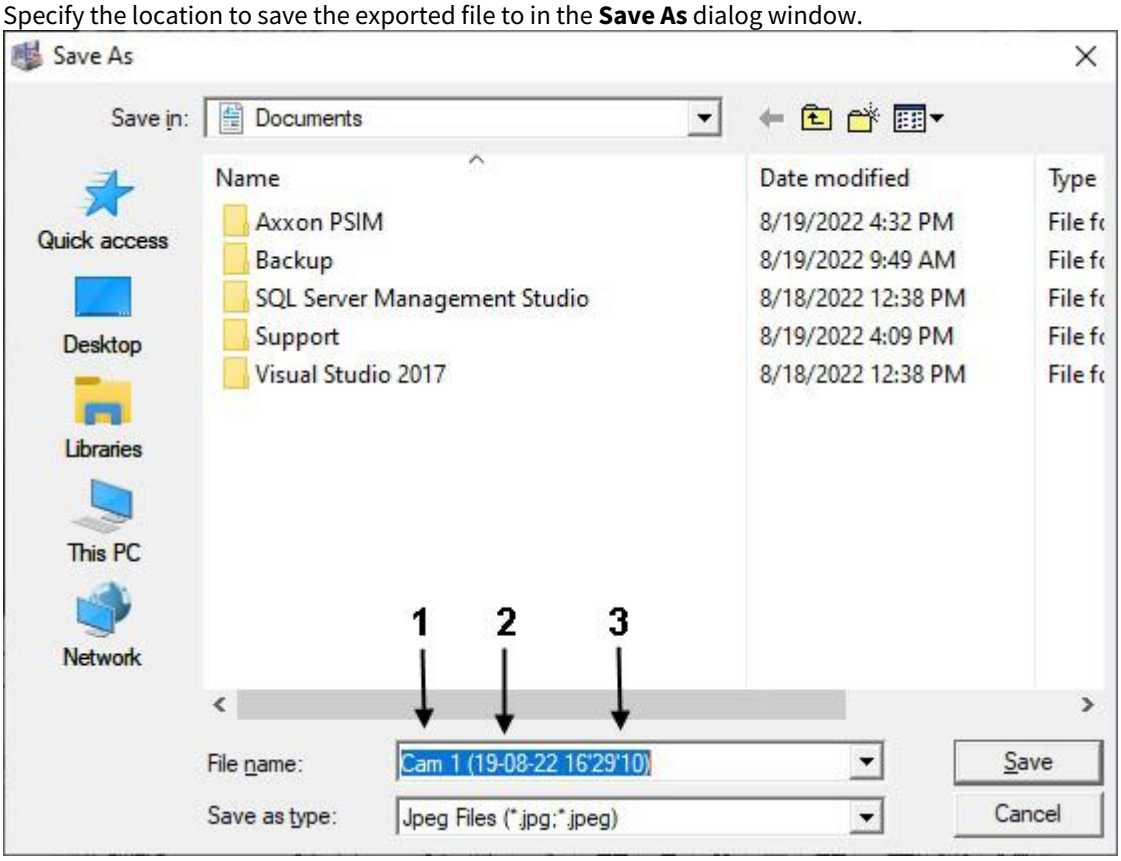
Note.

If AVI format is used, the resultant file size should not exceed 2 GB.

The Converter.exe utility allows exporting frames into bitmap and JPEG formats. Do the following:

1. a. Find the required frame (see the Searching for a frame in a recording section).
   b. In the **Export Setup** dialog box, specify the parameter values in the **Frame Export** group. Click the **OK** button.
   c. Click the **Export Frame** button ( ).

d. Specify the location to save the exported file to in the **Save As** dialog window.



The file name will be generated automatically in the following format: 1) name and number of the camera where the frame comes from; 2) creation date; 3) creation time. The file extension corresponds to the file format selected in the **Export Setup** dialog box.

e. Click the **Save** button.

3.4.7 Using a command prompt to work with the Converter.exe utility

Video and frames can be exported with the help of a command prompt using the following commands:

Converter.exe Disc:\File,Number_Cam,StartDate StartTime,StopDate StopTime,CameraName

Converter.exe Disc:\File,Number_Cam,StartDate StartTime,,CameraName

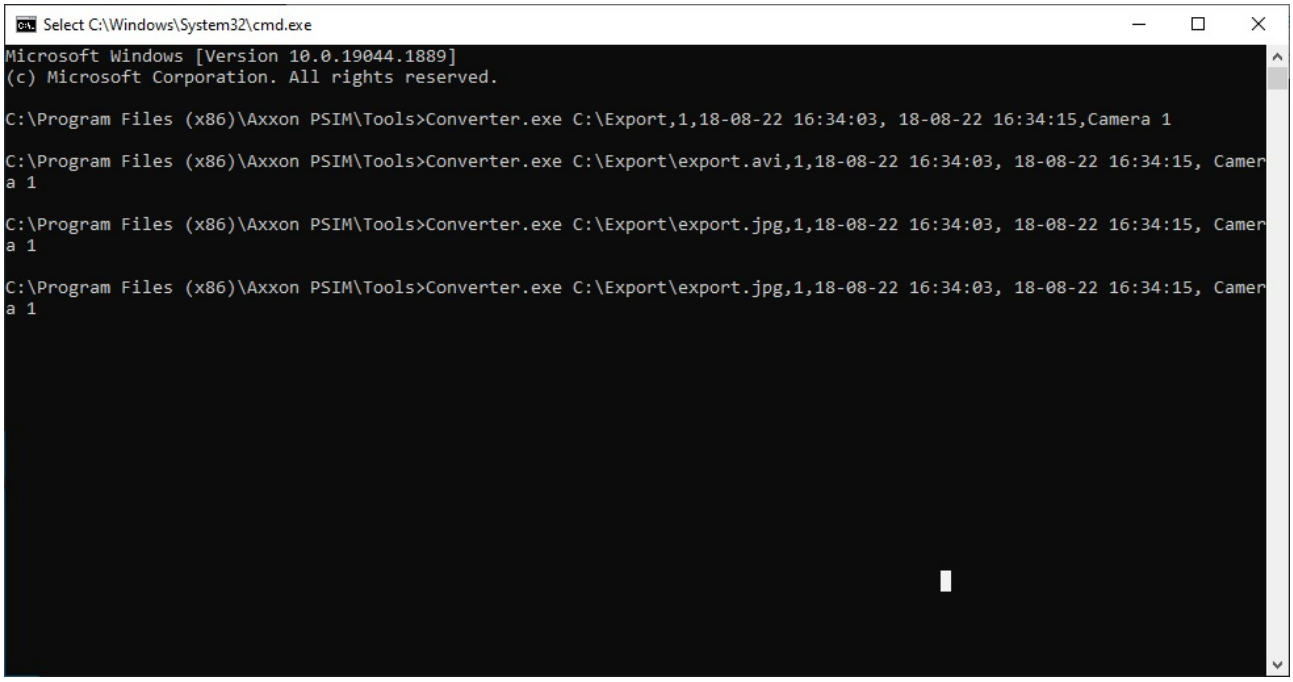
> **Note.**
>
> If **StopDate and StopTime** parameters are not specified, then ‘,’ is to be specified instead.

The table describes the command parameters.

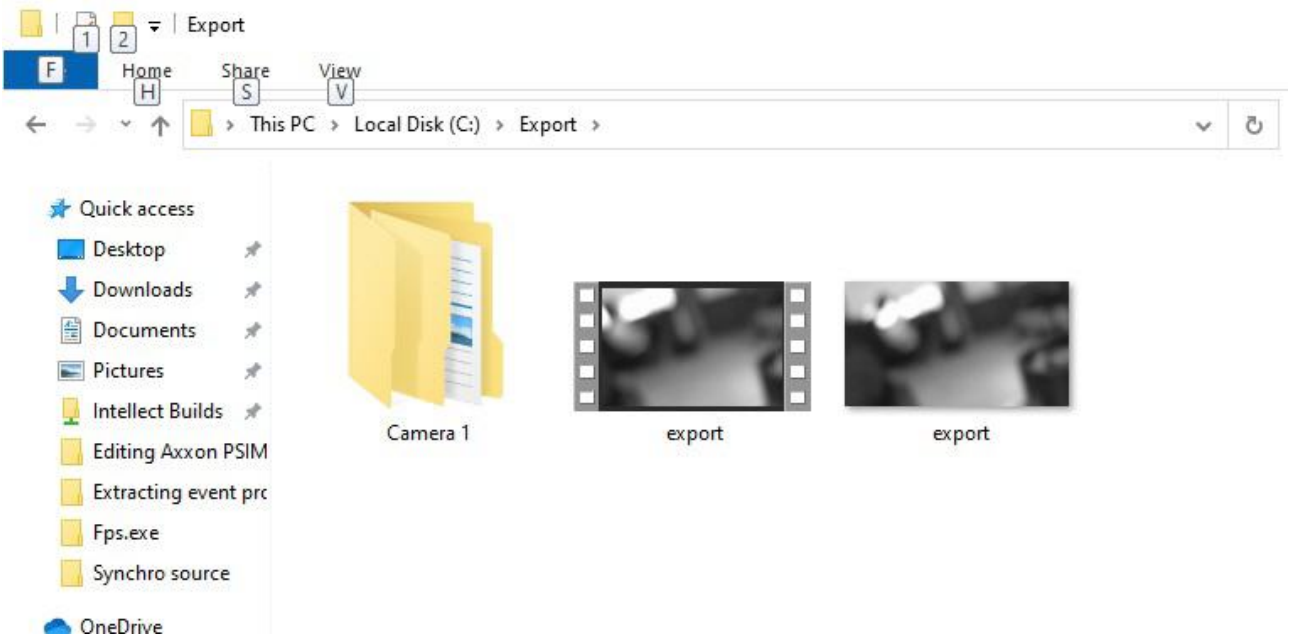
Parameter	Description
Disk	Disk for storing exported files

File	Name of a catalogue or file. ***Note 1.*** *If the catalogue or file specified in the command does not exist, it will be created automatically.* ***Note 2.*** *To export archive (video record in the original format) only catalogue name is to be specified.*
Number_Cam	Number of a camera which performs the recording
StartDate	Date of record start (dd-mm-yy)
StartTime	Time of record start (hh:mm:ss)
StopDate	Date of record end (dd-mm-yy). ***Note.*** *Parameter is not in use while exporting the separate frames*
StopTime	Time of record end (hh:mm:ss) ***Note.*** *Parameter is not in use while exporting the separate frames*
CameraName	Name of the camera that is to be displayed in the titles on the exported video, as well as the name of the folder created in the specified export folder used for storing exported files

The example of using the command prompt to export files is shown in the figure.



As a result the “export” folder containing the exported files is created on the local disk “C”.



3.4.8 Printing a frame

To print a frame, do the following:

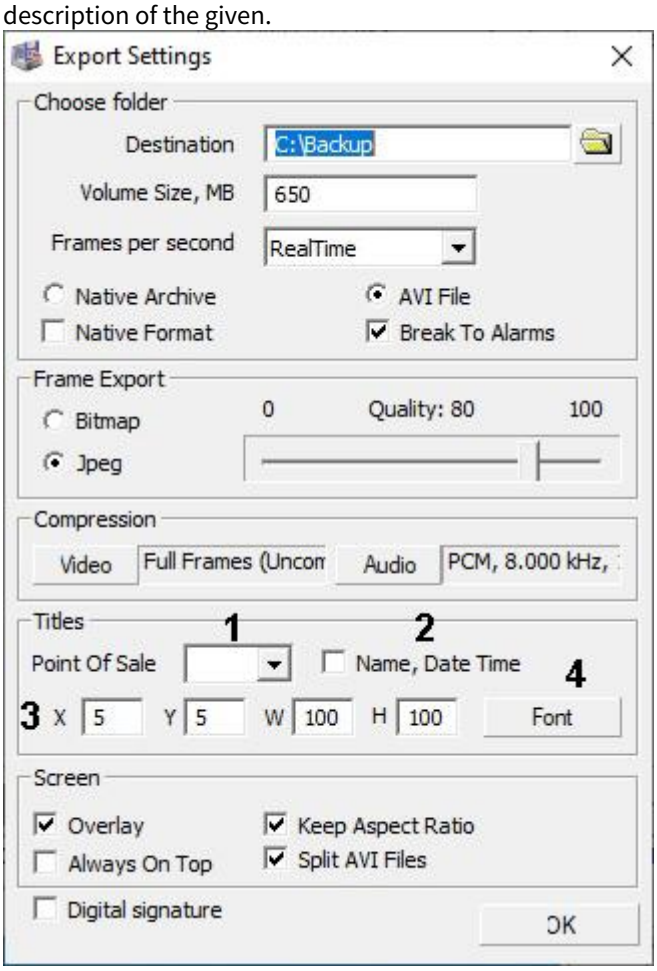
1. Find the required frame (see the Searching for a frame in a recording section).
2. Click the **Print Frame** button ( ).
3. A standard dialog box for printing and printer setup will be opened.

3.4.9 Exporting video with titles

Video with titles is exported as follows:

1. Run the Converter.exe utility (see Starting and shutting-down the Converter.exe utility).
2. Call for **Export Settings** dialog window in the opened window of Converter.exe utility and set its groups **Choose folder**, **Frame Export**, **Compression** and **Screen** (see. Interface description of The Export Settings dialog box).

3. Set the titles displaying in the **Titles group** in the dialog window **Export Settings**; table shows parameters description of the given.



№	Parameter name	Parameter description	Value range
1	Point of sale dropdown list	Name of cash terminal, titles from which should be laid over the video recording while viewing and exporting the frames and recordings with the help of Converter.exe utility	Empty value – titles from all the titrates overlay function. No – overlay function is off. Number of cash terminal (from one and above) – function of displaying the titles concerning the given cash terminal.

2	Checkbox **Name, Date, Time**	When the given checkbox is activated, lines, containing name and number of a camera, date and time of creation of the given video frame, will be laid over the video recording	Yes – lines, containing name and number of a camera, date and time of creation of the given video frame , will be laid over the video recording. No – lines, containing name and number of a camera, date and time of creation of the given video frame , will not be laid over the video recording.
3	Editing text fields **X, Y, W, H**	Coordinates and area size, taken by titles in the video recording. Is expressed in percentage relative to the screen size of video recording playback	From 0 and above. Depends on the screen size of video recording playback.
4	Font button	Font selection of titles displaying	-

Note.

If the cash terminal is selected, its value will not be saved with the repeated run of Converter.exe utility. On default displaying titles from all the titers is set.

4. To apply the settings it is necessary to click **OK** button. To cancel settings one should click the cross mark in the upper right corner of **Export Settings** dialog window.
5. Dialog window of Converter.exe utility for exporting the required file will open in result (see Exporting recordings and frames).

Export of video recordings with titles is completed.

4 Tweaki.exe utility for advanced setup of the Axxon PSIM software system

4.1 The purpose of the tweaki.exe utility

The tweaki.exe utility is used for configuring *Axxon PSIM* by editing the sections of the Windows registry, where the setup parameters for the *Axxon PSIM* core and modules are stored:

- For 64-bit systems, the sections are HKLM\SOFTWARE\Wow6432Node\AxxonSoft and HKCU\SOFTWARE\Wow6432Node\AxxonSoft.
- For 32-bit systems, the sections are HKLM\SOFTWARE\AxxonSoft and HKCU\SOFTWARE\AxxonSoft.

The utility should be run as the same Windows user who is used to start *Axxon PSIM*, otherwise the new settings may not apply. This is because the choice of the Windows account determines to which registry section the changes will be written.

Attention!

Invalid values of the registry keys may lead to the system failure.

The tweaki.exe utility provides the following functionality:

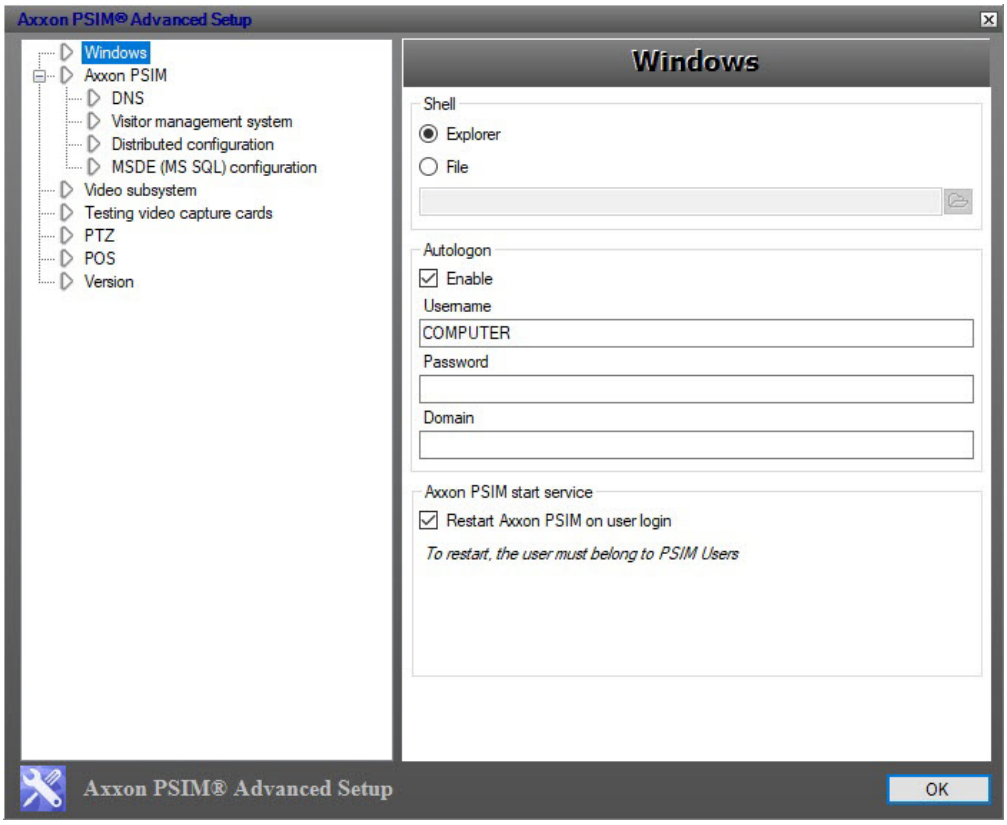
1. Setup of *Axxon PSIM* startup (see The Settings panel of the Windows section);
2. Enabling the debug mode of *Axxon PSIM* (see Enabling and configuring the debug mode of Axxon PSIM);
3. Advanced setting of the Video surveillance monitor (see The Settings panel of the Video subsystem section);
4. Advanced setting of events logging (see The Settings panel of the Axxon PSIM section);
5. Advanced setting of video signal processing by Server (see The Settings panel of the Video subsystem section);
6. Advanced setting of distributed architecture (see Extended setup of the distributed architecture);
7. Changing network names and IP-addresses in the configuration database (see Changing computer names and IP addresses in the Axxon PSIM configuration database);
8. Limiting the RAM used by MS SQL server (see Limiting memory usage by an MS SQL server);
9. Advanced setting of audio or video recording to an archive (see The Settings panel of the Video subsystem section);
10. Re-indexing audio and video archives (see Re-indexing the audio and video recordings archive);
11. Selecting the analog video output operation mode The Settings panel of the Video subsystem section);
12. Testing the operability of video capture cards (see Testing video capture cards);
13. Advanced setting of PTZ devices (see The Settings panel of the PTZ section);
14. Advanced setting of *POS PSIM* (see The Settings panel of the POS PSIM section);
15. Displaying versions of *Axxon PSIM* modules (see The Settings panel of the Version section).

4.2 Starting and shutting-down the Tweaki.exe utility

To start the tweaki.exe utility, do one of the following:

1. Start the utility from the Windows taskbar. Click **Start => All Programs => Axxon PSIM => Tools => Advanced settings utility**. The tweaki.exe utility is available from the **Start** menu with the following installation types of *Axxon PSIM*: Server, Remote administrator workstation, Remote client.
2. Start the utility from the **Tools** folder of the *Axxon PSIM* program folder: C:\Axxon PSIM\Tools\Tweaki.exe.

The **Axxon PSIM Advanced Setup** dialog box appears after running the tweaki.exe utility.

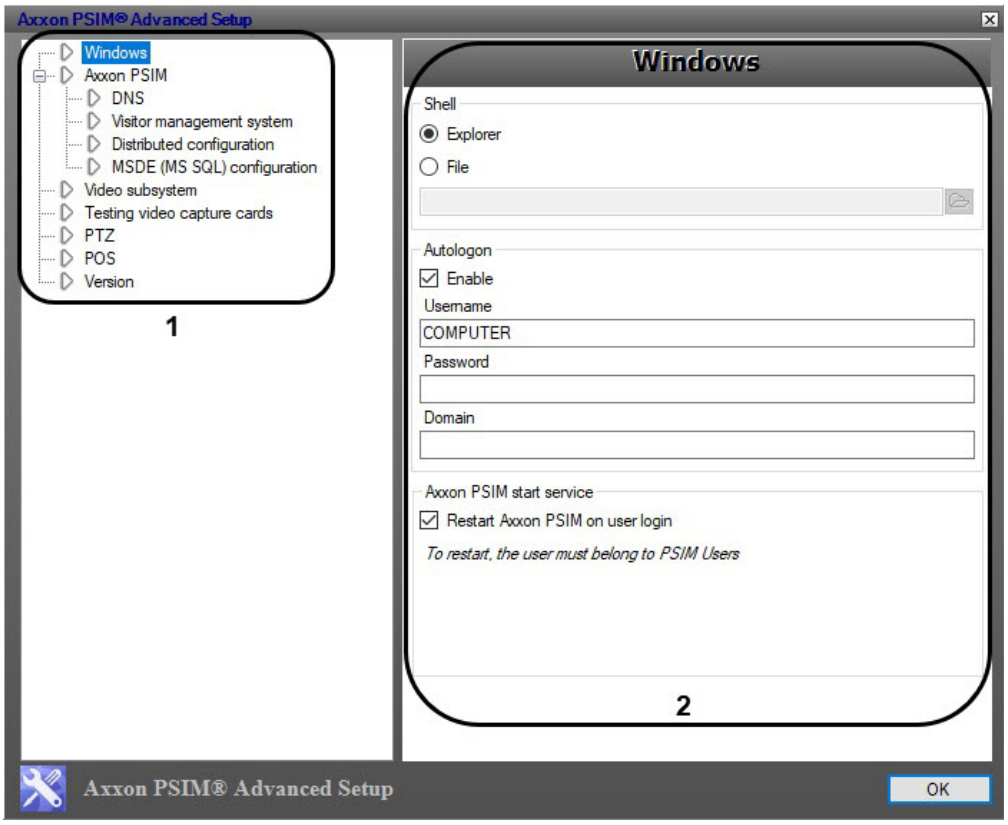


To shutdown the tweaki.exe utility and save the changes click **OK**. To shutdown the tweaki.exe utility without saving the changes, click ☒.

4.3 Interface of the Tweaki.exe utility

The user interface of the tweaki.exe utility consists of two interrelated elements:

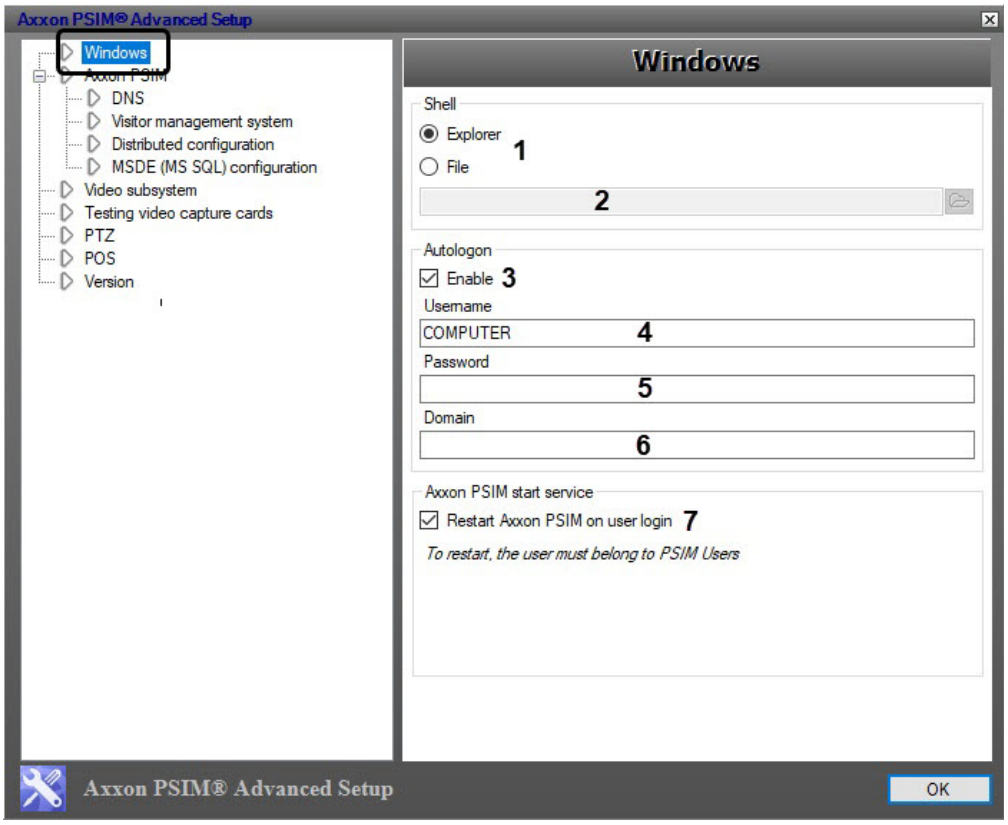
1. Tree of sections (**1**).
2. Settings panel for each section (**2**).



Sections tree of the tweaki.exe dialog box has static structure and is used for navigation in the utility. To access the settings panel for the required section, left-click the corresponding tree tab.

4.3.1 The Settings panel of the Windows section

The **Windows** section is used to set Windows running Windows OS. The settings panel for the **Windows** section is shown in the figure.



The parameters of the **Windows** setting panel are described in the table.

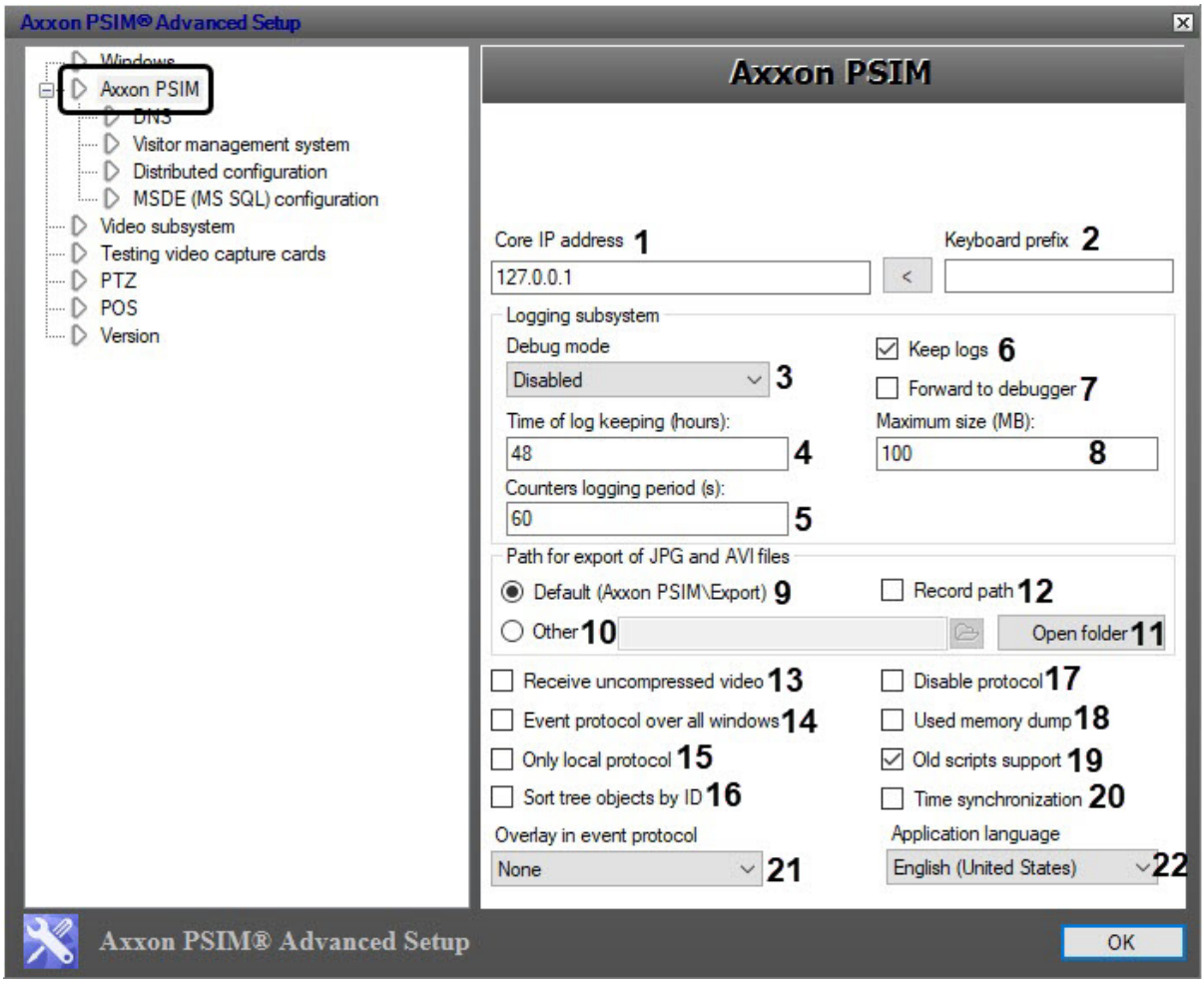
No	Parameter name	Field type	Description	Representation	Default value	Value range
The **Shell** group						
1	The **Explorer/ File** switch	Set in the position	Selection of Windows working shell ***Attention!*** *Disable UAC to run the Axxon PSIM software package as the shell. Configuration of the local security policy is required for full disabling of UAC in the Windows 8 and Windows 8.1 OS – see* OS settings for correct operation of Remote Admin Workstation or Server	-	Explorer	**Explorer** – Microsoft Explorer is loaded as working Windows OS shell (corresponds to standard Windows OS settings). **File** – *Axxon PSIM* starts as a working shell of Windows OS

No	Parameter name	Field type	Description	Representation	Default value	Value range
2	The **File** field with  button. Active for the **File** switch position	Button is pressed	Opens standard Windows window «Open» to select shell file of OS Windows. Full path to the file is displayed in the field	-	-	The psim.exe or psim_host.exe executive file is selected as a shell
The **Autologon** group						
3	The **Enable** checkbox	Checkbox	Activates automatic log on of the user to OS Windows	Boolean type	No	Yes – automatic log on of the user is activated No – automatic log on of the user is not activated
4	The **Username** field	Type-in the value	Set the username for logging on the OS Windows	-	-	Up to 64 characters. Depends on the settings of Windows user account (stored locally or on domain server)
5	The **Password** field	Type-in the value	Set the password for logging on the OS Windows	-	-	8 to 14 characters Depends on the settings of Window's user account (stored locally or on domain server)
6	The **Domain** field	Automatically	Displays the name of domain server (if there is any), where data concerning user account is stored (user name and password)	-	-	Depends on domain net settings (net settings of OS Windows correspondingly)

No	Parameter name	Field type	Description	Representation	Default value	Value range
7	**Restart Axxon PSIM on user login** checkbox	Setting checkbox	Specifies the way of restart the *Axxon PSIM* software installed as a service on user login	Boolean type	Yes	**Yes** – the *Axxon PSIM* software installed as a service restarts under the current user if it belongs to the PSIM Users group **No** – The *Axxon PSIM* software installed as a service doesn't restart under the current user even for users belonging to the PSIM Users group

4.3.2 The Settings panel of the Axxon PSIM section

The **Axxon PSIM** section is used for *Axxon PSIM* advanced setup. The settings panel for the **Axxon PSIM** section is shown in the figure.



The parameters of the *Axxon PSIM* settings panel are described in the table.

No	Parameter name	Method of setting the parameter value	Description	Representation	Default value	Value range
1	The **Core IP address** field with < button. Set on the Client	Enter the value in the field/ use the < button	Sets the IP address of the *Axxon PSIM* server to which the psim_host.exe module is connected by default. In case of pressing < button, IP address of the local computer is set	IP address	127.0.0.1	Depends on net settings of the Server. In case of connection failure dialog window requiring IP address is displayed

No	Parameter name	Method of setting the parameter value	Description	Representation	Default value	Value range
2	**Keyboard prefix**	Enter the value in the field	Sets the prefix for a special keyboard. When a button is pressed on this keyboard the *Axxon PSIM* detects when the button was pressed on this very keyboard	Symbol	—	Usually, a tilde (~), code 126
The **Logging subsystem** group						

No	Parameter name	Method of setting the parameter value	Description	Representation	Default value	Value range
3	**Debug mode**	Select the value from the drop-down list	Sets the mode of the *Axxon PSIM* **Debug window** displaying (see The Debug window)	List of available modes of **Debug window** displaying	Starting with weekly build 1.0.1.172, the **Debug 4** mode is enabled by default. Before this build — **Disabled** is a default mode	**Disabled**—**Debug window** is not displayed **Debug 1**—**Debug window** is displayed and a log file containing recordings about modules errors is created **Debug 2**—**Debug window** is displayed and a log file containing recordings about modules errors and alerts is created **Debug 3**—**Debug window** is displayed and a log file containing recordings about all the modules events is created **Debug 4**—**Debug window** is displayed and a log file containing recordings about all the modules events, and also additional menu that is individual for each module (used by programmers) are created

No	Parameter name	Method of setting the parameter value	Description	Representation	Default value	Value range
4	**Log-storing time (hours)**	Enter the value in the field	Sets the time of keeping log files	Sequence	48 hours	> 0
5	**Counters logging time (sec)**	Enter the value in the field	Assigns the time interval in seconds for logging processor load, memory usage, and disk usage	Sequence	60	Positive whole numbers not less than 60 and zero. If the value 0 is specified, sensor data is not included in the log file
6	**Save logs**	Set the checkbox	Enables logs saving	Boolean type	Yes	**Yes**—logs are saved **No**—logs are not saved
7	**Redirect to debugger**	Set the checkbox	Enables the debugger	Boolean type	None	**Yes**—the debugger is in use **No**—the debugger is not in use
8	**Maximum size (MB)**	Enter the value in the field	Defines the maximum size of RAM that log files can use. Log files are archived after that size is reached	Sequence	100 MB	>= 100 Values less than 100 Mb are ignored
The **JPG** and **AVI** files export path group						

No	Parameter name	Method of setting the parameter value	Description	Representation	Default value	Value range
9	The **Default (Axxon PSIM\Export)/Other** switch	Set in the position	Sets the folder for exported frames from *Axxon PSIM* video archive (see Frame export)	—	Default (Axxon PSIM\Export)	Default (Axxon PSIM\Export)—exported to the C:\Users\%current user name%\Documents\Axxon PSIM\export\ folder Other—exported to the selected folder
10	The **Other** field with the  button	Click the button/ enter the value in the field	Sets the path name to the folder, where frames from video archive are to be exported when the switch is set in the **Other** position. ***Note.*** *The specified path will be applied to the* ***ExportDir*** *registry key located in HKLM\SOFTWARE\WOW6432Node\Axxon Soft\AxxonPSIM\Video (see Registry keys reference guide)*	Path name	—	—
11	**Open folder**	Click the button	Opens the current folder for frame export	—	—	—
12	**Record path**	Set the checkbox	The checkbox allows you to prohibit changing the export directory when exporting an archive period **Note** The selected value is written to the **ExportDirFixed** registry key located in HKLM\SOFTWARE\WOW6432Node\AxxonSoft\AxxonPSIM\Video (see Registry keys reference guide).	Boolean type	No	**Yes**—export catalogue change is forbidden **No**—export catalogue change is allowed
No group						

No	Parameter name	Method of setting the parameter value	Description	Representation	Default value	Value range
13	**Receive uncompressed video**	Set the checkbox	Enables receiving uncompressed video from the Server. As a rule is set on the Client	Boolean type	No	**Yes**—Client receives uncompressed video from the Server **No**—Client receives compressed video from the Server
14	**Event viewer over all windows**	Set the checkbox	Enables displaying the Event viewer window over all windows	Boolean type	No	**Yes**—the Event viewer window is displayed over all windows **No**—the Event viewer window is displayed if a corresponding screen is selected
15	**Only local protocol**	Set the checkbox	Enables logging the events registered in the given computer to the Events protocol database. ***Note.*** *This parameter can be set on the settings panel of the* ***Computer*** *object—see* Configuring events logging	Boolean type	No	**Yes**—events registered in the given computer are recorded to the Events protocol database **No**—all required events are recorded to the Events protocol database

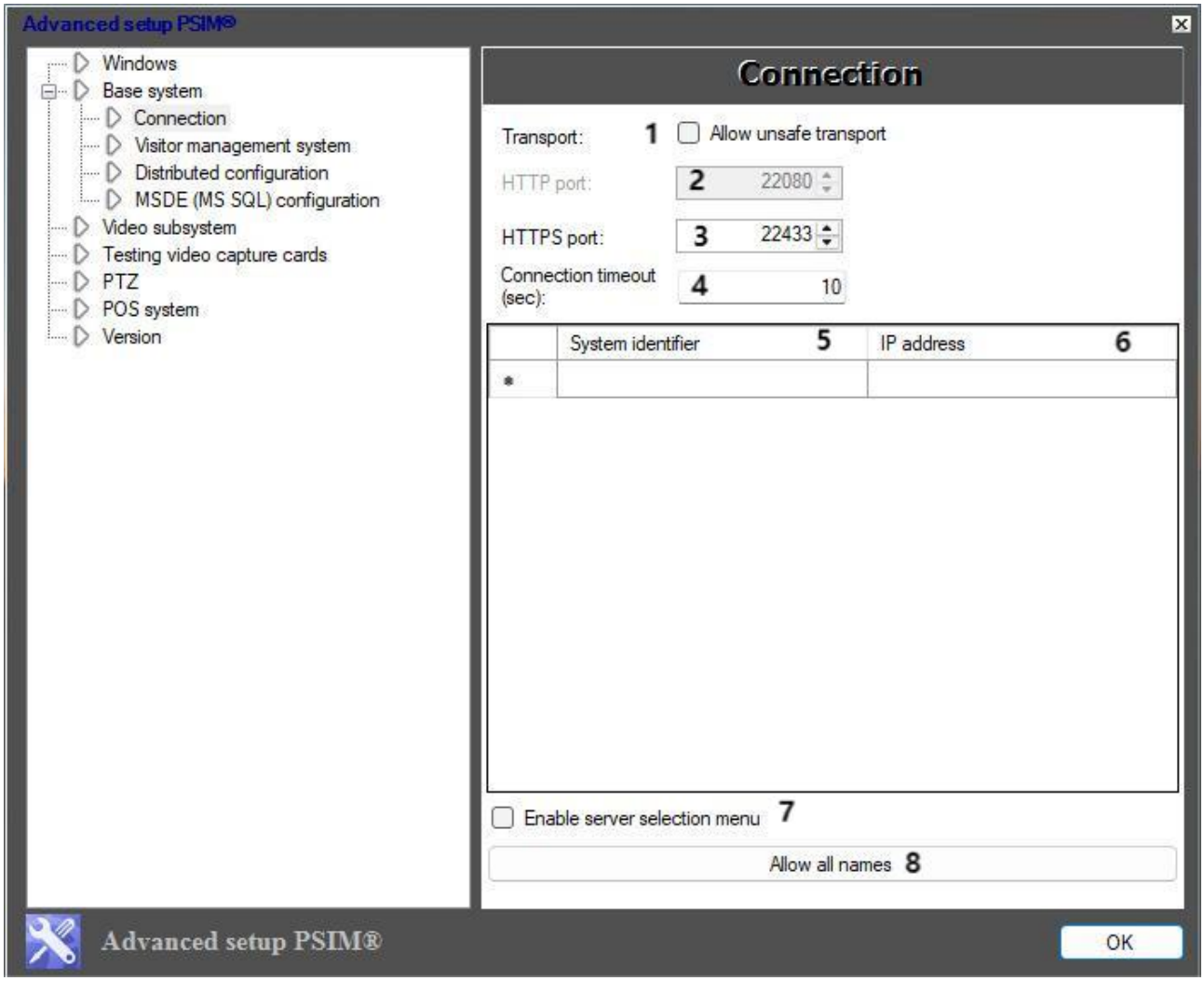
No	Parameter name	Method of setting the parameter value	Description	Representation	Default value	Value range
16	**Sort tree objects by ID**	Set the checkbox	Enables sorting of objects in the tree by identifier. ***Note 1.*** *If sorting by name is chosen, and there are numbers in the object name, then the objects will be sorted in alphabetical order. For example, an object with the name "**115**" will be above the object with the name "**15**", because in the name "**115**" the second number is 1, and in the name "**15**" the second number is 5.* ***Note 2.*** *This key also affects the sorting of objects in the tree when adding the objects to a layer in the Map Editor utility*	Boolean type	No	**Yes**—objects in the tree are sorted by identifier **No**—objects in the tree are sorted by name
17	**Disable protocol**	Set the checkbox	Disables events logging to the Event viewer database on this computer. ***Note.*** *This parameter can be set on the settings panel of the **Computer** object—see* Configuring events logging	Boolean type	No	**Yes**—events are not logged to the Event viewer database **No**—events are logged to the Event viewer database
18	**Used memory dump**	Set the checkbox	Enables logging .dmp file with a copy of main memory with incorrect shutting down at least one of the system modules to the *Axxon PSIM* root folder	Boolean type	No	**Yes**—memory dump is created **No**—memory dump is not created
19	**Support old scripts**	Set the checkbox	Enables the support of program tools in *Axxon PSIM*	Boolean type	No	**Yes**—both scripts and programs are supported **No**—only scripts are supported

No	Parameter name	Method of setting the parameter value	Description	Representation	Default value	Value range
20	**Time synchronization**	Set the checkbox	Sets time synchronization of all computers in the distributed system with system time of this computer. Time is automatically synchronized at midnight every 24 hours or when *Axxon PSIM* is started on the Server that is the source of time synchronization	Boolean type	No	**Yes**— synchronization is enabled **No**— synchronization is disabled
21	**Overlay in Event protocol**	Select the value from the drop-down list	Sets the overlay mode for processing the video signals that can be viewed with the help of the Event protocol object	Names of overlay modes	Overlay 2	**None**—video signals are not processed by video card **Overlay 1**— Direct3D is used **Overlay 2**— DirectDraw is used
22	**Application language**	Select the value from the drop-down list	Assigns the *Axxon PSIM* interface language	Names of installed languages	—	Depends on the set of installed languages. See Axxon PSIM Software System's interface language

The settings panel of the Connection section

The **Connection** section is used for setting up automatic connections between the client and backup video servers in case of connection loss with the main server. In the **Connection** section, you must specify the network names and IP addresses of the backup video servers, as they aren't listed in the Windows registry by default.

The settings panel of the **Connection** section is shown in the figure.



The table describes the setting parameters of the **Connection** section.

№	Parameter name	Method for setting the parameter value	Parameter description	Representation	Default value	Value range
1	**Allow unsafe transport** checkbox	Set the checkbox	Enables the access to the use of an unsecured port (HTTP port)	Boolean type	Clear	**Set**—Operator can allow the use of an unsecured port **Clear**—the use of an unsecured port is prohibited
2	**HTTP port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the unsecured port that will be used for data transmission *Note. The field is inactive if the **Allow unsafe transport** checkbox isn't set*	Positive integers	22080	NA
3	**HTTPS port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the secured port that will be used for data transmission	Positive integers	22433	NA
4	**Connection timeout (sec)** field	Enter the value in the field	Sets the time in seconds after which the client automatically connects to the backup video servers in case of connection loss with the main server	Seconds	10	From 0 to 999999999
5	**System identifier** field	Enter the value in the field	Sets the network name of the backup video server if the connection with the main server is lost	NA	NA	Depends on the network settings of the backup video server

№	Parameter name	Method for setting the parameter value	Parameter description	Representation	Default value	Value range
1	**Allow unsafe transport** checkbox	Set the checkbox	Enables the access to the use of an unsecured port (HTTP port)	Boolean type	Clear	**Set**—Operator can allow the use of an unsecured port **Clear**—the use of an unsecured port is prohibited
2	**HTTP port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the unsecured port that will be used for data transmission *Note. The field is inactive if the **Allow unsafe transport** checkbox isn't set*	Positive integers	22080	NA
3	**HTTPS port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the secured port that will be used for data transmission	Positive integers	22433	NA
4	**Connection timeout (sec)** field	Enter the value in the field	Sets the time in seconds after which the client automatically connects to the backup video servers in case of connection loss with the main server	Seconds	10	From 0 to 999999999
6	**IP address** field	Enter the value in the field	Sets the IP address of the selected backup video server	IP address	NA	Depends on the network settings of the backup video server

№	Parameter name	Method for setting the parameter value	Parameter description	Representation	Default value	Value range
1	**Allow unsafe transport** checkbox	Set the checkbox	Enables the access to the use of an unsecured port (HTTP port)	Boolean type	Clear	**Set**—Operator can allow the use of an unsecured port **Clear**—the use of an unsecured port is prohibited
2	**HTTP port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the unsecured port that will be used for data transmission *Note. The field is inactive if the **Allow unsafe transport** checkbox isn't set*	Positive integers	22080	NA
3	**HTTPS port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the secured port that will be used for data transmission	Positive integers	22433	NA
4	**Connection timeout (sec)** field	Enter the value in the field	Sets the time in seconds after which the client automatically connects to the backup video servers in case of connection loss with the main server	Seconds	10	From 0 to 999999999

№	Parameter name	Method for setting the parameter value	Parameter description	Representation	Default value	Value range
1	**Allow unsafe transport** checkbox	Set the checkbox	Enables the access to the use of an unsecured port (HTTP port)	Boolean type	Clear	**Set**—Operator can allow the use of an unsecured port **Clear**—the use of an unsecured port is prohibited
2	**HTTP port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the unsecured port that will be used for data transmission *Note. The field is inactive if the **Allow unsafe transport** checkbox isn't set*	Positive integers	22080	NA
3	**HTTPS port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the secured port that will be used for data transmission	Positive integers	22433	NA
4	**Connection timeout (sec)** field	Enter the value in the field	Sets the time in seconds after which the client automatically connects to the backup video servers in case of connection loss with the main server	Seconds	10	From 0 to 999999999
7	**Enable server selection menu** checkbox	Set the checkbox	Enables the server selection menu.	Boolean type	Clear	**Set**—Operator can enable the server selection menu

№	Parameter name	Method for setting the parameter value	Parameter description	Representation	Default value	Value range
1	**Allow unsafe transport** checkbox	Set the checkbox	Enables the access to the use of an unsecured port (HTTP port)	Boolean type	Clear	**Set**—Operator can allow the use of an unsecured port **Clear**—the use of an unsecured port is prohibited
2	**HTTP port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the unsecured port that will be used for data transmission *Note. The field is inactive if the **Allow unsafe transport** checkbox isn't set*	Positive integers	22080	NA
3	**HTTPS port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the secured port that will be used for data transmission	Positive integers	22433	NA
4	**Connection timeout (sec)** field	Enter the value in the field	Sets the time in seconds after which the client automatically connects to the backup video servers in case of connection loss with the main server	Seconds	10	From 0 to 999999999
			Note. You can connect several servers at once			**Clear**—Operator cannot enable the server selection menu

№	Parameter name	Method for setting the parameter value	Parameter description	Representation	Default value	Value range
1	**Allow unsafe transport** checkbox	Set the checkbox	Enables the access to the use of an unsecured port (HTTP port)	Boolean type	Clear	**Set**—Operator can allow the use of an unsecured port **Clear**—the use of an unsecured port is prohibited
2	**HTTP port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the unsecured port that will be used for data transmission *Note. The field is inactive if the **Allow unsafe transport** checkbox isn't set*	Positive integers	22080	NA
3	**HTTPS port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the secured port that will be used for data transmission	Positive integers	22433	NA
4	**Connection timeout (sec)** field	Enter the value in the field	Sets the time in seconds after which the client automatically connects to the backup video servers in case of connection loss with the main server	Seconds	10	From 0 to 999999999

№	Parameter name	Method for setting the parameter value	Parameter description	Representation	Default value	Value range
1	**Allow unsafe transport** checkbox	Set the checkbox	Enables the access to the use of an unsecured port (HTTP port)	Boolean type	Clear	**Set**—Operator can allow the use of an unsecured port **Clear**—the use of an unsecured port is prohibited
2	**HTTP port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the unsecured port that will be used for data transmission *Note. The field is inactive if the **Allow unsafe transport** checkbox isn't set*	Positive integers	22080	NA
3	**HTTPS port** field	Enter the value in the field. *Note. The value is entered using the keyboard, or by using the up and down arrows*	Sets the number of the secured port that will be used for data transmission	Positive integers	22433	NA
4	**Connection timeout (sec)** field	Enter the value in the field	Sets the time in seconds after which the client automatically connects to the backup video servers in case of connection loss with the main server	Seconds	10	From 0 to 999999999
8	**Allow all names** button	Click the button	Adds automatically the computers' IP addresses, set in the **System identifier** column, to the **IP address** column if these IP addresses are enabled and identified	NA	NA	NA

Note

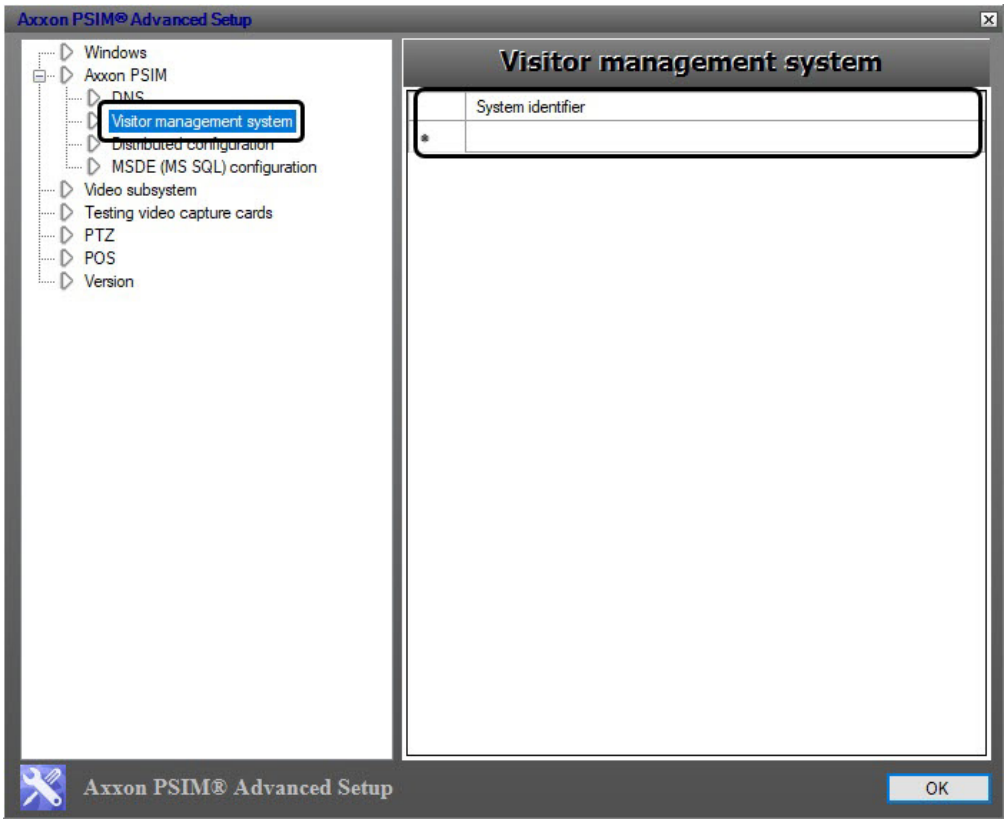
To delete a specified server, select it in the list (click the row) and press Ctrl+Del on the keyboard.

The Settings panel of the Visitor management system section

The **Visitor management system** section is designed for creating common photo database of the *Access Manager* module (is not included into *Axxon PSIM* base configuration, see Creating a single photograph database). In this section it is necessary to specify netnames of computer where the photos are to be stored. Photos are to be stored in the **Person** folder (<Axxon PSIM>\Bmp\Person).

Note.

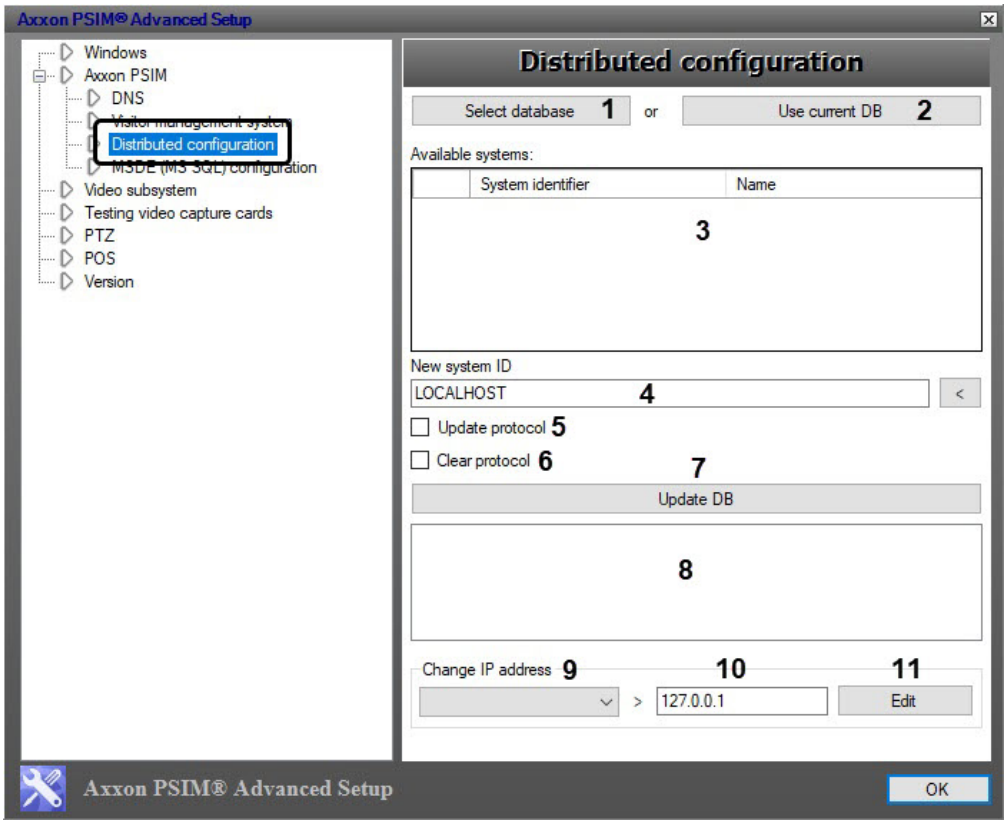
The **Person** folder is automatically created when the *Access Manager* module is installed.



The Settings panel of the Distributed configuration section

The **Distributed configuration** section is for *Axxon PSIM* common database adjustment when real computer netnames do not coincide with the names in the database (for instance when the computer with the database is replaced). The section is also used for adjusting IP-address of selected computer in the database.

The settings panel for the **Distributed configuration** section is shown in the figure.



The parameters of the settings panel are described in the table.

№	Parameter name	Field type	Description	Representation	Default value	Value range
1	The **Select database** button	Click the button	Opens the standard **Data Link Properties** dialog box to choose the database, where netname and/or IP-address are to be changed.	-	-	-
2	The **Use current DB** button	Click the button	Selection of main *Axxon PSIM* database			

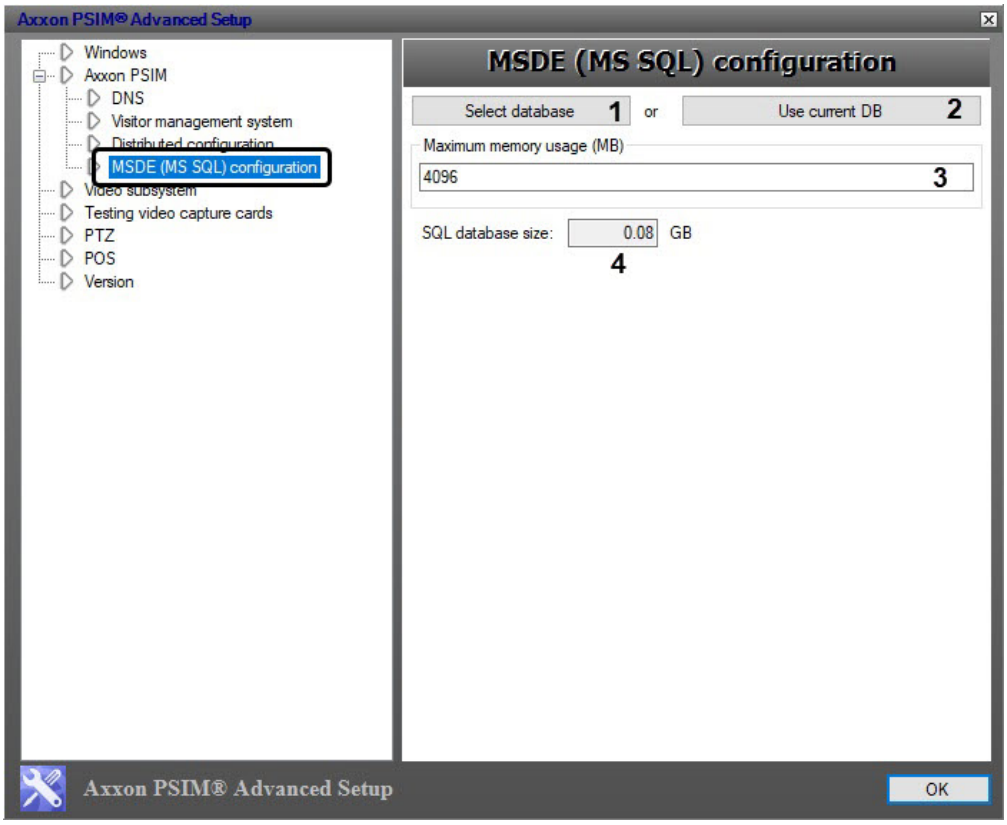
№	Parameter name	Field type	Description	Representation	Default value	Value range
3	The **Available systems** table	Automatically	Displays the list of netnames of computers that are in selected database	-	-	Netnames of computers connections between which are set on the **Architecture** tab
4	The **New system ID field** with < button	Button is clicked and value is selected from the list/ typed in the field.	Specifies a new netname of a computer selected in the **Available systems** table	-	-	Depends on the current net settings of the required computer. If the network name is longer than 15 characters, then first 15 characters are to be specified as the network name in this field
5	The **Update protocol** checkbox	Checkbox	Replaces the computer's netname in the **Events protocol** table of the selected main Axxon PSIM database	Boolean type	None	Yes – computer's netname is replaced in the **Events protocol** table No – computer's netname is not replaced in the **Events protocol** table
6	The **Clear protocol** checkbox	Checkbox	Clears the event log from the **Events protocol** table of the selected main *Axxon PSIM* database	Boolean type	None	No – the list of registered events is not cleared Checked – the list of registered events is cleared

№	Parameter name	Field type	Description	Representation	Default value	Value range
7	The **Update DB** button	Click the button	Runs the process of updating the selected database in accordance with given settings	-	-	-
8	The **Update protocol** field	Automatically	Displays updating process of the selected database	-	-	Depends on the structure of the selected database and the given settings
The **Change IP address** group						
9	The dropdown list with IP-addresses	Select from the list	Specifies IP-address that is to be changed in the selected database	IP-addresses of computers in the selected database	-	Depends on the number of computers connections between which are set on the **Architecture** tab
10	Field of setting IP-address	Type-in the value in the field	Specifies a new IP-address to be changed in the selected database	IP-address	127.0.0.1	Depends on the current net settings of the required computer
11	The **Edit** button	Click the button	Changes the IP-address of the required computer in the selected database	-	-	-

The Settings panel of the MSDE (MS SQL) configuration section

The **MSDE (MS SQL) configuration** section is designed for setting the limits of RAM space for MS SQL Server operation with databases of SQL format. This limitation enhances the performance of the system.

The settings panel for the **MSDE (MS SQL) configuration** section is shown in the figure.



The parameters of the settings panel are described in the table.

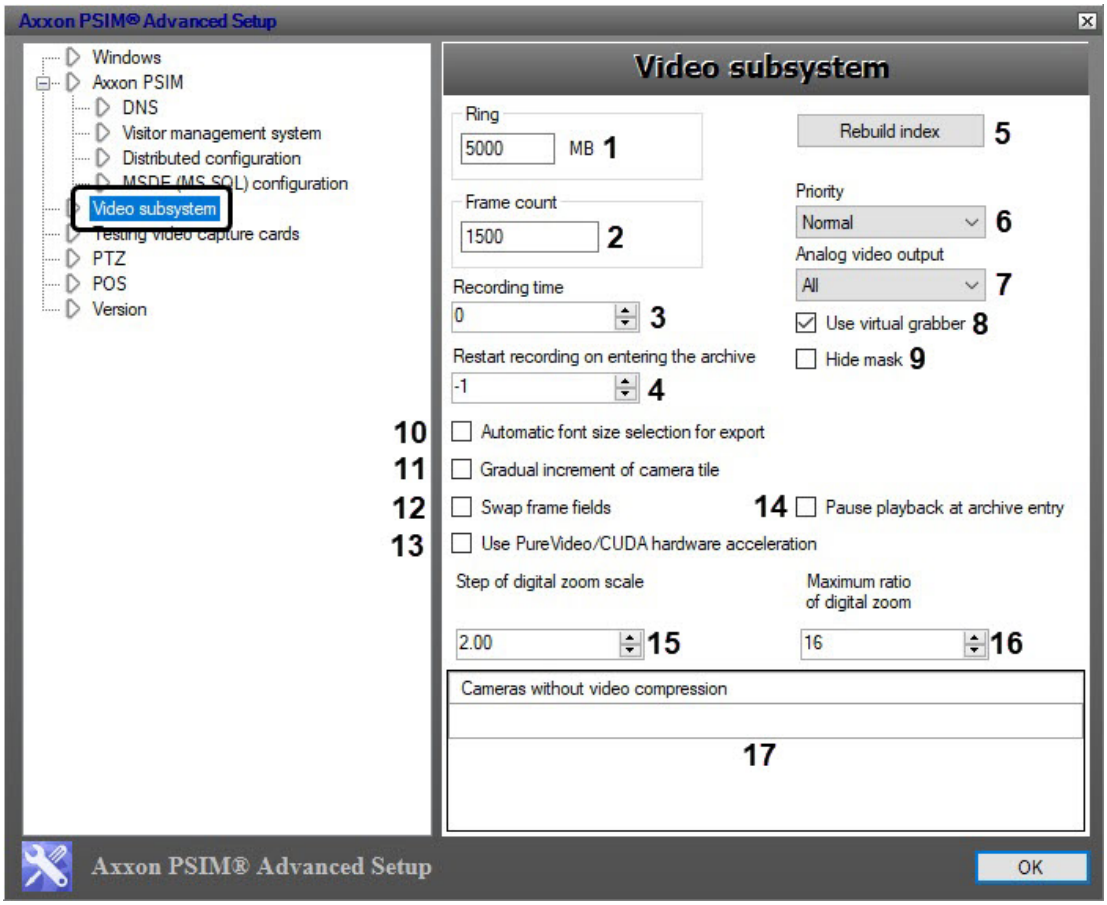
№	Parameter name	Field type	Description	Representation	Default value	Value range
1	The **Select database** button	Click the button	Opens the standard **Data Link Properties** dialog box for choosing the database of MS SQL format the RAM space for which is to be limited.	-	-	-
2	The **Use current DB** button	Click the button	Selects the main Axxon PSIM database	-	-	-
3	The **Maximum memory usage (MB)** indicator	Enter the value in the field	Sets the space of RAM in MB for SQL Server operation	MB	4096	Depends on full space of RAM.

№	Parameter name	Field type	Description	Representation	Default value	Value range
4	The **SQL database size** field	Automatically	Displays the current size of all MS SQL databases on the Server	Positive real number with amount precision – two decimals	-	Depends on the capacity of storage where the database is.

4.3.3 The Settings panel of the Video subsystem section

The **Video subsystem** section is used for advanced configuration of the video subsystem in order to enhance the performance of *Axxon PSIM*.

The settings panel for the **Video subsystem** section is shown in the figure.



The parameters of the settings panel are described in the table.

No	Parameter name	Method of setting the parameter value	Parameter description	Representation	Default value	Value range
1	**Ring**	Enter the value in the field	Sets free disk space; when the limit is reached, the earliest recordings will be deleted on loop (see General information on video archiving). If two or more disks are used for video archiving, archiving on current disk is performed till there is **FreeMbCritical** of free disk space (1000 MB by default, see the info on the key in Registry keys reference guide). Free space set by the **Ring** parameter is used for recording temporary files. This means that when the limit set by the **Ring** parameter is reached, the maximum size of the temporary file is **Ring** (registry key **FreeMb**). Video can contain less frames than set by the **Frame count** parameter. *Note. Old recordings may get deleted before the remaining disk space reaches the specified value if the disk space is less than 15000*	MB	5000	Depends on the hard disk space

No	Parameter name	Method of setting the parameter value	Parameter description	Representation	Default value	Value range
2	**Frame count**	Enter the value in the field	Sets the maximum number of frames in one recording file	Frame	1500	1500 to 10000. We don't recommend changing the default value
3	**Recording time**	Enter the value in the field/ select the value from the list	Sets the length of the file in seconds, restricting fragment's size not by number of frames, but by time of its recording	Time in seconds	0	Unlimited
4	**Restart recording on entering the archive**	Enter the value in the field/ select the value from the list	Enables the restart of recording on entering the archive	Integer	No	**0**—video fragment that was being recorded at the moment of entering the archive is forcibly stopped, and a new one starts. As a result, the user who enters the archive sees a freeze frame corresponding to the moment of entry **>0**—the recording is restarted when entering the archive, while positioning in the archive is carried out with a shift back to the specified value in seconds **-1**—recording is not stopped at the moment of entering the archive

No	Parameter name	Method of setting the parameter value	Parameter description	Representation	Default value	Value range
5	**Rebuild index**	Click the button	Deletes the file that stores indexes. After deleting the file, click the **Rebuild index** button to restart *Axxon PSIM* and create a new file with updated indexes	-	-	-
6	**Priority**	Select the value from the drop-down list	Sets the execution priority of all *Axxon PSIM* processes	Names of priority processes	Below normal	Realtime, High, Above normal, Normal, Below normal, Low
7	**Analog video output**	Select the value from the drop-down list	Selects the operation mode of the analog output	Names of available modes	All	**All**—video signal from a camera is displayed on a separate analog monitor **One**—video signals from cameras that are connected to different video capture devices, are displayed on a separate analog monitor

No	Parameter name	Method of setting the parameter value	Parameter description	Representation	Default value	Value range
8	**Use virtual grabber**	Set the checkbox	Allows access to virtual **Video capture devices** settings in *Axxon PSIM.* *Note. **Desktop Experience Feature** must be enabled when using a virtual video capture device on server OS and avi files*	Boolean type	Clear	**Set**—the **Virtual** and **Virtual bench** values are available from the **Type** drop-down list on the settings panel of the **Video capture device** objects **Clear**—the **Virtual** and **Virtual bench** values aren't available for the **Video capture device** objects
9	**Hide mask**	Set the checkbox	Disables displaying the video hidden by the motion detection mask. Video area marked by motion detection mask will be hidden by a grey fill. This feature works only on uncompressed video from FS or FX local video capture cards	Boolean type	Clear	**Clear**—video hidden by the mask is displayed **Set**—video hidden by the mask video isn't displayed
10	**Automatic font size selection for export**	Set the checkbox	Enables the relative font size for captions (camera No. and time) when exporting a frame or fragments of the video archive	Boolean type	Clear	**Clear**—when exporting a frame, regardless of the video resolution, the caption size remains constant as set by the SubtitlesFontSize registry key, see the Registry keys reference guide **Set**—when exporting a frame, the caption size is scaled depending on the video resolution

No	Parameter name	Method of setting the parameter value	Parameter description	Representation	Default value	Value range
11	**Gradual increment of camera tile**	Set the checkbox	Enables a gradual increase of the Surveillance window on the custom layout by double-clicking the left mouse button. All Surveillance windows on the layout must be of the same size to ensure proper operation of the key	Boolean type	Clear	**Clear**—Surveillance window is expanded to the entire Video surveillance monitor by double-clicking the left mouse button **Set**—by double-clicking the left mouse button, the Surveillance window is expanded gradually: the first double-click expands it two times of the initial size, the second double-click expands it three times of the initial size, and so on. The Surveillance windows adjacent to it are hidden on the layout
12	**Swap frame fields**	Set the checkbox	Switches *Axxon PSIM* from basic to additional driver if there are video artifacts when using the basic driver	Boolean type	Clear	**Clear**—*Axxon PSIM* operates with basic driver **Set**—*Axxon PSIM* operates with additional driver
13	**Use PureVideo/ CUDA hardware acceleration**	Set the checkbox	Enables **PureVideo/ CUDA** support on the Server when decompressing video from IP devices if PureVideo HD card of the second or third generation (NVIDIA VP2 and VP3) is installed. Used to reduce CPU load due to resources of graphics processor	Boolean type	Set	**Clear**—PureVideo/ CUDA isn't used **Set**—PureVideo/ CUDA is used

No	Parameter name	Method of setting the parameter value	Parameter description	Representation	Default value	Value range
14	**Pause playback at archive entry**	Set the checkbox	The **Pause** button is clicked when entering the archive	Boolean type	Clear	**Set**—the **Pause** button is clicked when entering the archive, you can navigate through the archive using arrow keys **Clear**—the **Pause** button isn't clicked when entering the archive
15	**Step of digital zoom scale**	Enter the value in the field/ select the value from the list	Specifies the fractional step of video image zooming	Numbers with the fixed point	2.00	Maximum value depends on the maximum scale of digital zoom (see 17). Minimum value is 1.00
16	**Maximum ratio of digital zoom**	Enter the value in the field/ select the value from the list	Specifies the maximum value of digital zoom of video image	Numbers	16	1–16
17	**Cameras without video compression**	Enter the value in the field	Specifies the numbers of cameras connected to the video capture cards with compression. There is no compression for these cameras, i.e. the compressor settings in *Axxon PSIM* are ignored	Camera serial number	-	Depends on the number of cameras registered in the system

Note

Setting the non-zero value to the **Recording time** parameter does not disable the **Frame count** parameter. If the values for both parameters are set, then the file recording will be performed in accordance with the value which comes first. For instance, if the value of **Recording time** is equal to 10

seconds and **Frame count** is equal to 500 frames (by default) and in 10 seconds the fragment consists of 80 frames, then 80-frame file will be recorded.

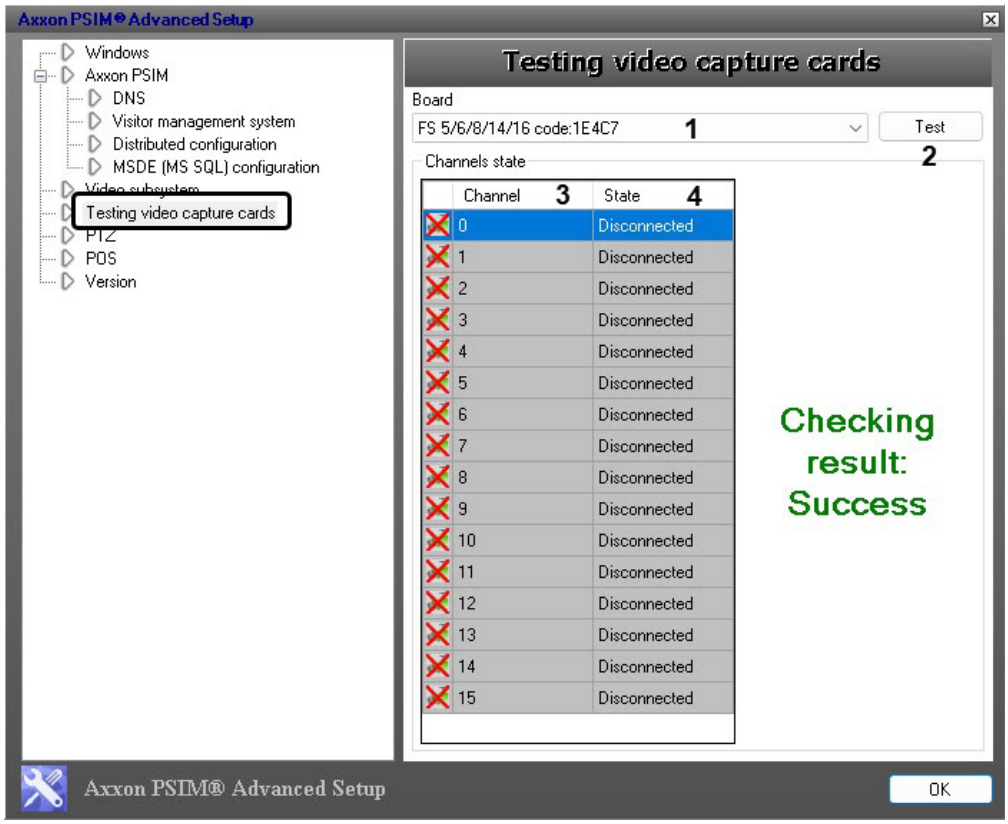
4.3.4 The Settings panel of the Testing video capture cards section

The **Testing video capture cards** section is designed to test the connection of the cameras to the video capture card.

Note

To use this functionality, *Axxon PSIM* must be shut down. If it is running, the message "Cards not found" will be displayed.

The settings panel for the **Testing video capture cards** section is shown in the figure.



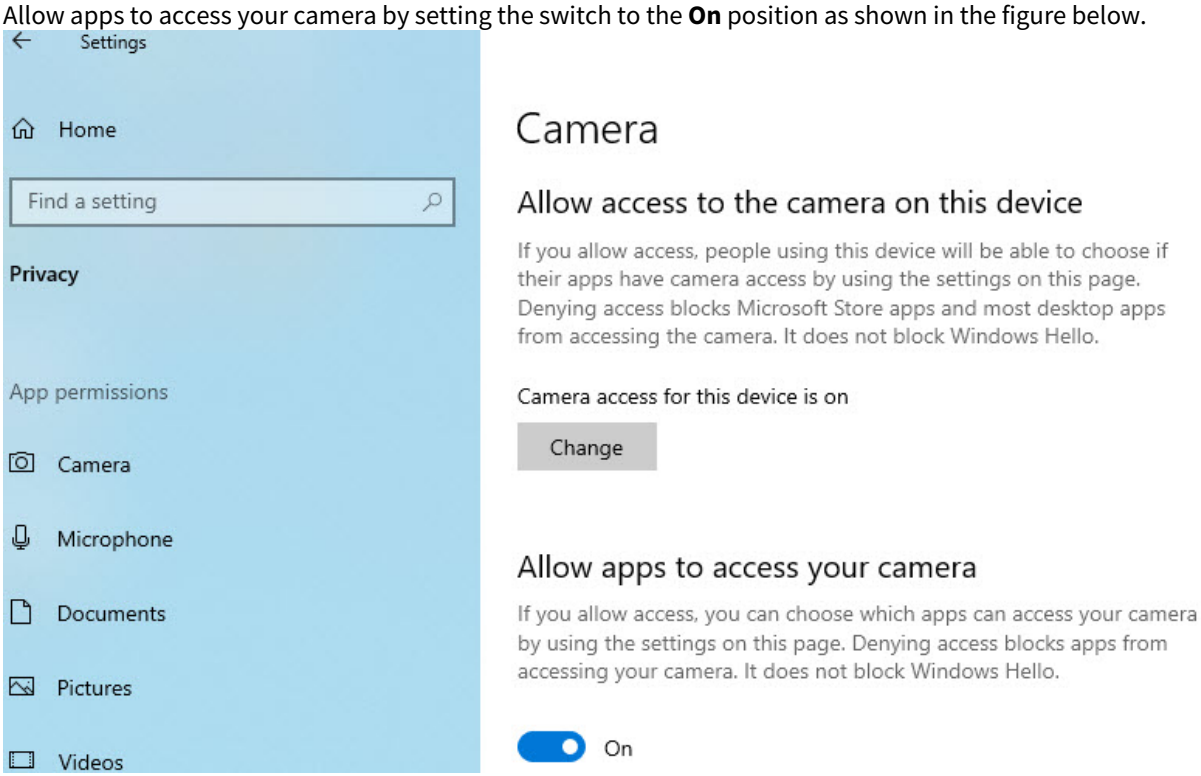
The parameters of the settings panel are described in the table.

No	Parameter name	Field type	Description	Representation	Default value	Value range
1	**Board**	Drop-down list	Specifies the video capture card which camera connections are to be checked	List of video capture cards	N/A	Depends on the number of installed video capture cards
2	**Test**	Button	Starts the testing process of the video capture card. The *Axxon PSIM* system is to be closed at the time of testing.	N/A	N/A	N/A
The **Channels** state table						
3	**Channel**	Column (set automatically)	Displays the channels numbers of the selected video capture card	N/A	N/A	From 1 to 16
4	**State**	Column (set automatically)	Displays the state of camera connections to the channels of the selected video capture cards	N/A	N/A	Attach—the camera is attached Detach—the camera is detached

If the video capture card is not recognized by the *tweaki.exe* utility, we recommend you to check whether the camera access is allowed for applications. To do this:

1. Go to Windows Settings→ Privacy→ Camera.

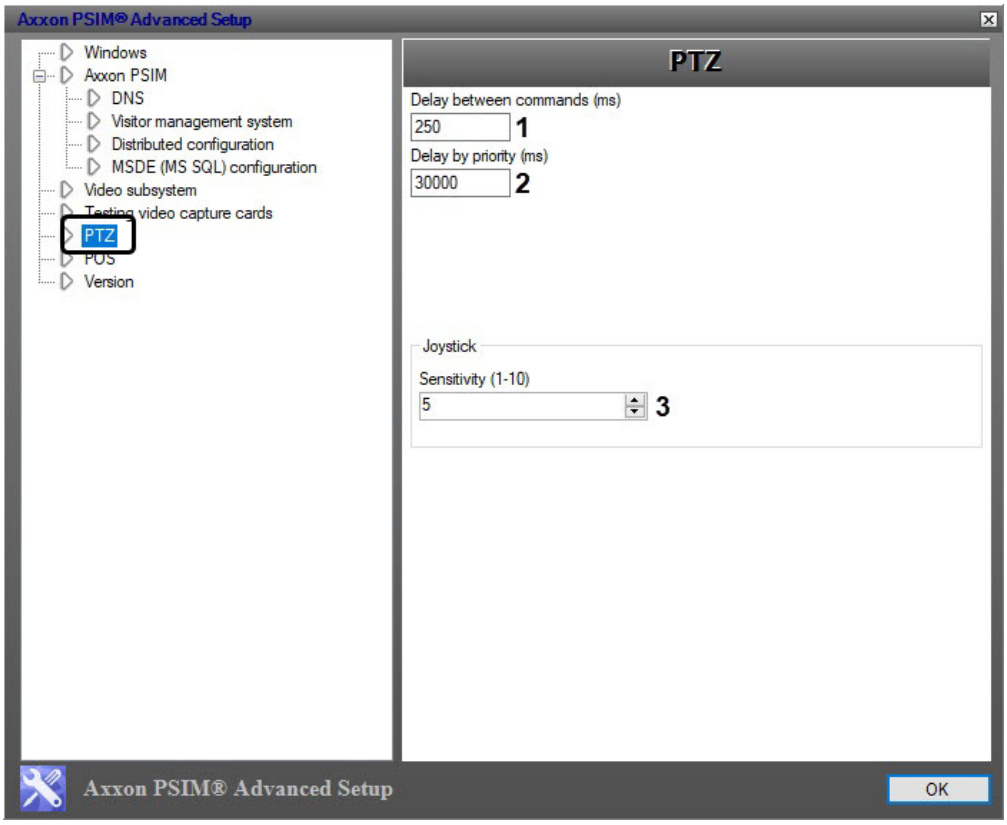
2. Allow apps to access your camera by setting the switch to the **On** position as shown in the figure below.



4.3.5 The Settings panel of the PTZ section

The **PTZ** section is used for setting the telemetry control elements.

The settings panel for the **PTZ** section is shown in the figure.



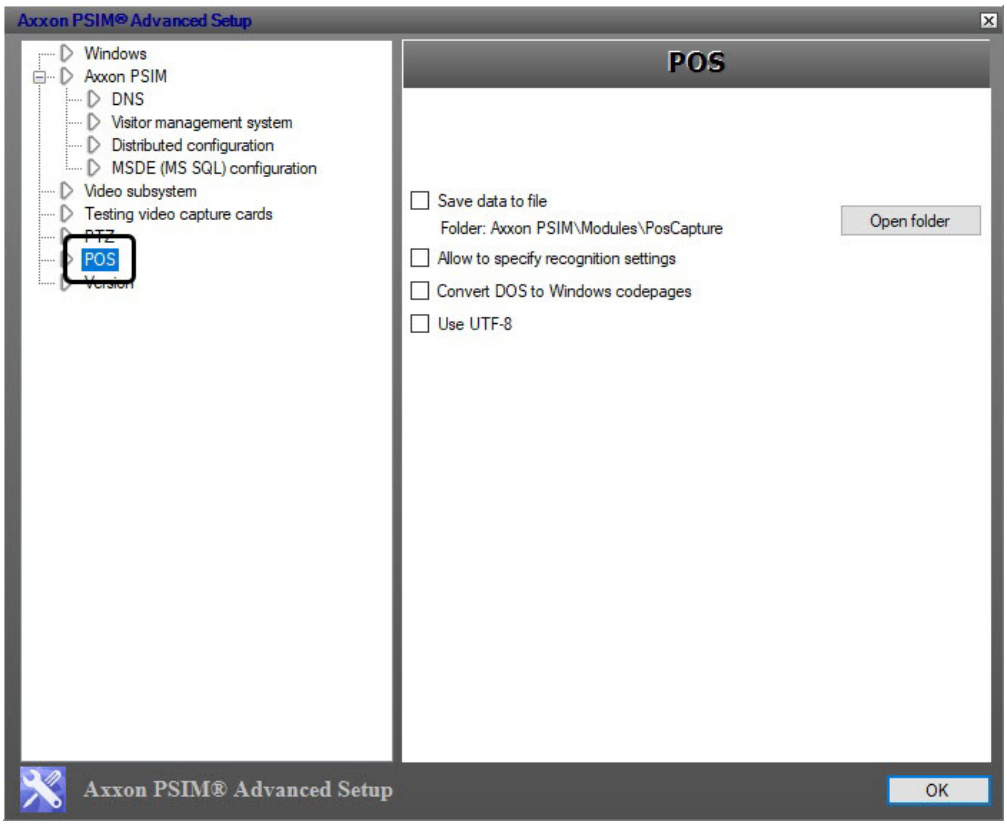
The parameters of the **PTZ** settings panel are described in the table.

No	Parameter name	Field type	Description	Representation	Default value	Value range
1	The **Delay between commands (ms)** field	Type-in the value	Sets the delay time between executing the commands for PTZ devices This parameter is not supported by IP cameras.	ms	250	No limitations. It is not recommended to change the default value.
2	The **Delay by priority (ms)** field	Type-in the value	Sets the delay time before switch from the PTZ control to a user with lower or equal priority.	ms	30000	No limitations. It is not recommended to change the default value.
The **Joystick** group						

No	Parameter name	Field type	Description	Representation	Default value	Value range
3	The **Sensitivity (1-10)** field	Enter the value in the field	Sets sensitivity of the joystick: the less value the more sensitivity. If value of parameter is small then camera will react on even small deviations of the joystick. If value of parameter is great the camera will stay fixed until significant deviation of joystick	Sensitivity in conditional units	5	1-10

4.3.6 The Settings panel of the POS PSIM section

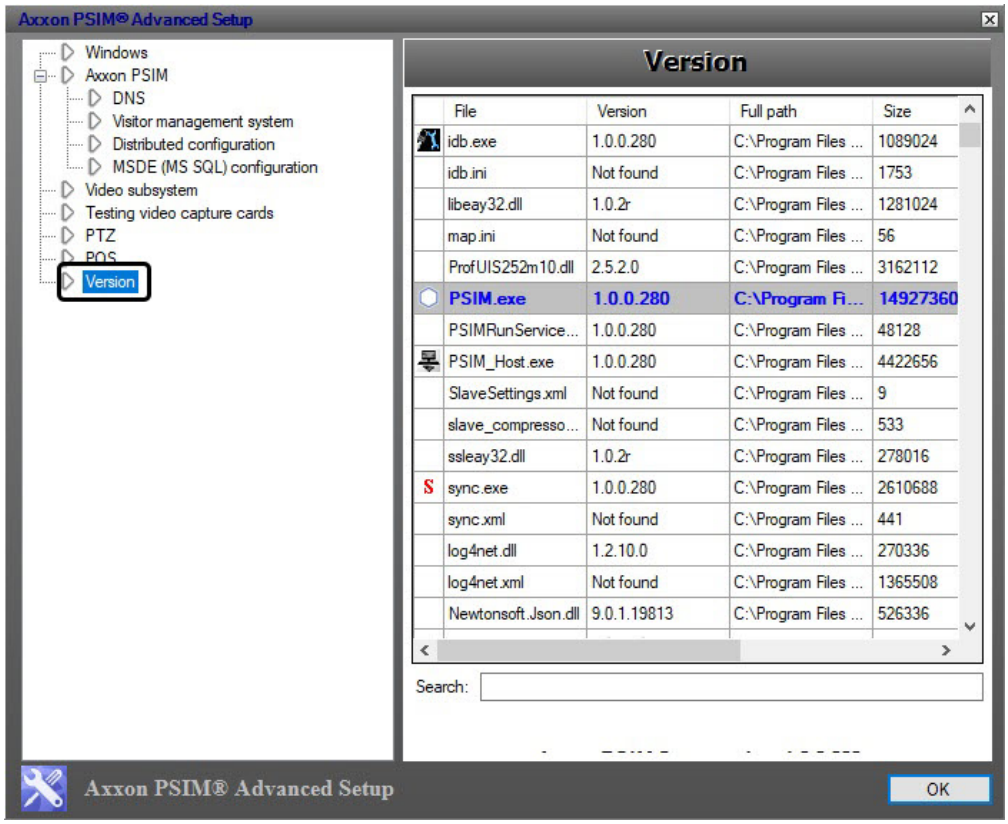
The POS section is designed for setting the *POS PSIM* module for controlling cashier operations (is not included in *Axxon PSIM* basic version). Detailed information about *POS PSIM* configuring using the tweaki.exe utility is presented in The settings panel for the POS sections using the tweaki.exe utility section in the Administrator's Guide documentation for *POS PSIM* software package.



4.3.7 The Settings panel of the Version section

The **Version** section provides information about *Axxon PSIM* software modules: versions, paths to executable files and .dll libraries, file sizes and dates of creation and modification.

The settings panel for the **Version** section is shown in the figure.

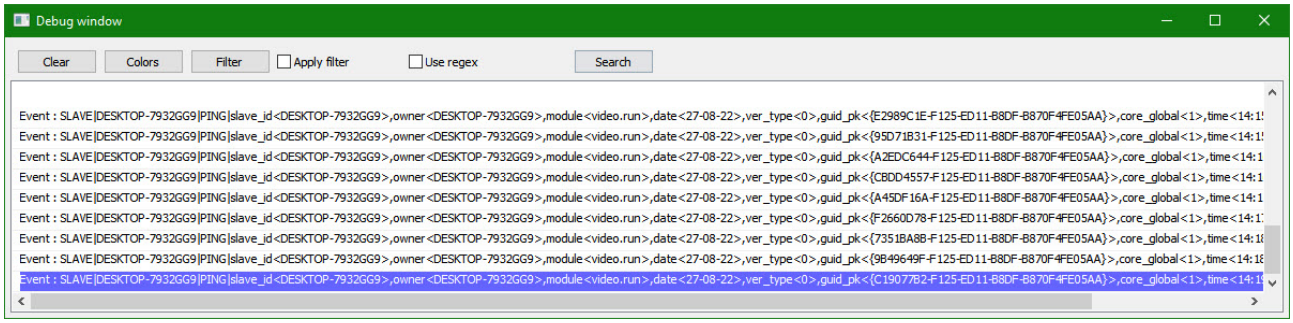


4.4 Typical tasks concerning system extended settings

4.4.1 Enabling and configuring the debug mode of Axxon PSIM

On the page:

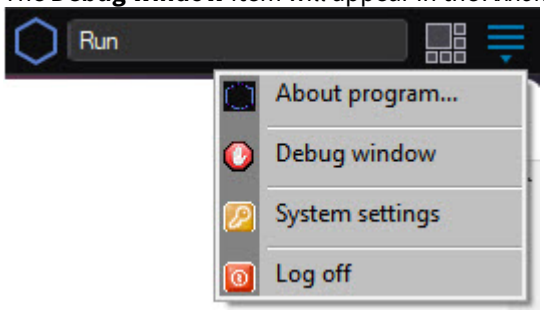
Debug mode is a special operation mode when the **Debug window** is open, and is designed for analyzing the progress of *Axxon PSIM* software operation and for prompt debugging in case errors occur. Log files are created in this mode—they are stored on the disk for a specific time period.



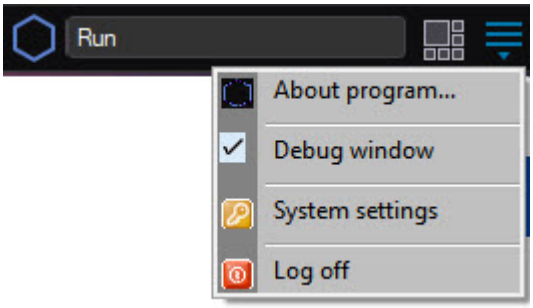
Enabling debug mode

Starting with weekly build 1.0.1.172, the **Debug 4** mode is enabled by default. In previous versions, the **Debug mode** is disabled by default. To enable the **Debug mode**, do the following::

1. Shut down *Axxon PSIM*.
2. Start the Tweaki.exe utility (see the Starting and shutting-down the Tweaki.exe utility)
3. Select the **Axxon PSIM** node in the tree on the left side of the utility dialog box.
4. Change the parameter **Debug mode** from **Disabled** to **Debug 1, Debug 2, Debug 3** or **Debug 4** (see description of modes in The Settings panel of the Axxon PSIM section).
5. Click the **OK** button.
6. Start *Axxon PSIM*.
   The **Debug window** item will appear in the *Axxon PSIM* main control menu.



7. Select **Debug window** in the main control menu to open the **Debug window**. The selected item will be marked with a tick.



To hide the **Debug window**, select the **Debug window** item in the menu once more.

> **Note**
>
> The debug mode slows the system down and uses a lot of system resources. We strongly recommend to enable debug mode for debugging purposes only and to disable it when all the settings are completed.

Note

Find details in the The Debug window section of The Script object. Programming using the JScript language.

Configuring log file parameters

You can set log keeping parameters both on the *Axxon PSIM* setting panel in the Tweaki.exe utility (see The Settings panel of the Axxon PSIM section) and using some registry keys:

1. The **Time of log keeping (hours)** parameter means the same as DebugTime registry key. It specifies the number of hours for keeping log files. 48 hours by default.
2. The **Maximum size (MB)** parameter means the same as DebugSize registry key. It specifies the number of megabytes provided for log. 100 MB by default.
3. The DebugZipDays registry key enables the logs archiving in the .gz format and specifies the time period for their keeping. 2 days by default.

Log files are rewritten when the maximum of one of the parameters is reached.

When the **Debug 4** debug mode is enabled, the video.run log file displays the most detailed information about the file system and memory usage of each camera every 10 seconds. To reduce the number of info lines,, displayed every 10 seconds, to 6 (this will reduce the size of the log file), it is necessary to add the StatusInfo=0 key.

An example of the displayed information if StatusInfo=1 or no key:

```
Uptime: 00:00:12, memory: 423.0 MB
[FS]Health ok.
[FS]Ring cycles count: 0
[FS]Total index in memory size: 62.7 KB
[FS]Total recorders: 4, MemFile: -1, memFile total size: 16.0 MB, last frame skipped
time: none, WritingQueueSize: 1500, avg speed: 18.99 MB/sec.
[FS]Total readers: 0 (cached frames: 0)
[FS]Total cameras: 4, internal VMDA detectors: 0, external VMDA detectors: 0. zone
detectors: 0.
[FS]Camera 1. Writing queue: 1 frames(0% of 1500), size: 0.00 MB(0 ms). Streams(1): 1,
 total VMDA detectors 0 (int: 0, ext: 0), zone: 0. Grabber_IP_CAM queue size: 0.
[FS]Camera 2. Writing queue: 0 frames(0% of 1500), size: 0.00 MB(0 ms). Streams(1): 2,
 total VMDA detectors 0 (int: 0, ext: 0), zone: 0. Grabber_IP_CAM queue size: 0.
[FS]Camera 3. Writing queue: 0 frames(0% of 1500), size: 0.00 MB(0 ms). Streams(1): 3,
 total VMDA detectors 0 (int: 0, ext: 0), zone: 0. Grabber_IP_CAM queue size: 0.
[FS]Camera 4. Writing queue: 0 frames(0% of 1500), size: 0.00 MB(0 ms). Streams(1): 4,
 total VMDA detectors 0 (int: 0, ext: 0), zone: 0. Grabber_IP_CAM queue size: 0.
Total registered senders: 1
Objects:
VideoFrame: 38(max: 77 at '09-09-22 14:40:13.014')
AudioFrame: 0(max: 5 at '09-09-22 14:40:08.816')
Msg: 73(max: 130 at '09-09-22 14:40:06.733')
Active[1]
SendVideoFrame(local=1,compressed=1) to 'TAG-5509.1': value: 0 (max 0), delay = 46
 ms, 09-09-22 14:40:15.548
Inactive[0](no new data for more than 15 seconds)
```

An example of the displayed information if StatusInfo=0:

```
Uptime: 00:00:12, memory: 427.0 MB
[FS]Health ok.
[FS]Ring cycles count: 0
[FS]Total index in memory size: 52.9 KB
[FS]Total recorders: 4, MemFile: -1, memFile total size: 16.0 MB, last frame skipped
time: none, WritingQueueSize: 1500, avg speed: 7.42 MB/sec.
[FS]Total readers: 0 (cached frames: 0).
```

Find more about registry keys in Registry keys reference guide.

Example.

The **Time of log keeping (hours)** is 720 hours (1 month) and the **Maximum size (MB)** is 100 MB.

One week later the size of log file is 100 MB. It starts being rewritten though the log is kept less than it was specified.

And if DebugZipDays has the value equal to the time period in days to keep logs, then logs are not rewritten – they are archived in the *.gz format and are kept for so long as it was specified in DebugZipDays parameter.

4.4.2 Extended setup of the distributed architecture

Extended setup of the distributed architecture is performed in the **Connection** section and is intended to create backup connections between the client and other cores (servers) in case of losing connection with the main core. Backup connections must be set up for each client individually.

To create a backup connection between the client and a core, do the following:

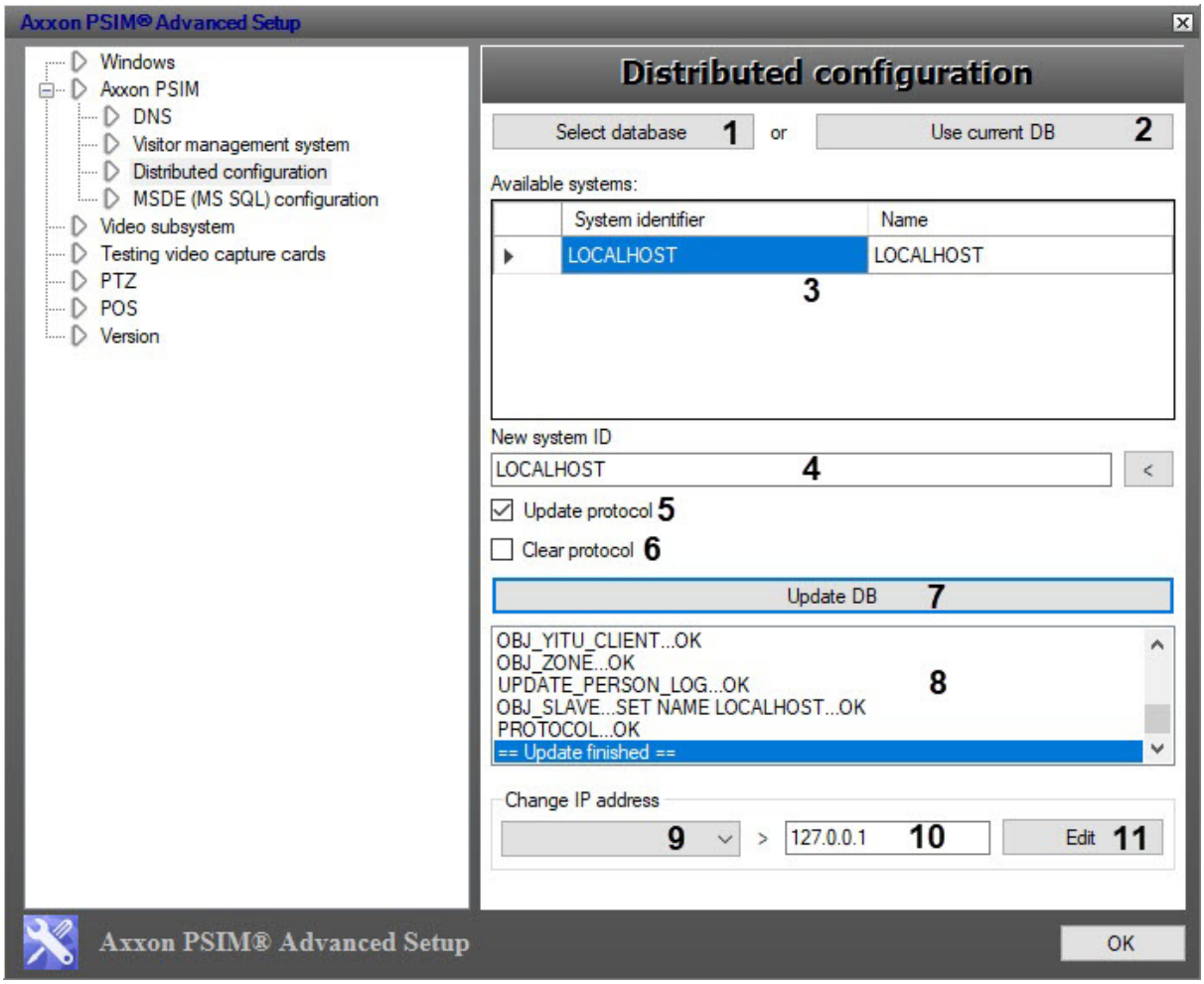
1. Stop the *Axxon PSIM* software if it is running.
2. Start the Tweaki.exe utility (see the Starting and shutting-down the Tweaki.exe utility section).
3. Select the **Connection** section in the tree that is located on the left side of the utility window (see The settings panel of the Connection section).
4. Specify the computer name and IP address in the table.
5. Click the **OK** button.

4.4.3 Changing computer names and IP addresses in the Axxon PSIM configuration database

The **Distributed configuration** node allows changing the computer name and/or IP address in the *Axxon PSIM* database.

To change the computer name in the configuration database, do the following:

1. Shut down *Axxon PSIM* if it runs.
2. Start the tweaki.exe utility (see Starting and shutting-down the Tweaki.exe utility).
3. Select the **Distributed configuration** in the tree on the left side of the utility dialog box (see The Settings panel of the Distributed configuration section).
4. Select the database containing the computer name to be changed using the **Select database** (**1**) or **Use current DB** (**2**) buttons.



As a result the **Available systems** (**3**) table will show all computer names registered in the selected database.

5. To select the computer name to be changed in the **Available systems** table, right-click an appropriate row. The row will be highlighted.
6. Click the button next to the **New system ID** (**4**) field to see the drop-down list of available computer names. Select the required computer name in the list. The selected name will appear in the **New system ID** field. Name can also be entered in the field manually.
7. Set one of the following checkboxes: **Update Protocol** (**5**) checkbox to replace the computer name in the events log, or the **Clear protocol** checkbox to delete all records in the log. Only one of two checkboxes should be set.
8. Click the **Update DB** button (**7**). The progress of replacing computer names for a new one will be displayed in the field below the **Update DB** button (**8**).

To change the IP address in the configuration database, do the following:

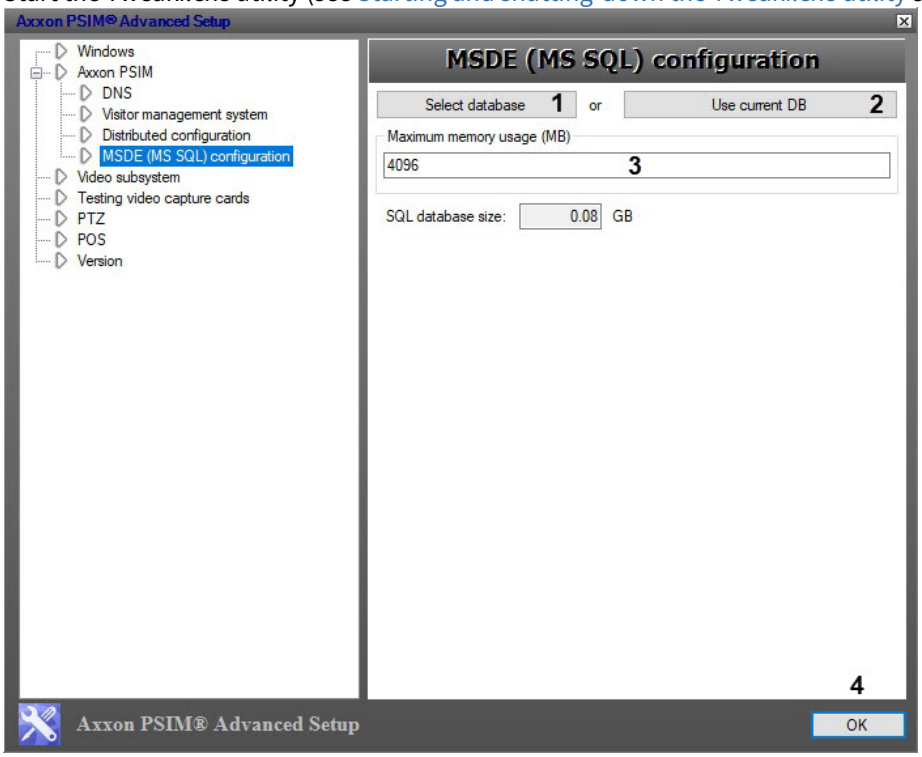
1. Do steps 1-4 of the previous instructions.
2. Select the IP address to be replaced from the drop-down list (**9**).
3. Enter a new IP address into the field (**10**).
4. Click the **Edit** button (**11**).

The IP address in the database will be changed.

4.4.4 Limiting memory usage by an MS SQL server

A certain amount of disk space is allocated for the SQL server for storing its data, functions and other internal structures. Allocated RAM is determined by default by the total RAM resources available for the SQL server in the system. The Tweaki.exe utility allows limiting the amount of RAM allocated for the SQL server. Do the following:

1. Close the *Axxon PSIM* software if it is open.
2. Start the Tweaki.exe utility (see Starting and shutting-down the Tweaki.exe utility section).



3. Select the **Configure MSDE (MS SQL)** node in the tree on the left side of the utility dialog box (see The Settings panel of the MSDE (MS SQL) configuration section).
4. Select the MS SQL database to limit the allocated RAM by doing one of the following using **Select database** (**1**) or **Use current DB** (**2**) buttons.
5. In the **Maximum memory usage (MB)** (**3**) enter the required amount of memory to be allocated for the SQL server.
6. Click the **OK** button (**4**).

4.4.5 Re-indexing the audio and video recordings archive

To re-index the audio and video archives, do the following:

1. Close the *Axxon PSIM* software if it is open.
2. Start the Tweaki.exe utility (see the Starting and shutting-down the Tweaki.exe utility).
3. Select the **Video Subsystem** node in the tree on the left side of the utility dialog box (see The Settings panel of the Video subsystem section).
4. Click the **Rebuild Index** button to delete the INDEX folder with .idx files containing the indexes to the video recording files in the archive.

> **Note.**

Pressing the button **Rebuild index** sets the value of parameter IndexRebuilding=1 in the register's branch of OS Windows: HKLM\SOFTWARE\AxxonSoft\PSIM\VIDEO for 32-bit system (HKLM\SOFTWARE\Wow6432Node\AxxonSoft\PSIM\VIDEO for 64-bit). Alterarchive reindexing the value of the parameter IndexRebuilding=0 is automatically set. When *Axxon PSIM* software is run together with IndexRebuilding=1 parameter, the archive is reindexed without any attempt to reas it from *.idx files.

5. Click **OK**.
6. Start the *Axxon PSIM* system again. A new INDEX folder will be created in the video archive folder, containing new indexes.

This completes re-indexing of the database.

4.4.6 Testing video capture cards

To test a video capture card, test its channels using the **Testing video capture cards** module of the Tweaki.exe utility. Do the following:

1. Shut down the *Axxon PSIM* software if it is started.
2. Start the Tweaki.exe utility (see the Starting and shutting-down the Tweaki.exe utility section).
3. Select the **Testing video capture cards** node in the tree on the left side of the utility dialog box (see The Settings panel of the Testing video capture cards section).
4. Press **Test** button.

The **Board** field will display the name of the video capture card, and the **Channels state** table will show the information about each channel of the card (number and status). The confirmation of successful testing will be displayed to the right of the **Channels state** table.

5 The utility for collecting configuration data on servers and RWS for the Technical Support

5.1 The purpose of the Support.exe utility

The Support.exe utility is designed for collecting information about the configuration and operating status of the hardware, OS Windows and the Axxon PSIM™ system. The utility generates an archive that can be used by AxxonSoft Technical Support Service for troubleshooting purposes. In case of system malfunction or errors in the Axxon PSIM™ system, do the following:

1. Go to the AxxonSoft tech support server: https://support.axxonsoft.com/.
2. Register a new account on the tech support server or log in the registered account.
3. Create an issue for tech support. Attach an archive generated by Support.exe utility.

Information on the issue progress will be sent to the email specified at registration.

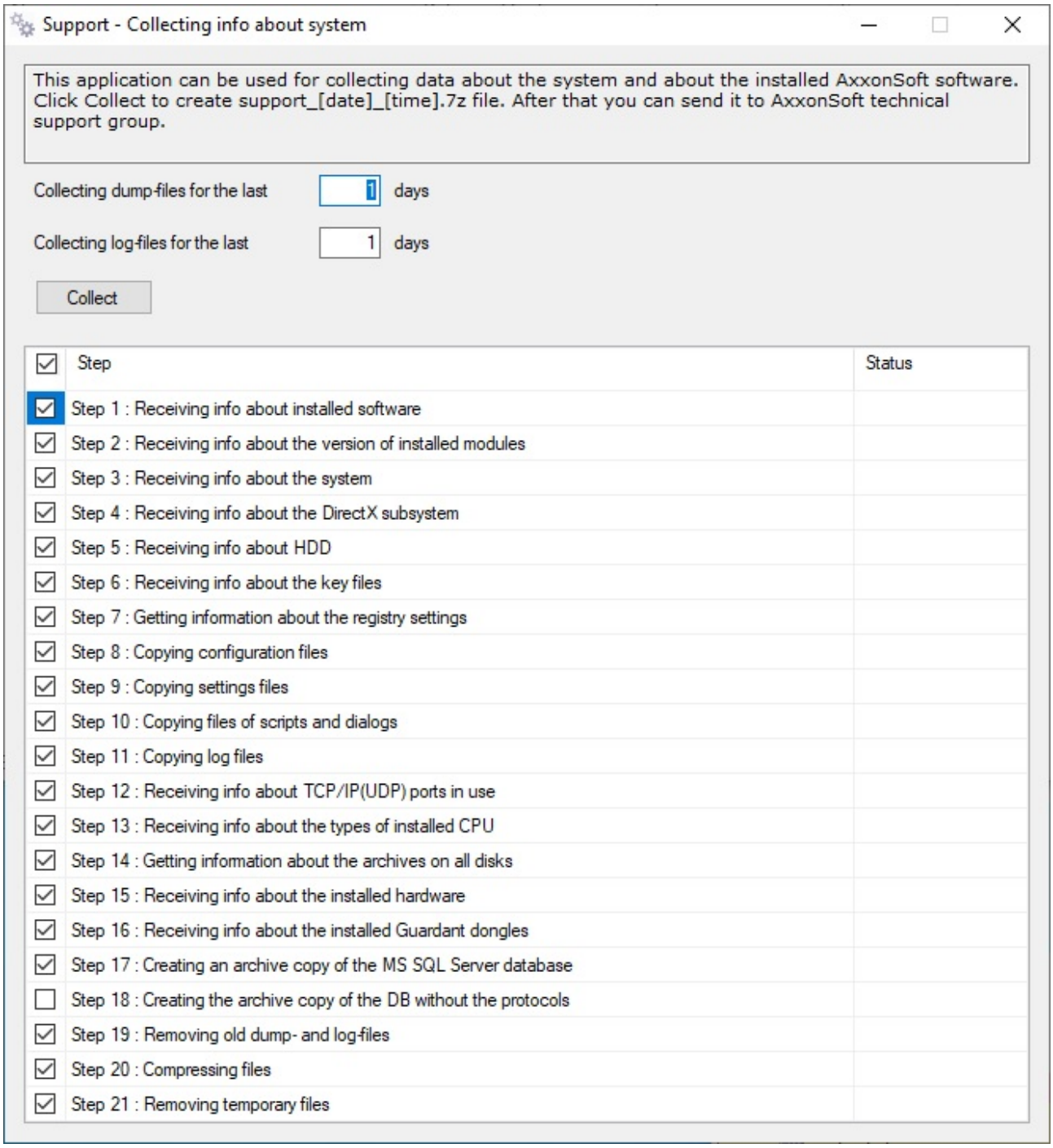
How to get technical support

5.2 Starting and shutting-down the Support.exe utility

To run Support.exe utility, use one of the following methods:

1. From the **Start** menu of OS Windows: **Start -> All programs -> Axxon PSIM -> System's information gathering utility**
2. From the **Tools** folder of the Axxon PSIM program folder: <Axxon PSIM>\Tools\Support.exe

After running the Support.exe, the **Support – Collecting info about system** utility dialog box is displayed.



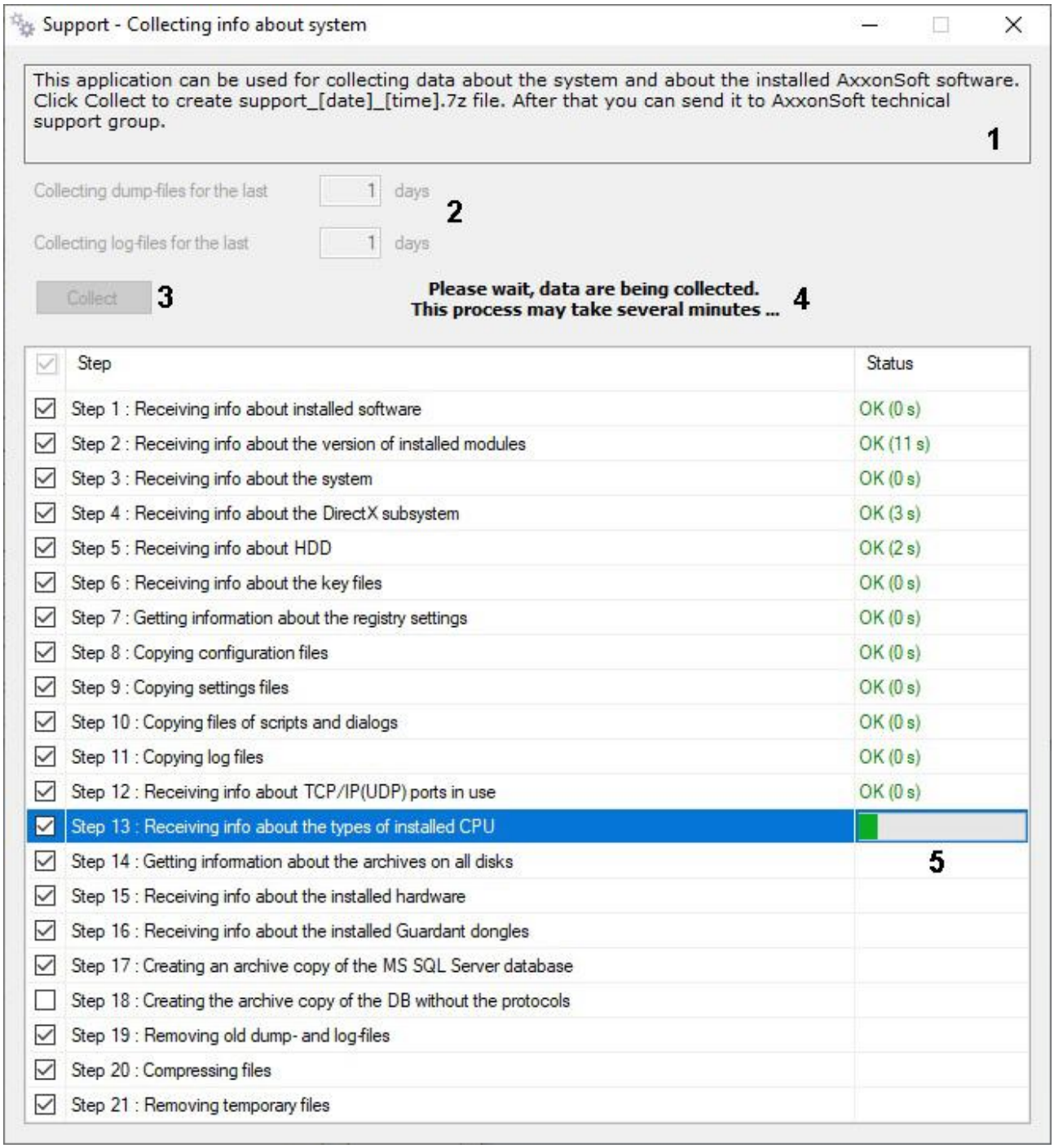
To close the Support.exe utility, click the **Close** button.

5.3 The Support interface description

Support.exe utility interface includes the following elements:

1. Short directions for using the Support.exe (1).
2. A group of settings for specifying data set collection time period (2).

3. **Collect** button to run the process of gathering information (3).
4. Filed of displaying the information (4).
5. Table to display and select steps of gathering information, it includes two columns – **Step** and **Status**. In the **Step** column, the short characteristics of information gathering process step is displayed and the step can be cancelled before the information gathering starts. In the **Status** column there is displayed process-bar and time, spent on information gathering (5).



To close the Support.exe utility, click the **Close** button.

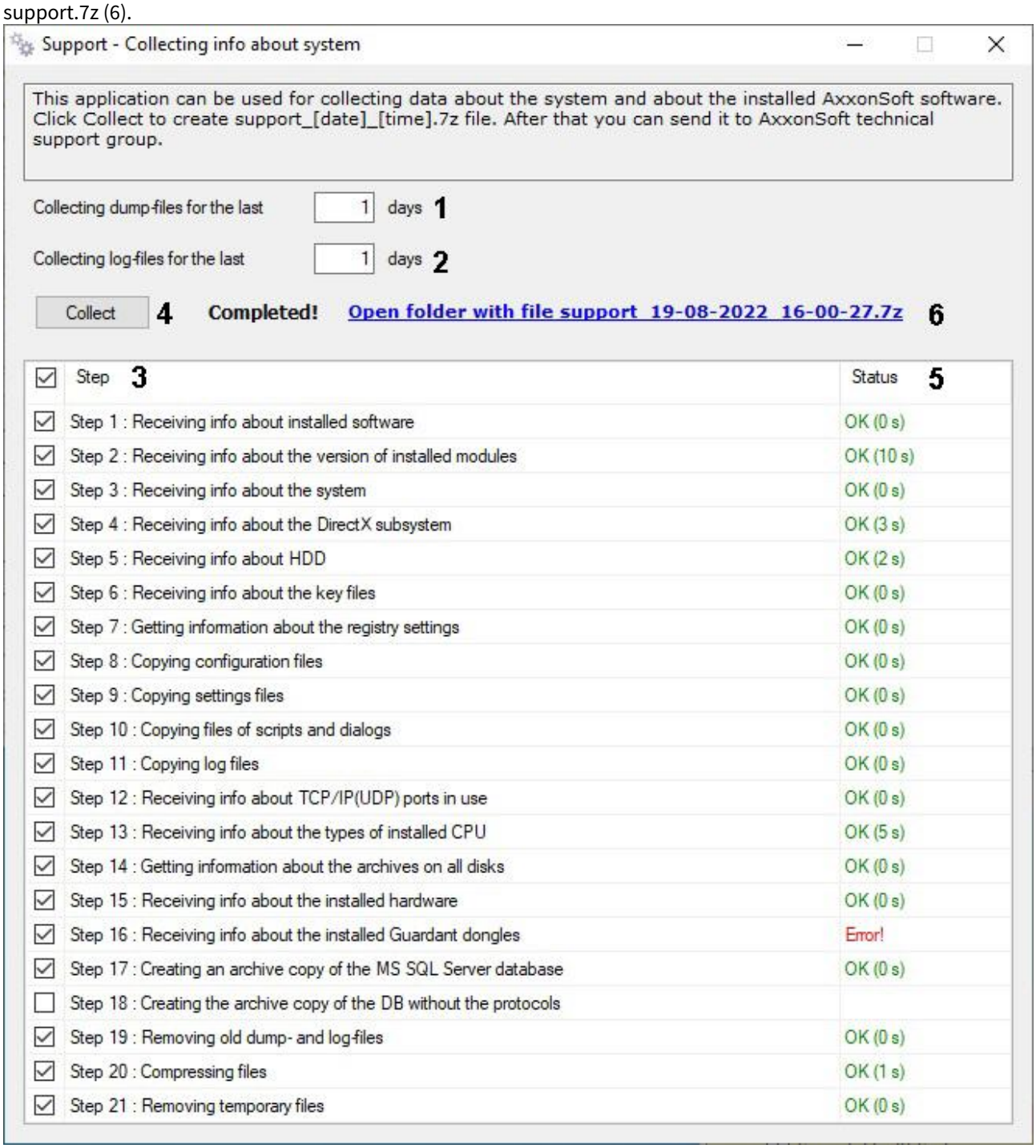
5.4 Collecting information about videoservers and remote workstations using the Support.exe utility

To collect the information using the Support.exe utility, do the following:

1. Start the utility.
2. If necessary set the dump and log files collection parameters:
    a. In the **Collect dump files for ___ days** field specify the number of days for which dump files are to be included into the data set for technical support (1).
    b. In the **Collect log files for ___ days** field specify the number of days for which log files are to be collected into the data set for technical support (2).
3. By default, all available system information is collected. If necessary, uncheck the boxes next to the information collection steps that should be skipped (3). If unchecked, information is not collected at the corresponding step.
   Some stages of information collection are mutually exclusive, for example, you cannot simultaneously select the **Creating an archive copy of the MS SQL Sever database** and **Creating the archive copy of the DB without the protocols** checkboxes.
   Some steps cannot be excluded, including **Compressing files** and **Removing temporary files**.
4. Click the **Collect** button (4).

The data collection process will start. Upon completion, the result of information gathering on each step is displayed in the **Status** column (5), while the information area will show the link to the newly generated file –

support.7z (6).



Follow the **Open Folder with Support.7z File** link to view the archive (6).
The archive is saved in C:\Users\%current user name%\Documents\Support\.

6 The Fps.exe utility for productivity estimation

6.1 The purpose of the Fps.exe utility

Productivity measurement fps.exe utility is used to estimate productivity of video processing.

Estimation is done in the following way:

1. Segmentation of the given video fragment for a set of frames in jpeg format.

   Note.

   If the video fragment is not set, the utility generates pattern set of frames. When necessary the utility may store the created set for fames to the selected directory.

2. Compression and/or decompression of the created frame set.
3. Calculation of productivity parameters − number of processed fps with defined resolution and colour.

Note.

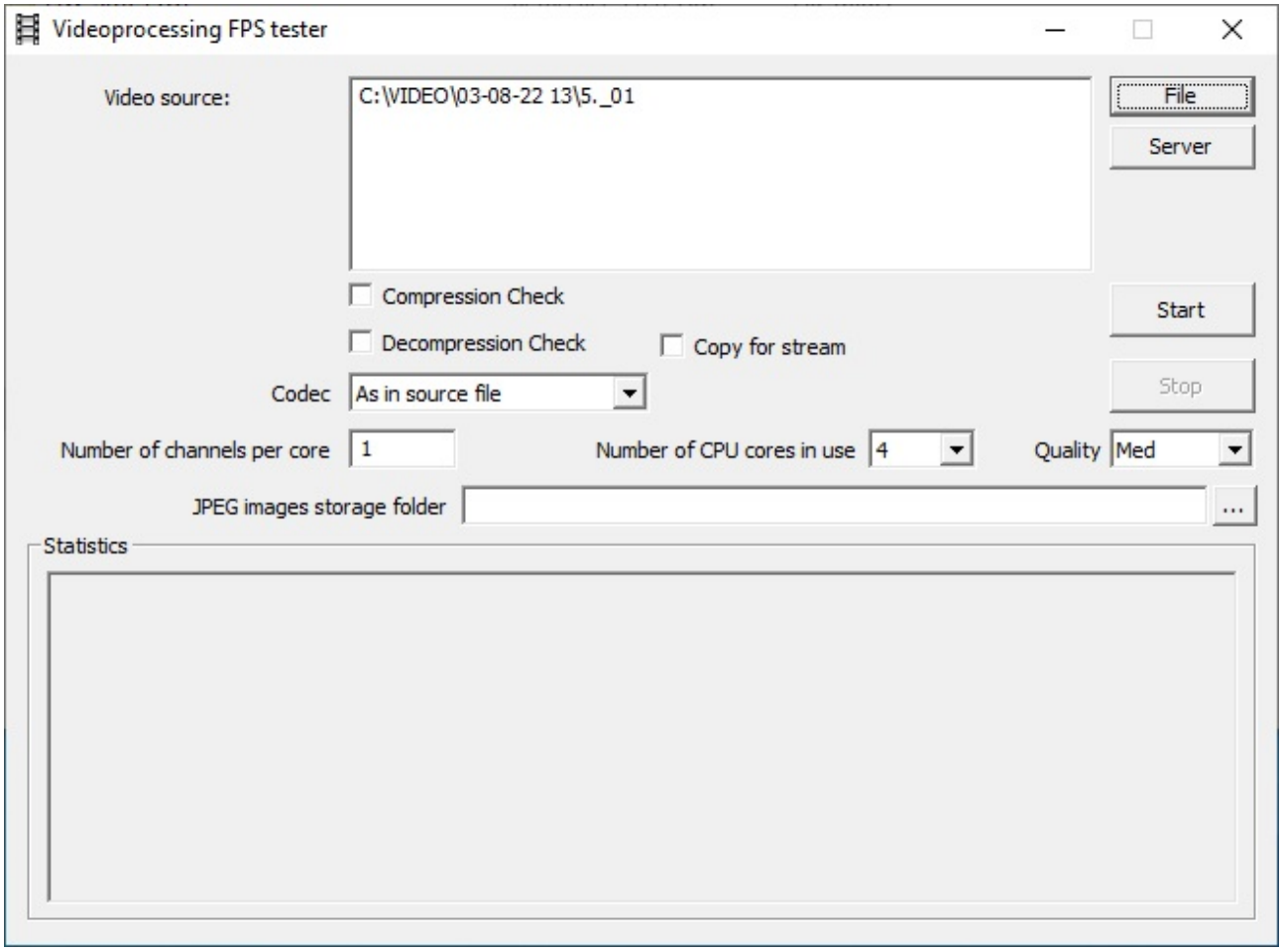
Compression is not available on the Cilent. Playback of a previously recorded video, or a video being received over the network in real time, is available.

6.2 Starting and shutting-down the Fps.exe utility

To start fps.exe, do one of the following procedures:

1. Start the utility from the Windows taskbar. Click **Start**, then **Programs**, then **Axxon PSIM**, then **Tools**, then **FPS testing utility**.
   The fps.exe utility is available from the **Start** menu with the following installation types of the *Axxon PSIM* software: Server, Remote administrator workstation, Remote client.
2. Start the utility from the **Tools** folder of the *Axxon PSIM* program folder: <Axxon PSIM>\Modules64\fps.exe.

After starting the fps.exe utility there will be a dialog window **Video processing FPS tester**.



To close fps.exe utility click ✕ in the right upper corner of the utility's dialog window.

6.3 Using the Fps.exe utility

On the page:

To check productivity of video processing, do the following:

1. Start the fps.exe utility (see Starting and shutting-down the Fps.exe utility).
2. Select the video source.
3. Set the check parameters.
4. Run the check and read into its results.

6.3.1 Selecting the video source

The video source can be either an archive file or a video server archive recorded on specific cameras.

> **Note.**
>
> The field **Video Source File** is not required to run the check on an emulated pattern set of frames.

If the video source is an archive file, select it as follows:

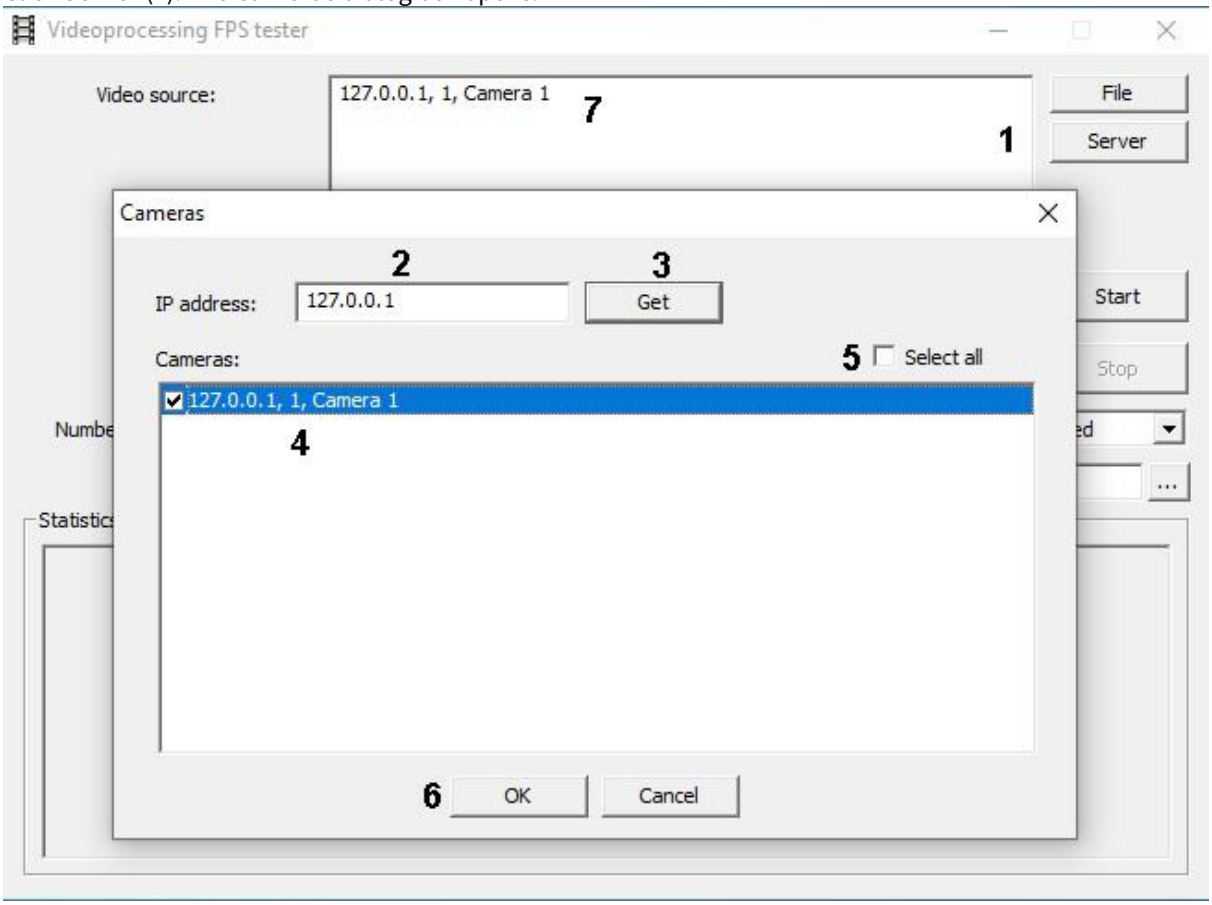
1. Click **File** and then double click the required file in the Windows standard **Open** box (1).

2. The full name of the selected file is displayed in the **Video source** field (2).

If the video source is a video server archive, make sure the *Axxon PSIM* is running on that server and all the required cameras are created in the hardware tree before performing the check.

Select the archive video source as follows:

1. Click **Server** (1). The **Cameras** dialog box opens.



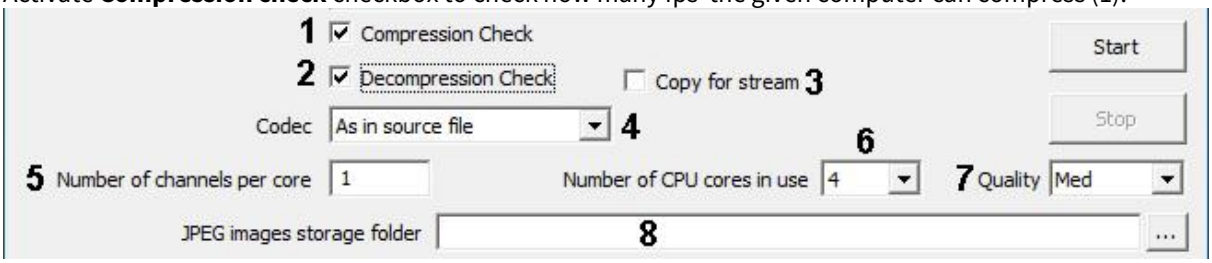
2. In the **IP** field, specify the IP address of the *Axxon PSIM* video server (2).
3. Click **Get** (3). If connection with the server is established, the **Cameras** field displays the list of cameras.

4. Set the check boxes next to the cameras to check performance using their archive (4) or set the **Select all** check box to select all the cameras in the list (5).
5. Click **OK** (6).
6. The selected cameras are added into the **Video source** field (7).

6.3.2 Setting the check parameters

Set the parameters of performance check as follows:

1. Activate **Compression check** checkbox to check how many fps the given computer can compress (1).



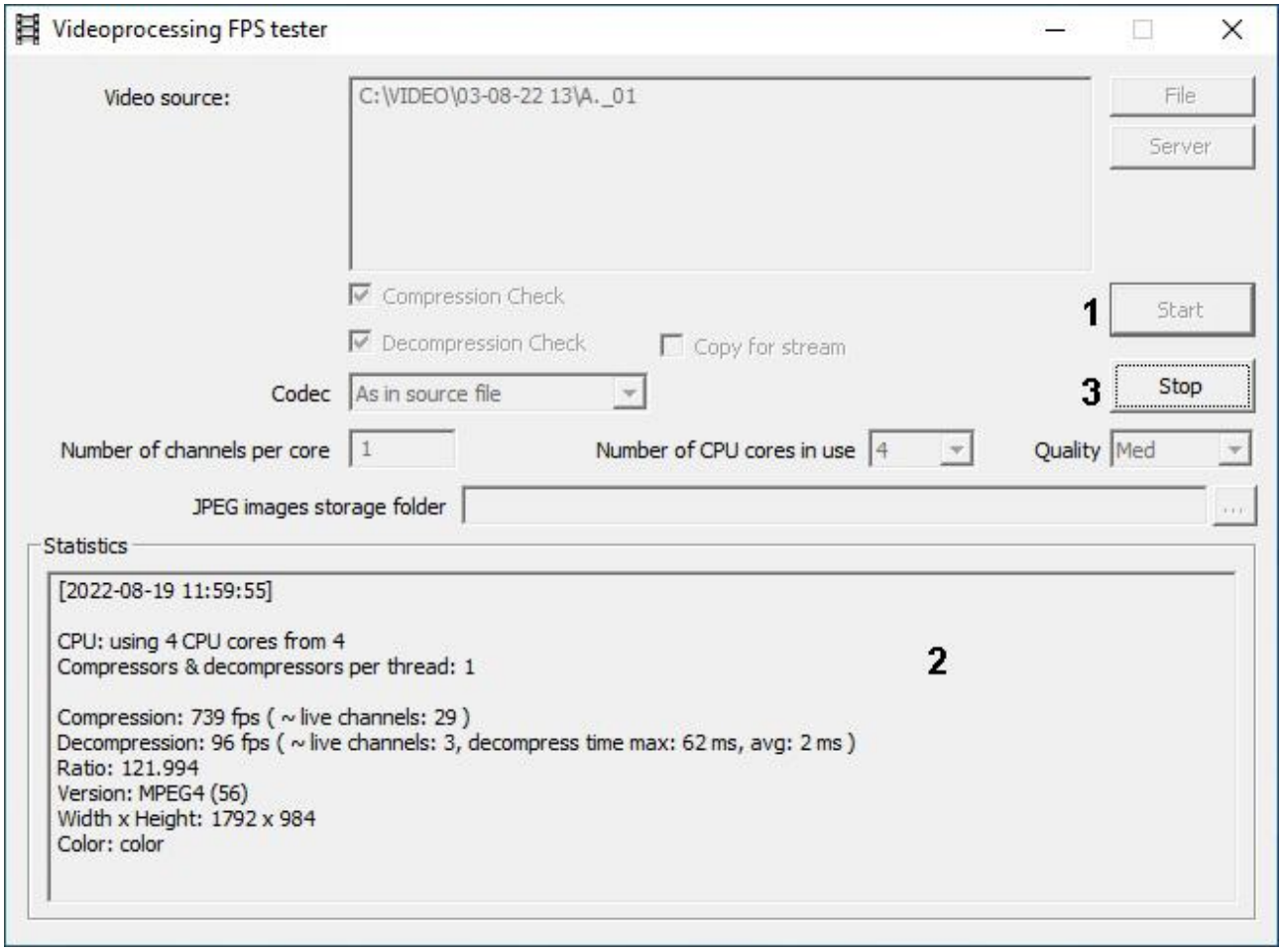
2. Activate **Decompression check** checkbox to check how many fps the given computer can decompress(2).
3. Select the **Copy for stream** check box to create a separate copy of each stream file in the RAM in order to avoid conflicts during the check (3). This function increases memory consumption when running the fps.exe utility.
4. Select the required compressor version from the drop-down list **Codec** (4).
5. Enter the required number of emulated cameras in the field **Channels amount** (5).

> **Note.**
>
> This setting is actual only with emulation of pattern set of channels.

6. In the **Number of CPU cores in use** field specify the number of CPU cores to be used for performance check (6).
7. Select the required value of frames compression from the dropdown list **Quality** (inversely to compression level) (7).
8. When necessary, set the directory where frames extracted from the video would be unzipped by clicking ... next to the **Jpeg images storage folder** field (8).

6.3.3 Running the check and reading into its results

Click the **Start** button to run video processing tester (1).



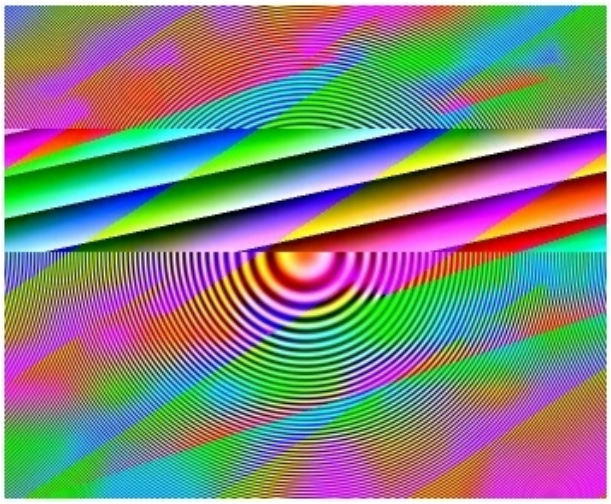
As a result, parameters of video processing productivity will be displayed in the title bar of the utility window (2).

Productivity parameter	**Description of parameter**
Compression	total number of frames that can be compressed in one second
Decompression	total number of frames that can be decompressed in one second
Ratio	compression ratio
Version	selected version of the compressor
Width	frame width
Height	frame height

Productivity parameter	**Description of parameter**
Color	if the frame is in color
CPU	number of CPU cores in use
Compressors $ decompressors per thread	number of compressor instances per CPU

If the **Jpeg images storage folder** is selected, the frames for testing video processing will be recorded to the selected .jpeg files storage folder.

The example of the emulated frame is shown below:



To stop the testing process, click the **Stop** button (3).

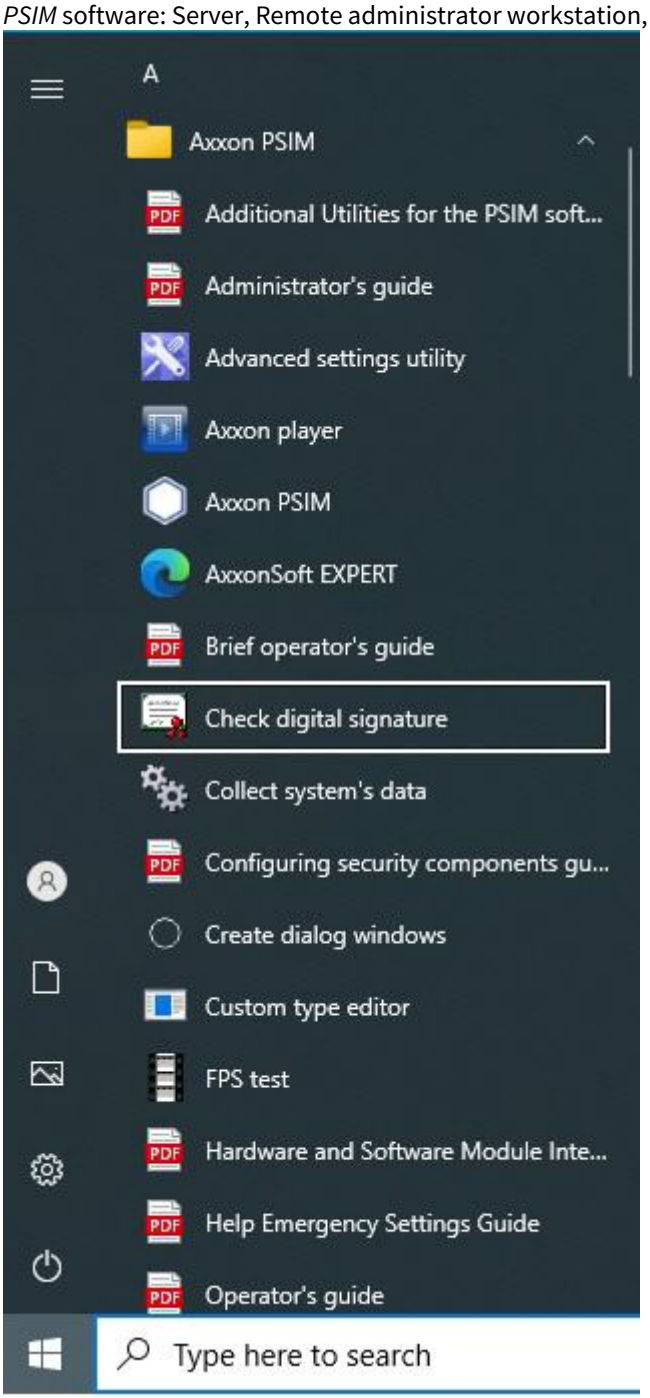
7 The SignCheck.exe utility for checking the authenticity of exported frames

7.1 Starting and shutting-down the SignCheck.exe utility

To start the SignCheck.exe utility, do one of the following:

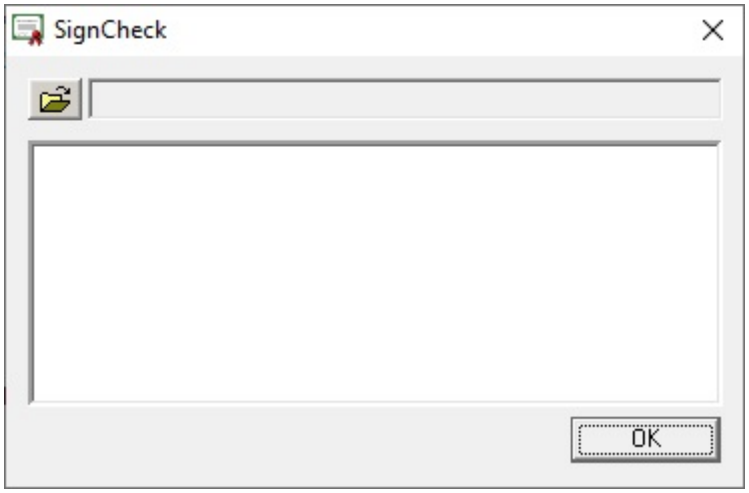
1. Start the utility from the Windows taskbar. Click **Start**, then **Programs**, then **Axxon PSIM**, then **Tools**, then **Check Digital Signature**.
   The SignCheck.exe utility is available from the **Start** menu with the following installation types of the *Axxon*

PSIM software: Server, Remote administrator workstation, Remote client.



2. Start the utility from the **Tools** folder of the *Axxon PSIM* program folder. Example: C:\Axxon PSIM\Tools\SignCheck.exe.

The SignCheck dialog box will open.



To close the SignCheck.exe utility, click the **Close** button.

7.2 The purpose of the SignCheck.exe utility

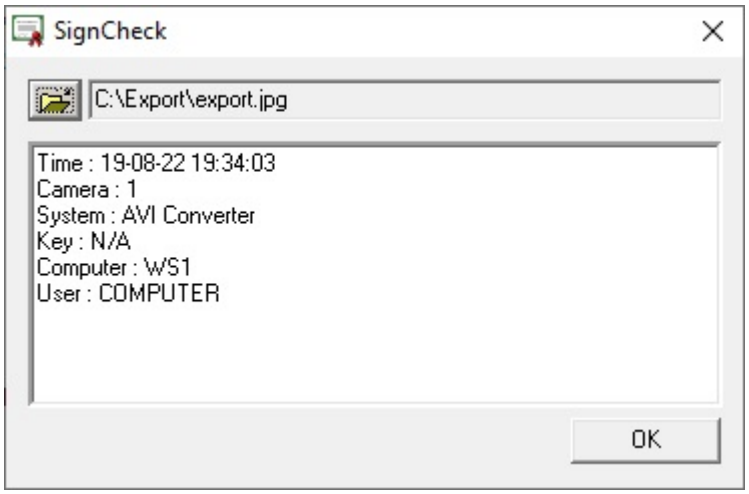
The SignCheck.exe utility is designed for checking the authenticity of a frame exported into BMP or JPEG format using the Converter.exe utility.

7.3 Using the SignCheck.exe utility

To verify the frame authenticity, do the following:

1. Start the utility (see Starting and shutting-down the SignCheck.exe utility section).
2. Select the file with exported frame to check, using the  button and a standard dialog box for opening files.

The SignCheck window will show the information about the selected frame.



The following information is displayed:

1. AxxonSoft export frame – digital signature title.
2. Frame time – date and time stamp of this frame in the recording.
3. Export time – date and time of exporting this frame to a file.

4. Camera – ID of the camera from which the recording was made.
5. System – the software that made the recording.
6. Computer – name of the computer this software is installed on.
7. User – user name of this computer.

If the frame cannot be authenticated, or the digital signature is missing, the "Verification failed” message will be displayed.

8 The Convert.exe utility for correcting modification dates of video archives

8.1 The purpose of the Convert.exe utility

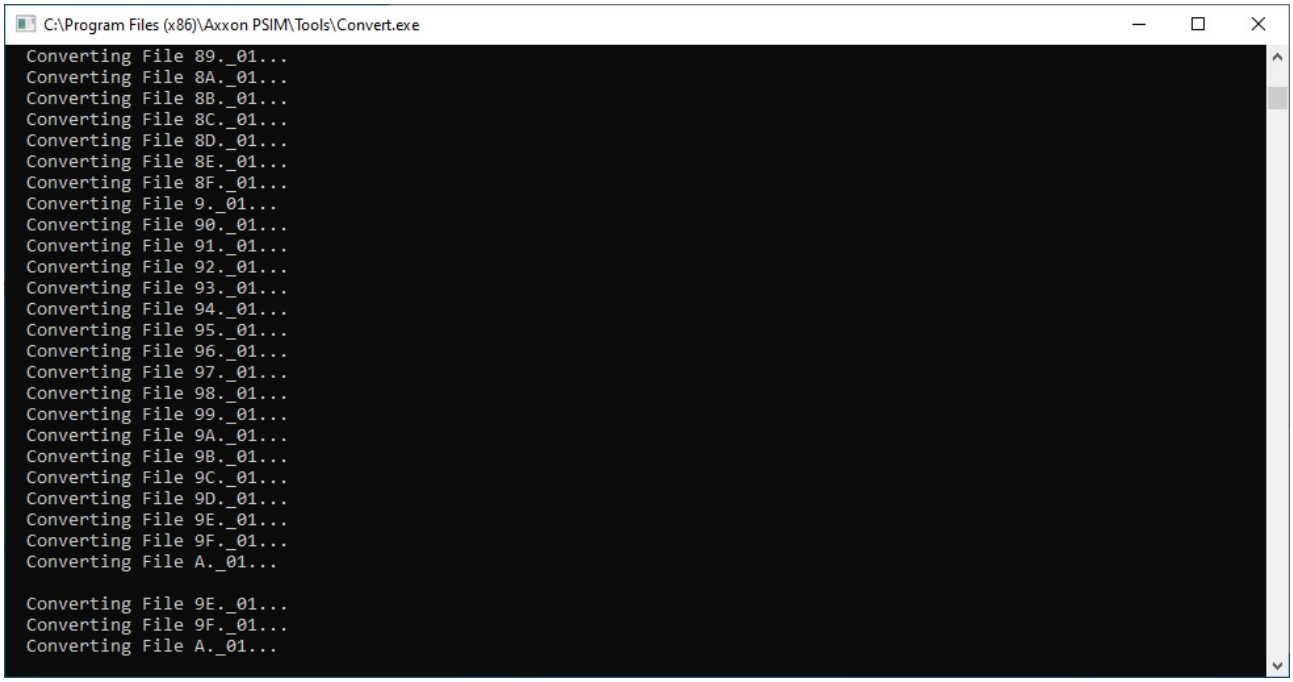
The Convert.exe utility is designed for restoring changed creation dates of video archive files. For example, file creation dates may be changed (corrupted) while transferring an archive from one computer to another. This may lead to incorrect playback of the archive.

8.2 Starting and shutting-down the Convert.exe utility

The Convert.exe utility can be operated in two modes:

1. Correction of records creation dates. To use this mode, start the utility from the Tools folder of the *Axxon PSIM* installation folder. Example: C:\Program Files (x86)\Axxon PSIM\Tools\Convert.exe.
2. Correction of records creation and modification dates. To use this mode, start the utility from the Tools folder of the *Axxon PSIM* installation folder with the -FULLMODE parameter.

The Convert.exe utility dialog box will open.



To shutdown the Convert.exe utility, click the **Close** button.

8.3 Restoring changed creation dates using the Convert.exe utility

The Convert.exe utility allows restoring the creation date of a video archive file. To make the restoration, start the utility (see the Starting and shutting-down the Convert.exe utility section). A console window will open starting the process of searching the Video folder on each of the available disks. Then, replacing of modification date for creation date will start automatically. This process will take some time depending on the archive size. For example,

restoring dates in a 500 MB archive will take about 10 seconds. When all dates are replaced, the Convert.exe window will close by itself.

8.4 Working with the Convert.exe utility using the command prompt

One can work with the Convert.exe utility using Windows command prompt. The following startup parameters are in use:

1. TZ +hh:mm – changing date of file creation and modification for hh hours and mm minutes.
2. PATH – specifies the path to the archive folder with files date of creation (modification) of which is to be restored.
3. FULLMODE – running the utility in order to correct the date of creation and modification.
4. FORMAT is similar to FULLMODE. It also converts archive files to a format optimized for high-resolution archiving. The execution time of the FORMAT operation is comparable the the time required for a full conversion of the archive on the disk, because it requires reading every frame and creating a backup copy of the files while they are being converted. After the format of the archive or record has been updated, the execution time of subsequent conversions in FULLMODE will become the same as during an ordinary conversion.

Examples of commands for working with the Convert.exe utility using the command prompt:

1. Convert.exe PATH "H:\Video\03-09-12 15" FULLMODE
   Running this command the Convert.exe utility will restore the date of file creation and modification in H:\Video\03-09-12 15 folder.
2. Convert.exe TZ +01:00
   Running this command the time of file creation and modification will change for an hour. For instance, the “17-09-12 13” folder will be renamed as “17-09-12 14”.

> **Note.**
>
> These examples assume using a command prompt in <Axxon PSIM>\ Tools folder.

9 The ddi.exe utility for editing database templates and external settings files

The ddi.exe utility is designed for editing external system settings files (*.ddi) and the templates of the main database (psim.dbi and psim.ext.dbi).

The ddi.exe utility is started from the **Start -> All Programs -> Axxon PSIM -> Tools -> System configuration** menu.

The ddi.exe utility is available from the **Start** menu with the following installation types of *Axxon PSIM*: Server, Remote administrator workstation, Remote client.

The utility can also be started from the **Tools** folder of the *Axxon PSIM* program folder.

After the changes are made to *.ddi and/or *.dbi files, update the main database. For this use the idb.exe utility (see The idb.exe utility for converting databases, selecting database templates and making backup copies of databases section).

Note.

If changes were made to .ddi or .dbi files using the ddi.exe utility and these files were installed along with *Axxon PSIM*, then these files will be deleted while deleting with configuration upload. .ddi and .dbi files added manually will be saved.

9.1 Editing psim.dbi and psim.ext.dbi database templates using the ddi.exe utility

To edit the template of the main database, open it using the **File -> Open** menu. The template files are stored in the root of the *Axxon PSIM* program folder.

Note.

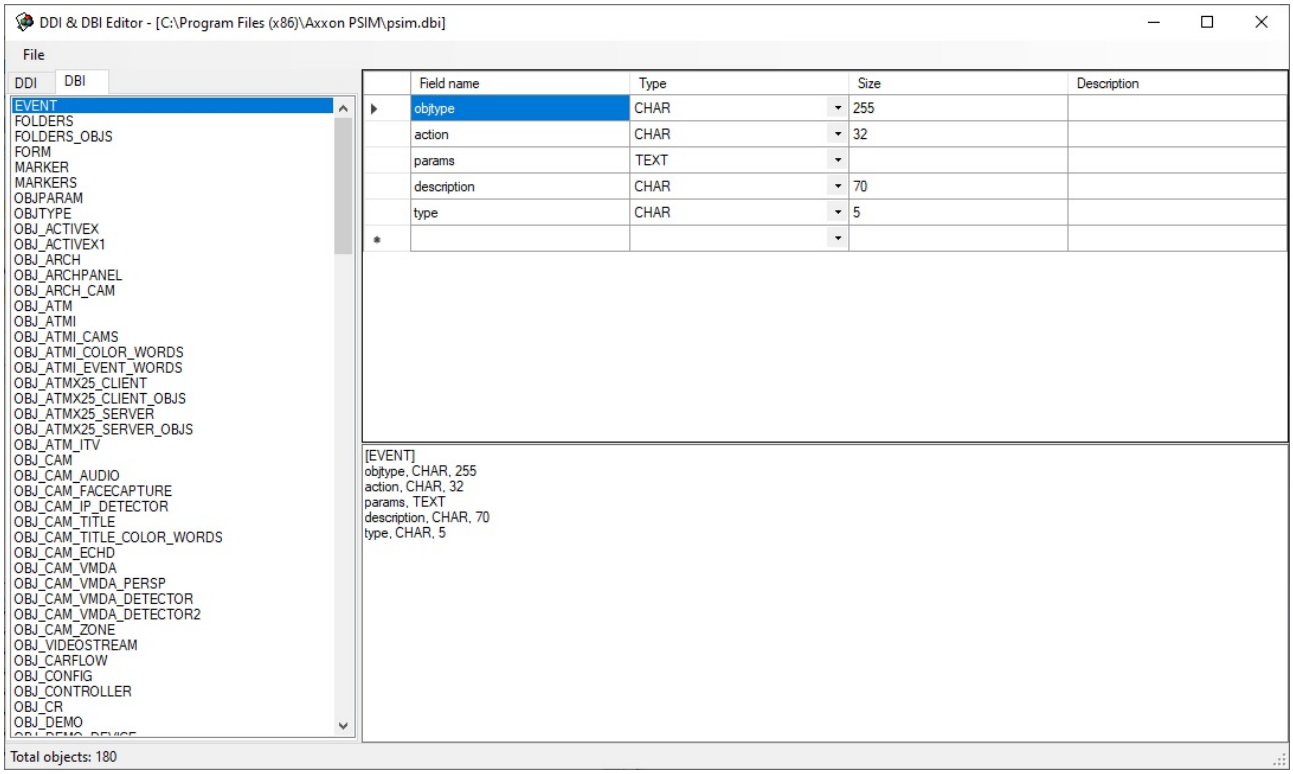
To open the recently used file, select the **Last files** item in the **File** menu or open the context menu in the **Names** tab.

Note.

The **Paste from file** item in the **File** menu allows opening several files by adding tables, described in other dbi files, to the open dbi file.

Psim.dbi file contains the list of main tables and fields of the database. User-defined tables and fields are stored in a separate file – psim.ext.dbi. This file is made separate from the main file, to eliminate the need to re-insert user-defined tables and fields into the main file, in case of *Axxon PSIM* system update. The contents of these files are merged upon *Axxon PSIM* start-up.

To view the database template, open the **DBI** tab in the top left corner of the window. The list of the tables of the main *Axxon PSIM* database will be displayed in the left panel. The right panel will show the list of fields of the selected database.



To delete, add, edit or copy object fields, use the table on the left of the utility box.

The following parameters of the table fields are displayed:

1. **Field name** – the name of the field in the database.
2. **Type** – data type of the field contents. Available types:
    a. BIT – checkboxes taking logical values Yes and No;
    b. CHAR – fields with a few symbols;
    c. DATETIME – date and time in the following format: date – dd-mm-yyyy, time – hh:mm:ss;
    d. DOUBLE, INTEGER, SMALLINT – numerical fields of corresponding types;
    e. TEXT – fields with the text.
3. **Size** – maximum number of units of the specified format in a field.
4. **Description** – field name shown in the interface.

The database is to be refreshed after the changes were made.

9.2 Editing the external setting file (Axxon PSIM.ddi) using the ddi.exe utility

To edit the external settings file (psim.ddi), open it using the **File** -> **Open** menu. This file is stored in the root of the *Axxon PSIM* program folder.

> **Note.**
>
> To open the recently used file, select the **Last files item** in the **File** menu or open the context menu in the **Names** tab.

Note.

The **Paste from file** item in the **File** menu allows opening several files by adding tables, described in other dbi files, to the open dbi file.

The external settings file contains the information about objects and events loaded into the system configuration, graphical symbols for various object states on the map, and the transition rules from one object state to another.

The purpose of editing can be software localization or expanding/limiting its functionality (for example, removing unused objects from the system).

Note.

Changing the external settings file may lead to system failure. Create a backup copy of the file before editing it.

The database is to be refreshed after the changes were made.

9.2.1 General information on editing the external setting file

To start using the utility, open the **DDI** tab in the top left corner of the utility dialog box.

The left side of the dialog box will display all system objects loaded into the configuration. The right side of the dialog box shows the properties panel for the selected object. This panel consists of several tabs: **Names, Events, Reactions, Icons, States**, and **Transition rules**.

To delete, add, edit or copy object properties, right-click a cell in the tab or the list of system objects to open the context menu. You can also use **Ctrl+C** and **Ctrl+V** to copy and paste lines from one object to another. Select the whole line(s) or just a cell(s) in it to copy by **Ctrl+C**. Delete lines with **Delete** key.

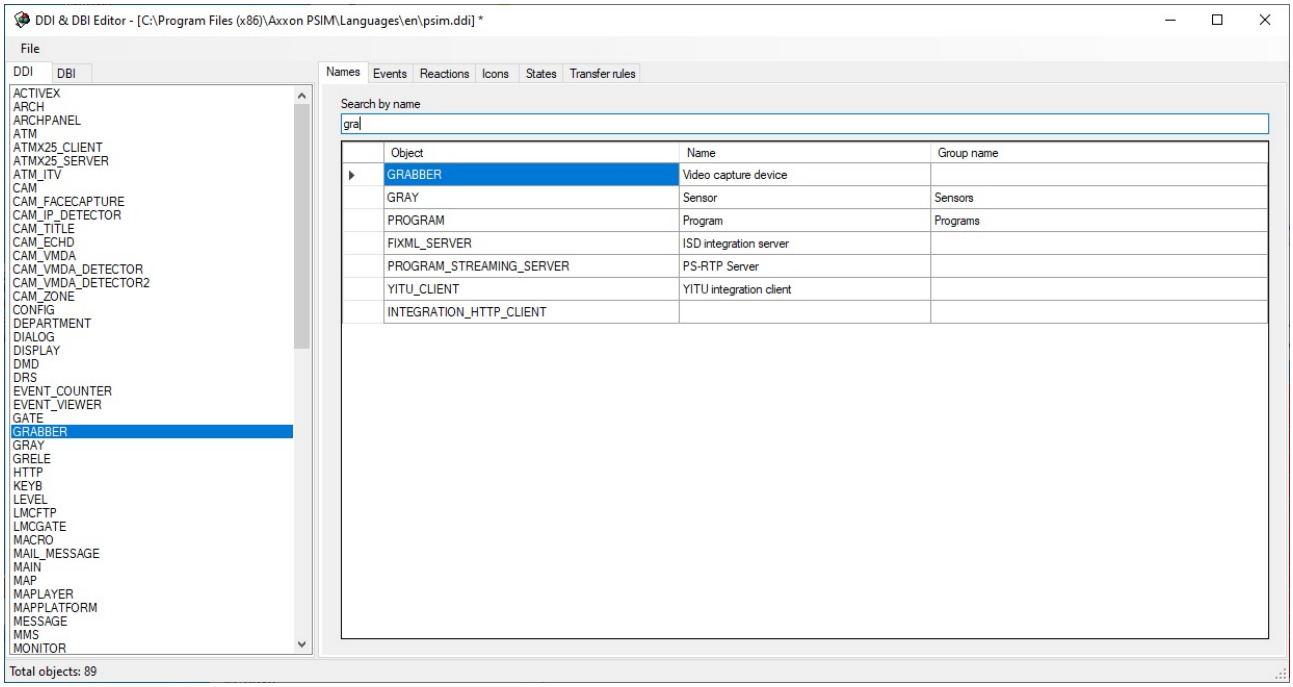
To edit the object properties, use the tables on the right of the ddi.exe utility box.

9.2.2 The Names tab

This tab contains the table with three fields:

1. **Object** – object ID in the system.
2. **Name** – the name of the object in the system.
3. **Group name** – the name of the group the object will be assigned to upon creation. If this field is left blank, no group will be created. Objects of different types may be assigned to the same group given that they have the same parent object (e.g., **Sensor** and **Relay** can be included to the "Sensors and Relays" group and so on).

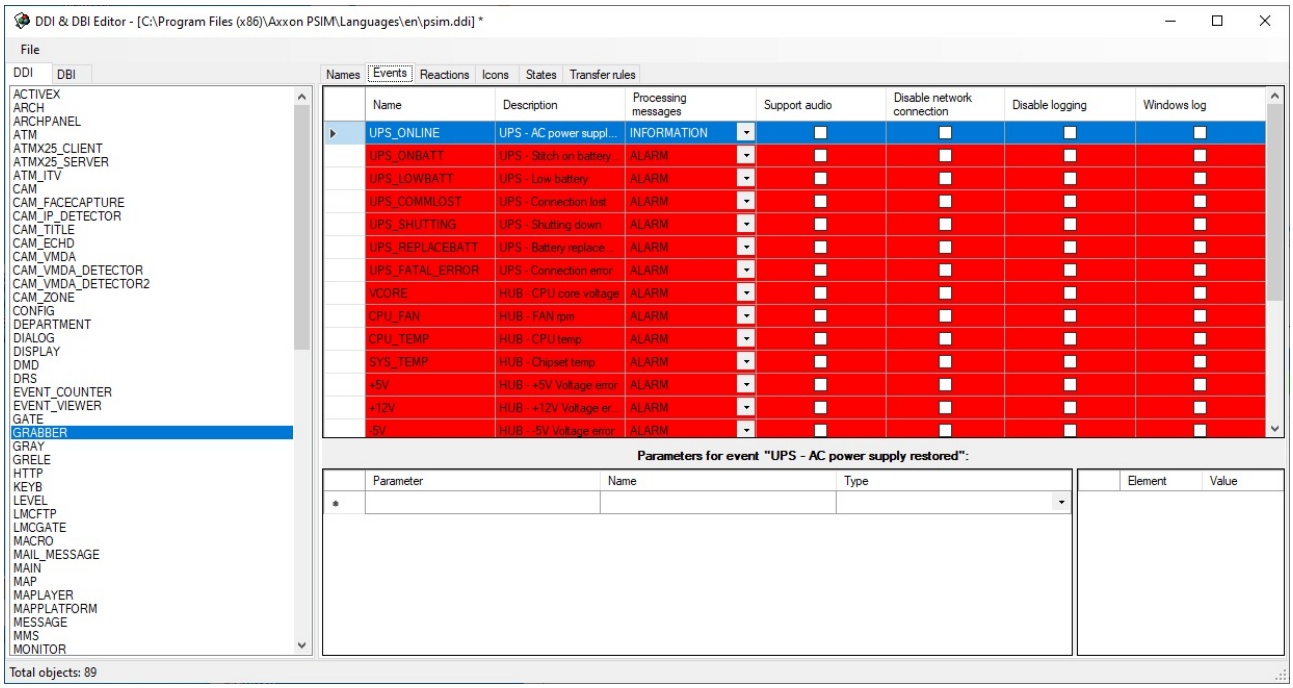
By default all objects, the description of which the ddi file contain, are displayed in the table. To find an object, type-in the object name or ID in the **Search by name** field. As a result the table will contain all object names in the system that exactly or partially match the word typed in this field.



9.2.3 The Events tab

This tab contains the list of the system events that the selected object can create. Each event has the following editable parameters:

1. **Name**. The event identifier.
2. **Description**. A short description of the event.
3. **Processing messages**. The type of window to open on event occurrence: alarm window or information window.
4. **Support audio**. The attached .wav files to be played when the event occurs.
5. **Disable network connection**. A local event only. If this checkbox is set, other computers on the network will not be notified when the event occurs.
6. **Disable logging**. By default, all events are displayed in the Event log. Set the checkbox not to log the event or record it in the database.
7. **Windows log**. Set the checkbox to log the event (see step 6) to Windows log. If the event is not logged, then it cannot be logged to Windows log.



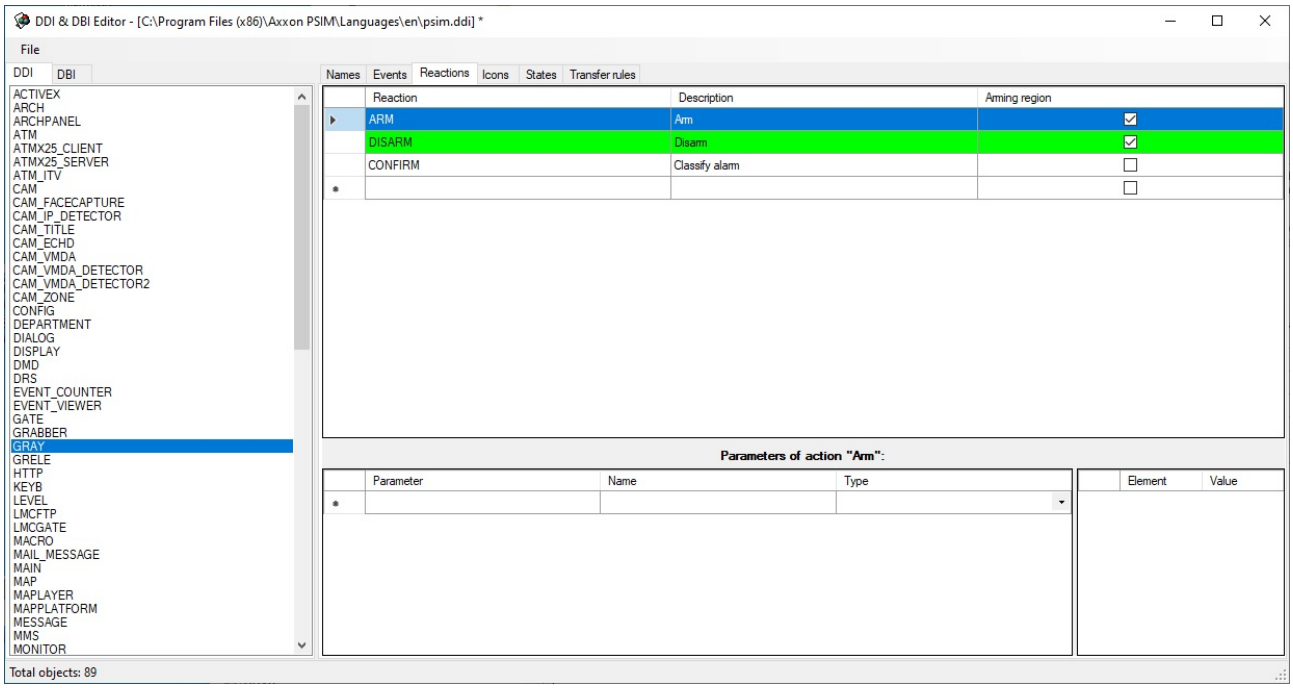
Note

You can create only the events that are available for the selected object (created at the stage of the system programming). Initially all of them are in the psim.ddi file.

9.2.4 The Reactions tab

This tab lists all reactions that the object can make in response to events. Each reaction has the following properties:

1. **Reaction** – reaction ID.
2. **Description** – short description of the reaction.
3. **Arming** – additional property of the reaction, arming a region.

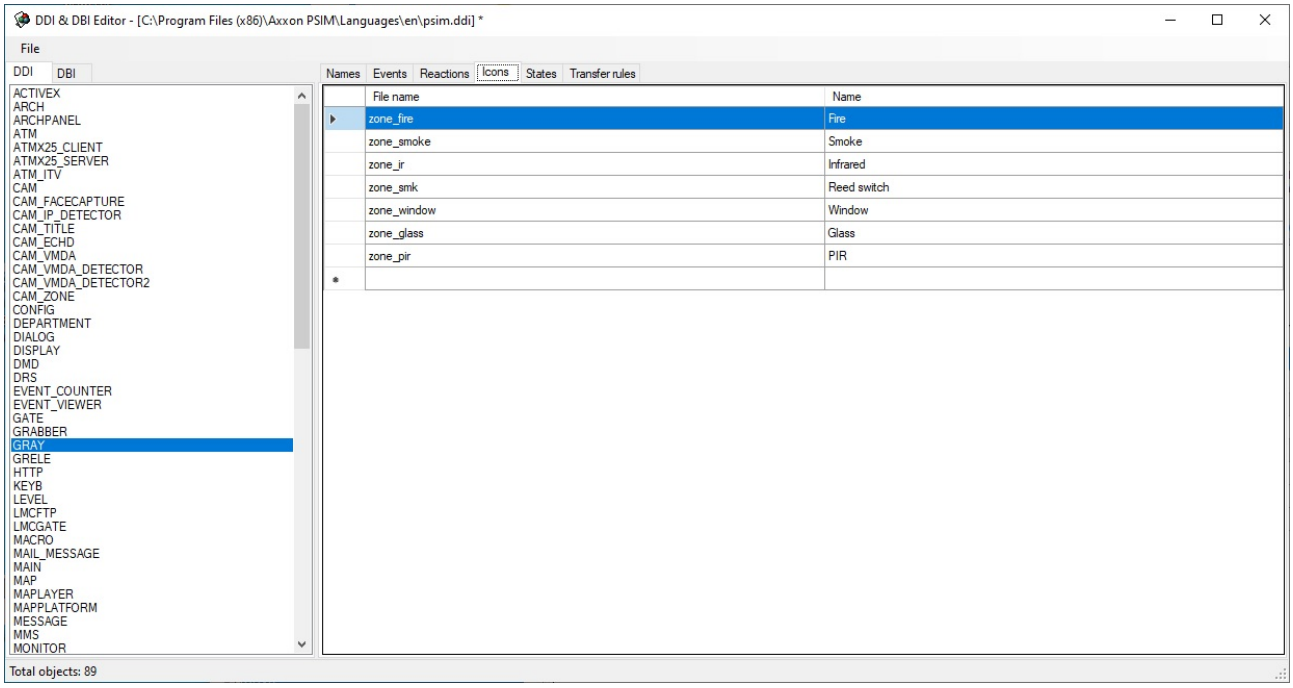


Note.

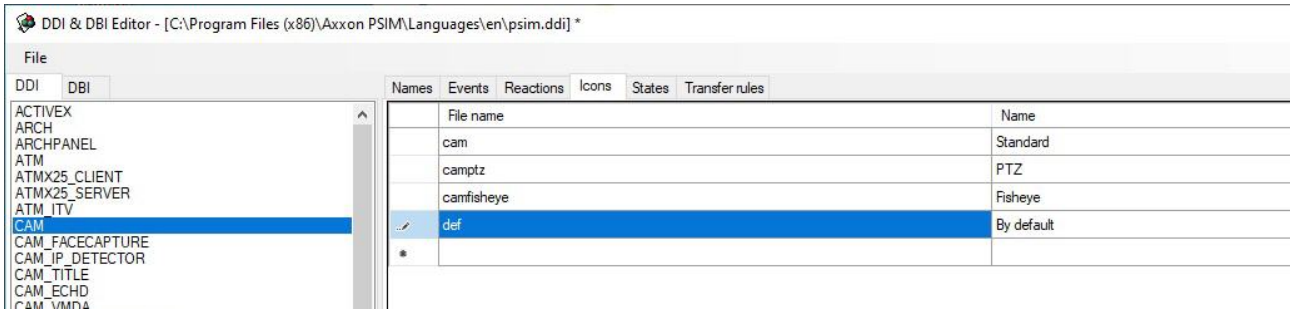
You can create only the reactions that are available for the selected object (created at the stage of system programming). Initially all of them are in the psim.ddi file.

9.2.5 The Icons tab

This tab lists the graphical symbols (icons) that represent the selected object on the map. The part of the name used for identifying the file in the .bmp, .jpg or .png format is specified in the **File name** column. Image files are to be stored in the **Bmp** folder in the *Axxon PSIM* program folder (for example, C:\ Program Files\Axxon PSIM\Bmp).



If default icons are to be in use for the same states of objects of the same type, the def icon should be specified on this tab (**By default**). See The States tab section for more information.



9.2.6 The States tab

This tab lists all states of the selected object. The states have the following properties:

1. **Name** – state ID.
2. **Image** – part of the name in the .bmp format that represent the object state on the map. For example, if the zone_fire file name was selected in the **Icons** tab, and the image of the selected ARMED state is arm, then the zone_fire_arm.bmp file will be in the **Bmp** folder.

The default icon for the states can be set. For this, set the def icon (**By default**) on the **Icons** tab. For example, if there is no zone_fire_arm.bmp icon for the ARMED state, then the def_arm.bmp icon will be searched. This avoids duplicating icons if one state for the different types of the object icon should be displayed identically.

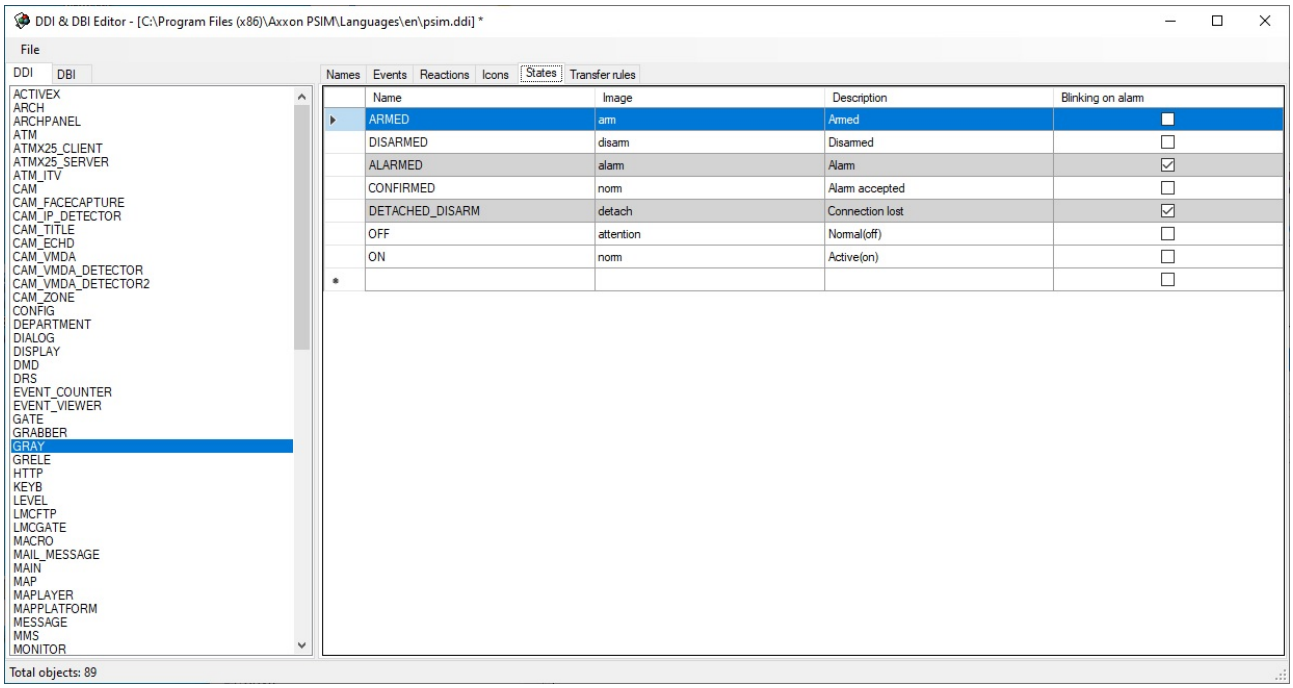
Note.

If the file ID is not set in the **Icons** tab, then the file name will consist of the object ID and part of the file name specified in the Image column.

Note.

If the object is displayed on the map as a polygon, circle or line, then the color of these figures can be set for each state.
For this specify the color in the R:G:B:A format after the icon name (separated by **$**) in the **Image** column or specify the color only in this format instead of the icon name. Here are the examples of the **Image** column contents:
255:0:0 – red color is set for the state.
alarm$255:0:0 – icon and red color are set for the state.

1. **Description** – short description of the state.
2. **Blinking on alarm** – option of displaying object state.

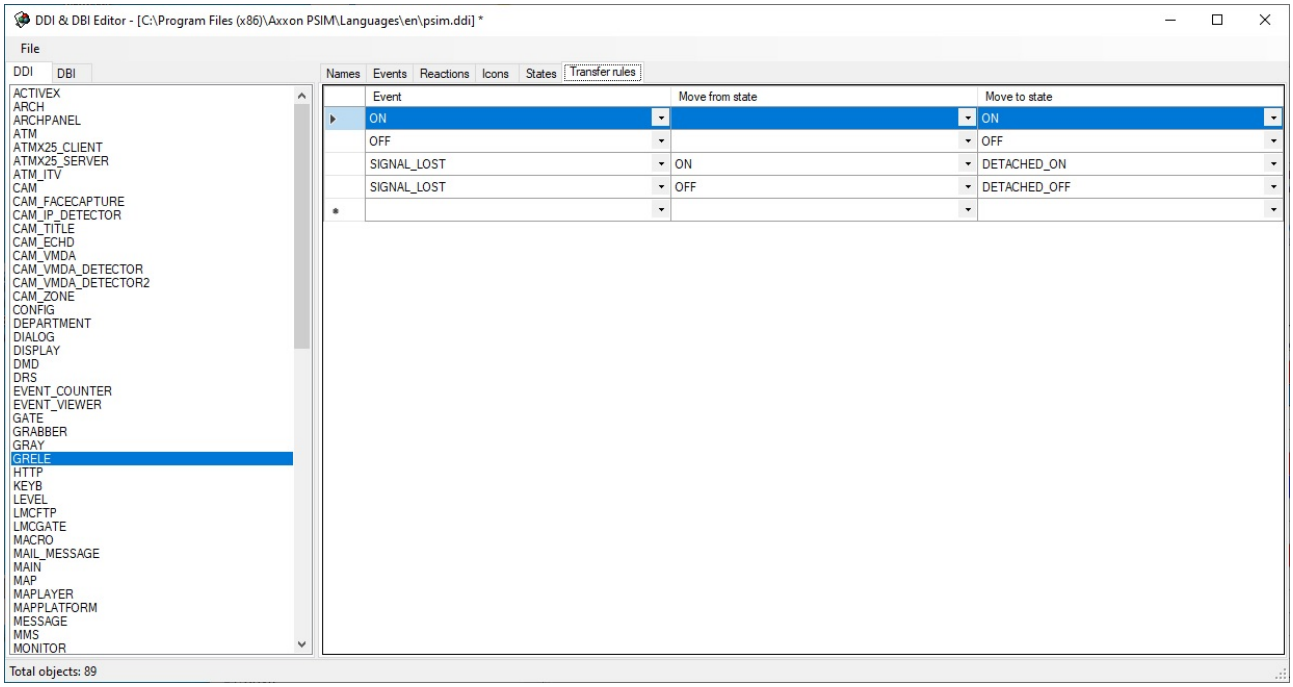


9.2.7 The Transition rules tab

Transition rules connect the events generated by objects, and the states of these objects. Each rule consists of the starting state of the object, an event, and an ending state that the object will take after the event.

The table lists the transition rules from one object state to another. Each rule has the following properties:

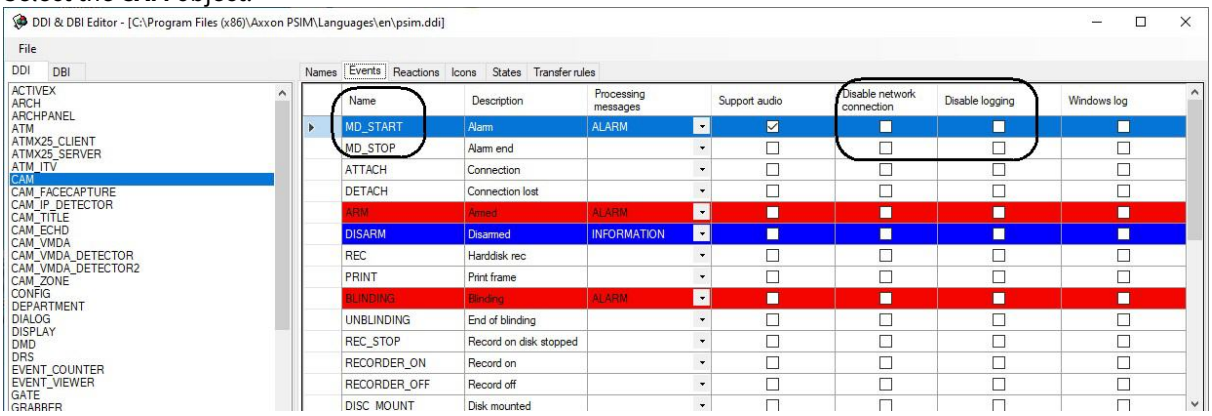
1. **Event** – identifier of the event triggering the transition.
2. **Transition from state** – identifier of the object state before the event took place. If this field is left blank, the rule will apply to all starting states.
3. **Transition to state** – identifier of the resultant state of the object.



9.2.8 Example of editing the Axxon PSIM.ddi file to reduce database load

When changing the ddi file events, reactions, etc. can be added, modified or deleted.
To reduce database load modify the psim.ddi file as follows:

1. Open the psim.ddi file in the ddi.exe utility.
2. Select the **CAM** object.



3. Go to the **Events** tab.
4. Set the **Disable network connection** and **Disable logging** checkboxes checked for the **MD_START** (Alarm) and **MD_STOP** (Alarm end) events.
5. Save the file.
6. Update the database using the idb.exe utility (the **Update database** button, see Interface elements of the idb.exe window).

When these actions are performed the events from the main motion detection tool are not recorded and sent to other cores. This reduces the database load.

Important!

When updating *Axxon PSIM* the modified psim.ddi file is substituted with the file by default.

In order the psim.ddi file is not substituted it is to be saved with another name at step 5 - e.g. "psim_1.ddi". Thus, 2 files of external settings are saved in the Languages catalog: source file and modified one. The idb.exe utility loads them in alphabetical order. As a result the psim_1.ddi file is loaded the last one and its parameters are applied when database is updated.

If the event list in psim_1.ddi is different from the original psim.ddi, e.g. some events are added or deleted, then the event list is merged by idb.exe DB update.

When installing a new *Axxon PSIM* version the psim_1.ddi file is not affected by the installation wizard and changes are saved.

Important!

When deleting *Axxon PSIM* without saving the configuration the entire *Axxon PSIM* catalog (including modified files) is deleted. In this case the modified files are to be manually backed up, e.g. to C:\Temp, under after reinstallation they are to be copied to <Axxon PSIM installation folder>\Languages\en.

10 The Arpedit.exe utility for creating user dialog windows

The Arpedit.exe utility is designed for creating dialog boxes. It allows tailoring *Axxon PSIM* system to particular monitoring and security tasks of the customer.

The Arpedit.exe utility is in the “Arpedit” folder (<Installation directory>\Axxon PSIM\Tools\Arpedit). Detailed information on the utility is given in User's Manual for ArpEdit (it is located in pdf format in the same folder too).

10.1 User's Manual for ArpEdit

10.1.1 Introduction into User's Manual for ArpEdit

On the page:

The purpose of the document

The *User’s Manual for ArpEdit* is a reference tool and contains information needed to work with the *ArpEdit*. This utility is included in the basic distribution of the *Axxon PSIM* software package.

The following materials are included in this manual:

1. General information on *ArpEdit*.
2. User guidelines for *ArpEdit*.

The purpose of *ArpEdit*

ArpEdit is designed to perform the following functions:

1. Creating badge forms for the **Access Control Service** module (in the form of files with the .arp extension).
2. Creating user dialog boxes (in the form of files with the .dlg extension).

Note.

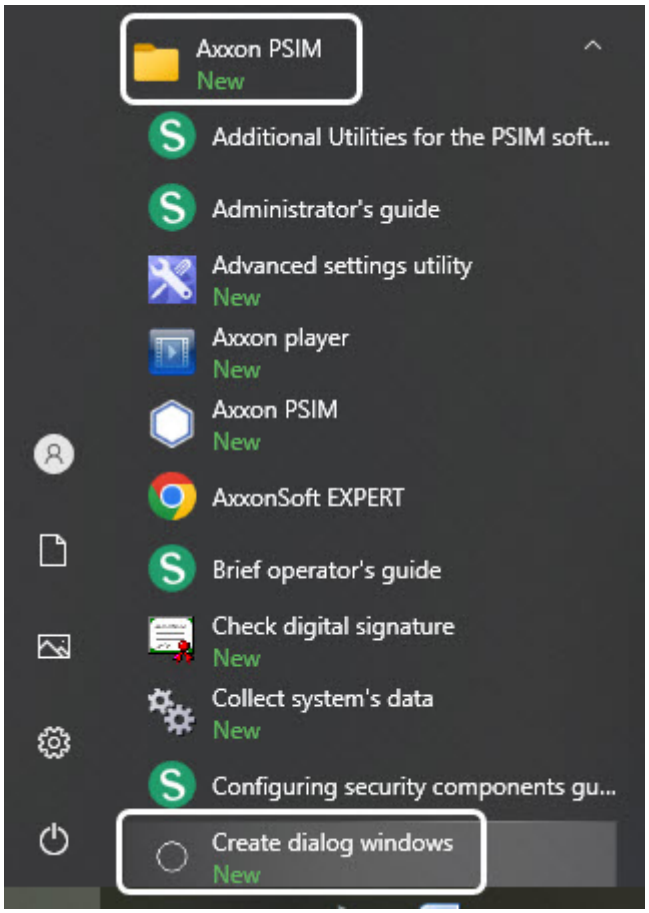
The dialog box is connected to Axxon PSIM via a system operator **object query window** and displayed as a result of the macro commands that are specifically designed to work with this dialog box. Thus, the *ArpEdit* utility allows you to completely adapt *Axxon PSIM* to solve particular problems of control and security at a production facility.

10.1.2 General principles of operating ArpEdit

Starting and shutting down ArpEdit

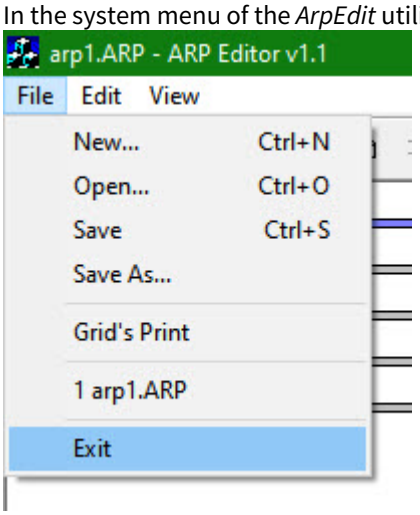
Launching *ArpEdit* can be done in one of the following ways:

1. Launch from the *Axxon PSIM* installation directory. To launch the *ArpEdit* utility from the *Axxon PSIM* installation directory, follow these steps:
    a. Go to the folder where you installed *Axxon PSIM* (default directory is C:\Program files\Axxon PSIM).
    b. Go to the **Tools\Arpedit** folder.
    c. Launch the file arpedit.exe.
2. Launch from the **Start** menu. To launch the *ArpEdit* utility from the **Start** menu, select the menu item **Create dialog windows,** located in **Start** → **Axxon PSIM**.



Closing the operation of the *ArpEdit* utility may be done in one of the following ways:

1. In the system menu of the *ArpEdit* utility, in the **File** heading, select **Exit**.



2. Click .

If the document contains any unsaved changes, a **Report editor** dialog box appears.

To confirm the changes, click **Yes**. To exit the program without saving the changes, click **No**.

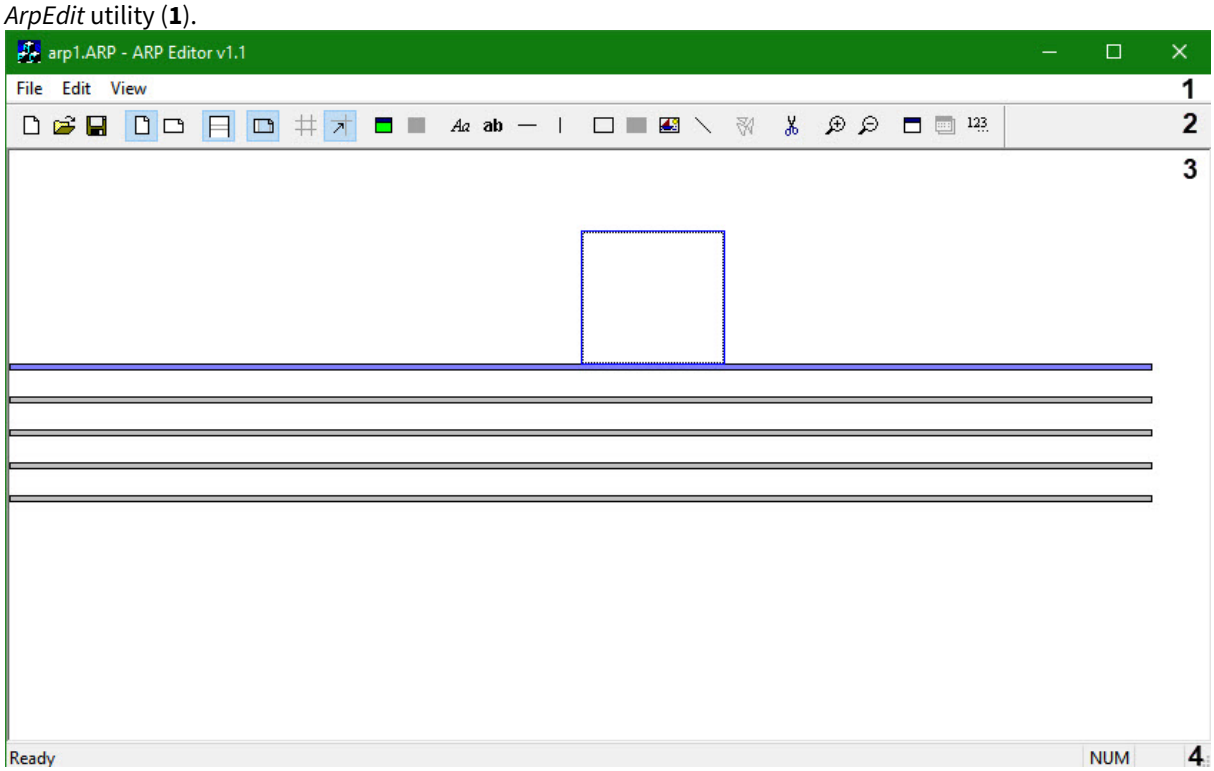
The utility window will close.

Description of the interface elements of the ArpEdit utility

The *ArpEdit* utility window contains the following key interface elements:

> **Note.**
>
> More information on the interface elements of the ArpEdit utility can be found in the appendix (see APPENDIX 1. Interface elements of the ArpEdit utility).

1. The System menu. Provides access to file operations, editing functions and window display settings for the *ArpEdit* utility (**1**).

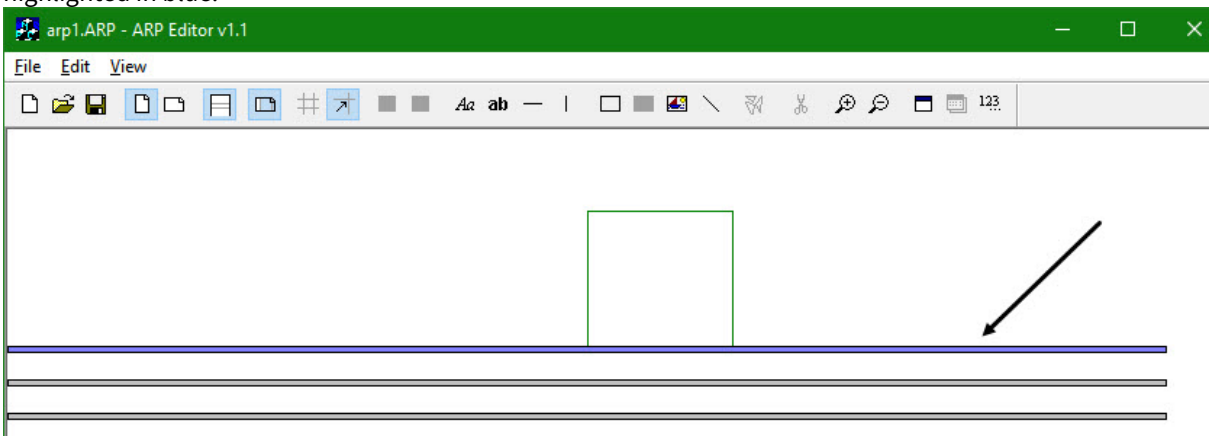


2. Toolbar. Provides access to key features of the utility (**2**).
3. Workspace. Contains elements of the badge or dialog box, add users, and allows for the management of placement and sizes (**3**).
4. The status bar displays information about the actions produced by the utility (**4**).

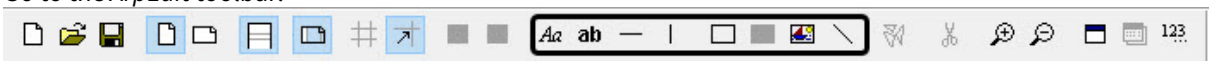
Creating ArpEdit objects

ArpEdit objects are divided into the user interface and variable elements. To create a new object in the workspace, follow these steps:

1. Select a section of the workspace where you want to add an item, click on it. The selected part will be highlighted in blue.



2. Go to the *ArpEdit* toolbar.



3. Select the object to be added by clicking the left mouse button on the appropriate icon on the toolbar (see description below).
4. Click the left mouse button at the point in the workspace in which to place the upper left corner of the object.

Note.

The dimensions of the created object can be changed in two ways:
1. By dragging the right or bottom edge of the object with the mouse.
2. By setting new values for the height and width of the object in the field box (see Setting field variables).

The position of the created object can also be modified in two ways:
1. Dragging the object with the mouse from the top or left edge.
2. By setting the new position of the object in the field variable window (see Setting field variables).

ArpEdit objects:

Name	Description	Purpose
Text	Fixed text field	Display fixed text field

Name	Description	Purpose
Variable	Variable text field, hidden text box, button or drop-down list	1. Displays information from the database when creating badges 2. Variable when creating dialog boxes

Name	Description	Purpose
Line	A line of given length and direction	Design element

Name	Description	Purpose
Frame	Set rectangular frame sizes	Design element

Name	Description	Purpose
Square	Set filled square sizes	Design element

Name	Description	Purpose
Image	Image placed at a specific location	Insert client photographs in the badge form for printing

Creating a new object is finished.

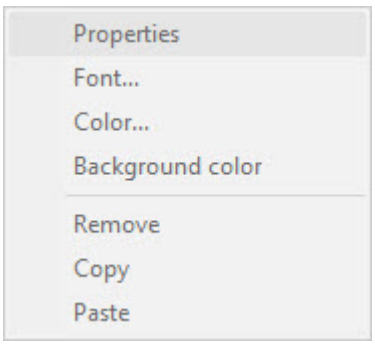
Setting object display variables

Setting field variables

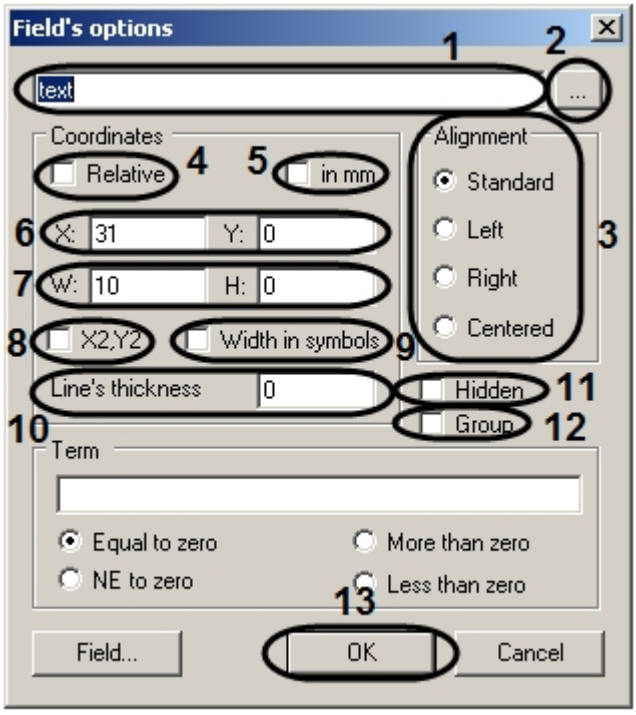
To set the field variables, follow these steps:

1. In order to set the field variables, it is necessary to select the variables of the object in the workspace, and open the **Variables** field in one the following ways:
   a. Click  on the toolbar;
   b. In the object functional menu, select **Properties**.

> **Note.**
>
> The object functional menu is opened by right-clicking anywhere inside the object.



2. The **Field variables** window will appear.

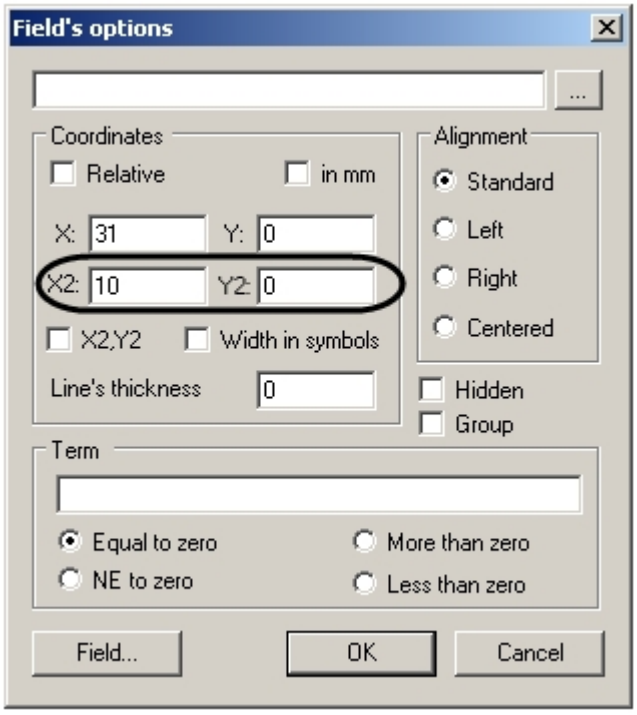


3. In the text field (**1**) enter information describing the field:
   a. Enter text in **Text field**, which will be displayed in the text field.
   b. For **Variable,** enter the variable name.
   c. For an **Image,** enter the image address in quotes. The image must be placed in one of the following folders:
      i. In the *Axxon PSIM* software installation folder (e.g. C:\Program Files\Axxon PSIM), then in the field (**1**) enter the image name, e.g. “image.bmp”.
      ii. In the Bmp folder of the *Axxon PSIM* software installation folder (e.g. C:\Program Files\Axxon PSIM\Bmp), then enter the image file address as "Bmp\image.bmp" or "Bmp/image.bmp".
4. If you would like to fill in the text field with data from a text file or enter a large amount of data, then click the ... button (**2**) and use a text editor (see the section in APPENDIX 2. Entering text using the editor).
5. Set the **Alignment** settings for the desired justification of the text within a selected object (**3**).
6. Select units of measure which will be used to size the object:
   a. If the size of the object will be given in millimeters, then check the **in mm** box (**5**).
   b. If the size of the object will be given in characters [symbols], then check the **Width in symbols** box (**9**).

   > **Note.**
   >
   > The size of the object is given in characters [symbols] by default.

7. Set the position of the upper left of the object in one of the following ways:
   a. Specify the absolute coordinates of the object. In this case you should indicate the position of the upper left corner by setting the X-axis in the **X** field, and the Y-axis in the **Y** field: (**6**)
   b. Specify the relative coordinates of the object. In this case you should check the **Relative** box (**4**).
8. The width and height of the object can be set in one of the following ways:
   a. Specify the width of the object in the **W** field, and the height of object in the **H** field (**7**).
   b. Specify the coordinates of the lower-right corner. To do this, check the **X2, Y2** box (**8**). The **W** and **H** fields will be by **X2** and **Y2**. After this, specify the coordinates of the lower-right corner of the object

using the **X2** field for the x-axis and the **Y2** field for the y-axis.



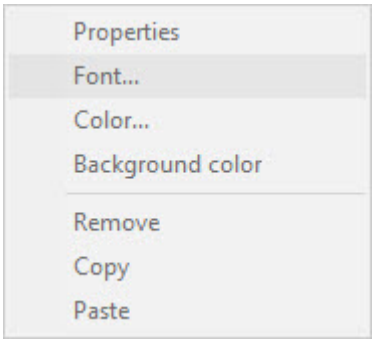
9. Specify the line thickness in the **Line thickness** field in the desired units (**10**).
10. If a custom object should be on the badge or there is a dialog window, but it should not be visible to the user, then check the **Hidden** box (**11**).
11. If the object must be part of a group, check the **Group** box (**12**).
12. Click **OK** (**13**).

Setting the variables is completed.

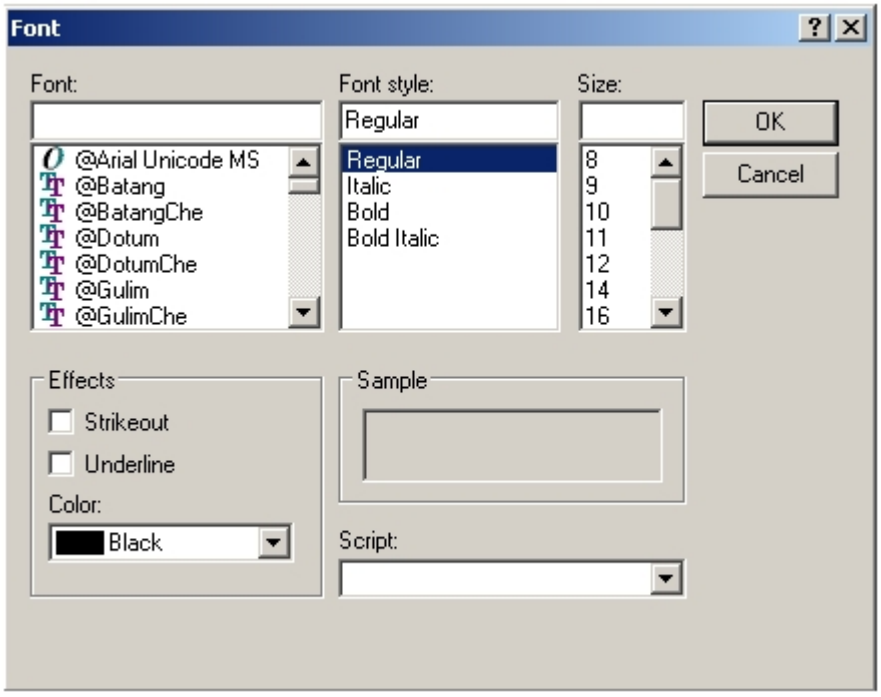
Setting the text font

To set the text font, follow these steps:

1. Select **Font** from the menu.



2. Using the standard font selection menu, set the text display settings.

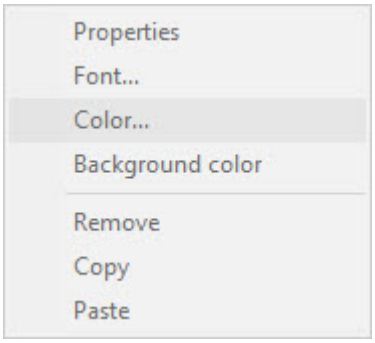


Setting the text font is completed.

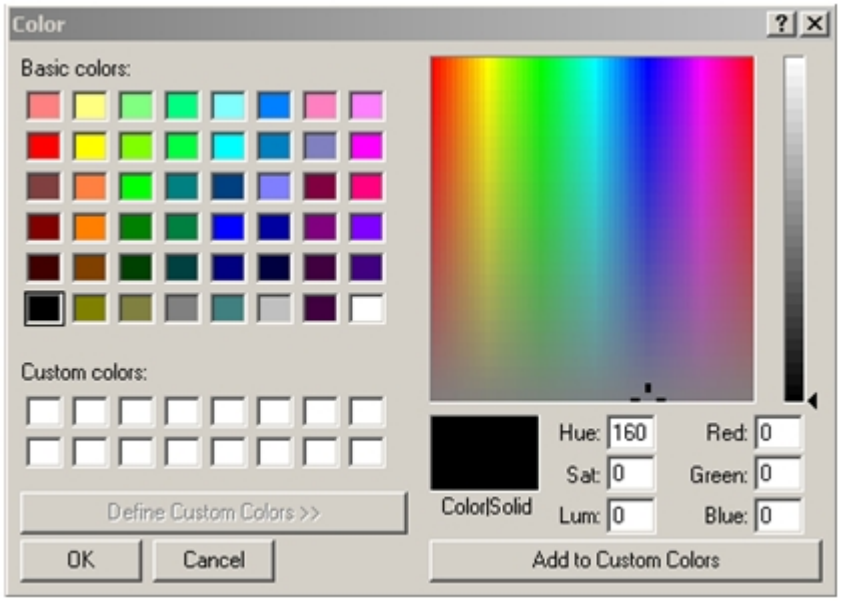
Setting the color

To set the color, follow these steps:

1. Select **Color** from the menu.



2. Using the standard color selection menu, select the color desired for the object.

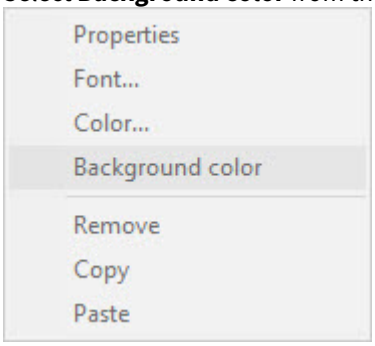


Setting the color of the object is completed.

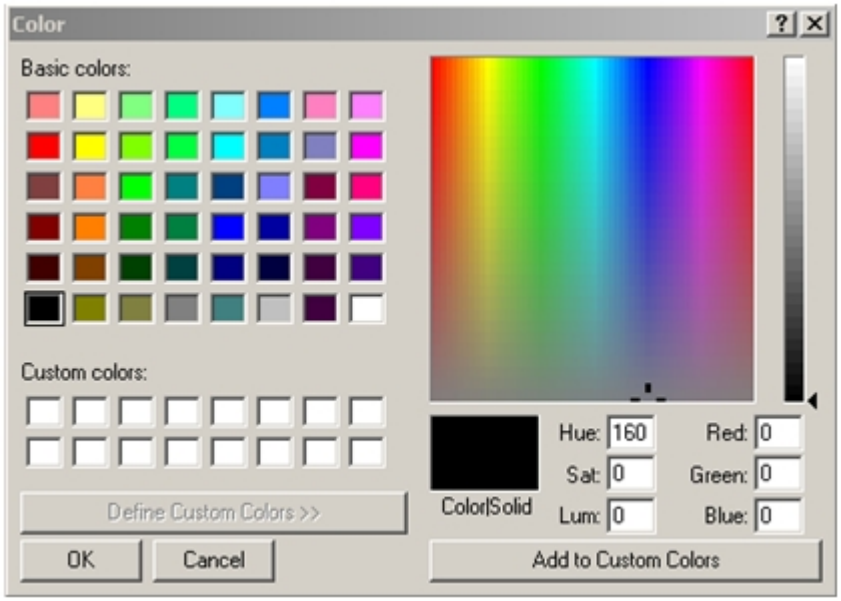
Setting the background color of the object

To set the background color of the object, follow these steps:

1. Select **Background color** from the menu.



2. Using the standard color selection menu, select the background color desired for the object.



Setting the background color of the object is completed.

10.1.3 Creating dialog boxes

Creating a dialog box form

In the *Axxon PSIM* dialog box, objects will be displayed in the *ArpEdit* workspace.

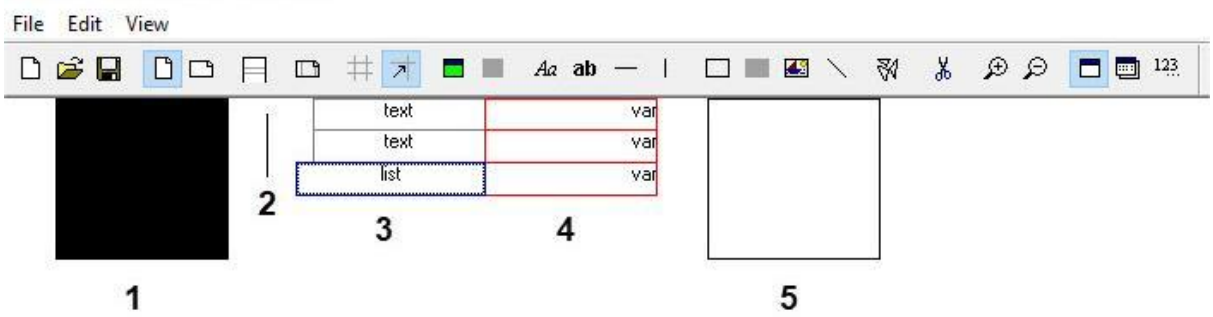
Create a dialog box form in the following order:

1. Create design elements in the workspace.
2. Create variables in the workspace.
3. Configure the design elements in the workspace.

Creating design elements

The design elements in the dialog window correspond to their appearance in the workspace. You can add the following design elements:

1. **Square** (**1**). Adding a square in the workspace is performed by clicking the button on the *ArpEdit* utility toolbar.



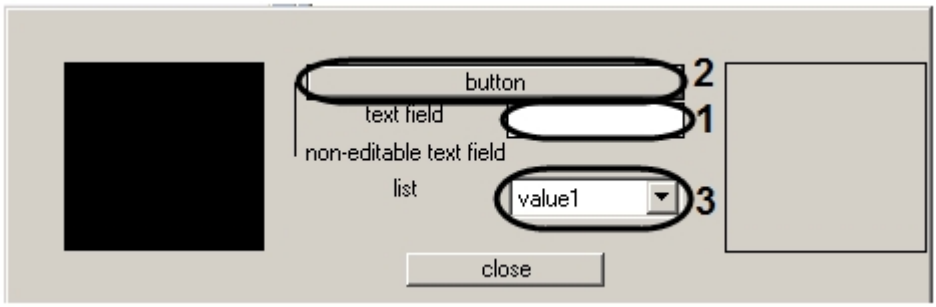
2. **Line** (**2**). Adding a line in the workspace is performed using one of the following buttons:  on the *ArpEdit* utility toolbar.
3. **Text** (**3**). Adding the text field with the non-edited information in the workspace is performed by clicking the  button on the *ArpEdit* utility toolbar.
4. **Variable** (**4**). Adding the editable text field (hidden field, button, or drop-down list) in the workspace is performed by clicking the  button on the *ArpEdit* utility toolbar.
5. **Frame** (**5**). Adding a frame in the workspace is performed by clicking the  button on the *ArpEdit* utility toolbar.

Creating design elements is complete.

Creating variables

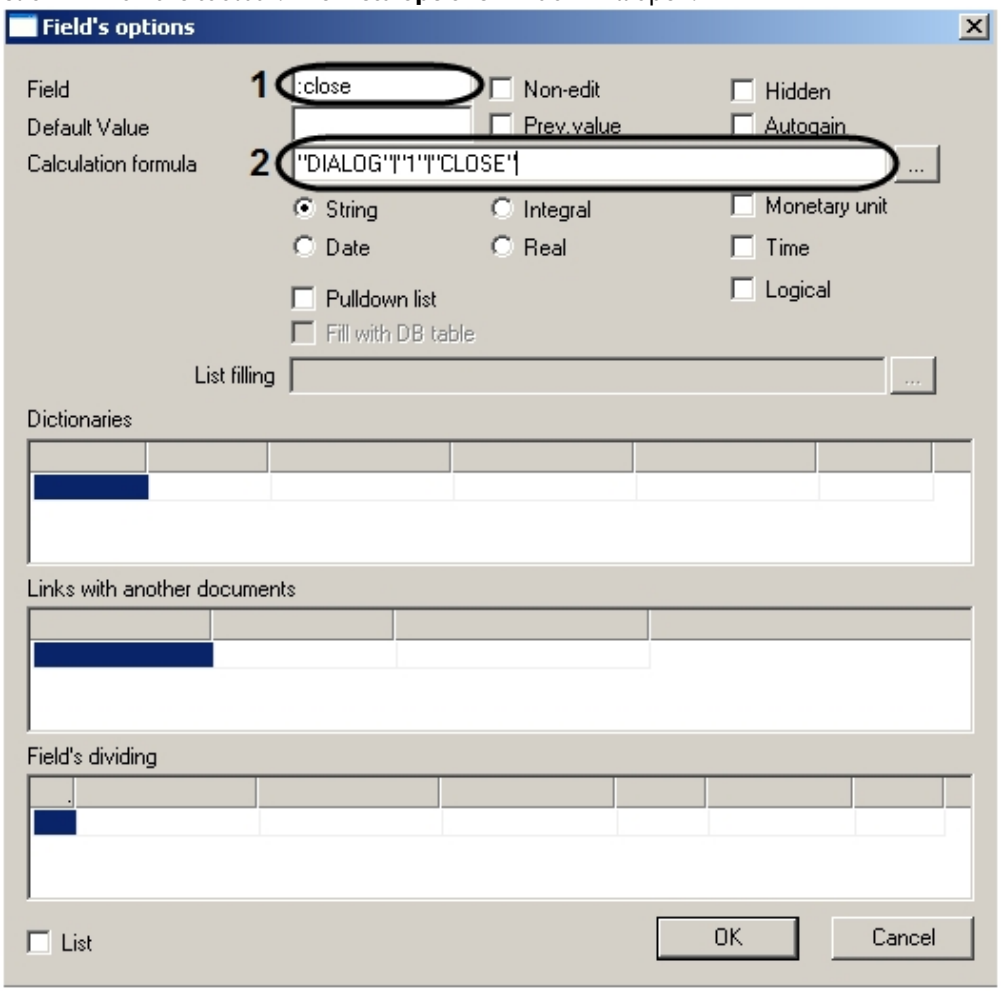
Creating variables in the workspace is done using the  on the *ArpEdit* toolbar. Depending on the variable setting they may be displayed in the dialog box as follows:

1. Editable text field (**1**). Additional configuration after adding is not needed (**5**).



2. Button (**2**). In order to display a variable as a button in the dialog box, you must configure it after adding it to the workspace, as follows (**6**):

a. Click  on the toolbar. The **Field options** window will open.

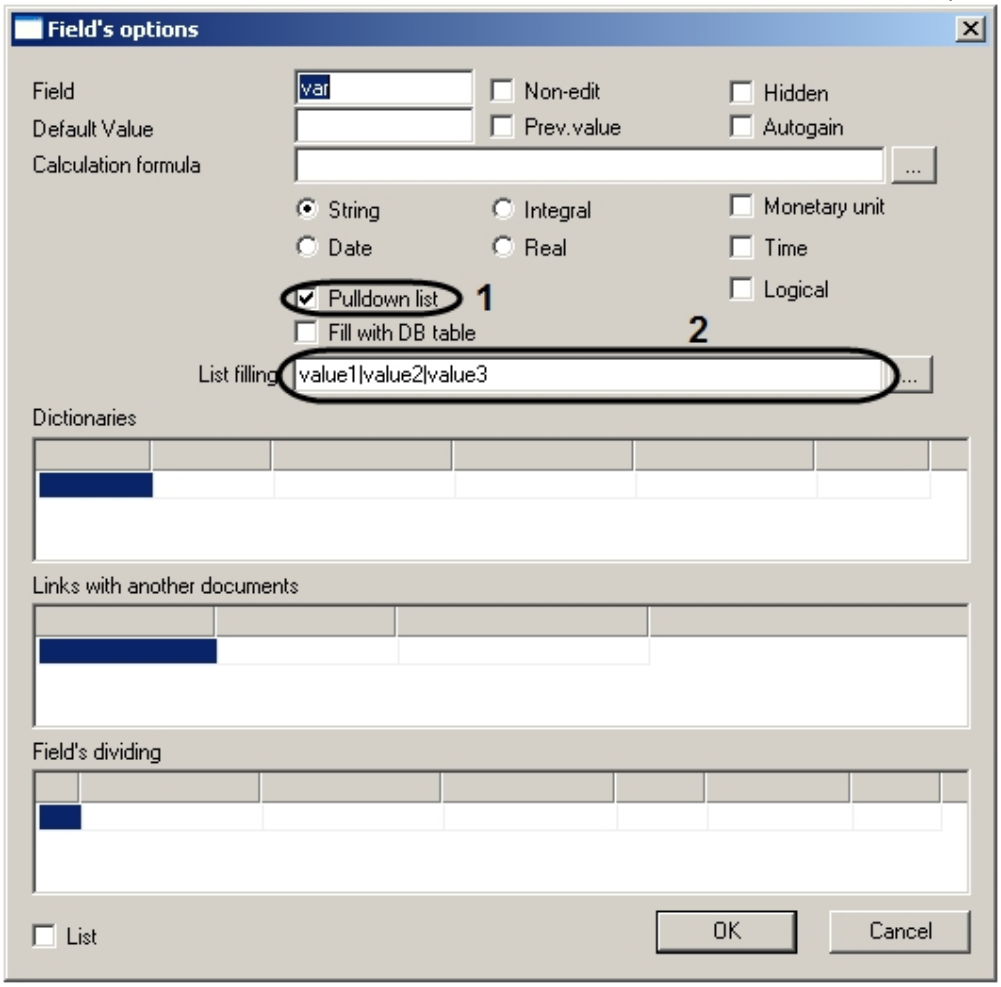


b. Place a colon in front of the variable name (**1**).
c. In the **Calculation formula** field, specify the variables for the DoReact function using quotes "," – which will be used with the button is clicked (**2**).
d. Click **OK.**

3. Drop-down list (**3**). In order to display a variable as a drop-down menu in the dialog box, you must configure it after adding it to workspace, as follows (**7**):

a. Click  on the toolbar.

b. Double click on the frame around the variable name. The **Field options** window will open.



c. Check the **Drop-down menu [Pulldown list]** box (**1**).
d. If you would like to manually specify menu values, then you must enter the desired value in the **Fill list** field, using the character "|" as the separator between values (**2**). To enter a large amount of text or to paste text from a file, click ... and use the editor (see the section in APPENDIX 2. Entering text using the editor).
e. Click **OK.**

Creating variables is completed.

Setting up workspace objects

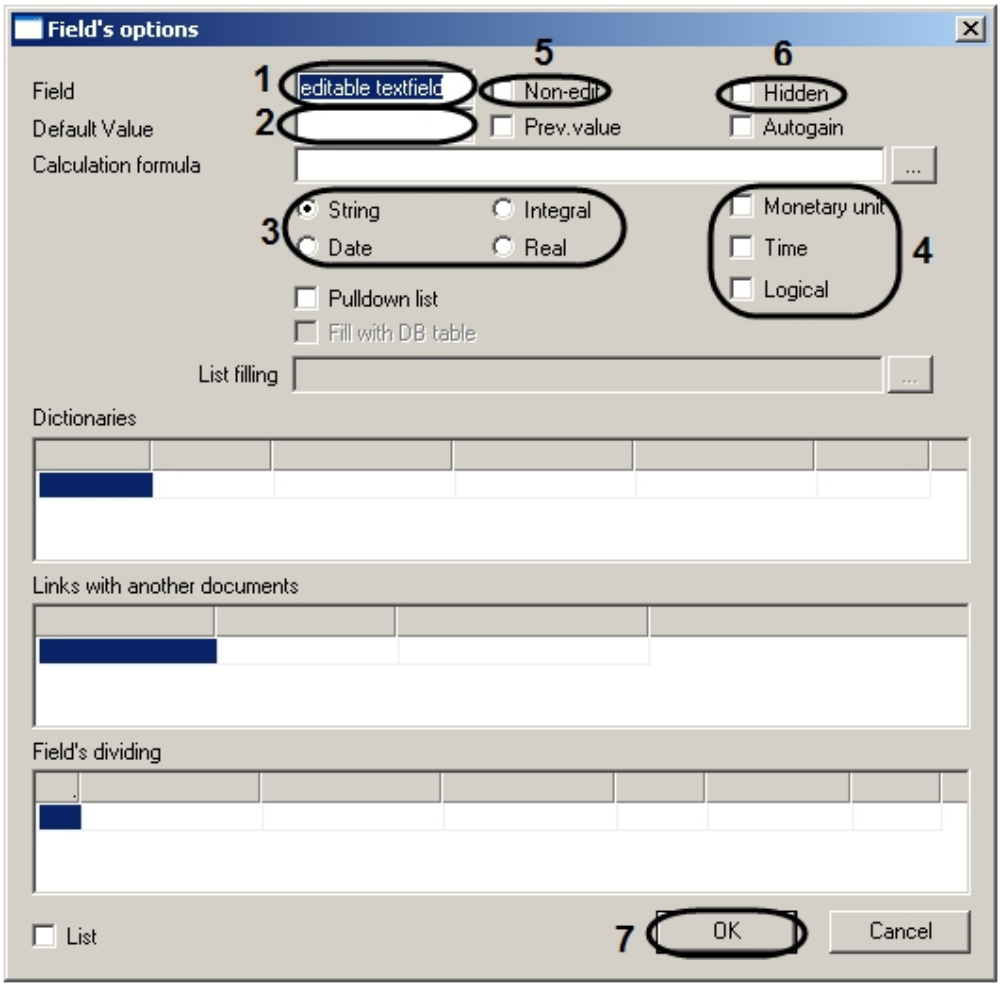
After adding interface elements and variables to the workspace, it is necessary to configure them. Configuring interface elements includes specifying their display variables (see the section on Setting object display variables).

To configure a variable, follow these steps:

1. Click  on the toolbar.
2. Double click the left mouse button on **Variable** menu item that you wish to set. The **Field options** window will open.
3. Enter the name of the variable in the **Text field** (**1**).

Note.

If there is a colon in front of the variable name (for example :var), the when creating a dialog box it will be displayed as a button with the same name (var). At the same time, in the **Calculation formula** field (**3**) the variables for the DoReact function will be displayed, delineated by the "|" character.



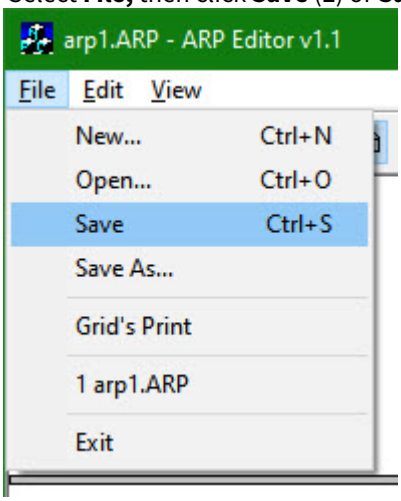
4. Enter the **Default value** in the field, of the variable that will be the default value (**2**).
5. Set the switches (**3**) to the position corresponding to the type of variable.
6. Specify the format for the variable. To do this you need to check one or more of the checkboxes in front of the format corresponding to the variable (**4**).
7. If you do not want to allow the value of the variable in the dialog box to be changed, then check the **Non-edit** box (**5**).
8. If you want the value of the variable to be present in the dialog box, but not visible, then check the **Hidden** box (**6**).
9. Click **OK** (**7**).

Configuring variables is completed.

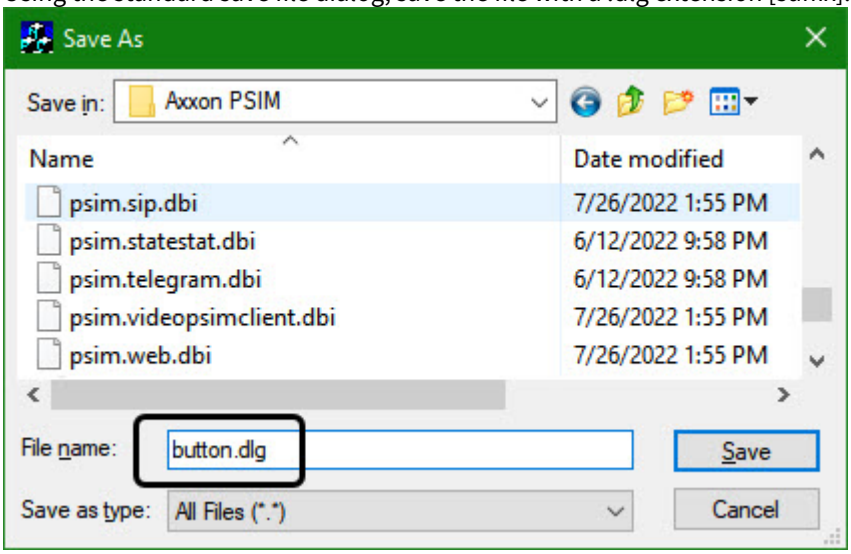
Saving the dialog box form

To save the dialog box form, follow these steps:

1. Select **File,** then click **Save** (**1**) or **Save as…** (**2**) to save the file under a new name.



2. Using the standard save file dialog, save the file with a .dlg extension [suffix].



Note.

The file extension should be entered manually in this case.

Important!

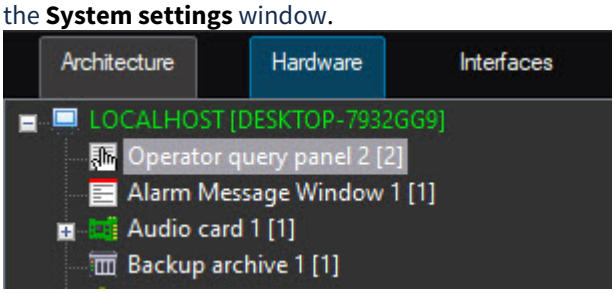
In order to have access to the saved dialog form file in *Axxon PSIM*, it should be saved in the following folder: <Path to installation directory of Axxon PSIM>/Program.

Saving the dialog bog form is completed.

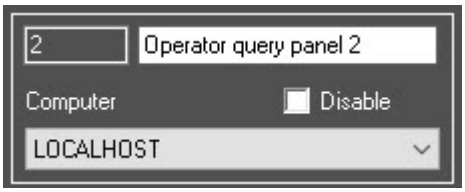
Opening a dialog window in Axxon PSIM

To open a dialog window in *Axxon PSIM,* do the following:

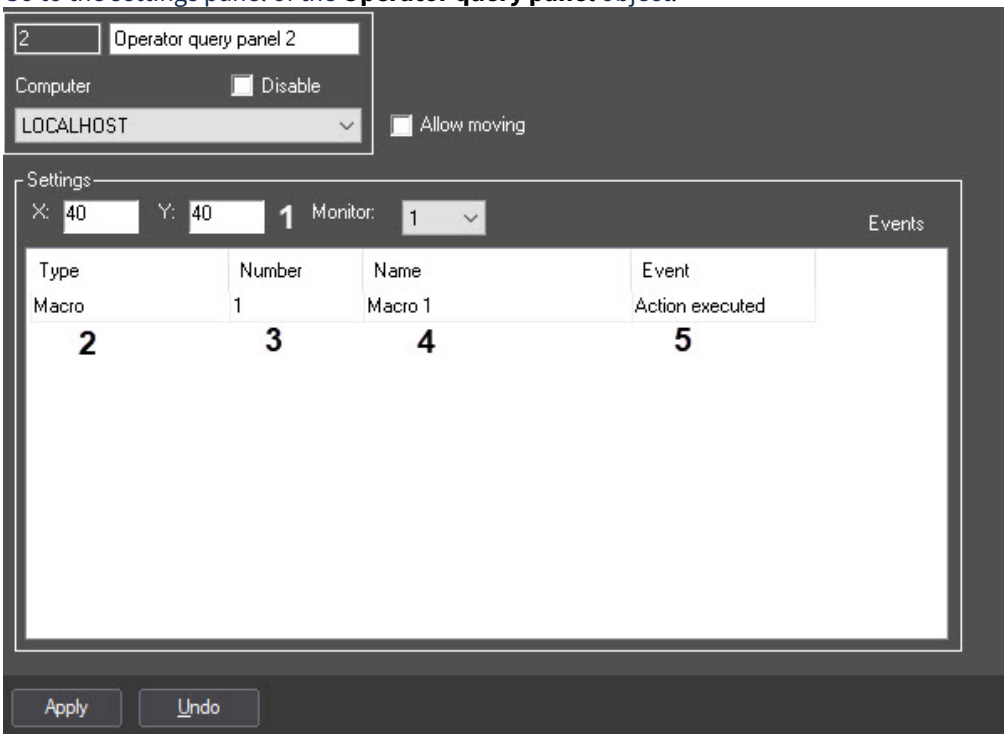
1. Create the **Operator query panel** object on the basis of the **Computer** object on the **Hardware** tab of the **System settings** window.



> **Attention!**
>
> When you create the **Operator query panel** object, specify the name of the file of the dialog window form saved in the corresponding directory in the **Number** field.



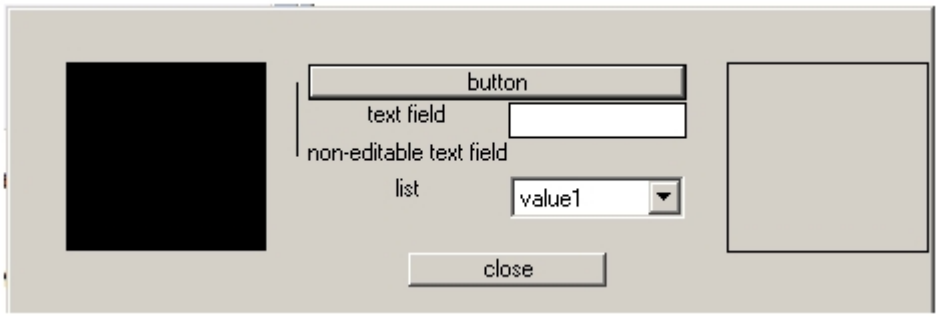
2. Go to the settings panel of the **Operator query panel** object.



3. Specify the window coordinates:
   a. In the **X** field, specify the coordinate on the horizontal axis.
   b. In the **Y** field, specify the coordinate on the vertical axis (**1**).
4. From the drop-down list in the **Type** column, select the type of the object that generates the appearance of a new dialog window (**2**).
5. From the drop-down list in the **Number** column, select the number of the selected object type in the system (**3**).

6. Double-click the cell in the **Name** column (**4**). The name of the selected object is automatically displayed in this cell.
7. In the **Event** column, select the action that is performed after the corresponding event occurs in the system (**5**).

> **Note**
>
> In the example shown in the figure, the dialog window created in the form will be displayed if the macro is executed.



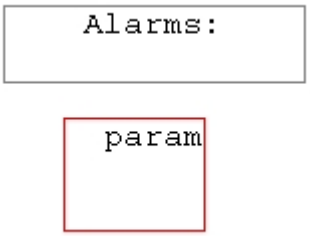
Dialog windows are used when programming *Axxon PSIM*. For detailed information about the embedded programming language, see Guide for creating scripts (programming).

Configuration of the **Operator query panel** object is described in detail in the Administrator's Guide.

Example of creating a dialog window to count the number of movements

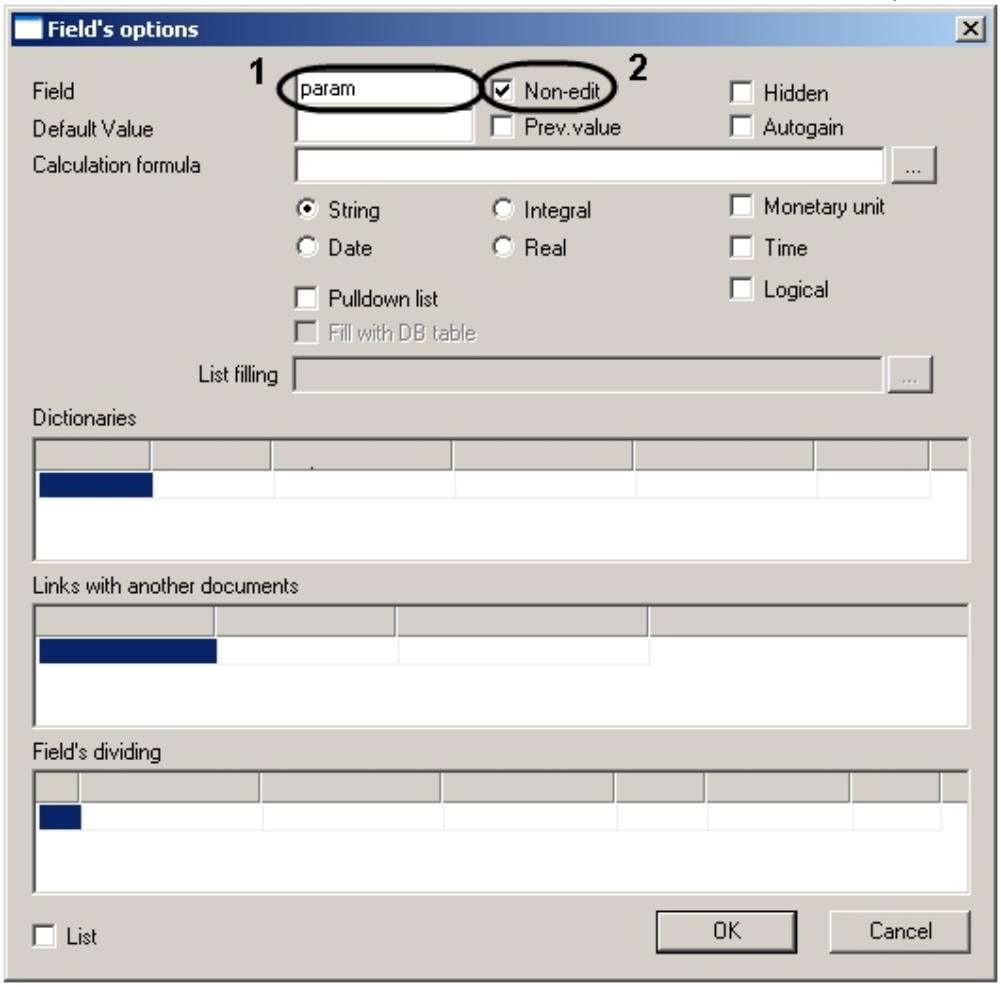
This section provides the example of creating a dialog window to count the number of movements.
To create such a dialog window, do the following:

1. Create the field with the **Number of movements** text (**1**).

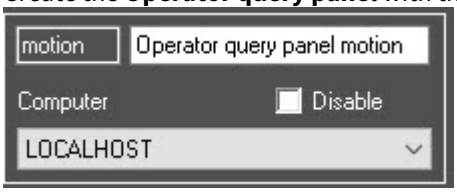


2. Create the **param** variable (**2**).
3. Click the  button on the toolbar.

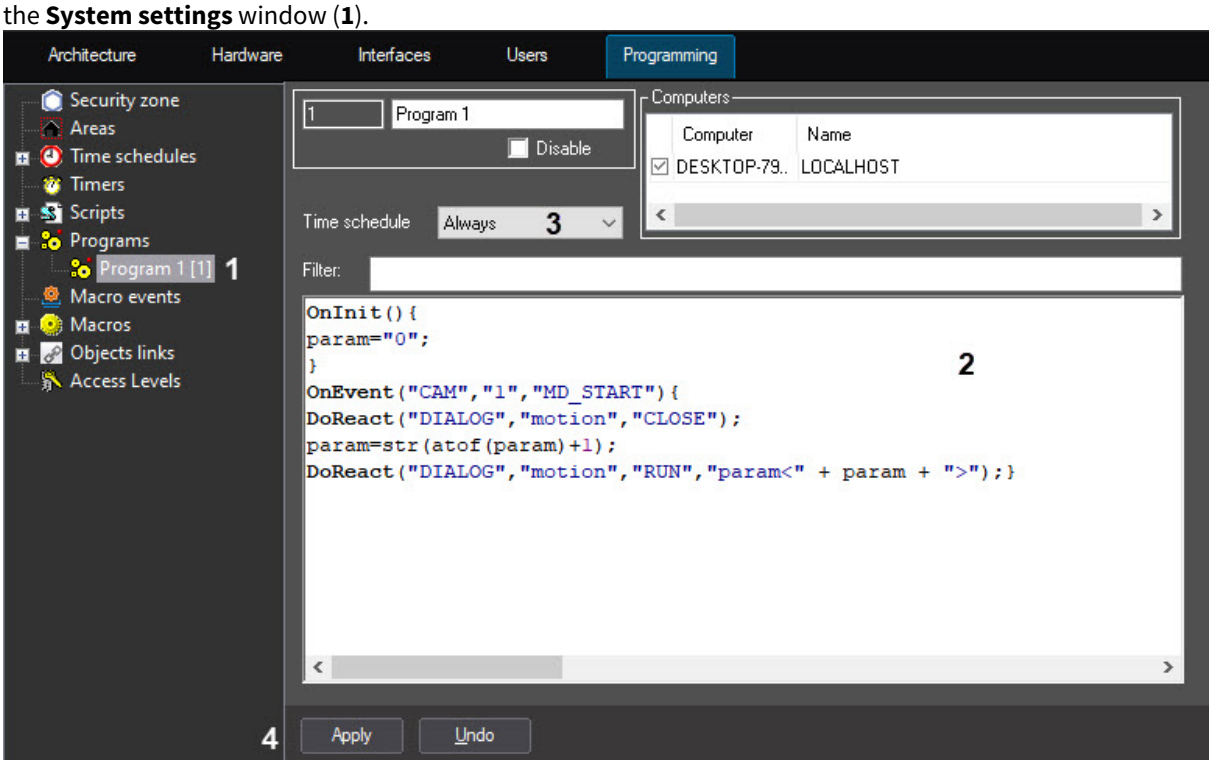
4. Double-click the frame around the variable name. The **Field's options** window opens.



5. Specify the **param** value as the name of the variable.
6. Set the **Non-edit** checkbox.
7. Save the file with the **motion.dlg** name in the following folder: <*Axxon PSIM* installation directory>\Program.
8. Run *Axxon PSIM*.
9. Create the **Operator query panel** with the **motion** number in the *Axxon PSIM* object tree.



10. In *Axxon PSIM,* create the **Program** object on the basis of the **Programs** object on the **Programming** tab of the **System settings** window (**1**).



11. Enter the following program text in the field on the right (**2**):

```
OnInit(){
param="0";
}
OnEvent("CAM","1","MD_START"){
DoReact("DIALOG","motion","CLOSE");
param=str(atof(param)+1);
DoReact("DIALOG","motion","RUN","param<" + param + ">");
}
```

12. From the **Time schedule** drop-down list, select **Always** (**3**).
13. Click the **Apply** button (**4**).

The result of script execution: as soon as movement appears in camera sector 1, the **motion** operator query panel opens, showing the number of (**param**) movements.

Creating a dialog window to count the number of movements is complete.

10.1.4 Working with badge forms

The *ArpEdit* utility supports work with the *Visitor Management System* (see Visitor Management System Module Settings and Operation Guide) module and allows you to create badge forms and output them for printing.

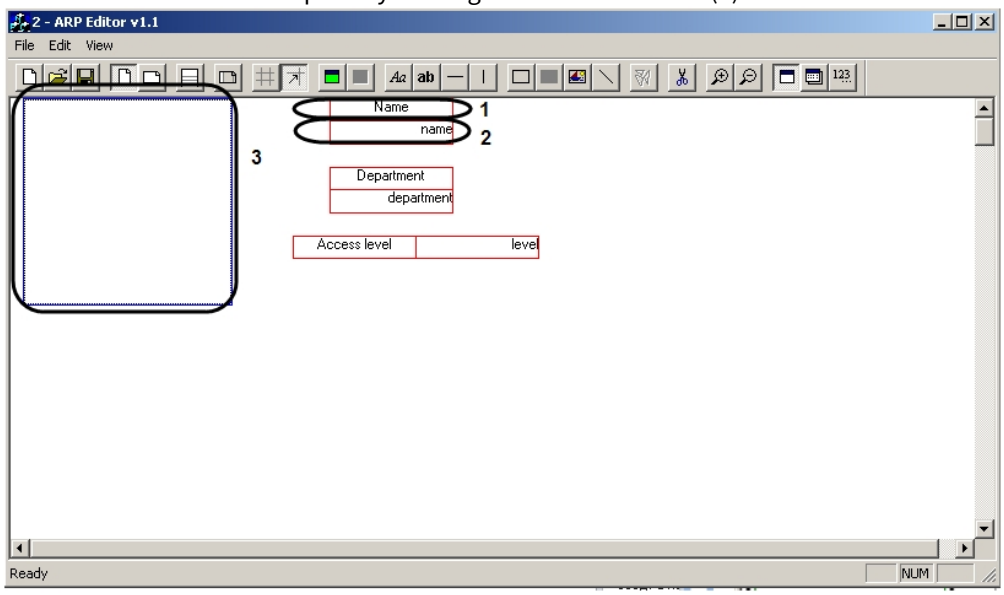
Creating a badge form

Before you start to create badge forms, you need to make sure that you have created an **Access Control Service** object, as well as departments and users in *Axxon PSIM.*

To create badge forms in the *Access Control Service,* follow these steps:

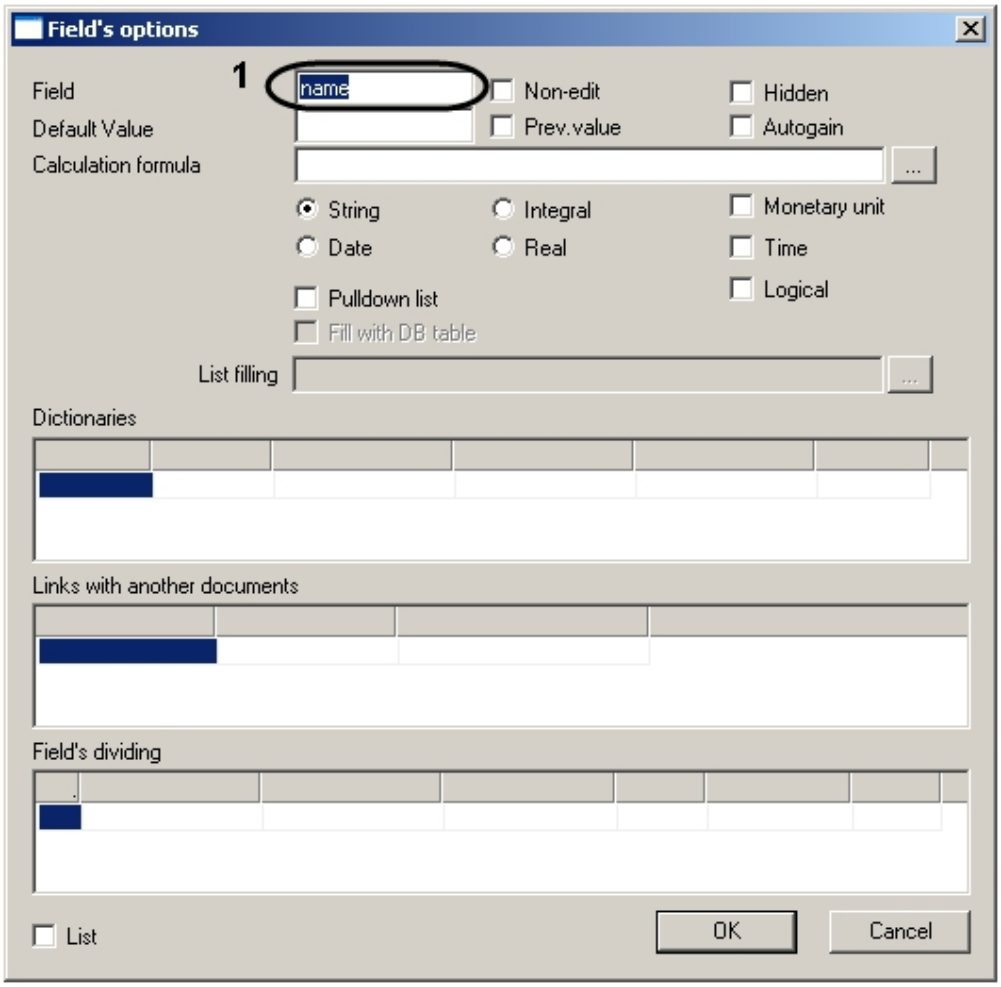
1. Select the workspace section where the items will be added to the interface. Each section represents a single page.
2. Create the required number of variables, as follows:

   a. Add a variable to the workspace by clicking  on the toolbar (**1**).



   b. Click  on the toolbar.

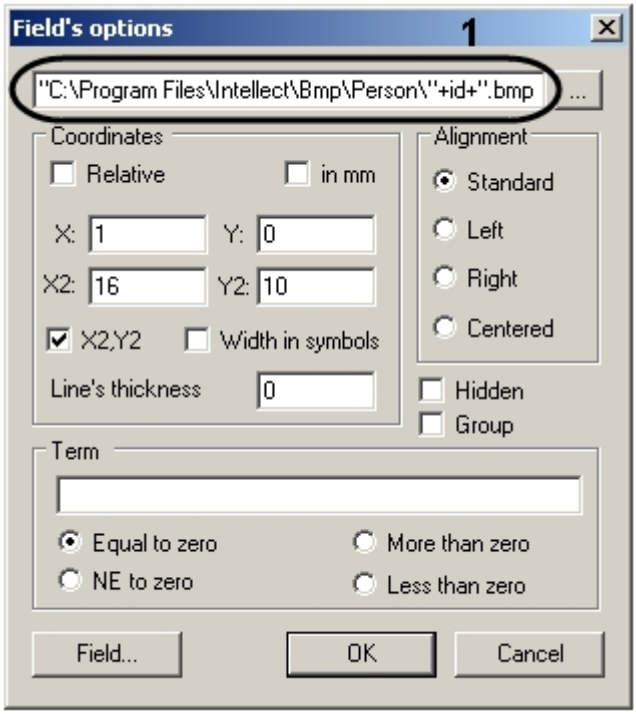
c. Double click the left mouse button on the border of the **Variable** that you wish to set. This will open the **Field options** window.



d. In the **Field** box [field], enter the name of the variable corresponding to the table in the *Axxon PSIM* database: dbo.OBJ_PERSON, from which data will be accessed for printing the badges (**1**).

3. Add the required design elements from the *ArpEdit* toolbar.
4. In order to allow the printing of photographs of employees on each pass for badge users, the **Image** should be set as follows:

5. Select the required **Image** and click  on the toolbar. The **Field options** window will open**.**



6. In the **Field options** window, specify the following text string: "*<Axxon PSIM* installation directory>\bmp\Person\"+id+".bmp" (**1**). When outputting the badge to the printer, the **id** variable will be automatically read from the data base, and photography assigned to that ID by *Axxon PSIM* will be printed on the badge.

Design elements used for badge forms:

Name	Description	Function
Text	Uneditable text field	Will display uneditable text information

Name	Description	Function
Line	Line of any given length and direction	Design element

Name	Description	Function
Frame	Rectangular frame of a specified size	Design element

Name	Description	Function
Square	Filled rectangle of a specified size	Design element

Name	Description	Function
Image	An image placed at a specified location	Insert user photographs on badge forms when printing

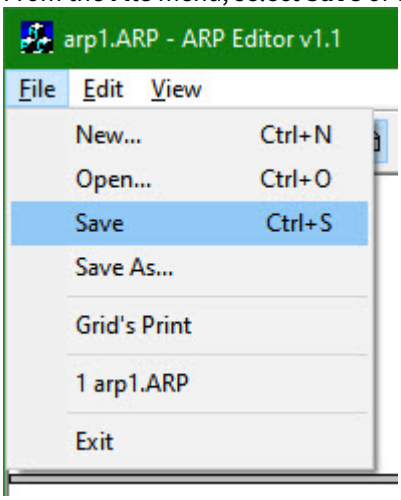
After adding all the required elements in the workspace, you must set the display variables (see section on Setting object display variables).

Creating badge forms is completed.

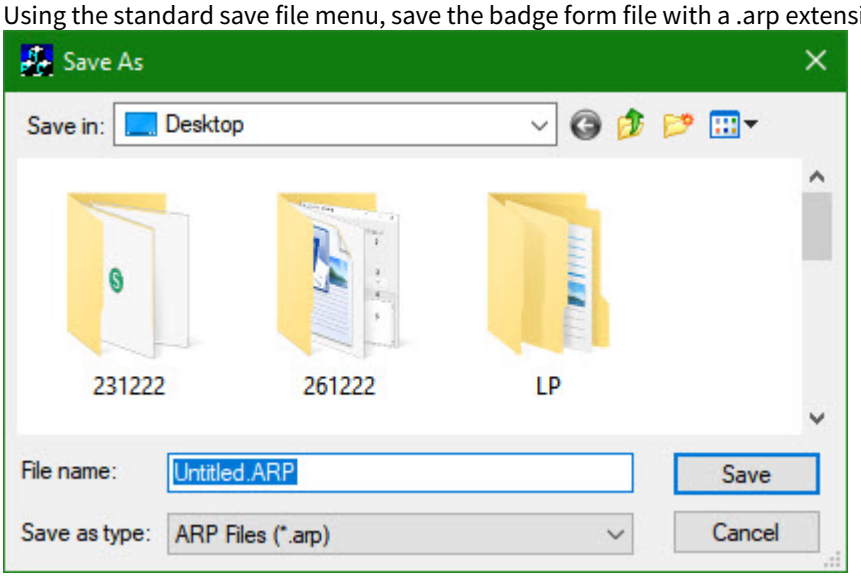
Saving badge forms

To save created badge forms, follow these steps:

1. From the **File** menu, select **Save** or **Save as…** to save a file with a new name.



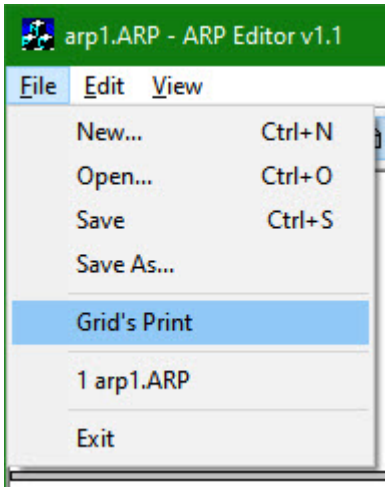
2. Using the standard save file menu, save the badge form file with a .arp extension.



Saving badge forms is complete.

Printing badges

To output badges for printing, select **Printer network [Print's Grid]** from the **File** menu.



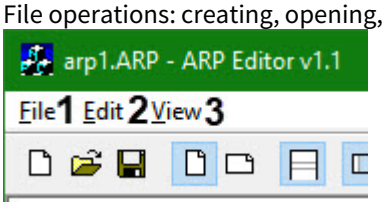
Outputting the badge to the printer is completed.

10.1.5 APPENDIX 1. Interface elements of the ArpEdit utility

System menu

The *ArpEdit* utility system menu provides access to the following functions:

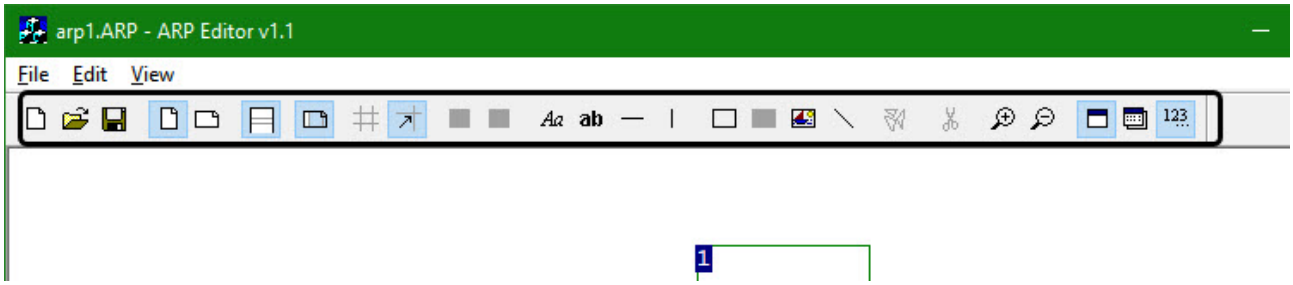
1. File operations: creating, opening, saving, printing (**1**).



2. Text editing features (**2**).
3. *AprEdit* utility window display settings. In this menu, you can enable or disable the display of the toolbar and status bar (**3**).

Toolbar

The main way to manipulate objects in *ArpEdit* is via a toolbar, that has buttons to control the utility.

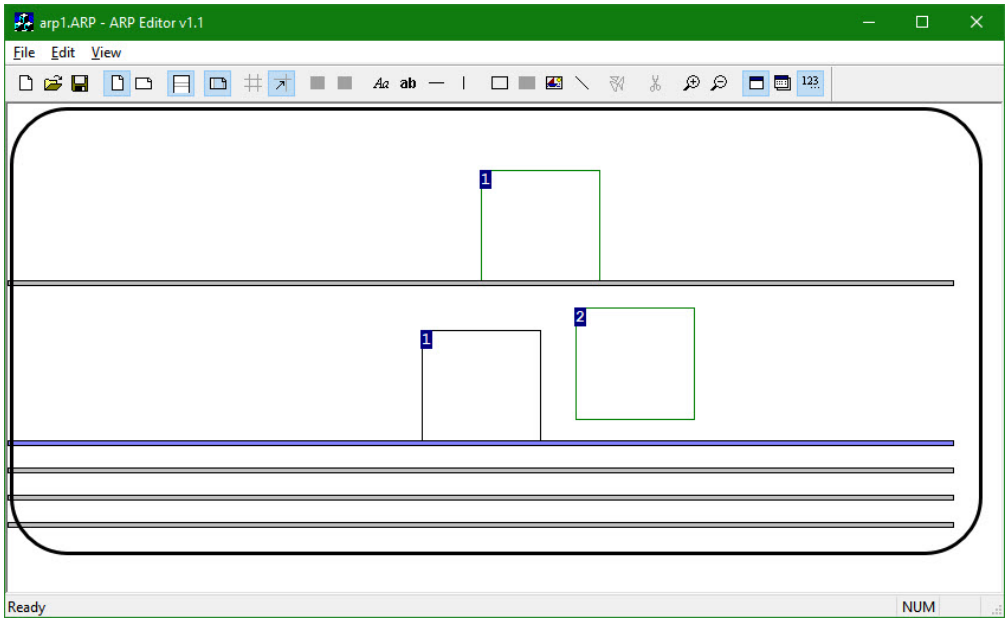


Description of the buttons in the *ArpEdit* utility toolbar:

Button image	Name	Function
Manipulation of *ArpEdit* documents		
	New	Create new document
	Open	Open file
	Save	Save text document
Managing an *ArpEdit* document		
	Orient vertically	When this element is activated, the page is oriented vertically
	Orient horizontally	When this element is activated, the page is oriented horizontally
	Display sections	Displays sections (pages) of the document (up to five)
	Show grid	Displays the mapping grid for the workspace
	Snap to grid	Snaps the object to the grid
	Zoom in	Increases the size of objects in the workspace
	Zoom out	Decreases the size of objects in the workspace
	Display options	Opens a settings window with display settings for the selected object
	Sort fields	Displays the fields in order by section
Adding objects to the *ArpEdit* workspace		
	Text	Insert a **text field** in the workspace
	Field	Insert a **Variable** (editable text field) in the workspace
	Horizontal line	Insert a horizontal **line** in the workspace
	Vertical line	Insert a vertical **line** in the workspace
	Frame	Insert a **frame** in the workspace
	Square	Insert a **square** (shaded rectangle) in the workspace
	Image	Insert an **image** in the workspace
	Line	Insert a **line** in any direction in the workspace
Object management		
	Separate text	Separate text using a linefeed as a separator
	Delete	Delete the selected object
	Form	Access the editor for variable parameters
	Form options	Set parameters for the connection with the data source

Workspace

The ArpEdit utility workspace is designed for the placement of objects in ArpEdit. When the Show sections button is activated, the workspace will be divided into sections by horizontal lines.



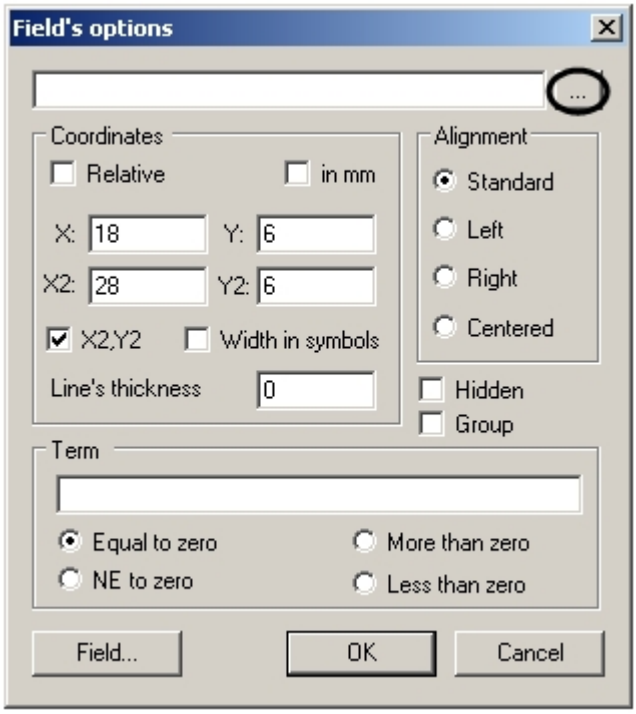
Each section will have its own page. To start editing a section, select it by licking on the dividing line with the left mouse button. The selected section will be highlighted in blue.

10.1.6 APPENDIX 2. Entering text using the editor

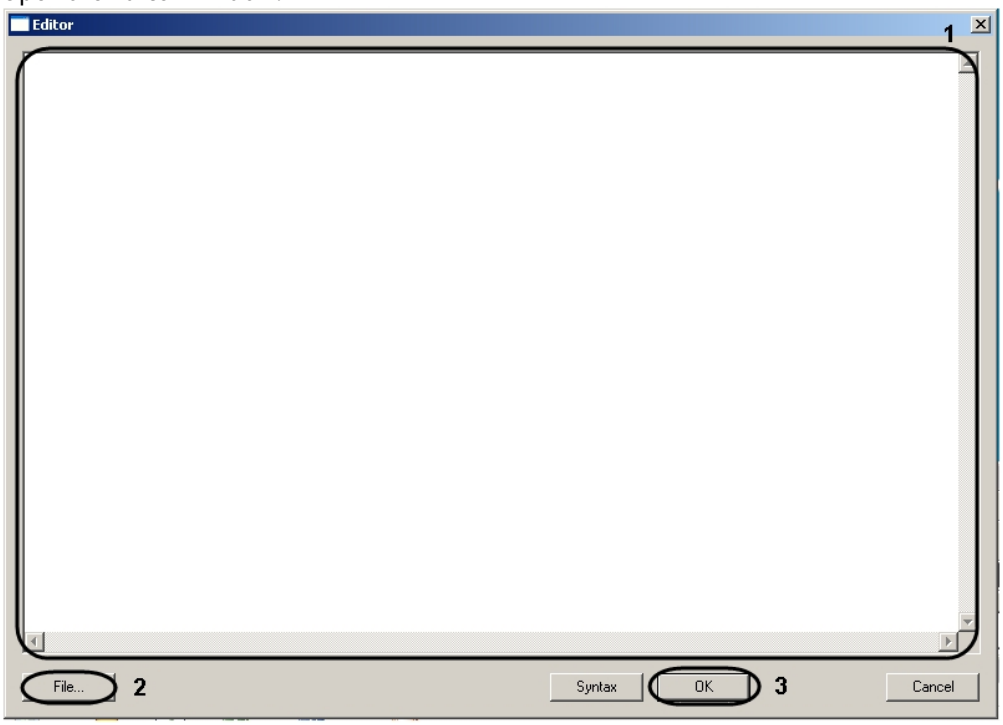
You can enter text in the variable settings using the built-in *ArpEdit* editor. This editor should be used when you want to fill in a text field with data from a text file or a large amount of data.

To enter text using the editor, follow these steps:

1. Click ... next to the text field.



2. Open the **Editor** window.



3. Enter text in the text field (**1**).
4. If you want to paste the text into a text field from a text file, then click **File...** (**2**) using the standard open file dialog box, select the required text file. Text from the selected file will appear in the text field (**1**).
5. Click **OK** (**3**).

Entering text using the editor is completed.

11 The idb.exe utility for converting databases, selecting database templates and making backup copies of databases

11.1 The purpose of the idb.exe utility

The idb.exe utility is designed for database administration in *Axxon PSIM* software. It provides the following functionality:

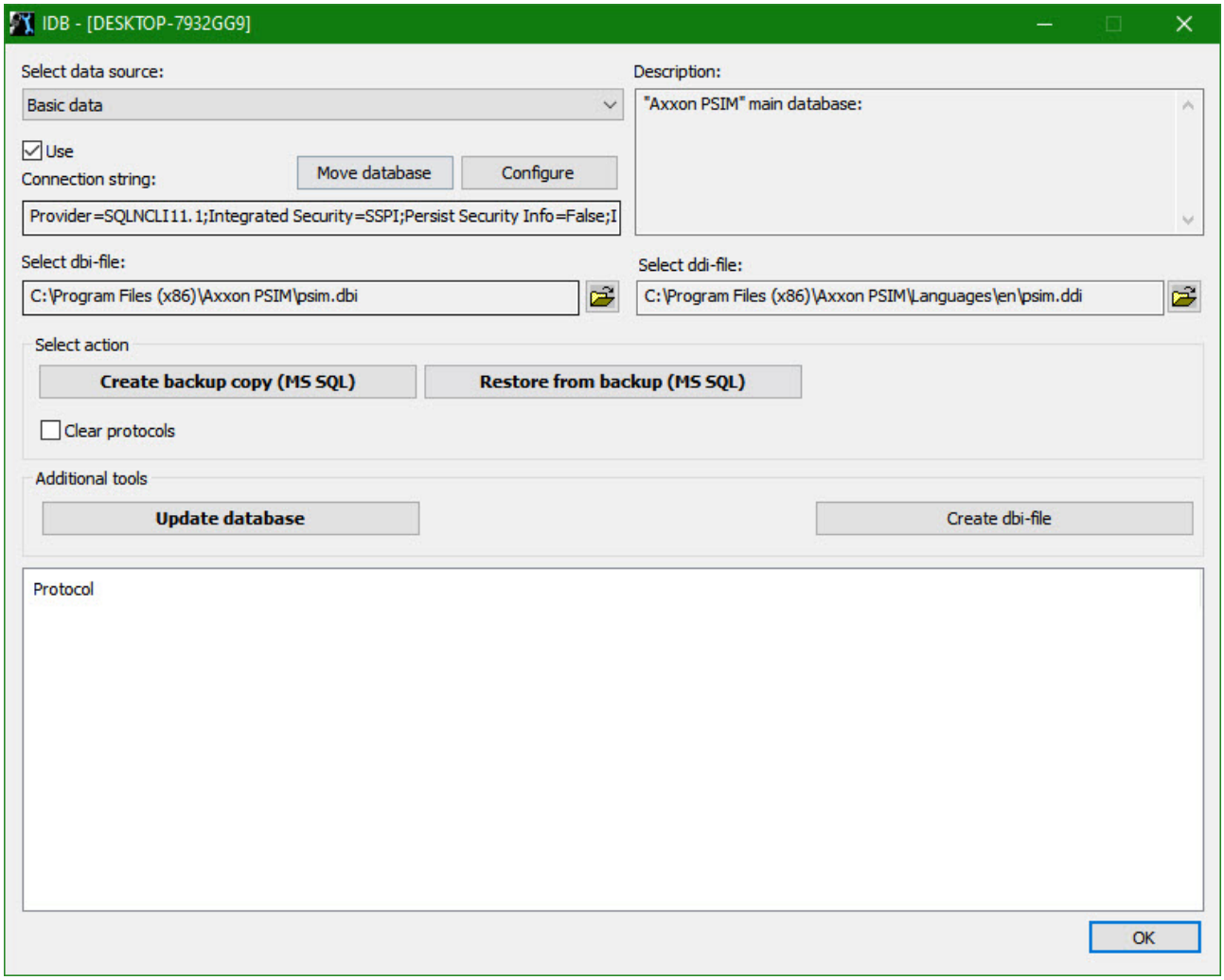
1. Connecting to the Axxon PSIM database.
2. Setting up the database synchronization.
3. Creating backup copies of a database.
4. Restoring a database from its backup copy.
5. Changing the database template (see Interface elements of the idb.exe window).
6. Separating the events log into an individual database.

11.2 Running and shutting down the utility

Shut down *Axxon PSIM* before running the idb.exe utility.

The idb.exe utility is run from the *Axxon PSIM* installation directory. For example: «C:\ Program Files \Axxon PSIM\idb.exe».

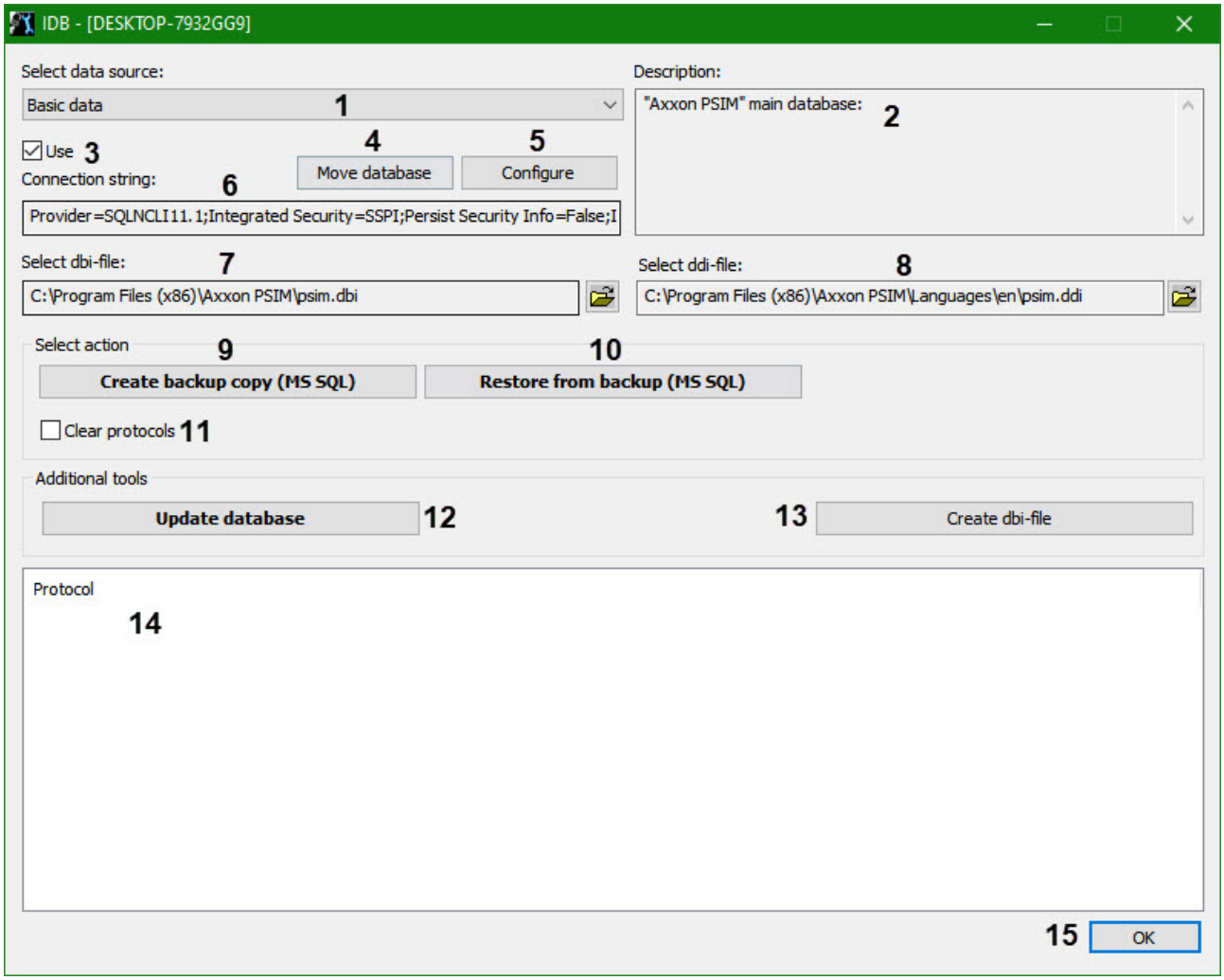
The idb.exe dialog box will open.



To confirm the changes and shut down the utility, click the **OK** button. To shut down the utility without saving the changes, click the **Close** button (☒).

11.3 Interface elements of the idb.exe window

The figure below shows the idb.exe dialog box.



The table describes the interface elements of the idb.exe utility dialog box.

№	Element name	Description	Default value	Allowed values
1	**Select data source**	The drop-down list for selecting the database: local **Configuration** database, **Event protocol** database, or a remote database for synchronization	Basic data	**Basic data** – local **Configuration** database **Synchro source** – remote database for synchronization **Protocol** – **Event protocol** database **Titles** – **Captions** database Other values are used when working with vertical solutions

№	Element name	Description	Default value	Allowed values
2	**Description**	The information field that displays the description of the selected data source from the **Select data source** dropdown list	Axxon PSIM main database	**"Axxon PSIM" main database** – local **Configuration** database **Synchro source** – remote database for synchronization **"Axxon PSIM" system's external protocols database** – **Event protocol** database **Titles database** – **Captions** database Other values depend on the availability of the databases for the installed vertical solutions.
3	**Use**	The checkbox for enabling or disabling the selected database usage. When set, the **Configure** button becomes active, which is used for setting up the connection to the database	Checked	**Checked** – database is connected **Clear** – database is not connected
4	**Move database**	The button used to transfer MS SQL Server database files (.mdf and .ldf) to the specified folder. The user should have the rights to create files in this folder. When the files are moved, the database is automatically attached. *Note. It is possible to move only the local DB (Basic data data source). When using a remote DB (Synchro source data source), files can not be moved*	Active	Active – the idb.exe utility is connected to the MS SQL format database Inactive – the idb.exe utility is not connected to the MS SQL format database
5	**Configure**	The button opens the **Data Link Properties** dialog box to configure the database connection. This button is active if the **Use** checkbox is set	Active	Active – the idb.exe utility is connected to the database Inactive – the idb.exe utility is not connected to the database

№	Element name	Description	Default value	Allowed values
6	The **Connection string** information field	The information field displaying the summary about the database connection parameters	Depends on the database connection parameters, the server configuration or Remote Administrator's workstation configuration	Displays the combination of the following parameters: Provider, Integrated Security, Persist Security Info, Data Source. The **Provider** parameter can take the following values: • SQLOLEDB.1 – when using the MS SQL server format database; • Microsoft.Jet.OLEDB.4.0 – when using the MS Access format server database Other values are not used. The **Integrated Security** parameter can take the following values: • SSPI – authentication on MS SQL server using Windows account information; • parameter not shown – authentication on MS SQL server using the user login/password, or using MS Access format database The **Persist Security Info** parameter can take the following values: • True – allow saving the password for automatic connection to the database;

№	Element name	Description	Default value	Allowed values
				• False – do not allow saving the password for automatic connection to the database The **Data Source** parameter can take the following values: • the name of the MS SQL server used for managing the database; • the path to the .mdb file of the MS Access format database
7	Information field and the **Select dbi-file** button	The information field and the button for selecting and displaying the database structure .dbi file. The updated database will have the structure specified in this file	C:\Program Files\Axxon PSIM\psim.dbi	The full path to the .dbi file
8	Information field and the **Select dbi-file** button	The information field and the button for selecting and displaying the information about the .ddi file with system objects, events and reactions	C:\Program Files\Axxon PSIM\Languages\en\Axxon PSIM.ddi	The full path to the .dbi file
9	**Create backup copy (MS SQL)**	The button for starting the process of creating a backup copy of the database. This button is active if the idb.exe utility is connected to the MS SQL format database	Active	Active – the idb.exe utility is connected to the MS SQL format database Inactive – the idb.exe utility is not connected to the MS SQL format database

№	Element name	Description	Default value	Allowed values
10	**Restore from backup (MS SQL)**	The button for restoring the database from a previously created backup	Active	Active – the idb.exe utility is connected to the MS SQL format database Inactive – the idb.exe utility is not connected to the MS SQL format database
11	**Clear protocols**	The checkbox that excludes the Event log database from the created database backup copy. It is recommended to set this checkbox if the size of the Event log database is too large, and there is no need to include the Event log in the backup copy. The setting is available only for *Axxon PSIM* base database	No	Checked – the database backup copy does not include the Event log database Clear – the database backup copy includes the Event log database
12	**Update database**	The button for starting the process of updating the database structure. The structure is updated according to the .dbi file specified in the **Select dbi-file** field	Active	Active – the idb.exe utility is connected to the **Configuration** database Inactive – the idb.exe utility is not connected to the **Configuration** database
13	**Create dbi-file**	The button for creating a database structure .dbi file (template)	Active	Active – .dbi file creation is allowed
14	The **Protocol** information table	The information table that displays the progress of database processing: converting, structure updating, creating backup copy, etc.	Empty	Information messages about the progress of the database processing. The blue “i” icon indicates that the processing step has been successfully completed The red “!” icon indicates the errors in the processing step A blue tick icon indicates the completion of the processing

№	Element name	Description	Default value	Allowed values
15	**OK**	The button for saving the database connection parameters and shutting down the idb.exe utility	Active	Active – saving database connection parameters and shutting down the idb.exe utility is allowed Inactive – the utility is still processing the database

11.4 Using the idb.exe utility

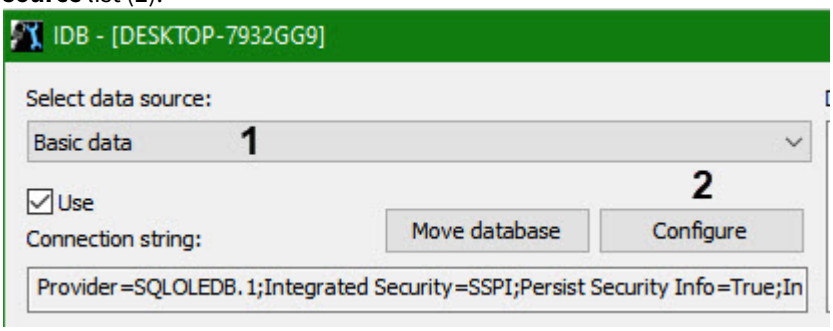
The idb.exe utility allows the administration of the databases of the Axxon PSIM system. Instructions on how to use the utility for administering databases are given in Axxon PSIM™ software database management section.

Note.

The Windows Firewall/ICS service is to be enabled to use the idb.exe utility.

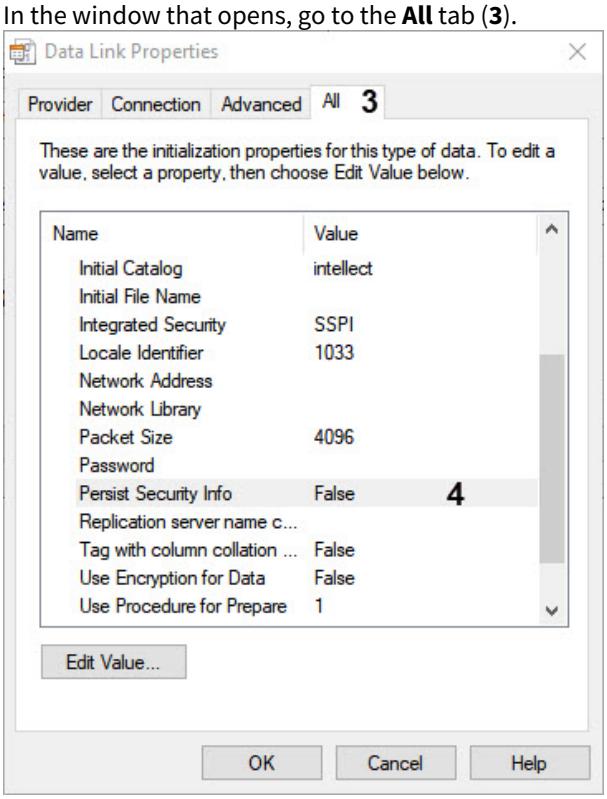
When you switch between databases using the **Select data source** drop-down list (see Interface elements of the idb.exe window), note that the specified parameters for connecting to the currently selected database are partially reset. This is due to the Microsoft security policy. In order for the settings in the **Connection string** field to be saved, do the following **before** you switch to the administration of another database:

1. Make sure that the database which connection settings should be saved is selected in the **Select data source** list (**1**).

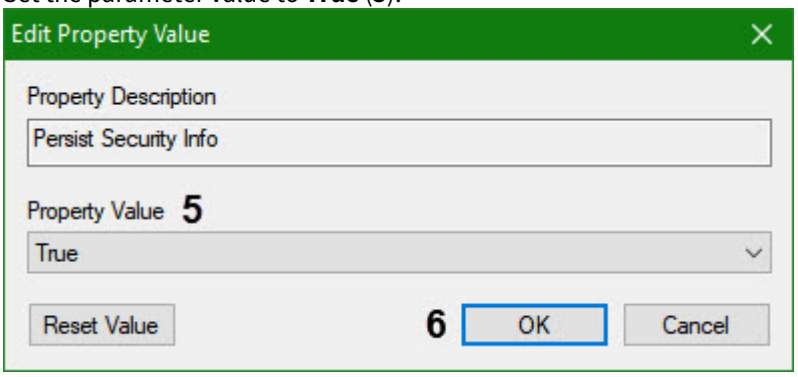


2. Click the **Configure** button (**2**).

3. In the window that opens, go to the **All** tab (**3**).



4. Left double-click on the **Persist Security Info** parameter (**4**).
5. Set the parameter value to **True** (**5**).

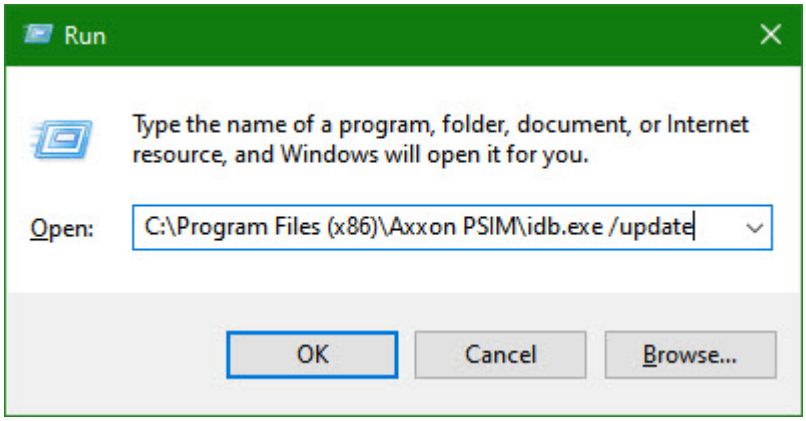


6. Click **OK** (**6**).
7. Click **OK** on the **Data Link Properties** window to update the settings and close the window.
8. Click **OK** in the IDB utility window to save the settings.

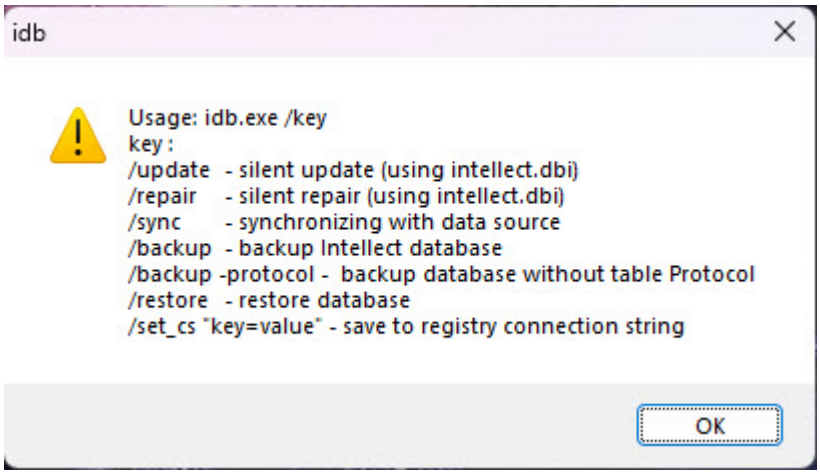
As a result, the next time you switch to the selected database, the settings for connecting to it will not be reset.

11.5 Working with idb.exe utility with the use of keys

It is possible to run idb.exe utility with keys. For this click **Start** → **Run**. Type the path to idb.exe utility (C:\Program Files (x86)\Axxon PSIM\idb.exe by default) and the required key after / in the appeared window.



To display keys, supported by the utility, use the command «idb.exe /?».



idb.exe utility supports the run with the following keys:

1. «/update» – the key of running the hidden updating of database (uses psim.dbi file).
2. «/sync» – the key of database synchronization with the source of data.
3. «/backup» – the key of running the process of creation the backup copy of Axxon PSIM database. Use the -protocol option to exclude the Event protocol database from the backup (i.e., the full command in this case would be: **/backup -protocol**).
   The backup copy is created to the address «C:\Users\user\Documents\Axxon PSIM». It is used when the idb.exe utility is connected to MS SQL database.
4. «/restore» – the key of running the database recover from the previously created backup copy. It is used when the idb.exe utility is connected to MS SQL database.
5. «/set_cs key=value» – the key of saving the connection string to the system registry (summary on parameters of connection to database).

11.6 Extracting event protocol into an individual database

External event protocol is created with the help of the idb.exe utility.

Attention!

If *Time and Attendance* module is in use (the module is a part of *ACFA PSIM* subsystem) use the RemoteProtocolConnector utility to extract event protocol into a separate database—see *Axxon PSIM Web*

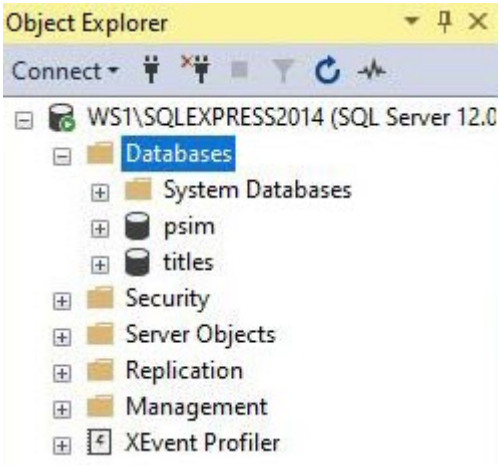
Report System. User Guide (the most recent version of this document is available in AxxonSoft documentation repository).

Note

To operate the Report System, which is a part of base *Axxon PSIM*, the method of extracting the event protocol into a separate database is used. The method is described in this section, i.e. using the idb.exe utility. Configuration of the connection to such protocol DB is required in the Report System, which is a part of base *Axxon PSIM* (see Connecting to the Events Log (PROTOCOL table)).

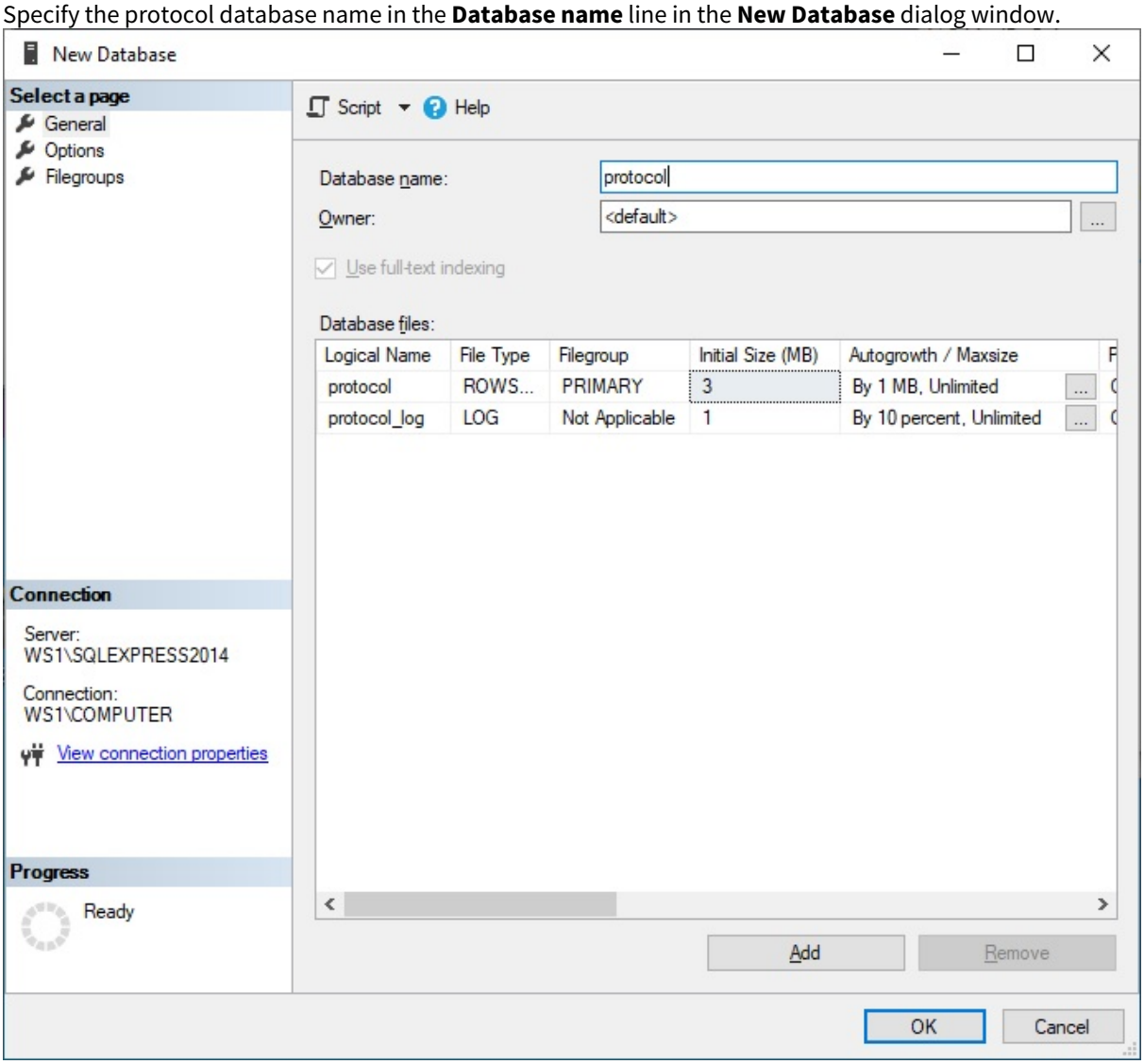
It is necessary to create the **protocol** database beforehand with the help of the MS SQL Server program. Do the following:

1. Open Microsoft SQL Server Management Studio Express;
2. Select **Databases**.



3. Right-click and select **New Database...**

4. Specify the protocol database name in the **Database name** line in the **New Database** dialog window.



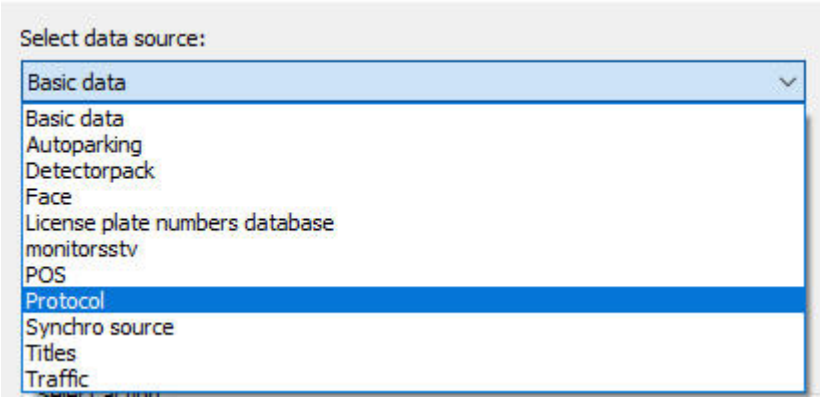
5. To create a new protocol database, click the **OK** button.
6. Shut down Microsoft SQL Server Management Studio Express by clicking the **Close** button in the upper right corner of the dialog window.

As a result, the **protocol** database is created.

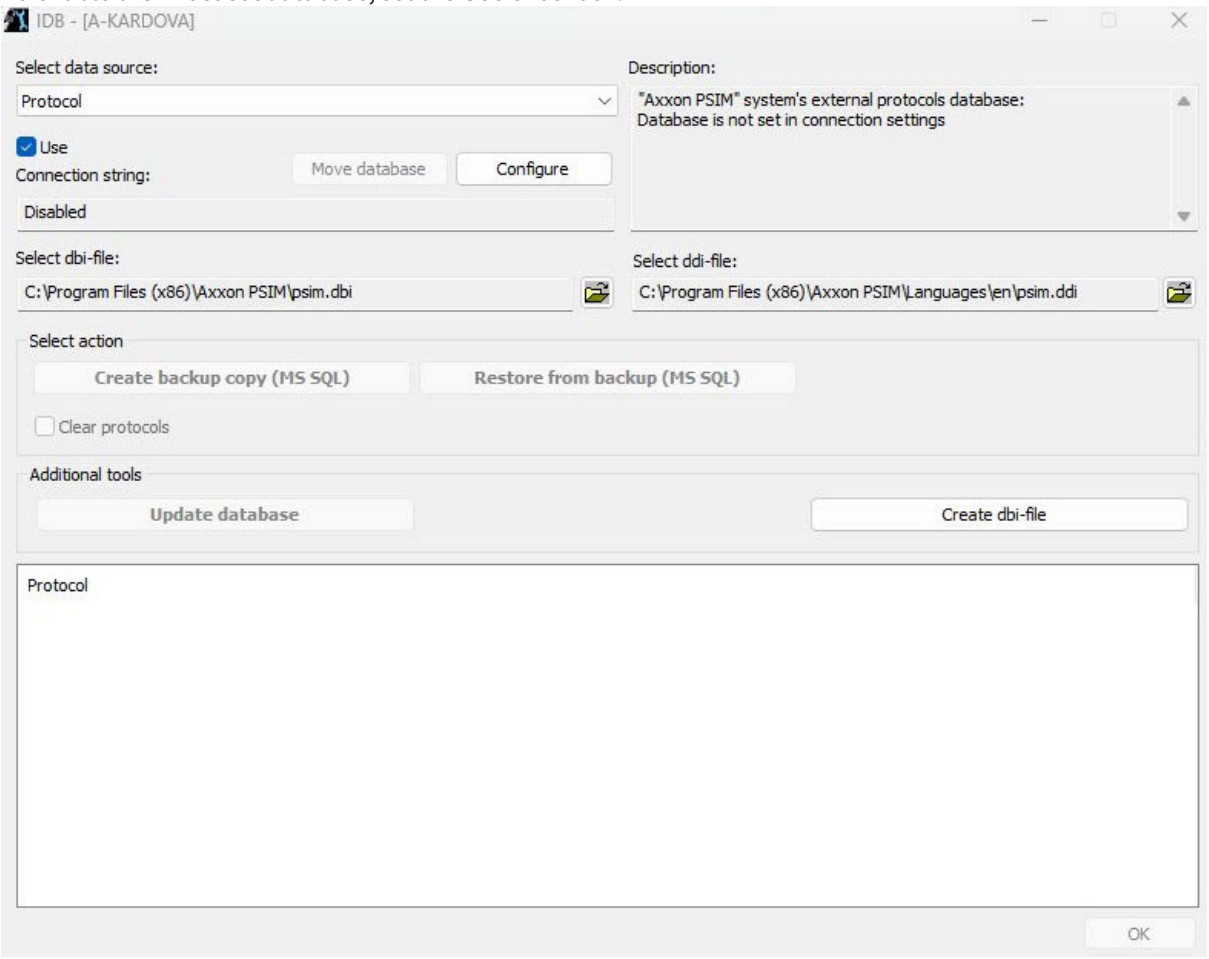
To enable the external event protocol, do the following:

1. Run the idb.exe utility (see Running and shutting down the utility).

2. Select the **Protocol** database from the **Select source database** drop-down list.



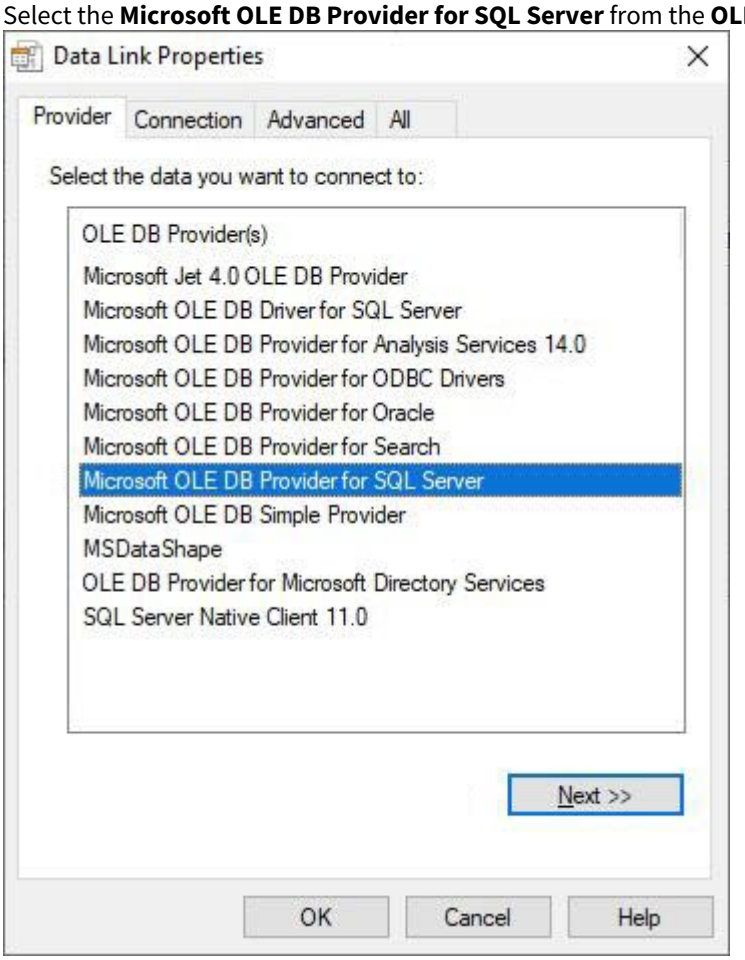
3. To enable the **Protocol** database, set the **Use** checkbox.



As a result, the **Configure** button becomes active.

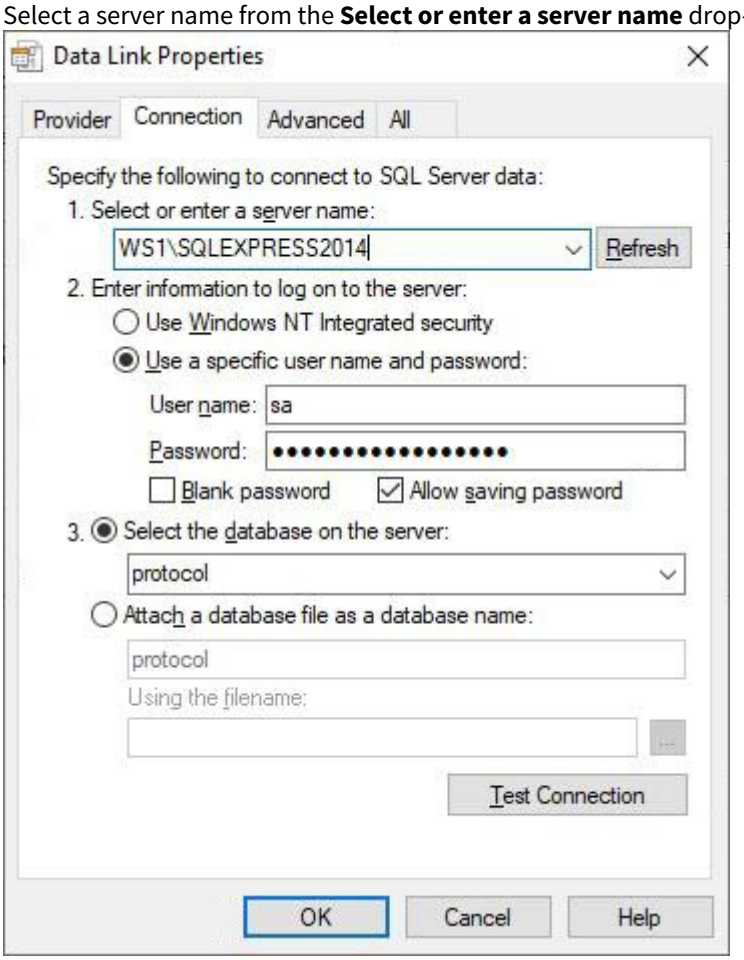
4. To connect to the **Protocol** database, click the **Configure** button. As a result, the **Data link properties** dialog window appears.
5. Go to the **Provider** tab.

6. Select the **Microsoft OLE DB Provider for SQL Server** from the **OLE DB Provider(s)** list.



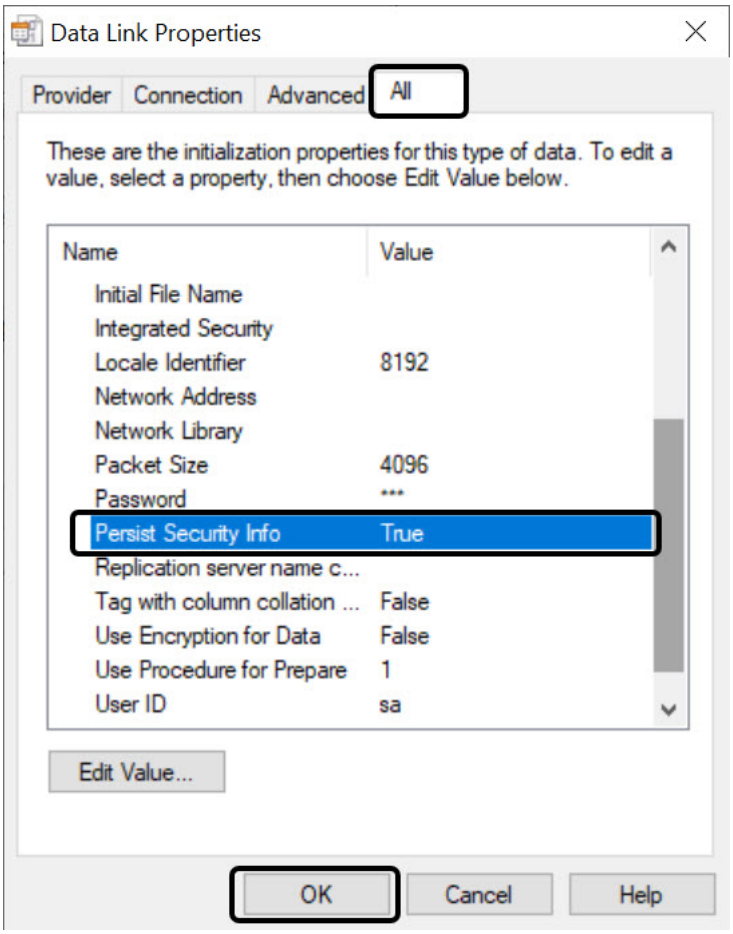
7. Click the **Next** button. You will be automatically redirected to the **Connection** tab.
8. Do the following in the **Connection** tab:

a. Select a server name from the **Select or enter a server name** drop-down list.



b. Specify the user name in the **User name** field and specify the password in the **Password** field.
c. Set the **Allow saving password** checkbox.

d. Go to the **All** tab.



e. In the **Persist Security Info** field, set the **True** value. This is necessary to correctly save the user password.

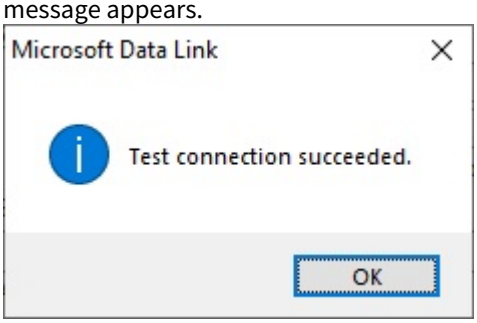
> **Note**
>
> Each time you change the server connection parameters, you must set the **Persist Security Info** field value to **True**.

f. Select the **protocol** database in the **Select the database on the server** drop-down list.

> **Note**
>
> You must select a database at this step. If you leave the database field blank, after you close the **Data Link Properties** window, the line "Database is not set in connection settings" appears in the database description window of the IDB.exe utility and the **OK** button to save changes is inactive.

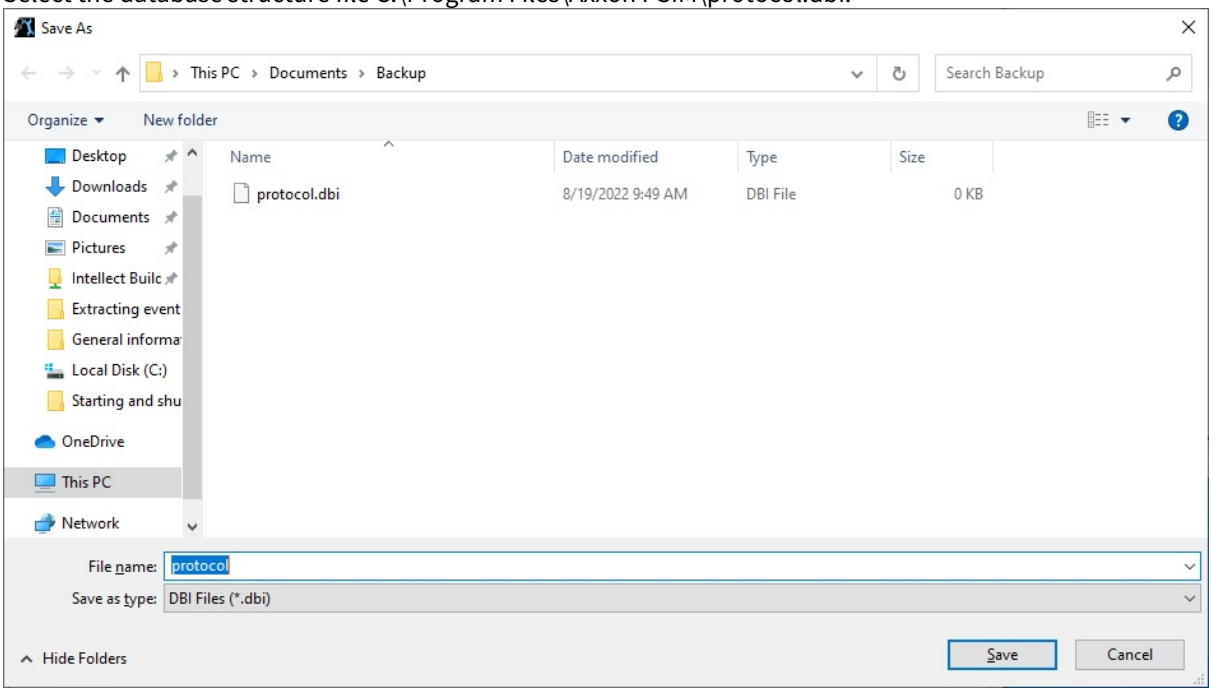
g. Click the **Test Connection** button.

h. If the connection to MS SQL Server is successfully established, then the **Test connection succeeded** message appears.

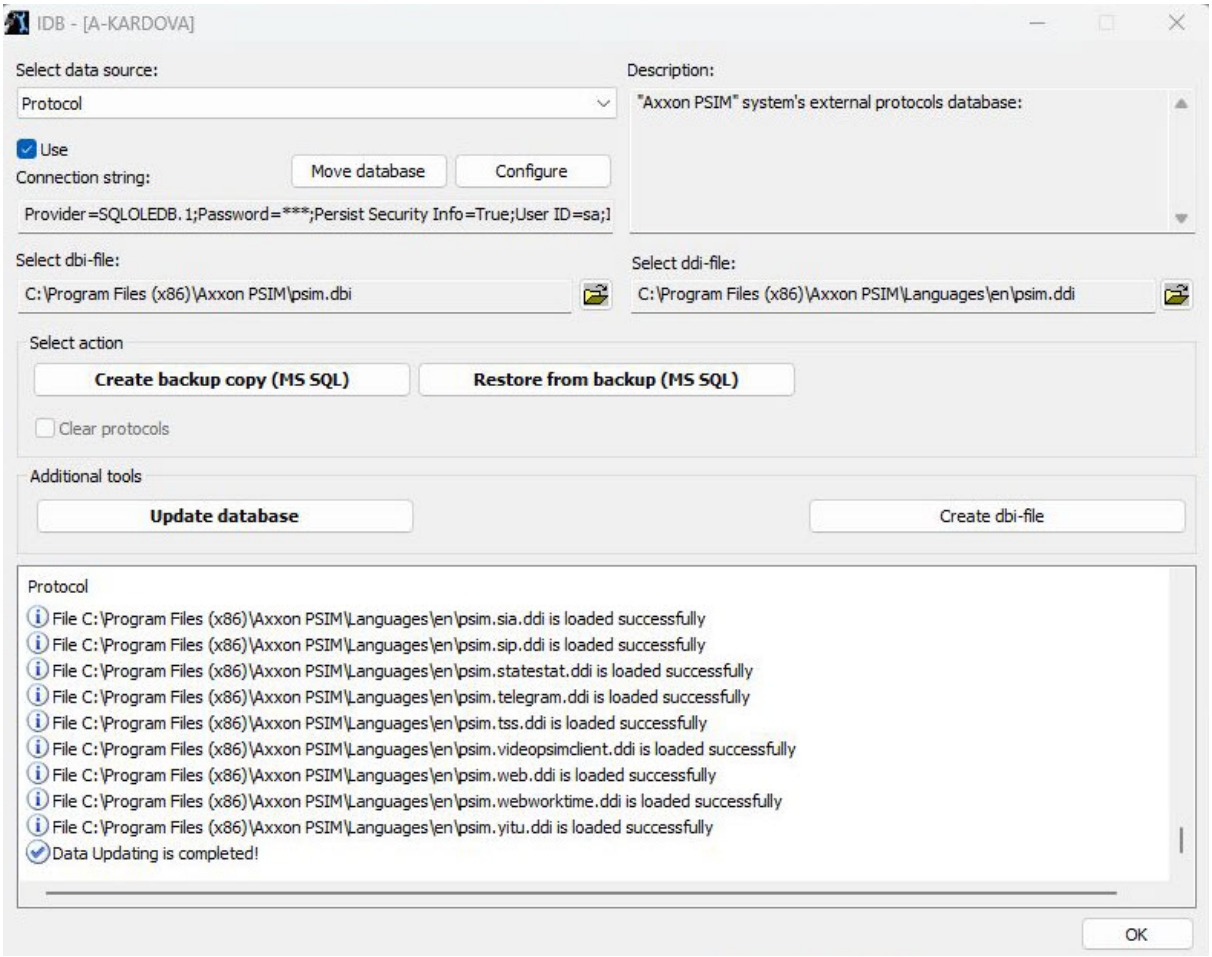


i. Click the **OK** button in the message window. The window closes automatically.

9. Select the dbi file. Click the button next to the **Select dbi-file information** field.
10. As a result, the **Open** dialog window appears.
11. Select the database structure file C:\Program Files\Axxon PSIM\protocol.dbi.



12. Click the **Update database** button to update the database in accordance with the psim.dbi file specified in the **Select dbi-file** field.



As a result, database update starts. Information about this process is displayed in the **Protocol** table. Database is updated, when there is the **Database Updating is completed!** message in the **Protocol** table.

13. To save *Axxon PSIM* connection parameters to the **Protocol** database, click the **OK** button. As a result the dialog window closes automatically.

External event protocol is created and connected.

11.7 Creating the database backup copy

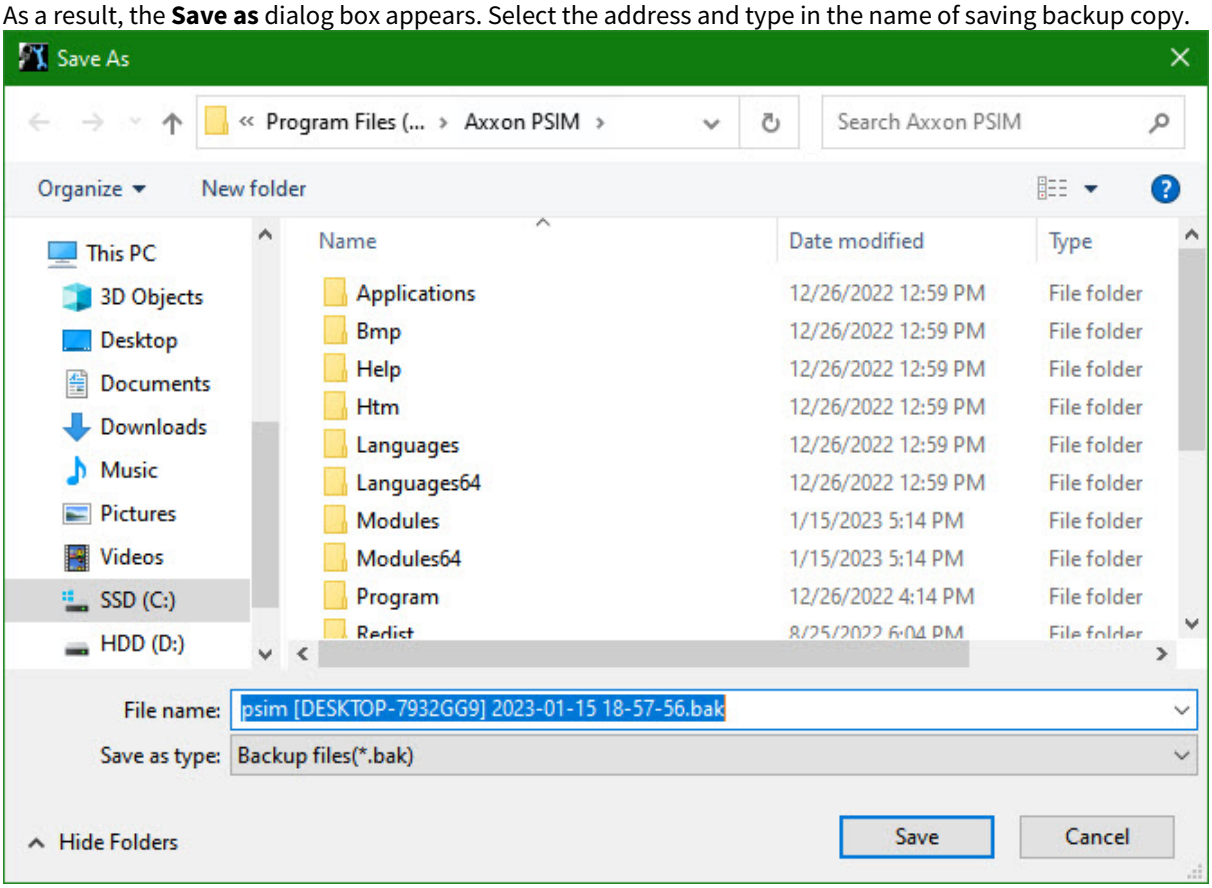
To create the MS SQL database backup copy, use the idb.exe utility. To create the backup copy, do the following:

1. Run the idb.exe utility (see Running and shutting down the utility).
2. Select the **Basic data** MS SQL database from the **Select data source** dropdown list.

> **Note**
>
> Select the vertical solution database to create a backup copy of the vertical solution database. For example, for *Face PSIM* the data source is **Face**.

3. If it is not required to include the Event protocol in the backup copy of the database, set the **Clear protocols** checkbox. This checkbox is not available if the vertical solution database is selected.
4. Click the **Create backup copy (MS SQL)** button.

5. As a result, the **Save as** dialog box appears. Select the address and type in the name of saving backup copy.

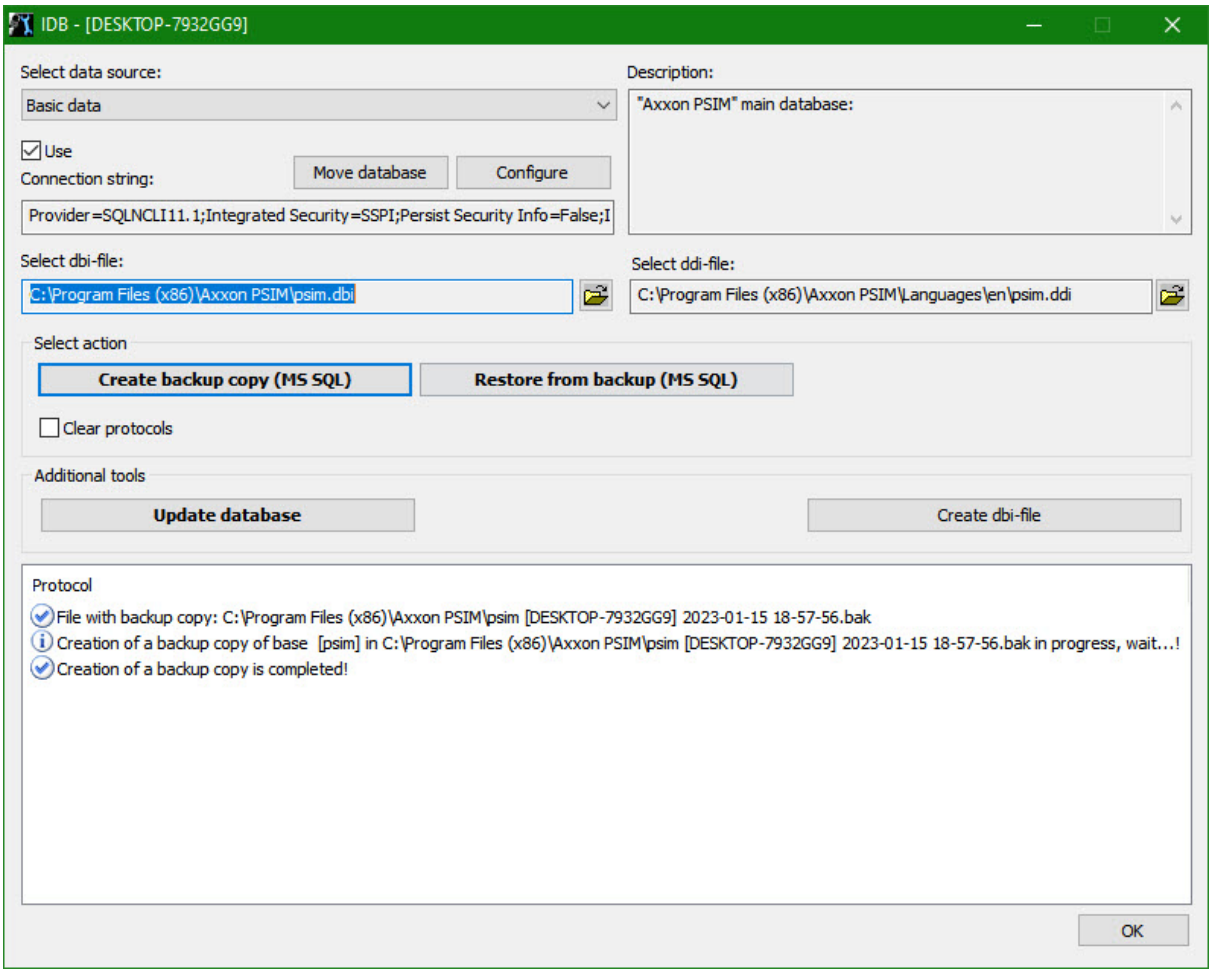


Note

While creating the MS SQL database backup copy, the created backup copy will be saved on the computer where the database server is installed, in case of *Axxon PSIM* software and database server are located on different computers connected through the network. To save created backup copy on the computer where *Axxon PSIM* is installed, do the following:

a. Create the folder available through the network on the computer where *Axxon PSIM* is installed. Provide access to the created folder from the computer where the database server is installed.
b. Specify the path to the created folder in the **Save as** window.

6. As a result, the process of backup copy creation starts. Information on this process is given in the **Protocol** information table.



7. The backup copy is created when the **Creation of a backup copy is completed!** message appears in the **Protocol** table.

> **Note**
>
> The backup copy (MS SQL) can be created using the macro.

8. Click the **OK** button. The dialog box closes automatically.

The MS SQL database backup copy is created.

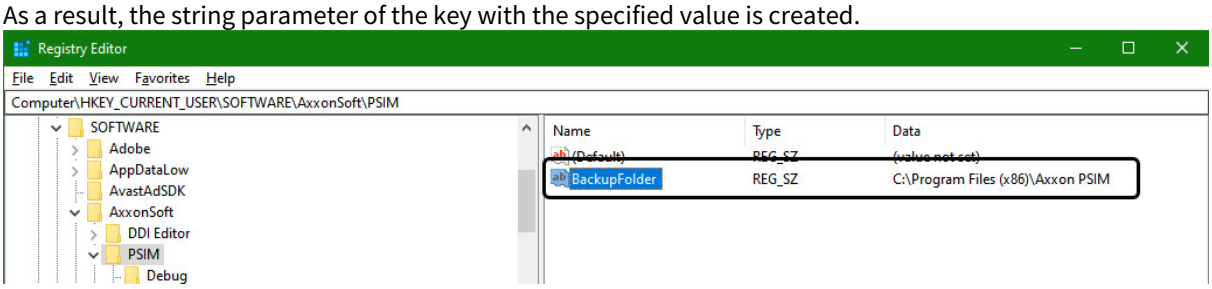
By default the database backup copy is created at: C:\Documents and Settings\<user name>\My documents\AxxonSoft\Axxon PSIM\Data\psim.sql.bak. In case you cannot change the folder for storing the database backup copy while the backup copy creation, do the following:

1. Call the **Run** function (**Start** → **Run**). Type in regedit in the opened dialog box.
2. Click the **OK** button. As a result, the **Registry editor** dialog box opens.
3. Create the string parameter with the BackupFolder name in the HKLM\SOFTWARE\AxxonSoft\PSIM registry thread (see Adding string parameters to the registry).
4. Set the value of the BackupFolder parameter: type in the address of the folder for storing the database backup copy (e.g. C:\Documents and Settings\AVP\Desctop\Backup).
   If it is necessary to store the database copy on the network disk, then the UNC path to the network folder (with the recording access) should be specified on the disk in the \\ServerName\ShareName format. Take

into account that all network resources that require additional authentication should be connected using the same username as for running the SQL Server service. To find out and/or change the user that runs the SQL Server service, do one of the following:

a. Using the SQL Server Configuration Manager utility.
b. Run **Start – Control panel – Administrative tools – Services**, right-click the **SQL Server** service and select **Properties** in the feature menu. In the opened **SQL Server** service dialog box, go to the **Log On** tab.

5. As a result, the string parameter of the key with the specified value is created.



6. Call the **Run** function (**Start** → **Run**). Type in the «C:\Program Files*Axxon PSIM**idb.exe /backup*» key in the opened dialog box.
7. Click the **OK** button.

As a result, the psim.sq.l.bak database backup copy is created in the folder specified as the value of the BackupFolder parameter.

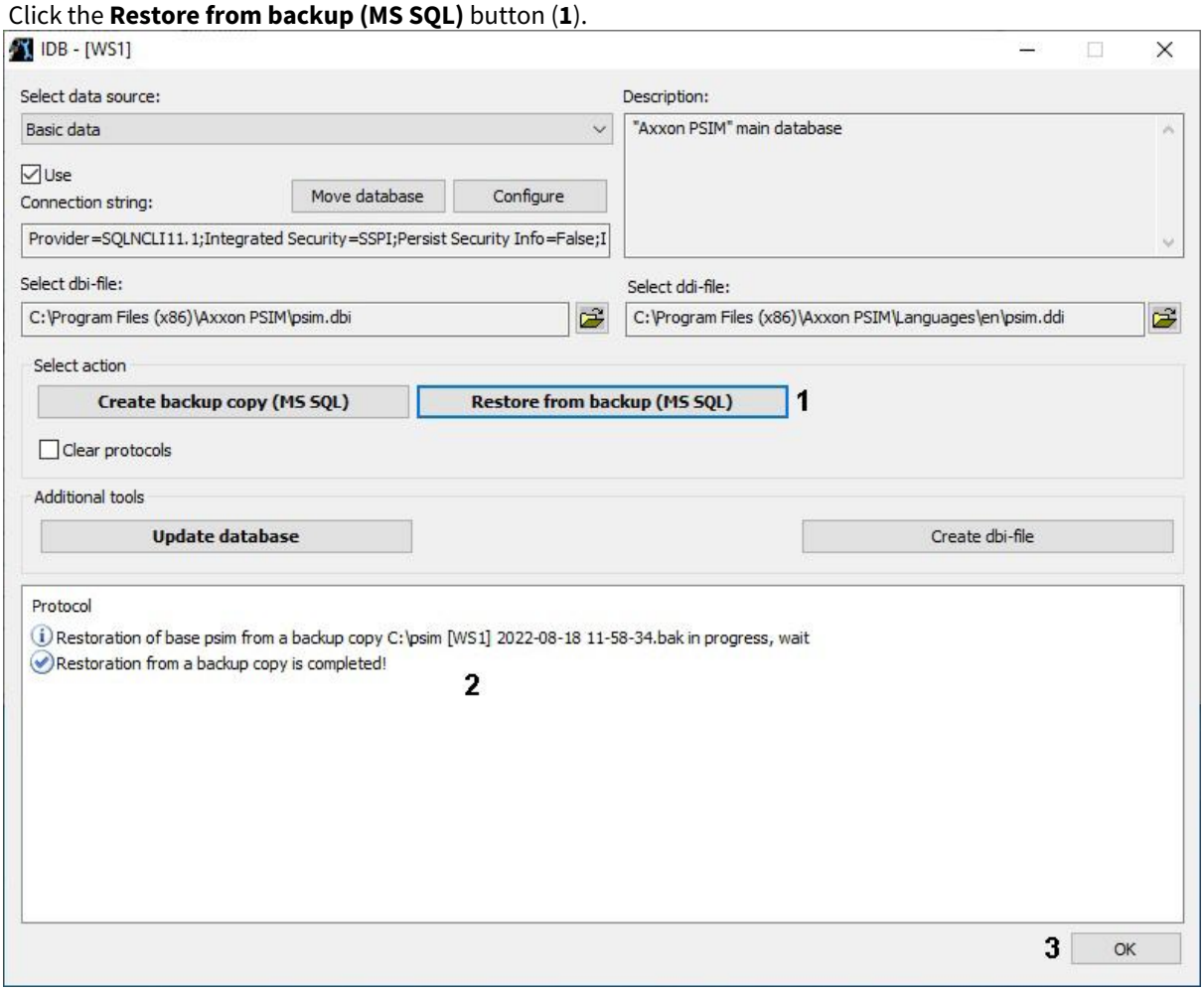
11.8 Restoring database from backup copy

The database backup copy is created using the idb.exe utility (see Creating the database backup copy). Database restoring from backup copy is also performed using the idb.exe utility in the following way:

1. Run the idb.exe utility (see Running and shutting down the utility).
2. From the **Select data source**: drop-down list select the MS SQL database – **Basic data**.

> **Note**
>
> Select the vertical solution database to create a backup copy of the vertical solution database. For example, for Face *PSIM* the data source is **Face**.

3. Click the **Restore from backup (MS SQL)** button (**1**).



4. Using the standard dialog box for opening files, select the created earlier file with database backup copy.
5. As a result, the process of database restoring from backup copy will start. Information about process is displayed in the **Protocol** informational table (**2**).
6. Restoring is completed when the **Restoration from a backup copy is completed**! message will be displayed in the **Protocol** table.
7. To finish the work click the **OK** button. The window will close automatically (**3**).

Database restoring from backup copy is completed.

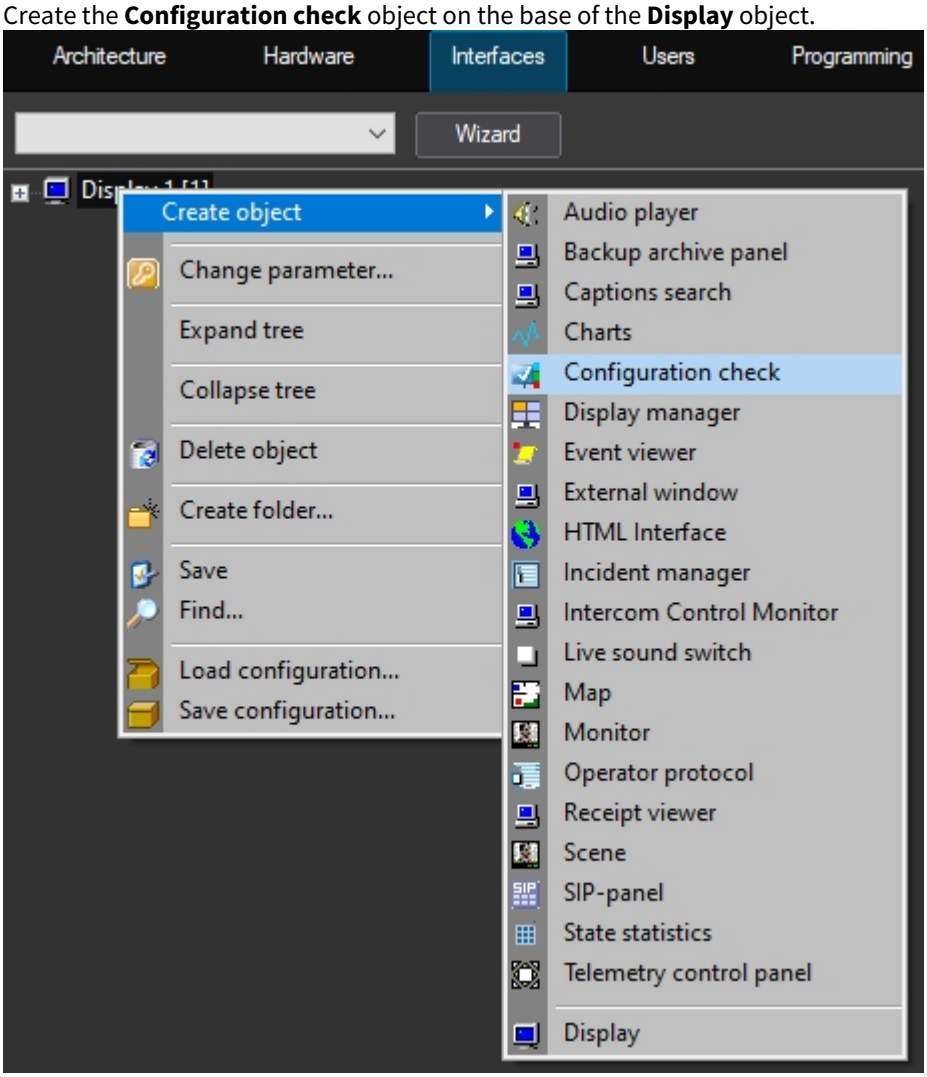
12 Configuration check tool

The Configuration check tool is designed for checking the settings of all created objects in the Axxon PSIM™ software and restoring the correct configuration if any changes occurred. Restoring is performed from the configuration template which can be created at any moment in accordance with current settings.

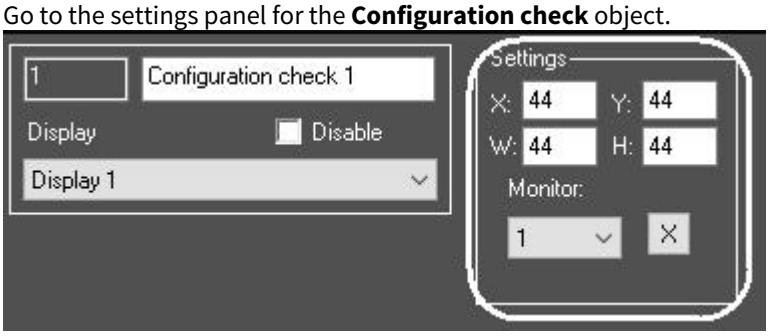
12.1 Starting and shutting down the Configuration check tool

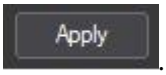
To start the Configuration check tool, do the following:

1. Go to the **Interfaces** tab of the **System settings** dialog box.
2. Create the **Configuration check** object on the base of the **Display** object.



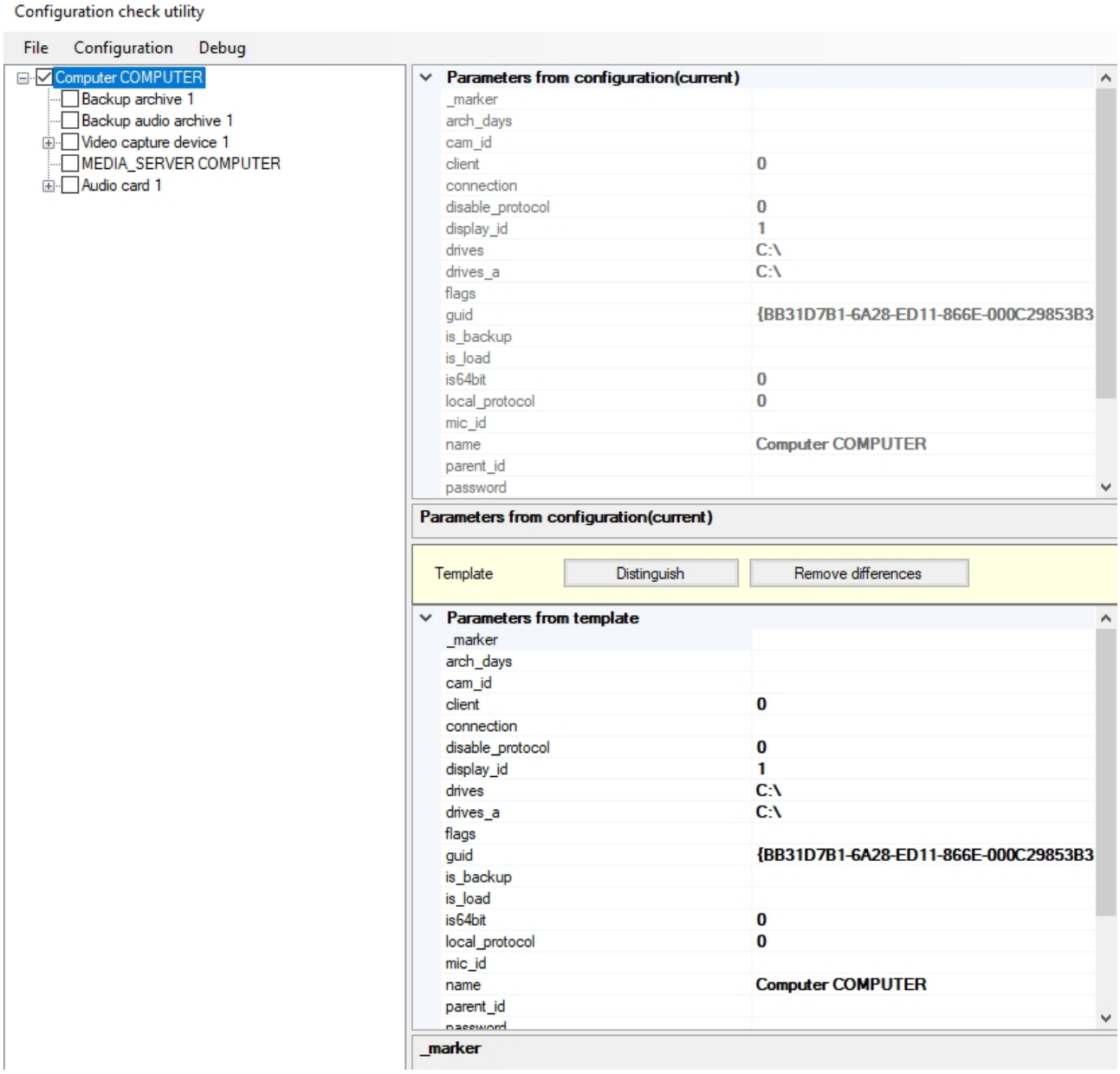
3. Go to the settings panel for the **Configuration check** object.



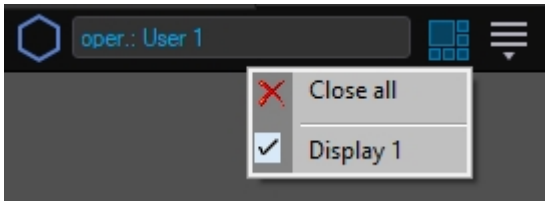
4. To configure the position of the **Configuration check** object, set the coordinates of upper left corner in **X:**, **Y:** fields and values of window's width and height in **W**:, **H:** fields, and select the computer monitor for which the coordinates are set.
5. To save the changes, click the 

.

As a result the **Verifying configuration** tool dialog box is displayed.



To shut down the tool, click the  button on the main control panel of *Axxon PSIM* software and select the **Close all** menu item;



12.2 Configuration check tool interface description

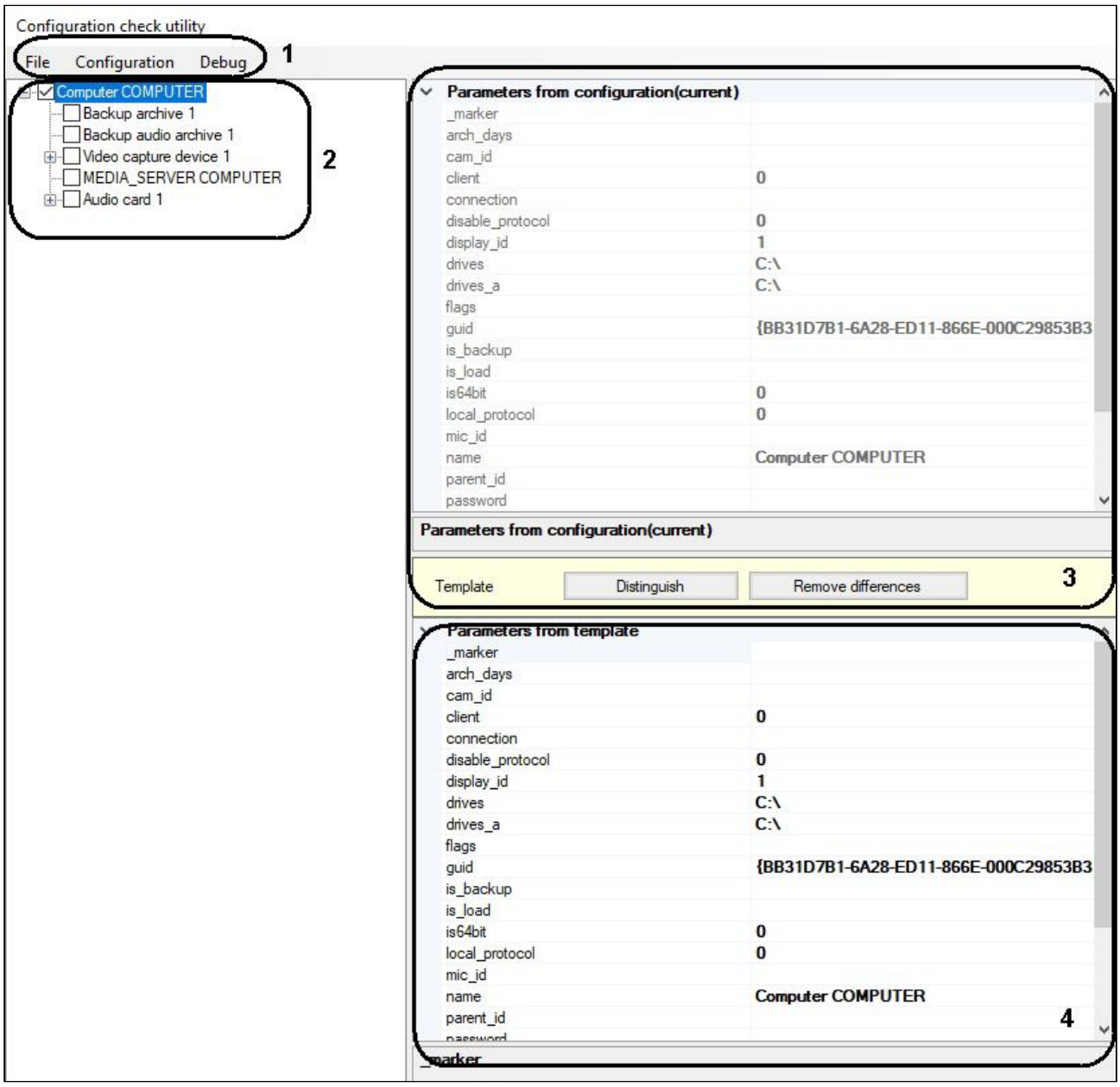
The dialog box of the Configuration check tool has four main interface elements:

1. The toolbar (1).
   The tool's control menu is located here.
2. The objects tree of *Axxon PSIM* software (2).
   The objects tree of *Axxon PSIM* software is displayed here. Clicking the left mouse button on any object in the objects tree, the configuration of its parameters is displayed in parameters field (points 3-4).
3. The field of object parameters from *Axxon PSIM* configuration (3).
   The current configuration is displayed in this field. These parameters are not available for editing.
4. The field of object parameters from a template (4).

Parameters of the selected object from the configuration template field are displayed here. These parameters are available for editing.

Note.

At the first start of the Configuration check tool, the current configuration of selected object is displayed in this field.



12.3 Using the Configuration check tool

To start the operation, start the Configuration check tool (see the Starting and shutting down the Configuration check tool section).

12.3.1 Creating a template

To create a template in the Configuration check tool, do the following:

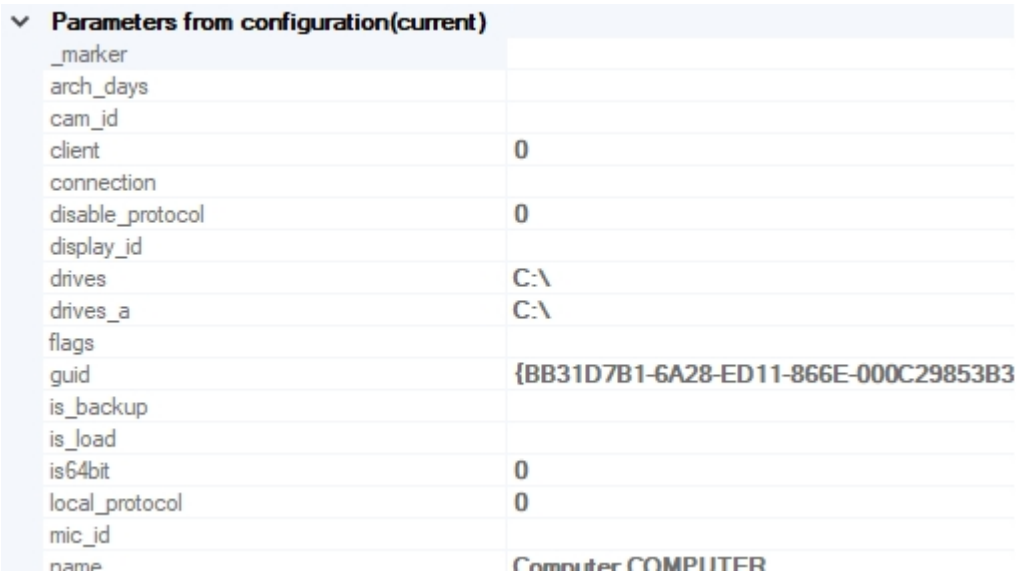
1. In the objects tree, set the checkboxes next to those objects which parameters configuration will be included in a template.

2. Click the left mouse button upon the object which parameters configuration is to be edited.

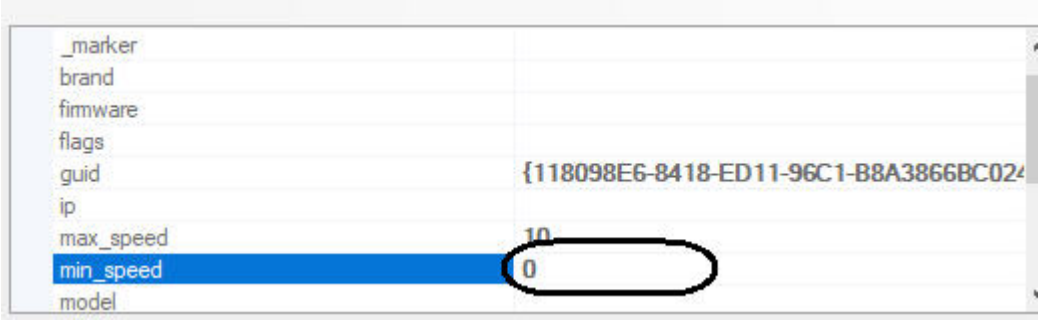
> **Note.**
>
> The set checkbox next to the required object is an obligatory term in order to edit the parameters.

As a result there is a list of object parameters with values, available for editing in the parameters from template field.

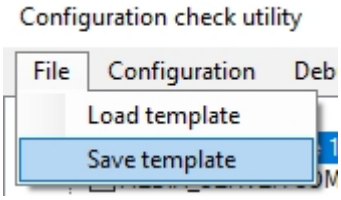
> **Note.**
>
> In the parameters from *Axxon PSIM* configuration field there is a list of object parameters with values set in *Axxon PSIM* software. They can not be edited.



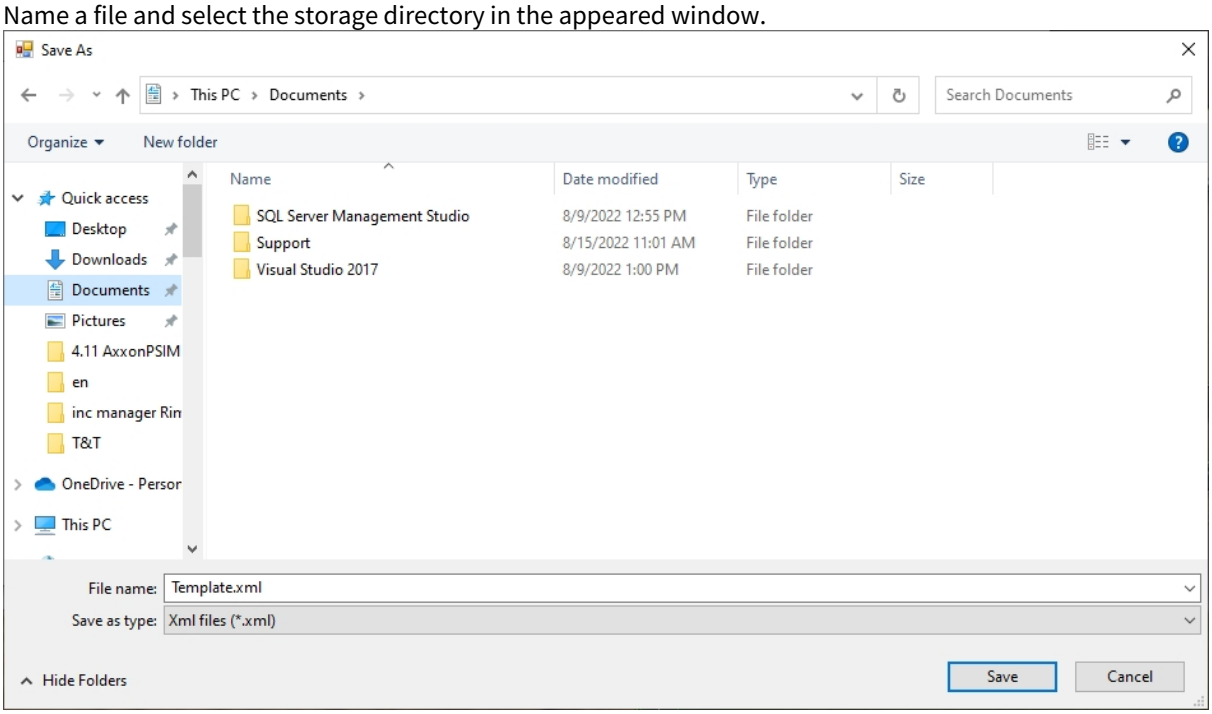
> **Note.**
>
> At the first start of the Configuration check tool, the current configuration of selected object is displayed in this field.



3. Edit the object parameters. To edit the selected parameter, click the left mouse button upon the corresponding line with its value and edit it.
4. Repeat steps 3 for all objects, which parameters configurations are to be edited.
5. Go to the **File** menu of the control panel and select the **Save template** item.



6. Name a file and select the storage directory in the appeared window.



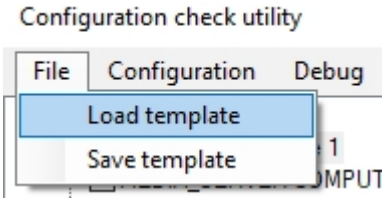
7. Click the **Save** button.

The template is now created.

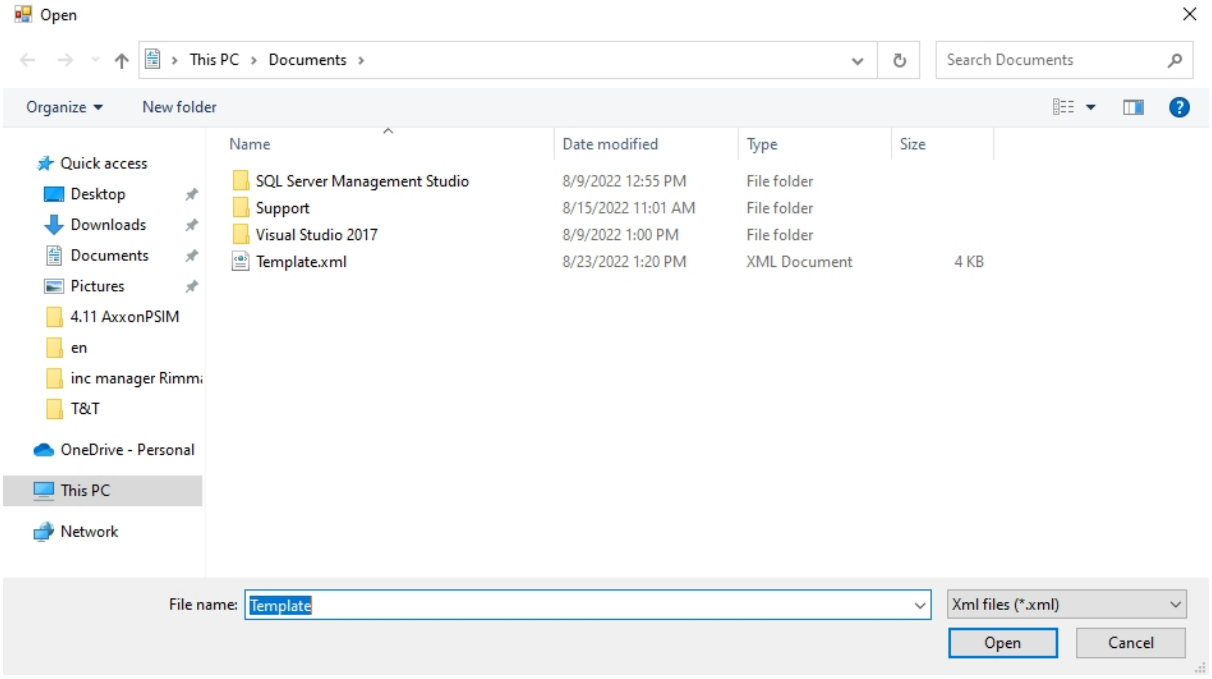
12.3.2 Downloading and editing the template

To download and edit the template, do the following:

1. Go to the **File** menu on the control panel and select the **Load template** item.



2. Select a template file in the appeared window and click the **Open** button.



The objects tree is displayed as a result. The active checkbox is next to the objects which configuration has been saved in the template.

3. To edit the template, repeat steps 1-7 of the **Creating a template** section.

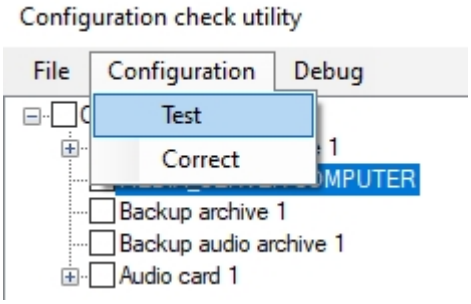
The template is now downloaded and edited.

12.3.3 Verifying and correcting the configuration

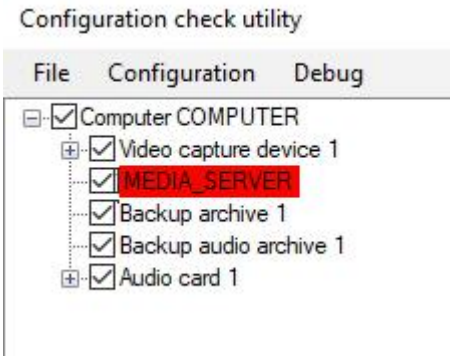
To verify the current configuration of objects in *Axxon PSIM* software and restore it from the template, do the following:

1. Download the template for which the object configuration is to be verified in *Axxon PSIM* software (see the Downloading and editing the template section).

2. Go to the **Configuration** menu on the control panel and click the **Test** button.

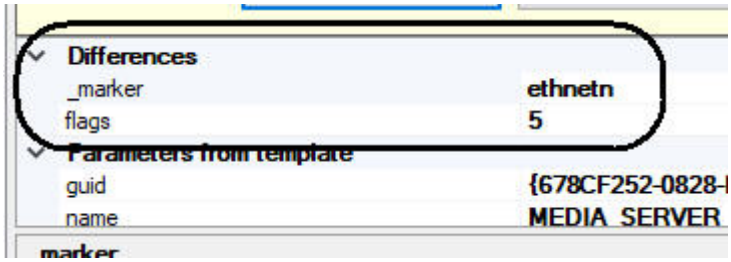


As a result the objects which current configuration in *Axxon PSIM* software differs from that one in the template will be marked red in the objects tree.

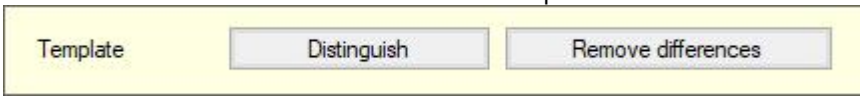


3. To view object parameters in the template which values are different from those ones in the *Axxon PSIM* software, click the left mouse button upon the object marked red in the objects tree and go to the parameters from the template field.
4. Click the **Distinguish** button in the **Template** field.

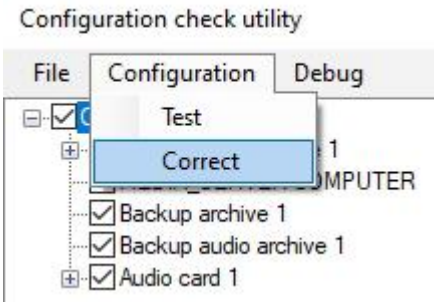
As a result the parameters which values are different from those ones in *Axxon PSIM* software are moved to the **Differences** list.



5. Correction (if necessary) of these parameter in *Axxon PSIM* software for those ones from the template may be performed in two ways:
   a. Click the **Remove differences** button in the Template field.



b. Go to the **Configuration** menu on the control panel and select the **Correct** item.



The parameter configuration from *Axxon PSIM* templates is now verified and corrected.

13 Index.exe utility for reindexing archive files

13.1 Function of the index.exe utility

The *index.exe* utility reindexes archive files with a large array of data.

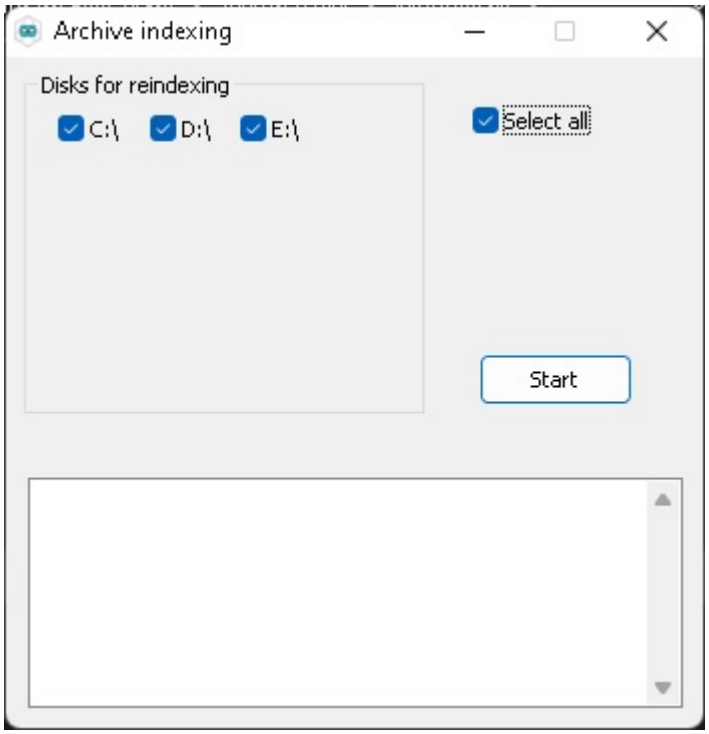
> **Attention!**
>
> In order for *Axxon PSIM* to start working with new indexes, it is necessary to restart the video.run module or restart *Axxon PSIM* after reindexing.

Another way to perform reindexing of archive files is to shut down *Axxon PSIM* and completely clear the INDEX folder in the VIDEO folder on the disk with the archive. Indexes are rebuilt automatically after you start *Axxon PSIM*. This method is equal to using the *index.exe* utility.

13.2 Starting and shutting down the index.exe utility

To start working with the utility, run the *index.exe* file in the **Modules64** folder that is located in the *Axxon PSIM* installation directory, for example, C: \Program Files\Axxon PSIM\Modules64.

As a result, the window of the *index.exe* utility opens.



To exit the *index.exe* utility, click the **Close** ✕ button.

13.3 Working with the index.exe utility

> **Attention!**

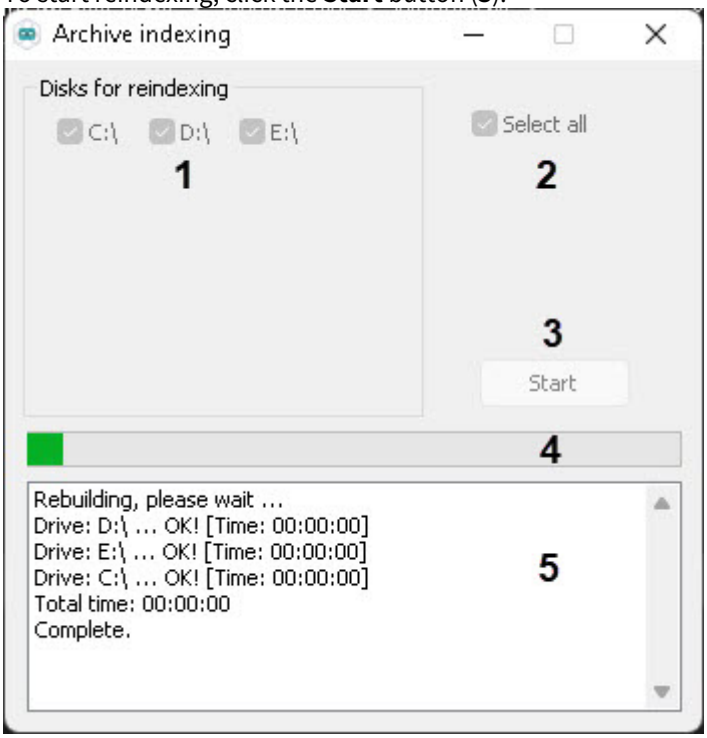
Before you start working with the utility, check the value of the **IndexRebuilding** parameter in the section HKLM\SOFTWARE\AxxonSoft\PSIM\Video for 32-bit systems (HKLM\SOFTWARE\Wow6432Node\AxxonSoft\PSIM\Video for 64-bit) of the Windows OS registry: by default it must be 0. If the parameter value differs from the default value, you must change it to 0; otherwise, the utility won't index the archive.

Note

We recommend starting the process of reindexing using the *index.exe* utility after shutting down *Axxon PSIM*.

To reindex archive files after changes to the archive (for example, after copying new video recordings to one or several archive disks), do the following:

1. Start the *index.exe* utility (see Starting and shutting down the index.exe utility).
2. In the **Archive indexing** window, select archive disks for reindexing by setting the checkboxes next to the required disks (**1**).
   To select all disks, set the **Select all** checkbox (**2**).
3. To start reindexing, click the **Start** button (**3**).



Note

During reindexing, all elements of the utility window are inactive.

4. The process of reindexing is displayed in the progress bar (**4**) and in the field (**5**).
5. When the process is complete, close the utility window by clicking the ✕ button.

Reindexing of archive files is complete.

To reindex archive files without using the dialog window, in the command line, start the *index.exe* utility with parameters. For example, the **index.exe C, D** command reindexes archive files on local disks C and D. To reindex archive files on all disks, use the **all** parameter.

Attention!

In order for *Axxon PSIM* to start working with new indexes, it is necessary to restart the video.run module or restart *Axxon PSIM* after reindexing.

14 The shedule.exe utility for creating a replication query file

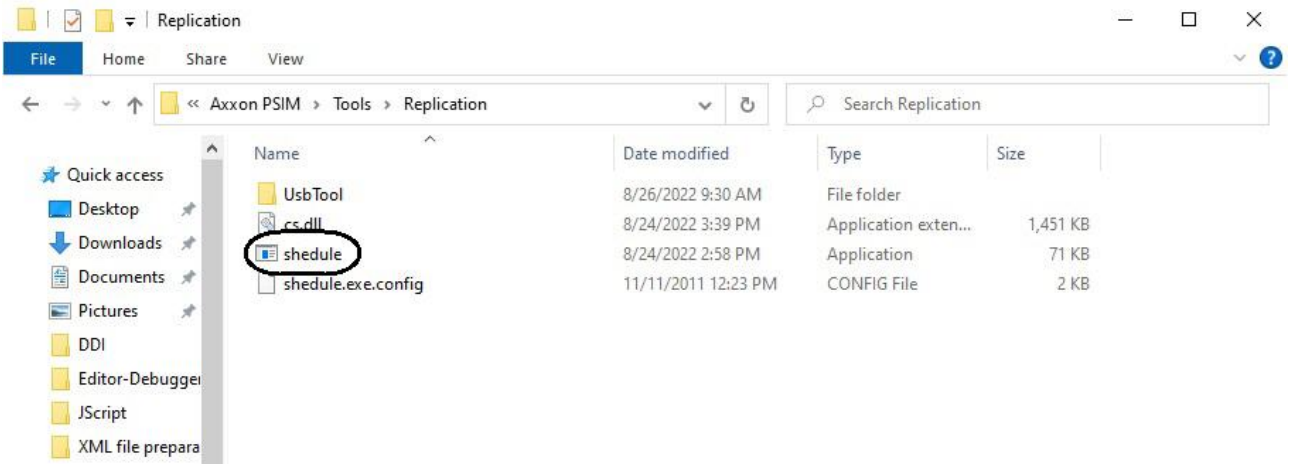
14.1 The purpose of the shedule.exe utility

The shedule.exe utility is designed for creating a query file on the Server-Receiver while replicating the archive on unconnected Servers (see Replicating archive from unconnected servers using the removable storage section).

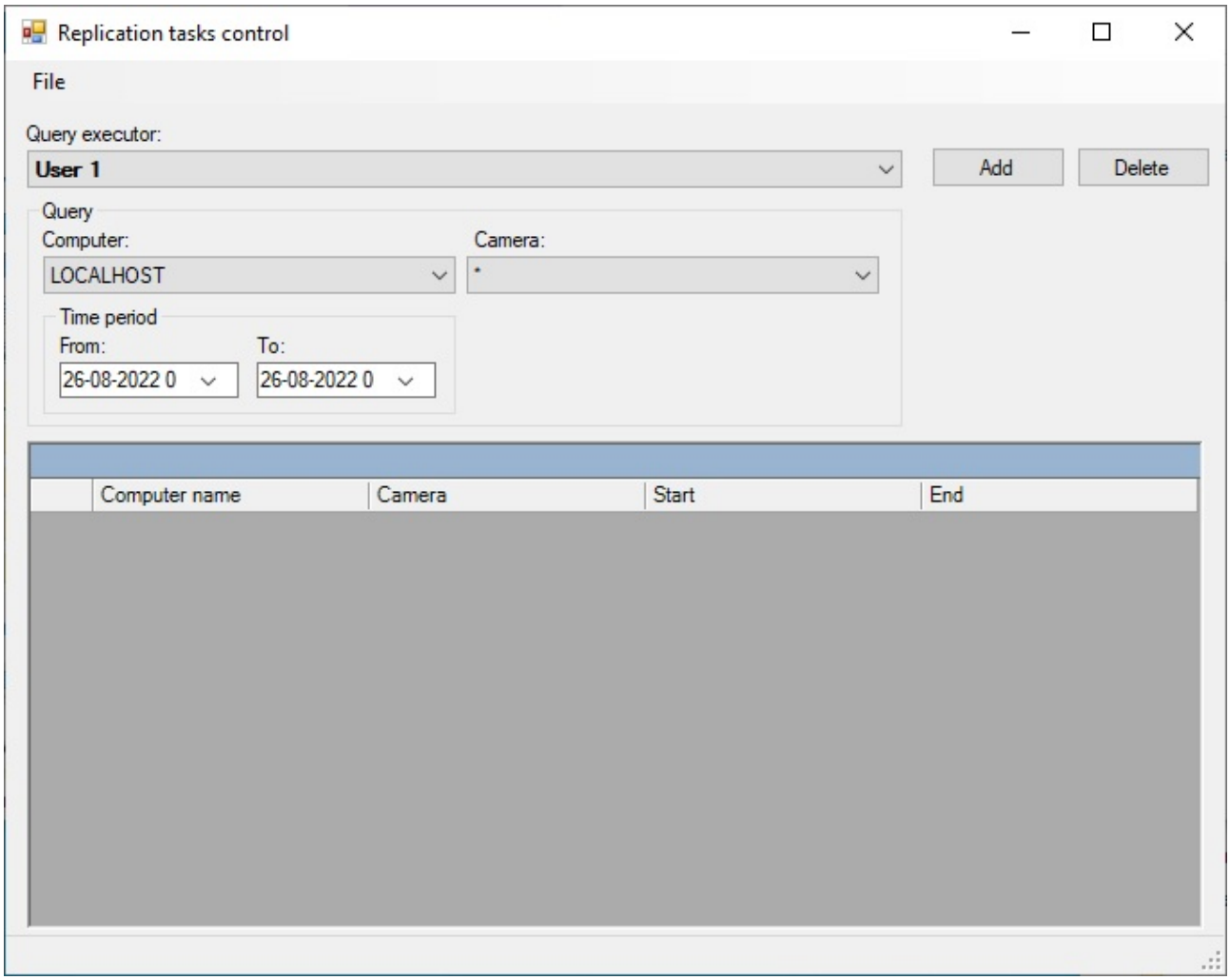
14.2 Starting and shutting-down the schedule.exe utility

To start the utility start the schedule.exe file in the Tools\Replication folder of the *Axxon PSIM* installation directory. For example:

C:\Program Files\Axxon PSIM\Tools\Replication\shedule.exe.



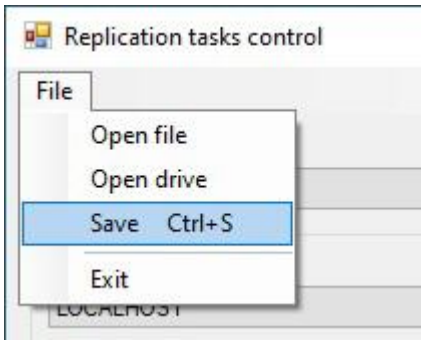
As the result the dialog window of the schedule.exe utility is opened.



Note.

The error message is displayed at opening the schedule.exe utility when users or the **Camera** objects are not created in the *Axxon PSIM* software under the **Computer/LOCALHOST** object corresponding to the Receiver. It is needed to create required objects and restart the system.

To close the *schedule.exe* utility, click the button or select **Exit** in the **File** menu.

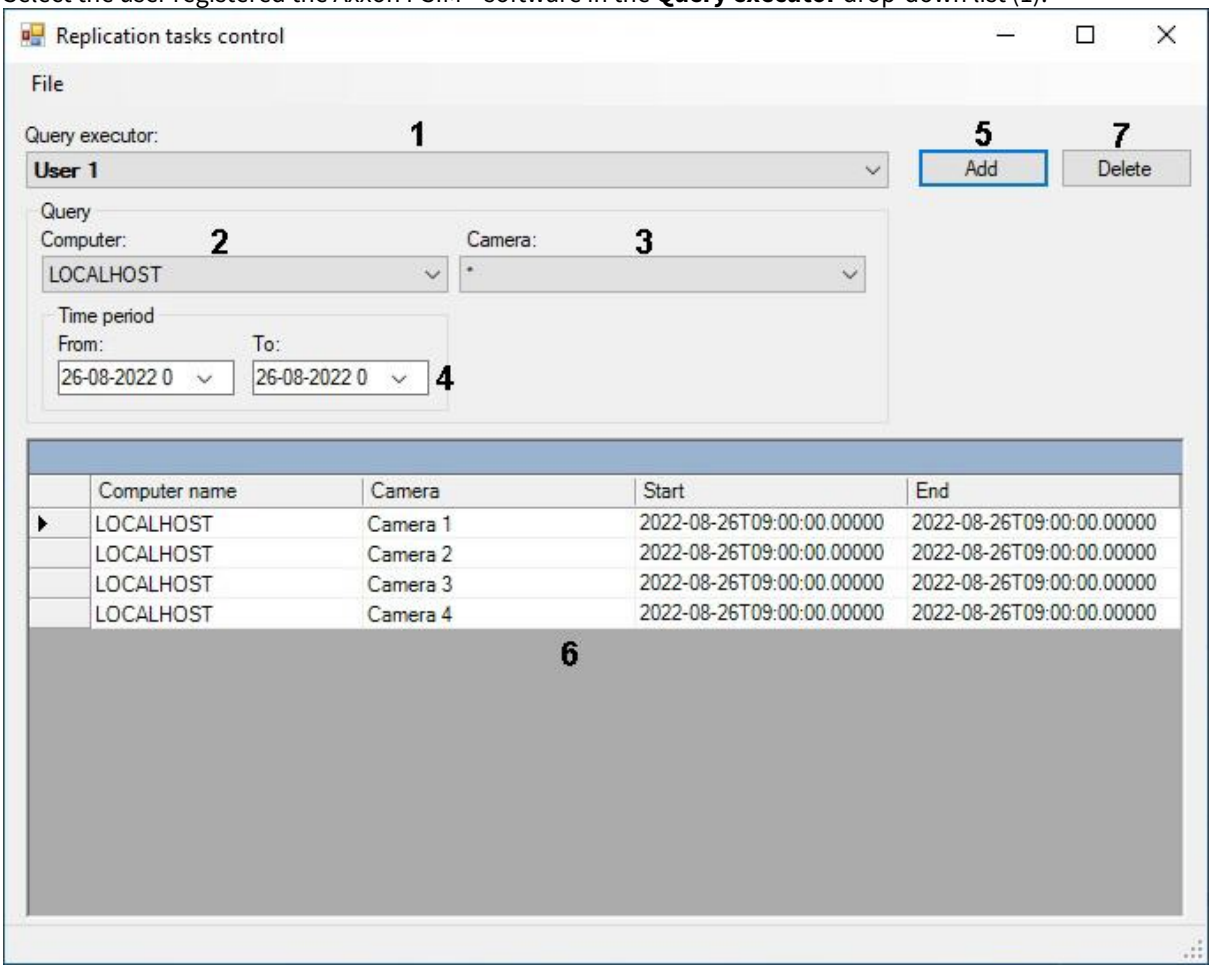


14.3 Using the schedule.exe utility

14.3.1 Creating the query file for replication

To create the query file do the following:

1. Connect the removable storage to the Receiver.
2. Select the user registered the Axxon PSIM™ software in the **Query executor** drop-down list (1).



3. Select the **Computer** object corresponding to the Data source in the **Computer** drop-down list (2).
4. In the corresponding drop-down list select the **Camera** object the archive of which is to be copied (3).
5. Specify the time period for which the archive from selected camera is to be copied in the **From**: and **To**: fields using the mask or calendar that is displayed by clicking the button (4).
6. Click the **Add** button (5).
   The task is added to the list (6).

   Note.

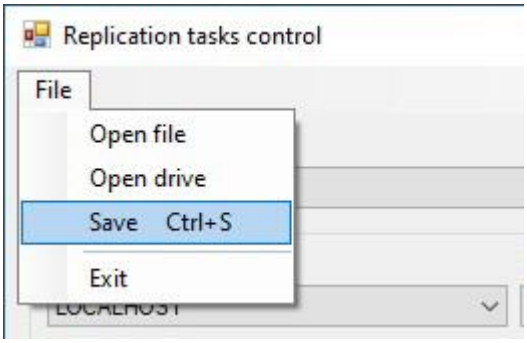
   Select the task and click the **Delete** button to delete it from the list (7).
7. Repeat steps 2-6 for all required Sources.
8. Save the query file.

The query file is now created.

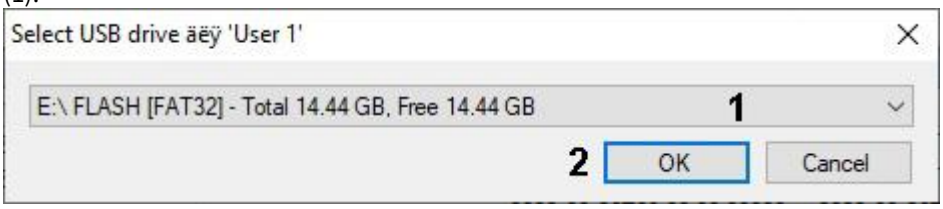
14.3.2 Saving the query file

To save the query file do the following:

1. Select **Save** in the **File** menu.



2. Select the removable disk where the query file is to be saved in the drop-down list of the opened dialog box (1).



> **Note.**
>
> The Removable disks are not found message will be displayed if the removable storage is not found while saving the query file.

> **Note.**
>
> If there is the PSIMBackup folder on the removable storage, then the dialog box asking to delete this folder is displayed. Click the **OK** button.

3. Click the **OK** button (2). The query file is saved on the selected disk.

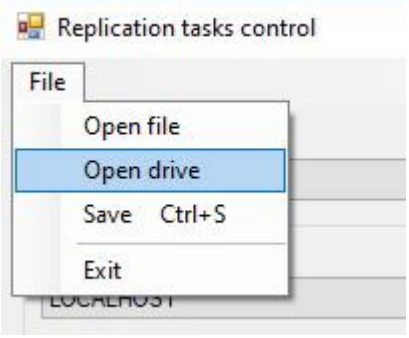
The query file is now saved.

14.3.3 Opening the query file

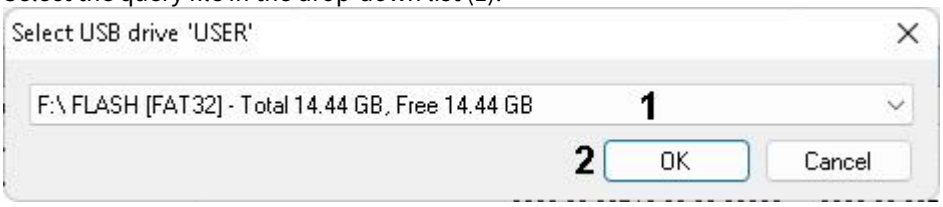
To open the query file do one of the following:

1. Specify the disk where the query file is. For this:

2. Select **Open drive** in the **File** menu.

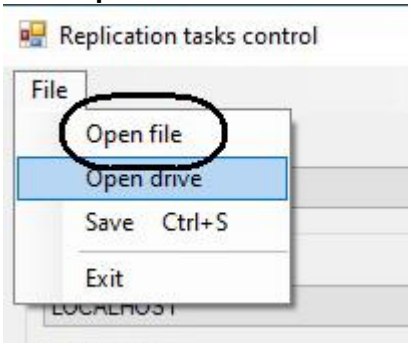


3. Select the query file in the drop-down list (1).



> **Note.**
>
> The Removable disks are not found message will be displayed if the removable storage is not found while openning the query file.

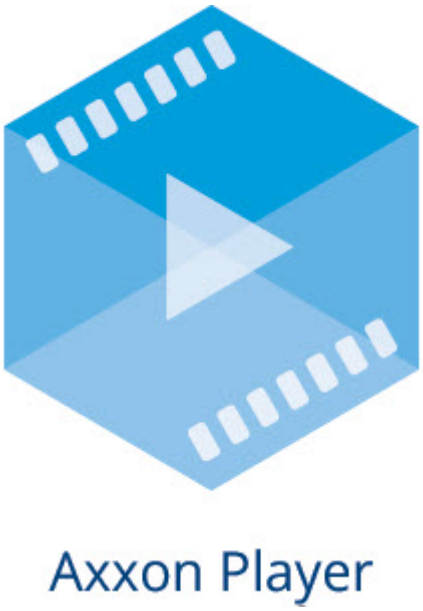
4. Click the **OK** button (2).
   The utility detects and opens the query file which is in the root of selected disk.
5. Select the query file manually. For this:
6. Select **Open file** in the **File** menu.



7. Select the *psim_task.xml* file containing the query parameters using the standard opening dialog.

The query file is now opened.

15 The AxxonPSIM player utility for viewing and converting the video archive



15.1 General information about the AxxonPSIM player utility

On the page:

15.1.1 Purpose of the AxxonPSIM player utility

The purpose of the *AxxonPSIM player* utility is to view a video archive recorded using *Axxon PSIM* or *Axxon One* (see Opening video files, Viewing video using the AxxonPSIM player utility). The utility also allows you to view any video files in .mkv, .mov, .mp4, .asf, .flv and .avi formats, both with and without audio (see Opening video files by specifying the path in the utility).

Additionally, you can use the utility to:

- export video files, see Exporting the Axxon PSIM video archive using the AxxonPSIM player utility;

Attention!

Exporting video files in .mov, .mp4, .asf and .flv formats is not supported.

- decompress the video archive files packed in .exe, see Unpacking video files in the AxxonPSIM player portable utility.

15.1.2 Hardware requirements for the AxxonPSIM player utility

For the proper operation of the *AxxonPSIM player* utility, the graphics card must support the Direct3D or OpenGL 1.2 functionality.

15.1.3 Portable version of the AxxonPSIM Player utility

You can download 64-bit portable versions of the *AxxonPSIM player* utility at http://www.axxonsoft.com/resources/downloads.php. The portable version of the *AxxonPSIM player* utility can work without *Axxon PSIM* or *Axxon One* installed. Working with the portable version of the *AxxonPSIM player* utility is similar to the version included in the *Axxon PSIM* distribution package.

15.1.4 Watch history in the AxxonPSIM player utility

The utility generates a log file containing the playback history, see Watch history in the AxxonPSIM player utility.

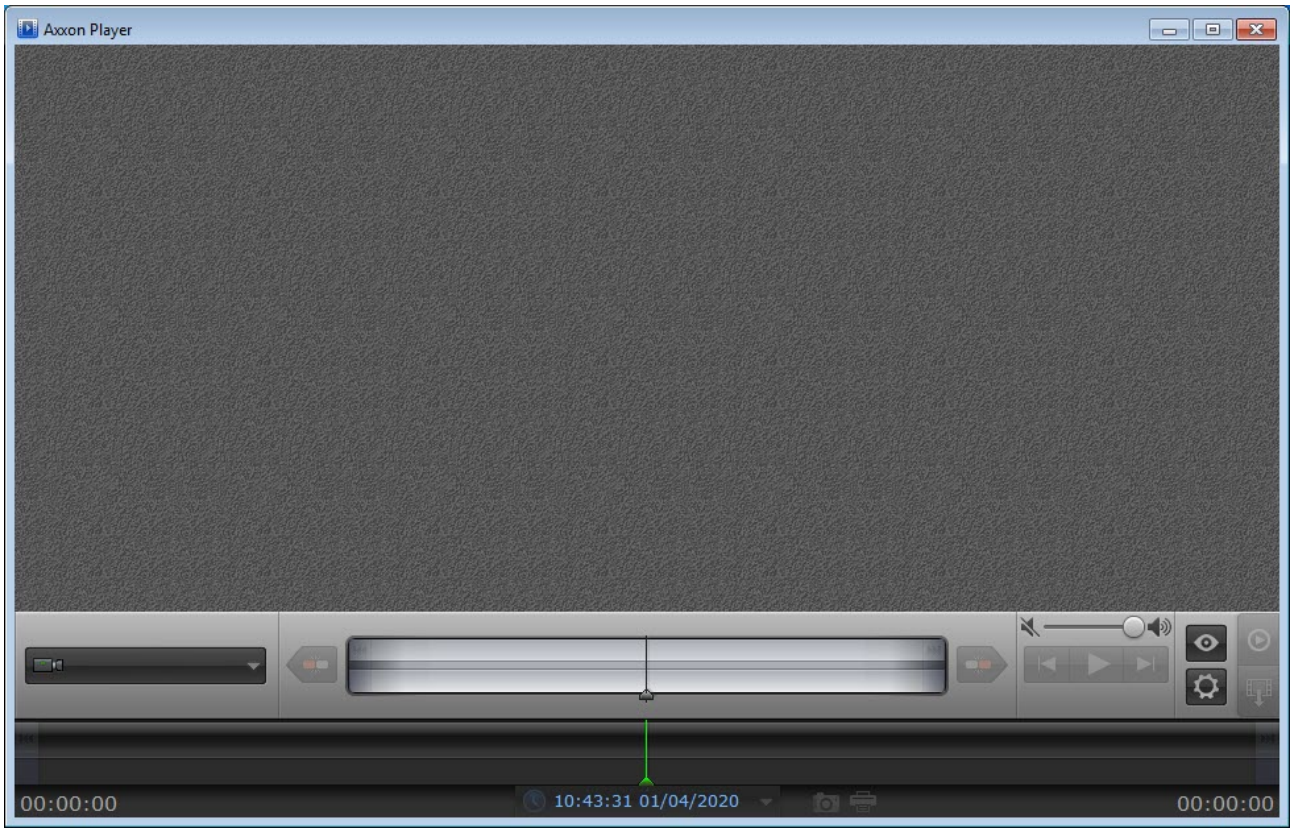
15.2 Starting the AxxonPSIM player utility

On the page:

15.2.1 Starting AxxonPSIM player after Axxon PSIM installation

To start the *AxxonPSIM player* utility, run the **AxxonPSIM_player.exe** executable file in the **Player** folder from the *Axxon PSIM* software installation directory.

The **AxxonPSIM player** window opens after starting the *AxxonPSIM player* utility.



The *AxxonPSIM player* utility is now started.

15.2.2 Starting AxxonPSIM player portable

To perform initial start-up of the *AxxonPSIM player portable* utility, do the following:

1. Unpack the archive downloaded from AxxonSoft website to any suitable folder. Open the folder.
2. Run the **AxxonPSIM_player_portable.exe** executive file. Wait for starting up complete.
3. Utility files are copied to the **C:\Program Files\Player** directory. In the **Documents** folder the **AxxonSoft** directory is created. This directory contains **Export** and **ScreenShots** folders in which video export and frames export is performed on default.

   Note.

   On initial start-up of *AxxonPSIM player portable* utility the *Axxon Driver Pack* is installed. It can't be removed by standard Windows tools. *Axxon Driver Pack* is removed automatically when the *AxxonPSIM player portable* utility environment removing.

4. After completing of creating environment the *AxxonPSIM player portable* utility will be run.

Next run of the *AxxonPSIM player portable* utility is also performed using the **AxxonPSIM_player_portable.exe** executive file located in the distribution package.

15.3 Opening video files

There are three ways to open video files with the *AxxonPSIM player* utility:

1. Double left-click on the archive file (file of *._* type) in the VIDEO folder.

   Note

   To open files by double clicking they should be associated with the player utility. To perform it, run the *AxxonPSIM player* from the admin login at least once.

2. Specifying the path using which the access to archive files is to be performed in the utility.
3. Using the command prompt.

Note

If video files that are to be opened were not recorded, but copied, then start the Convert.exe utility to open the archive (see The Convert.exe utility for correcting modification dates of video archives section):

- If the archive is created in the same time zone as it is viewed, then start the utility with the fullmode parameter:
  convert.exe fullmode
- If the archive is created in different time zone than it is viewed, then move the archive to the current time zone by starting the utility with the following parameters in the command prompt:
  convert.exe fullmode TZ +hh:mm
  where +hh:mm is the time shift between the current time zone and the time zone of the archive.

Otherwise the folders with video files fail to open.

Note

Select the folder that is the source for files to be played back in the .mkv, .mov, .mp4, .asf, .flv and .avi formats.

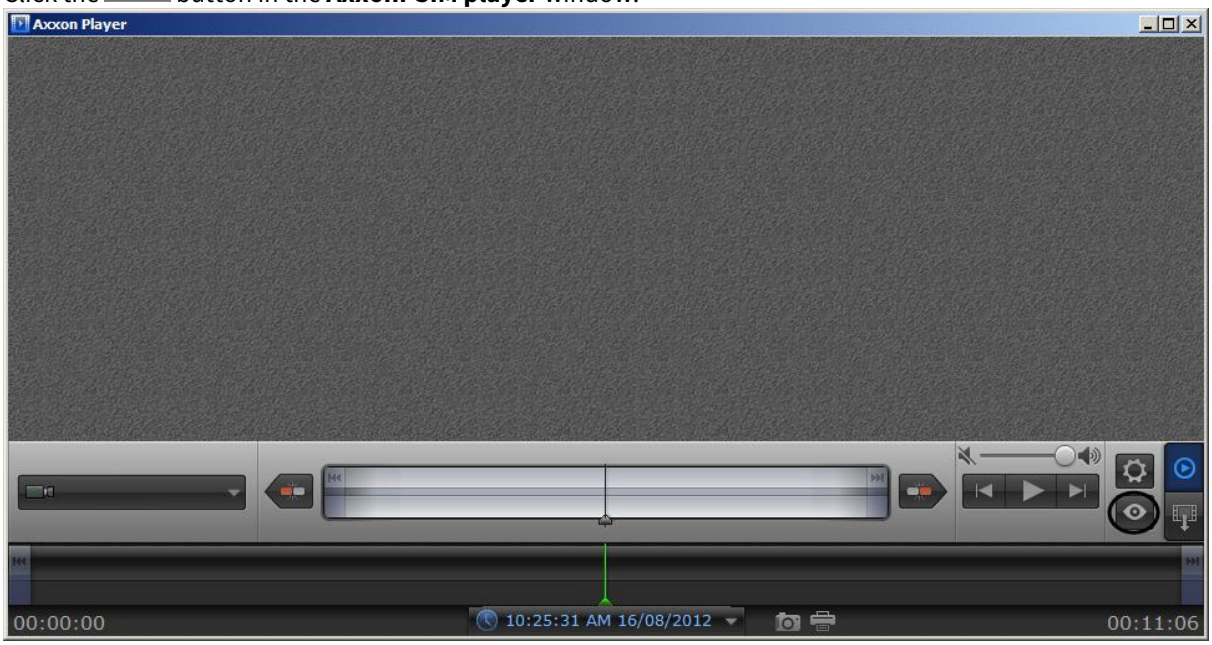
15.3.1 Opening video files by specifying the path in the utility

The following ways are to be used to specify the path to archive files:

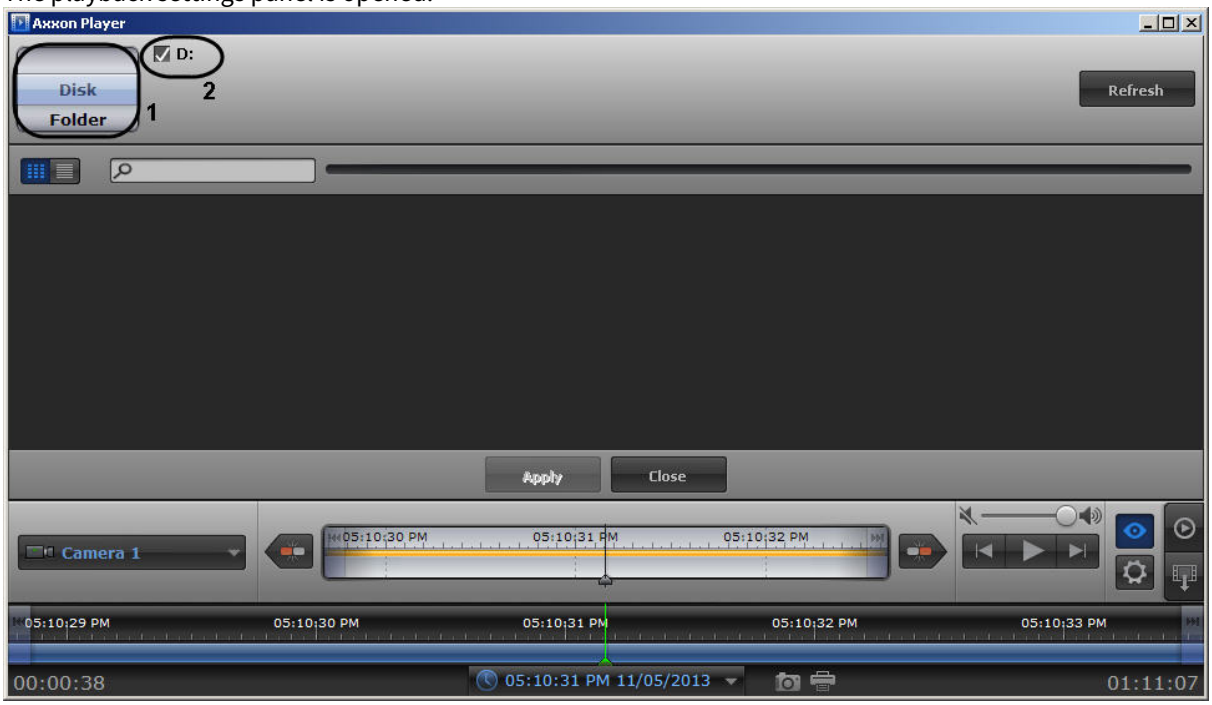
1. **Disk** – access is performed to all files stored on the specified disk. The archive must be stored on the disk with all the supplementary files created during the recording including the INDEX folder etc.
2. **Folder** – access is performed to all files stored in the specified folder. The archive must be stored in the folder with all the supplementary files created during the recording including the INDEX folder etc.
3. **File** – a separate archive file or a file in .mkv, .mov, .mp4, .asf, .flv or .avi format will be played back.
4. **Folder with video files** – files in .mkv, .mov, .mp4, .asf, .flv or .avi format stored in the specified folder will be played back.

To open archive files which are to be viewed with the *AxxonPSIM player* utility, do the following:

1. Click the  button in the **AxxonPSIM player** window.



The playback settings panel is opened.

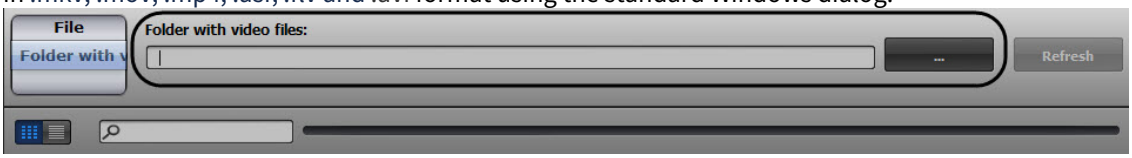


2. Select the way of opening the file: **Disk**, **Folder**, **File** or **Folder with video files** (**1**).
3. Specify the path to video files:
    a. If the **Disk** way is selected then set checkboxes next to thy letters of those disks on which the *Axxon PSIM* software archive is stored.

b. If the **Folder** way is selected then click the ... button and specify the folder from which the archive is to be viewed using the standard Windows dialog.

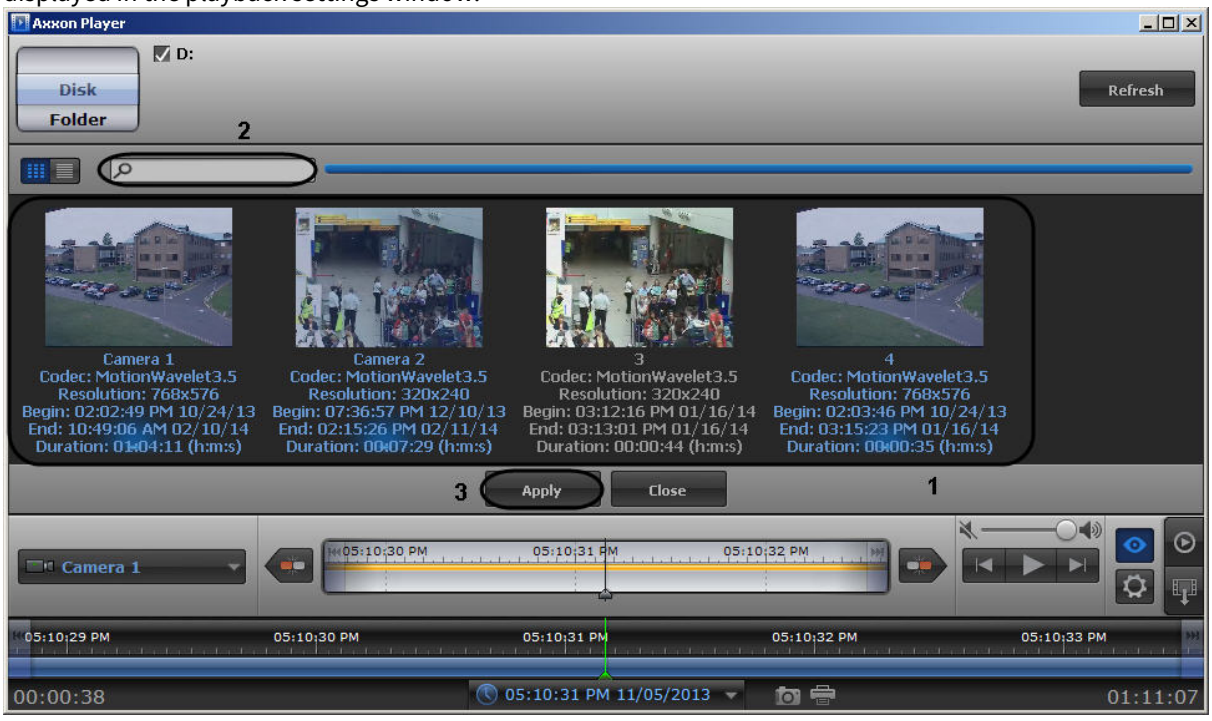
c. If the **File** way selected then click the ... button and specify the archive file using the standard dialog of file opening.

d. If the **Folder with video files** way is selected then click the ... button and specify file in .mkv, .mov, .mp4, .asf, .flv and .avi format using the standard Windows dialog.



> **Note**
>
> The path to the files can be specified manually by entering it in the corresponding field.

4. Click the **Refresh** button (**2**). The of list video cameras on which the archive is available by specified path is displayed in the playback settings window.



5. In the list (**3**) select the video cameras or files the archive from which is to be viewed. To select several cameras or files at a time, left-click them holding the Ctrl key.

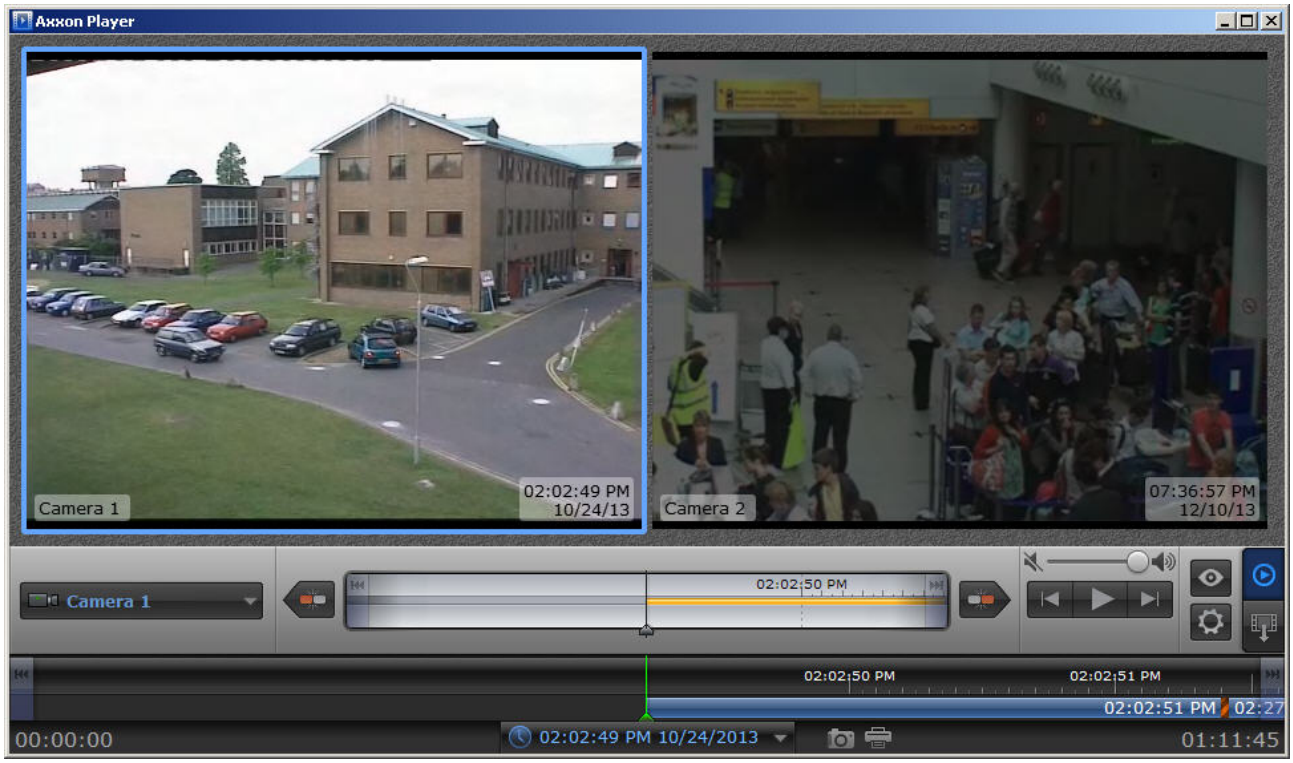
> **Note**
>
> All found cameras are selected by default. The names of the selected video cameras are highlighted with blue.

> **Note**
>
> Click the  button to switch over the mode of list viewing by rows (one camera in a row).

> **Note**
>
> Enter the part of camera name in the **Search** field to search required camera (2).

6. Click the **Apply** button (3).

Playback setting panel is closed. Video images from selected cameras stored in the archive on specified path are displayed in the utility window.



If several cameras are selected for archive playback, it is possible to make the image from one camera fullsized in the utility window. Double click the video image to switch over the full-screen mode. Double click the video image again to return the mosaic mode.

Opening the archive files specifying the path is completed.

15.3.2 Opening video files using the command prompt

It is possible to open video files using the *AxxonPSIM player* utility from the command prompt.

To open video files input the following in the command prompt:

AxxonPSIM_player.exe --source "File/Folder path". For example, AxxonPSIM_player.exe --source "H:\VIDEO\05-05-12 18\15._01".

To select all available disks with the archive use the “all” value of the “source” parameter: AxxonPSIM_player.exe --source "all".

To display the window of the *AxxonPSIM player* utility over other windows use the “topmost” parameter with “1” value when opening video files using the command prompt. For opening in a normal mode use “0” value of this parameter. For instance, the AxxonPSIM_player.exe --source "H:\VIDEO\05-05-12 18\15._01" --topmost "1" command starts the utility in the displaying over other windows mode. By default the “topmost” parameter has “0” value.

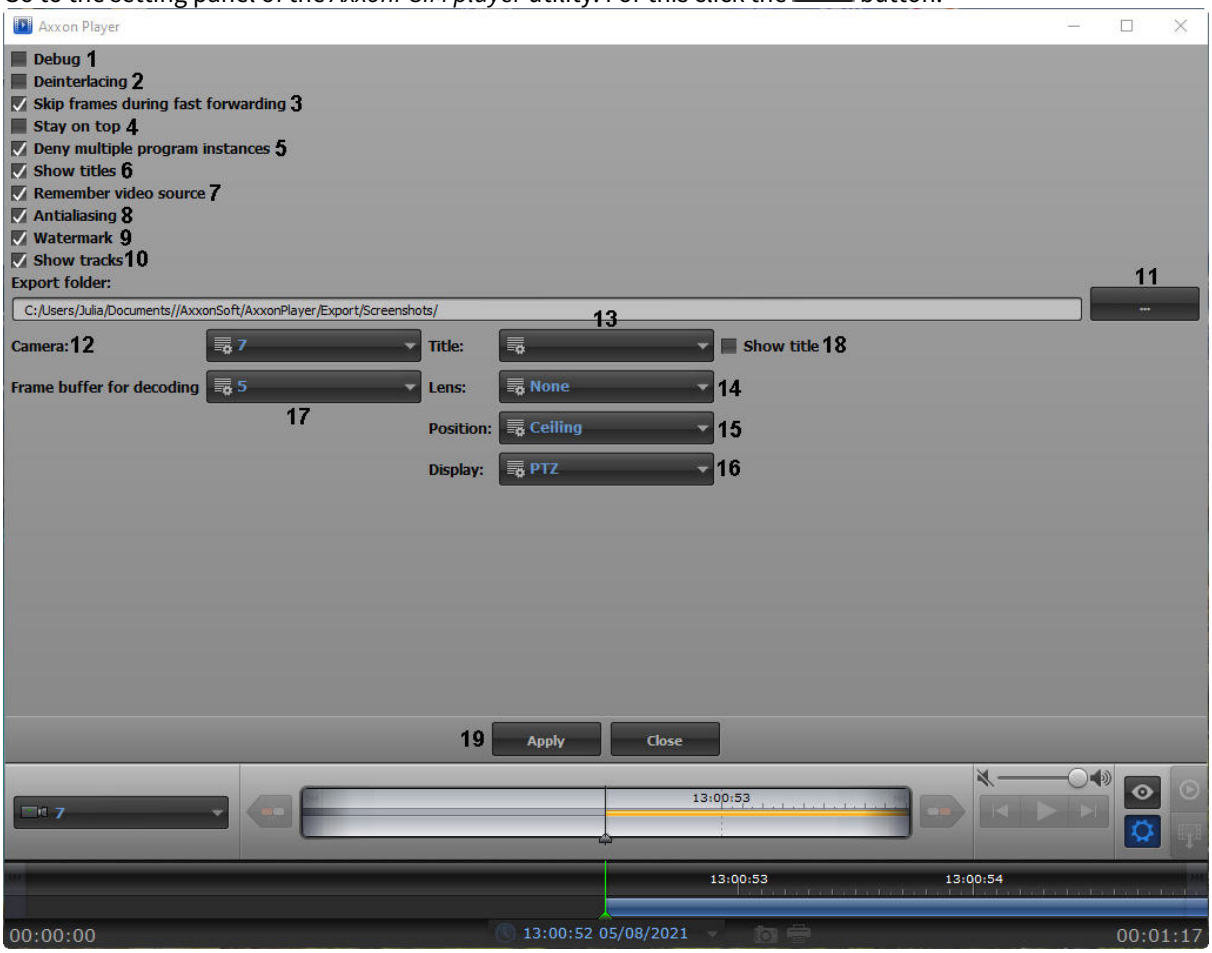
To start the *AxxonPSIM player* utility in a single mode prohibiting simultaneous opening several windows of the utility, use the “single” parameter of the command prompt with “1” value. To start using several windows of the utility use **0** value of this parameter. For instance, using the AxxonPSIM_player.exe --source "H:\VIDEO\05-05-12 18\15._01" --single "1" command the *AxxonPSIM player* utility starts with prohibition of simultaneous opening of several utility windows. By default the “single” parameter has “1” value.

To enable the option of titles displaying above video image while playing use the “titles” parameter of the command prompt with value 1.To disable titles displaying while playing the video image use value 0 for this parameter. On default the titles parameter is 1.

15.4 Configuring the AxxonPSIM player utility

To configure the *AxxonPSIM player* utility do the following:

1. Go to the setting panel of the *AxxonPSIM player* utility. For this click the  button.



2. To display a semi-transparent debug window over each image, set the **Debug** checkbox (**1**).
3. To enable deinterlacing set the **Deinterlacing** checkbox (**2**). To disable deinterlacing remove this checkbox. Deinterlacing allows avoiding artifacts in the video image.

Image with artifacts:

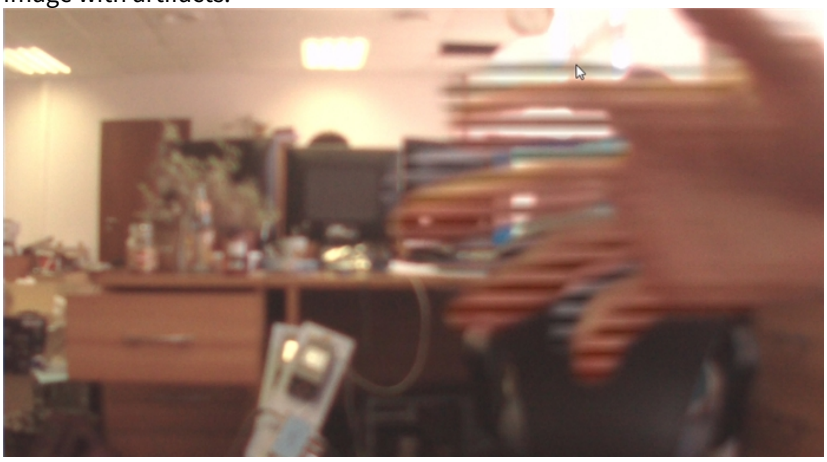
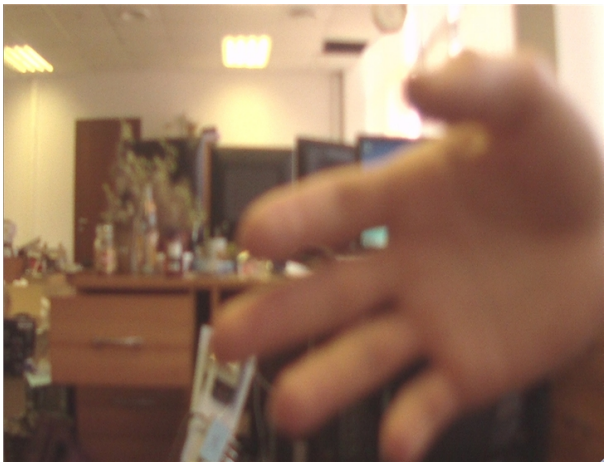


Image with no artifacts:



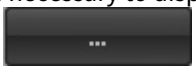
4. To enable the option of frames skipping when there is fast playback set the **Skip frames during fast forwarding** checkbox (**3**). This functionality is used to reduce the Server load.
5. To display the utility window over other windows set the **Stay on top** checkbox (**4**).
6. To disable the simultaneous opening of several utility windows set the **Deny multiple program instances** checkbox (**5**).
7. If it is necessary to display titles above video image while playing the video record, set the **Show titles** checkbox (**6**). Options of titles displaying such as font, color and place are specified by Settings.xml file which is located in the folder with video archive (in the VIDEO folder). This file is formed by the **Captioner** object (see the Configuring captions display on a video image section).

   Attention!

   To use the Settings.xml file, the path to the archive files should lead to the disk or to the folder where the Settings.xml file is located (see the Opening video files by specifying the path in the utility section). If the Settings.xml file is missing or a direct path to the archive file is specified, then the titles will be displayed in the center of the video image. If the path to the archive files leads to the exported archive file in the .avi format, then the titles will be displayed according to the information from this archive file.

   Note

   The axis of the titles coordinates is shifted to the right closer to the center of the player's screen in order to prevent the titles overlapping on the debug information.

8. If resources of video (disks, folders, files) are to be remembered and selected when the utility is run, then set the **Remember video source** checkbox checked (**7**). If the checkbox is set unchecked, then video is not shown when the utility is run, but when the path to the folder or file with video is selected, the previously specified path is shown. If the checkbox is set checked, then when the utility is run video is shown starting from the frame at which the viewing was previously stopped.
9. If the 'stairstep' artifacts appear on video while playing, set the **Antialiasing** checkbox (**8**) to eliminate them.
10. Set the **Watermark** checkbox (**9**) to show AxxonSoft watermark over the exported video (see Watermarks).
11. If it is necessary to display tracks during playback, set the **Show tracks** checkbox (**10**).
12. Click  (**11**) to open a standard Windows dialog box for specifying the folder to export *Axxon PSIM* archive into (see Exporting the Axxon PSIM video archive using the AxxonPSIM player utility).

    Note

The path to the folder can be entered manually to the corresponding field.

13. From the **Camera** drop-down list (**12**), select the camera to which the below settings apply:
    a. From the **Title** drop-down list (**13**), select the captions to display over the video from the camera while playing.
    b. From the **Lens** drop-down list (**14**), select one of the following lens types installed in the camera (see also Viewing archive of a fisheye camera):
        - **None**
        - **Standard fisheye lens**
        - **Auto calibrated**
        - **A0**V**
        - **A1UST**
        - **A8TRT**
        - **B0QQV**
        - **B4QQV**
        - **B5SST**
        - **B6SST**
    c. From the **Position** drop-down list (**15**), select the camera position:
        - **Ceiling**
        - **Wall**
        - **Floor**
    d. From the **Display** drop-down list (**16**), select the camera type:
        - **PTZ**
        - **Perimeter**
    e. In the **Frame buffer for decoding** drop-down list (**17**), select the number of frames for decoding: 3 or 5.
    f. Set the **Show title** checkbox to enable the selected captions displaying (**18**).
14. Click the **Apply** button (**19**).

The configuration the *AxxonPSIM player* utility is complete.

15.5 Viewing video using the AxxonPSIM player utility

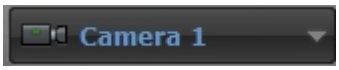
15.5.1 The Playback control panel

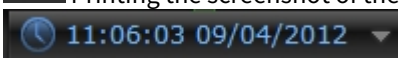
Archive playback control using the *AxxonPSIM player* utility is performed in the utility window on the playback control panel.

Click the  button to go to the playback control panel.

Elements description of the playback control panel is given below:

1.  Start the archive playback on cameras on which there are records on specified date. Synchronic archive playback is available.
2.  Playback stop.
3.  Playback speed up in two times relatively the current speed if the playback launched (maximum ×16 speed up is available).
   Go to the next frame if the playback stopped.
4.  Playback speed down in two times relatively the current speed if the playback launched (maximum ×16 speed down is available).
   Go to the previous frame if the playback stopped.
5.  Go to the current record beginnig.
6.  Go to the current record ending.
7.  Go to the archive ending in the main time scale. Go to the archive ending of selected camera on additional time scale.

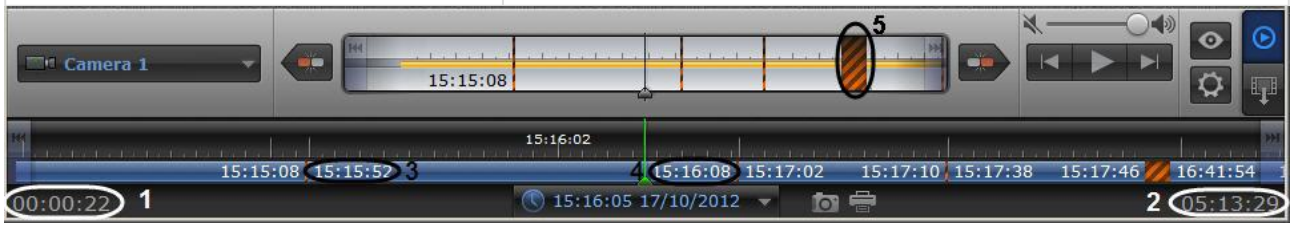
8.  Go to the archive beginning in the main time scale. Go to the archive beginning of selected camera on additional time scale.
9. 

Select active camera for archive playback in full-screen mode if several cameras selected for archive playback.
10.  Saving the screenshot of the utility area displaying camera boxes. Screenshot is saved in C:\Users\%current user%\Documents\AxxonPlayer\Screenshots directory.
11.  Printing the screenshot of the utility area displaying camera boxes.
12. 

Specifying time and date for archive record to be played.
13.  Volume adjustment.

Time and archive marks in the both scales are to be taken into consideration while controlling playback. Their description is given in the table below.

Mark	**Description**
Time mark for archive absence (5)	This mark means that there is no compressed archive. The more interval without archive, the thicker the mark is
Time mark 1 (1)	Time period from archive begin to the current moment
Time mark 2 (2)	Time period from the current period to archive ending
Time mark 3 (3)	Time of recording start
Time mark 4 (4)	Time of recording finish

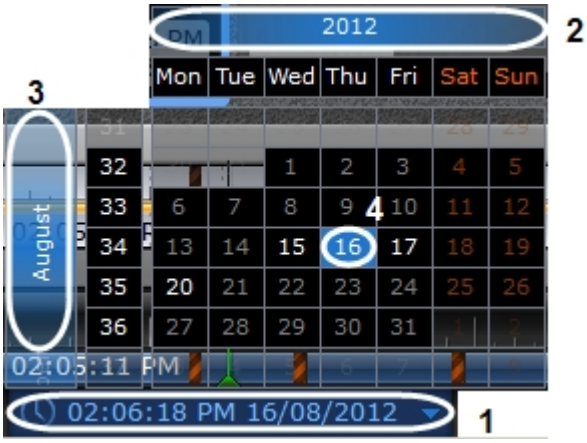


15.5.2 Archive navigation using the calendar

Archive navigation can be performed using the Calendar tool. This tool is designed to specify the date the archive on which is to be played back.

To specify date of archive viewing do the following:

1. Click the  or  button to access the Calendar tool (1).



2. Specify the year by dragging the calendar field left or right (2).
3. Specify the month by dragging the calendar field up or down (3).
4. Select the needed day by left-clicking the mouse (4). Days for which records are stored in archive are highlighted with white.

Going to the first archive record at the specified date is performed when the required date is selected in the calendar.

Date specifying for archive viewing is completed.

15.5.3 Archive navigation using the timescale

You can perform archive navigation using timescales.

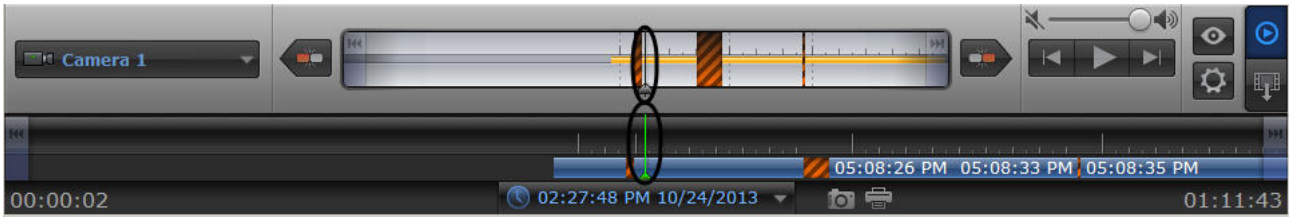
Timescales contain color indicators of records presence per period—tracks.

There are the following timescale types in the *AxxonPSIM player* utility:

1. Main timescale (**1**). This scale displays tracks from all cameras selected for viewing.
2. Additional timescale (**2**). This scale displays tracks from the active camera.

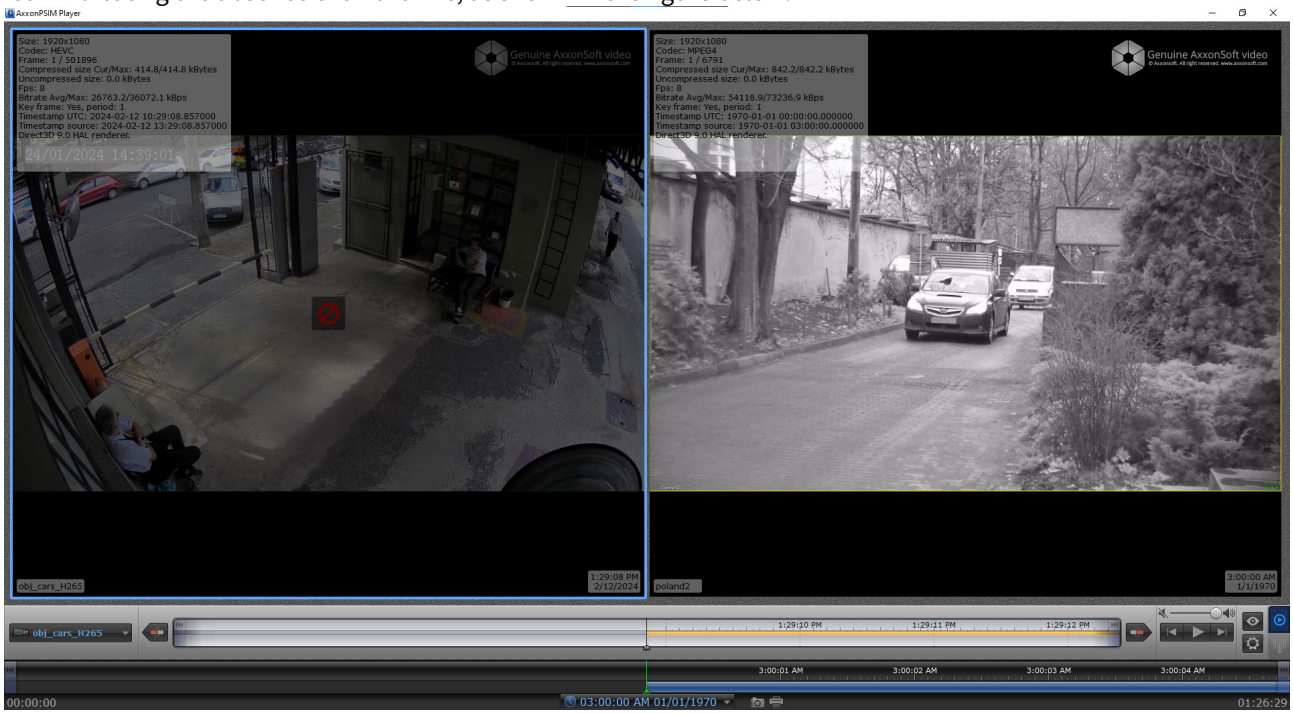
You can perform archive navigation in two ways:

a. By dragging the scale relative to the indicator. When you match the indicator to the point on the timescale, the system switches to the recording moment corresponding to this point.
b. By clicking the left mouse button on the required period on the timescale.



Moving along the main and additional scales is performed synchronously.
If there are no frames for the viewing period, the system displays the last frame on a black background with a red

icon indicating the absence of an archive, as shown in the figure below.



It is possible to zoom the timescales. You can zoom in and zoom out using the mouse wheel in the required timescale area (see Scaling a video image in the AxxonPSIM player utility).

15.5.4 Scaling a video image in the AxxonPSIM player utility

It is possible to scale viewing video images in the *AxxonPSIM player* utility.

Zoom in and zoom out of video image size are performed using the scroll wheel in the camera area.

Navigation over the blowup video is performed using the mouse cursor moving with holding the middle mouse button (wheel) pressed.

15.5.5 Saving the frame from the command prompt

It is possible to export frame from archive using the command prompt. The following parameters of AxxonPSIM_player.exe executive file are used:

- help – reference on parameters of executive file;
- source arg – specifying the video file/catalogue;
- channels arg – specifying the video camera id for frame export;
- destination arg – specifying the catalogue for frame export;
- time – specifying the time of export frame in YYYY-MM-DD HH:MM:SS.ZZZ format.

Example.

« --source "D:\VIDEO" --destination "D:\CmdExportFolder" --channels "1 3 5" --time "2011-11-02 15:40:11.123"»

or

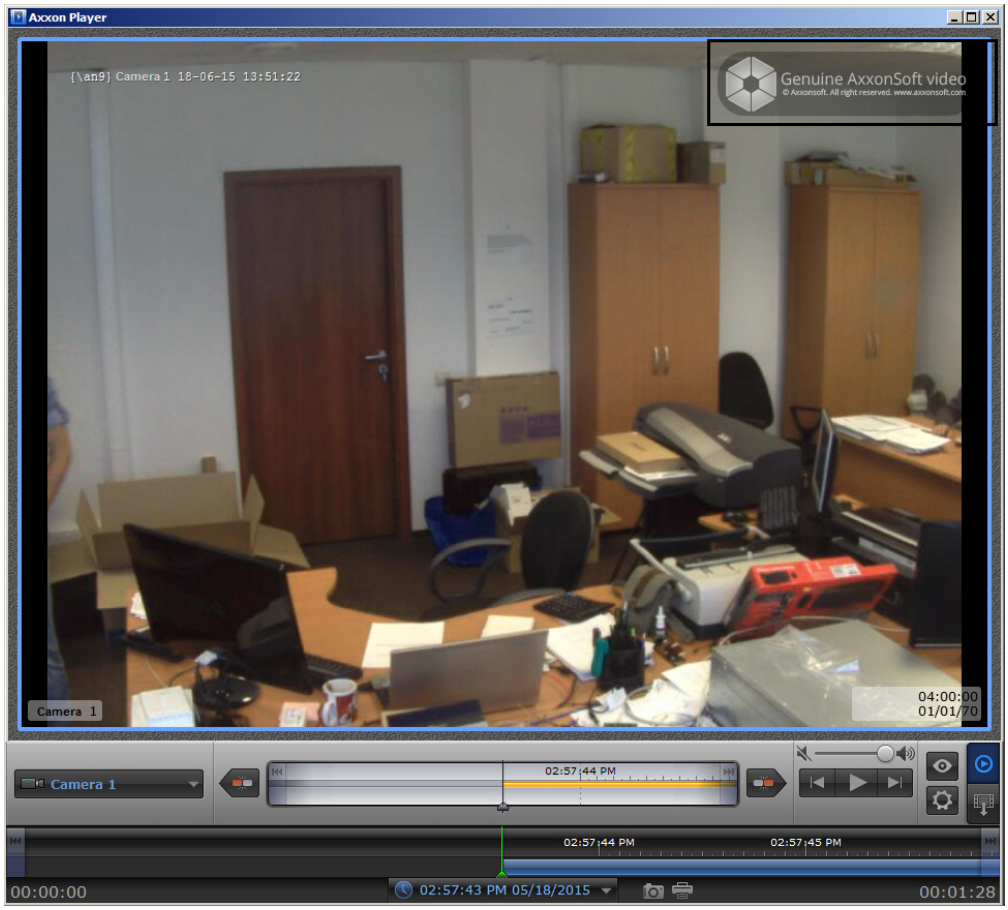
«--source "D:\VIDEO" --destination "D:\CmdExportFolder\UserFrame.jpg" --channels "1" --time "2011-11-02 15:40:11.123"»

File names like “dd-MM-yyyy hh-mm-ss-zzz channelID.jpg" are assigned automatically in the first case. In the second case file names are specified by the user and it is possible to save the frame in JPG, BMP or PNG formats.

If the **channels** parameter is not specified, then all existing channels are to be saved both for the video and images.

15.5.6 Watermarks

If a video file was exported using AviExport utility (see The AviExport utility section in Operator’s Guide), a watermark will be displayed on the video while viewing it using the *AxxonPSIM player* utility:



Note

A watermark is not added to the video if video was exported in the original format and codec was not changed.

15.5.7 Viewing archive of a fisheye camera

Video files of a fisheye camera archive are opened in a common way – see Opening video files.

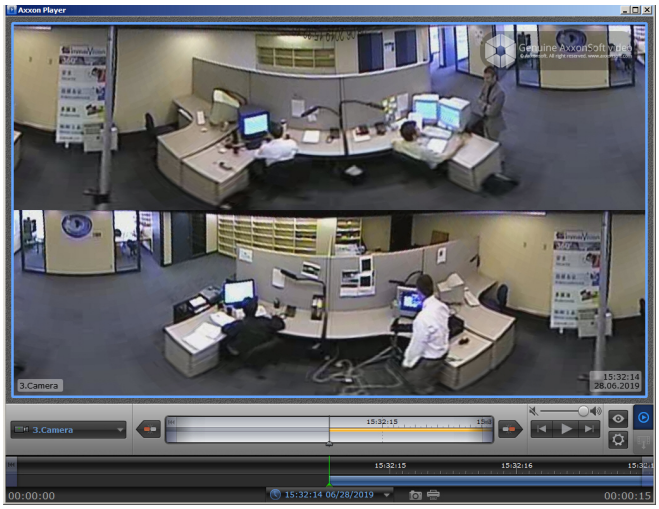
However, the fisheye video is recorded to *Axxon PSIM* or *Axxon One* archive without any conversion, therefore conversion parameters are to be set in *AxxonPSIM player* in order to view such archive video files – see Configuring the AxxonPSIM player utility.

After setting the conversion parameters, the video is displayed in the "unfolded" form. When **Display: PTZ** is set, the virtual PTZ format is available during file playback after digital zoom of the video image with the mouse wheel by one scale division or more. In this format, click-and-move the left mouse button over the video to change the angle of view of the fisheye camera.

Example.

Video without conversion (**Lens: None**):

Video with the following conversion parameters: **Lens: Standard fisheye lens, Position: Ceiling, Display: Perimeter**:



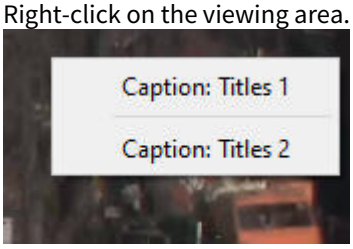
Video with the following conversion parameters: **Lens: Standard fisheye lens, Position: Ceiling, Display: PTZ** (after scrolling the mouse wheel by one scale division):

15.5.8 Displaying captions on video

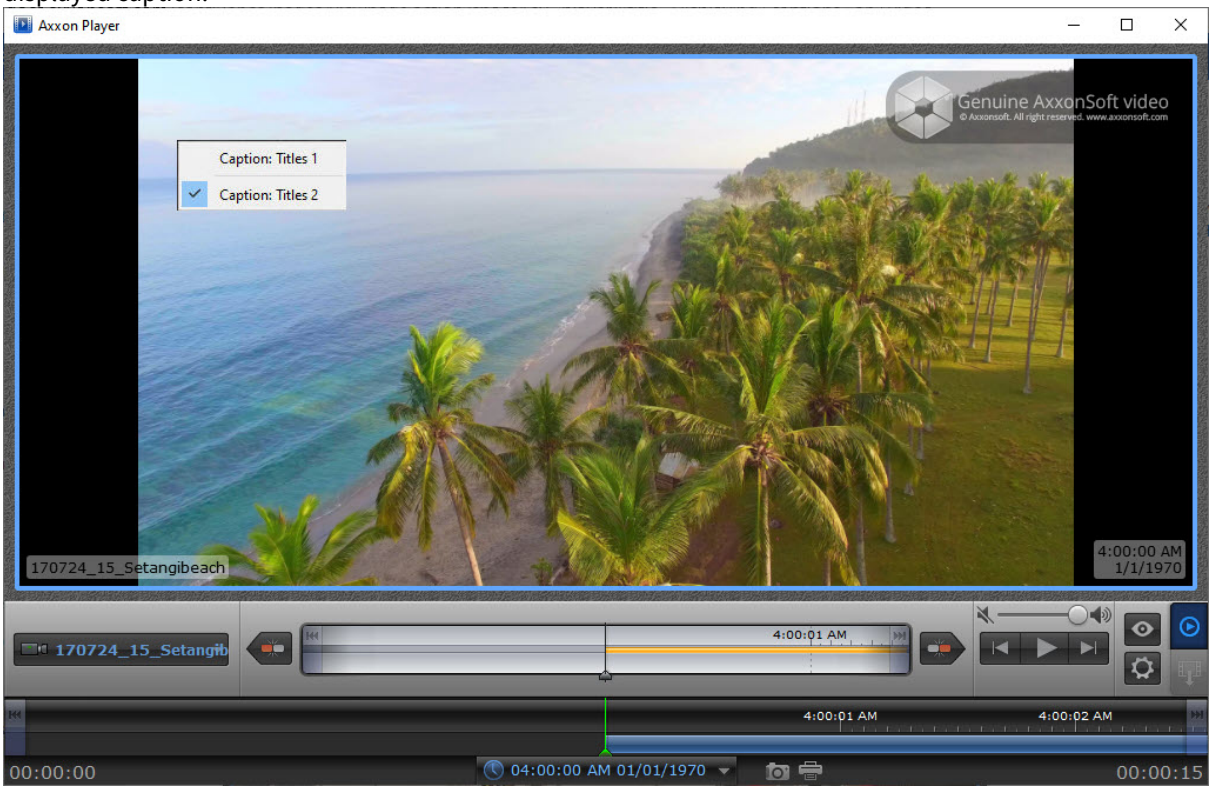
If the video file contains captions, you can adjust their display during the video playback in the *AxxonPSIM player* utility. When playing back a video with both external and built-in captions tracks, the external captions are disabled by default. When playing back a video with the external captions only, they are enabled automatically.

To adjust the captions display, do the following:

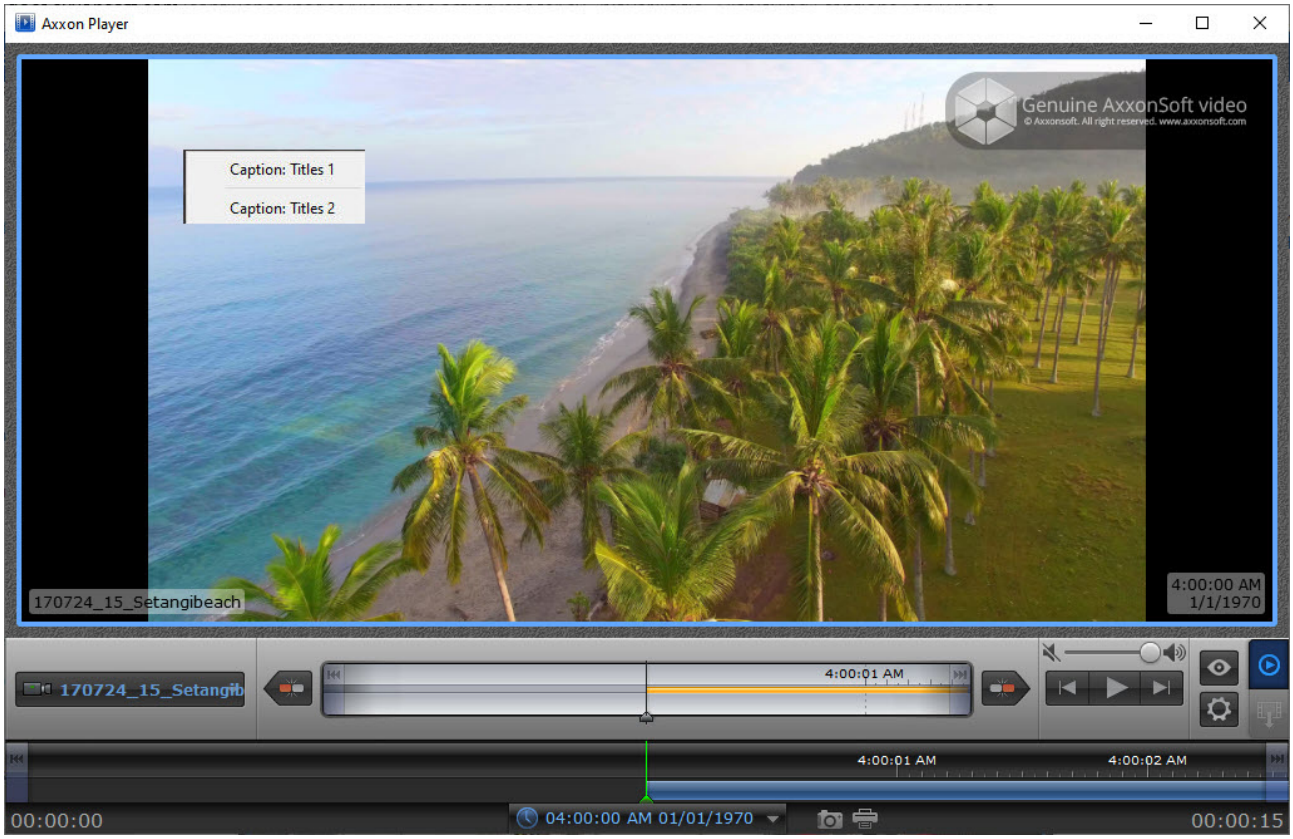
1. Right-click on the viewing area. A window with a list of available captions will open:



2. Click on the name of the caption that should be displayed. The  icon will appear next to the name of the displayed caption:



To disable the captions display, click on the caption name again:



15.6 Exporting the Axxon PSIM video archive using the AxxonPSIM player utility

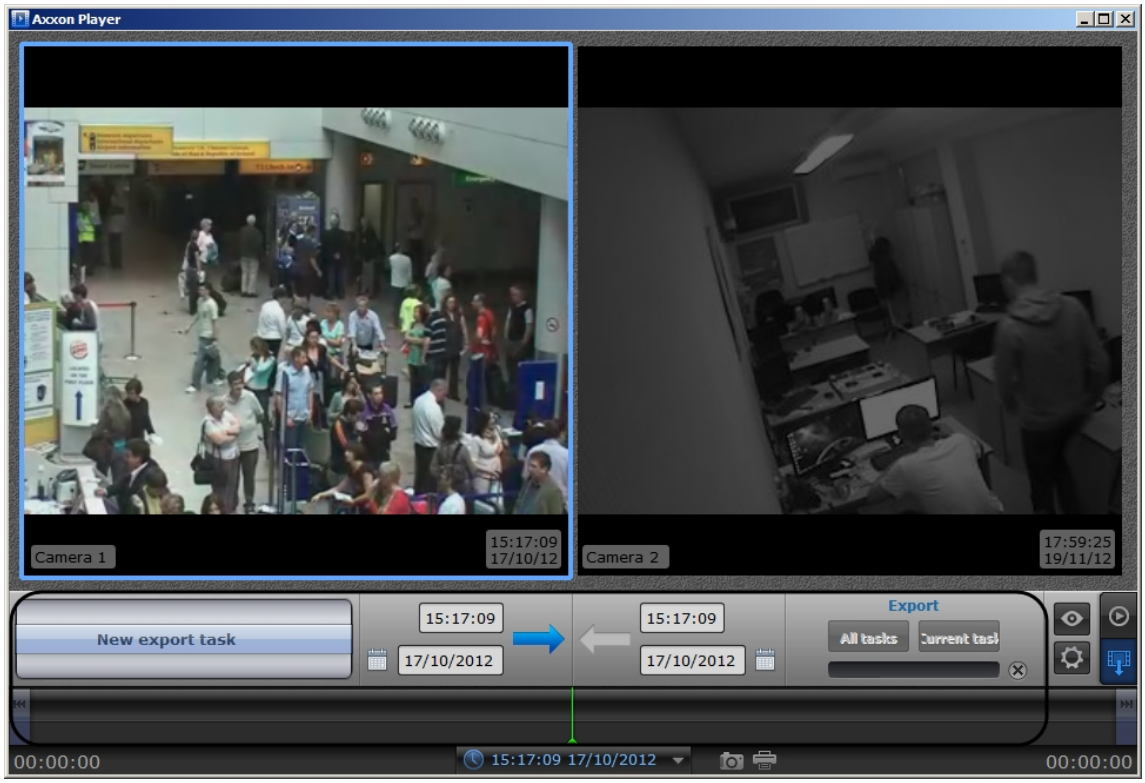
15.6.1 Order of video archive export

Exporting the archive using the *AxxonPSIM player* utility is performed in the following way:

1. Specify the path to the folder into which the archive files are to be exported (see Configuring the AxxonPSIM player utility).
2. Go to the export panel (see Going to the export panel).
3. Create the export task (see Creating the export task).
4. Start the archive export process (see Running the archive export).

15.6.2 Going to the export panel

To go to the export panel click the  button. If a video file in .mov, .mp4, .asf and .flv formats is open in the utility, this button is disabled and looks like  .

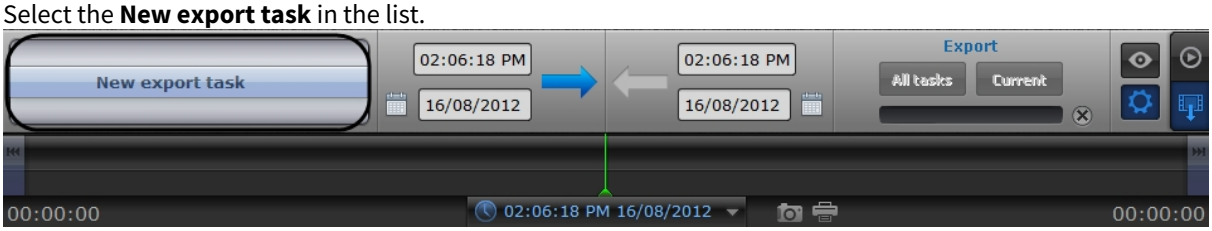


15.6.3 Creating the export task

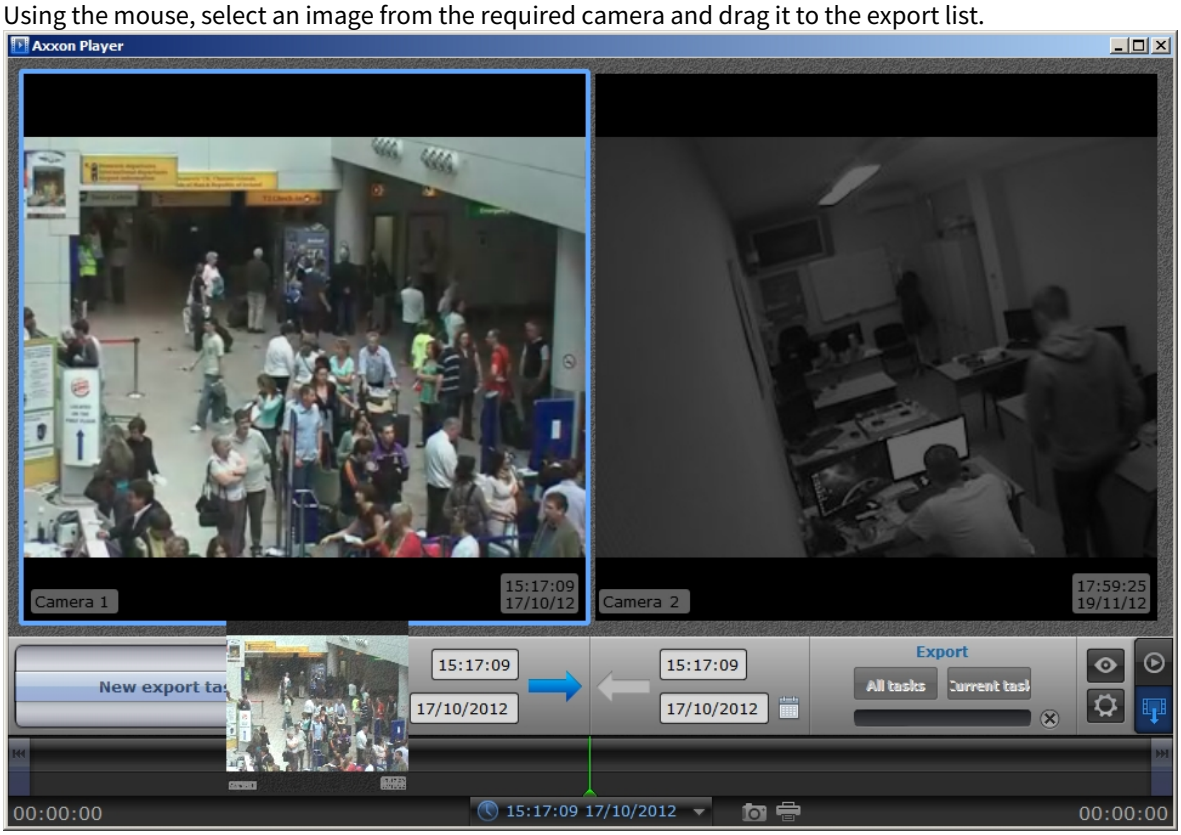
To create the export task, do the following:

> **Attention!**
>
> For the correct operation of the *AxxonPSIM player* utility, you can add up to 10 cameras within one export task. This limitation is due to the specifics of Windows API.

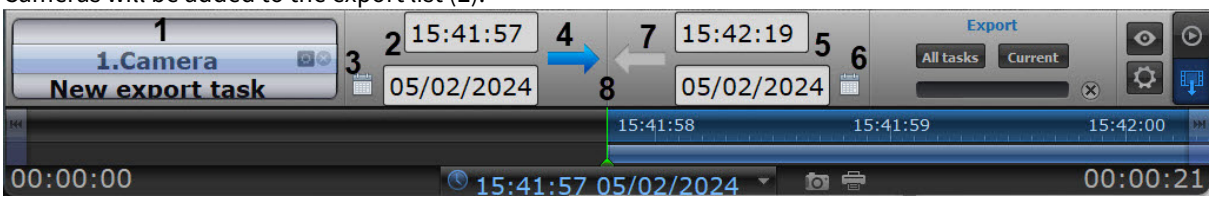
1. Select the **New export task** in the list.



2. Using the mouse, select an image from the required camera and drag it to the export list.



Cameras will be added to the export list (**1**).



Note

- You can create several export tasks, i.e. select several cameras for one task, then create another export task and add other cameras to it.
- To remove a camera from the list, click the button.

3. Each export task has a separate window with settings.

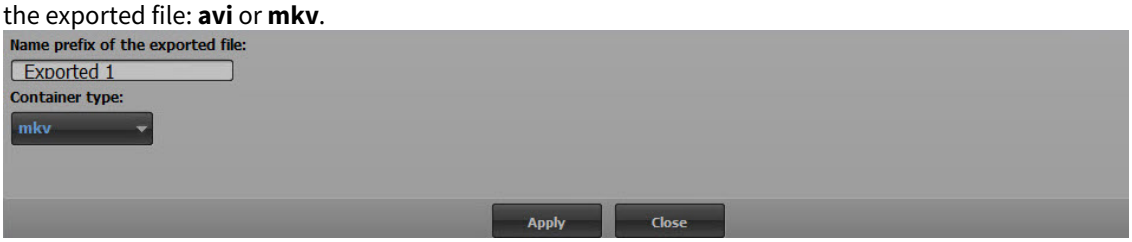
Attention!

Window with settings is only available for formats different from the *Axxon PSIM* own format.

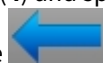
To open the settings window, click the gear button next to the list of cameras.

a. In the window that opens, in the **Container type** field, select the container type (a file format containing a set of video and audio tracks, subtitles tracks, as well as other service information) for

the exported file: **avi** or **mkv**.



b. In the **Name prefix of the exported file** field, specify the name of the exported file.
c. To save the changes, click the **Apply** button. To discard the changes, click the **Close** button.

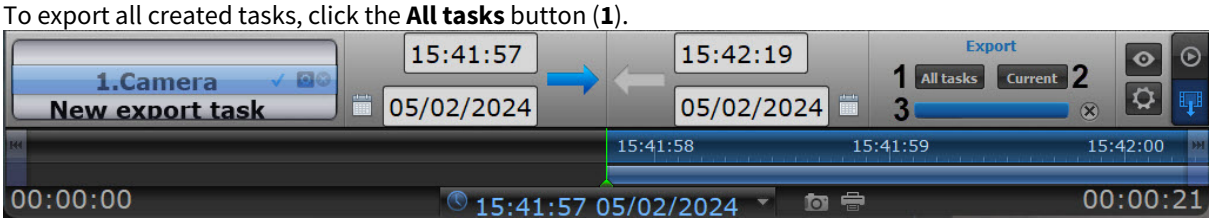
4. Specify the export start and end date in one of the following ways:
   a. Enter the required value in the field manually (**2, 5**).
   b. Click the  button and use the **Calendar** tool (**3, 6**). Calendar operation algorithm is similar to the archive navigation (see Archive navigation using the calendar).
   c. Click the  button (**4**) and specify the export start date by dragging the time scale relative to the indicator (**8**). Click the  button (**7**) and specify the export end date by dragging the time scale relative to the indicator (**8**).

Export task creation is complete.

15.6.4 Running the archive export

To start the export, you can do one of the following:

- To export all created tasks, click the **All tasks** button (**1**).



- To export a single task highlighted in the list, click the **Current** button (**2**).

The export status is indicated by the progress bar (**3**).

> **Note.**
>
> To stop the export, click the  button. In this case, none of the archive files will be exported.

Export of video archive is completed.

After the export is completed, the files will be saved to the default folder C:\Users\user\Documents\AxxonSoft\Export\Screenshots. You can change the folder for export in the *AxxonPSIM player* utility settings (see Configuring the AxxonPSIM player utility).

If the archive cannot be exported, an error message will appear describing the problem.

15.6.5 Setting the export parameters in the command prompt

It is possible to set the export parameters from the Windows command prompt. The following parameters of the **AxxonPSIM_player.exe** executive file are used:

- help – reference output by parameters of executive file;

- source arg – specify the video file/catalogue;
- channels arg – specify the video camera id for export through the space button;
- destination arg – specify the export catalogue;
- from arg – specify the start export time in YYYY-MM-DD HH:MM:SS.ZZZ format;
- to arg – specify the end export time in YYYY-MM-DD HH:MM:SS.ZZZ format.

Example of line for export: «--source "D:\VIDEO" --channels "1 3 5" --destination "D:\CmdExportFolder" --from "2011-11-02 15:40:05.123" --to "2011-11-02 15:40:17.123"».

15.7 Unpacking video files in the AxxonPSIM player portable utility

In *Axxon PSIM*, you can export the archive in the .exe format using the AviExport utility (see Operator's Guide, The AviExport utility section).

If you have problems playing back the archive exported in the .exe format, you can extract the video from the .exe file and watch it separately.

You can do this as follows:

1. Place the exported .exe file in the same folder as the *AxxonPSIM player* portable utility.
2. While in this folder,
    a. Run the command line with the **cmd** command.
    b. Execute the **%PACKED_FILE_NAME% --extract "%VIDEO_FILE_NAME%"** command, where
        - **%PACKED_FILE_NAME%**—the name of the archive exported in the .exe format;
        - **%VIDEO_FILE_NAME%**—the name of the file in the .avi format, which is necessary to obtain as a result of unpacking.

> **Attention!**
>
> If the exported .exe file is larger than 4 GB, it is necessary to execute the **AxxonPSIM_player_portable --executable "%PACKED_FILE_NAME%" --extract "%VIDEO_FILE_NAME%"** command, where AxxonPSIM_player_portable is the name of the *AxxonPSIM player* portable utility.

As a result, the exported file with the specified name appears in the same folder.

Command examples:

Packed_video.exe --extract "1video.avi" —if the source file is less than 4 GB.

AxxonPSIM_player_portable--executable "1video4GB.exe" --extract "result.avi"—if the source file is larger than 4 GB.

> **Attention!**
>
> The extraction fails if the name of the folder where the *AxxonPSIM player* portable utility and .exe file are located contains Cyrillic characters. To fix it, rename the folder (using Latin characters and digits) and try again.

Unpacking video files in the *AxxonPSIM player* portable utility is complete.

15.8 Watch history in the AxxonPSIM player utility

The utility saves the watch history and generates a text file named **AxxonPSIM_player.lh** (extension — log history). The file is located in the C:\Program Files\AxxonSoft\Player folder.

The file writes the information about viewing the video archive only in *Axxon PSIM* own format, even if the archive was exported into the .exe format and then viewed in the Player. The information about viewing files in other formats won't be written.

The file contains the following information about the watch history:

- **AxxonPSIM player start date**—the date and time of the Player start. This information is written at each new start;
- **Selected cameras:**
  - **count**—the number of cameras selected for viewing;
  - **date**—the date and time of the cameras selection for viewing;
- **id**—camera identifier;
- **name**—the name of the camera;
- **startTime**—the date and the time of the video archive from which you started the viewing.

The system date and time are used.

The file is also written when using the portable version of the utility.

Example of file content:

```
AxxonPSIM player start date: 10-10-22T19:00:48

Selected cameras: count = 2, date: 10-10-22T19:00:48
id = 1, name = Camera 1, startTime = 05-10-22T17:09:02
id = 2, name = Camera 2, startTime = 05-10-22T17:09:02

Selected cameras: count = 2, date: 10-10-22T19:00:52
id = 1, name = Camera 1, startTime = 05-10-22T17:09:02
id = 2, name = Camera 2, startTime = 05-10-22T17:09:02
```

16 The SyncProtocol.exe utility to synchronize event log database

16.1 The purpose of the SyncProtocol.exe utility. Starting and shutting-down the utility

Purpose

The SyncProtocol.exe utility is designed to synchronize Server/Client Event log database with databases of other Servers/Clients by command if the auto synchronization is disabled.

The auto synchronization is disabled on the **Computer** settings panel using the **Only local protocols** checkbox. If this checkbox is set checked, then the auto synchronization is not performed – see Configuring events logging.

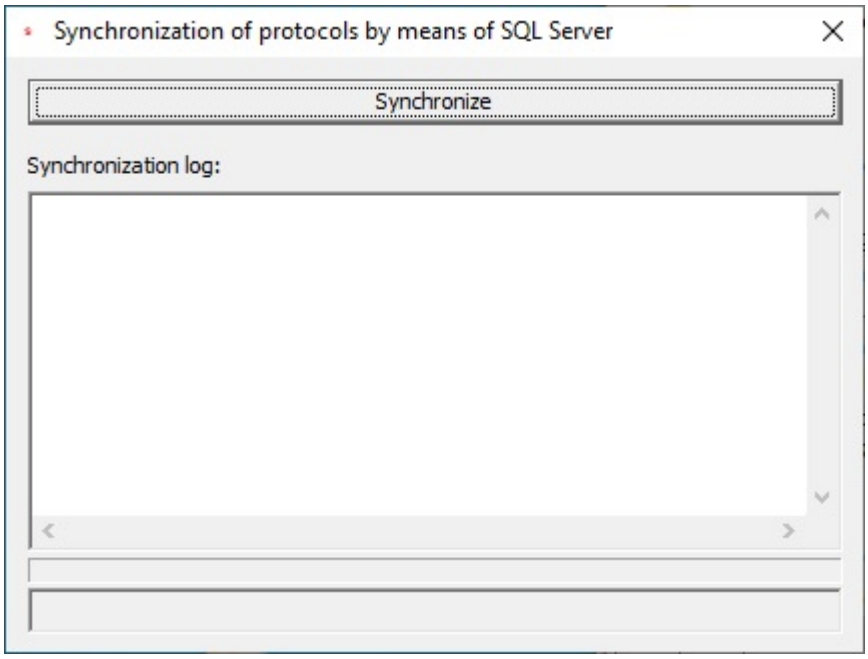
Before starting synchronization using the SyncProtocol.exe utility it is required to configure synchronization on the **Computer** settings panel by specifying the computers for synchronization and the Event Viewer database connection string – see Configuring the Event Viewer databases synchronization.

There is no synchronization with computers for which sending events is disabled in the **Architecture** tab (see Configuring the interaction of distributed system components). If the **Send events** checkbox is set checked, but checkboxes for all the events are set unchecked, then the events that cannot be disabled will be synchronized (for instance, SLAVE and macro events).

Starting and shutting-down the utility

Start the SyncProtocol.exe utility from the **Tools** folder in the *Axxon PSIM* installation folder (by default, C:\Program Files (x86)\Axxon PSIM\Tools).

The utility dialog box is shown in the figure.

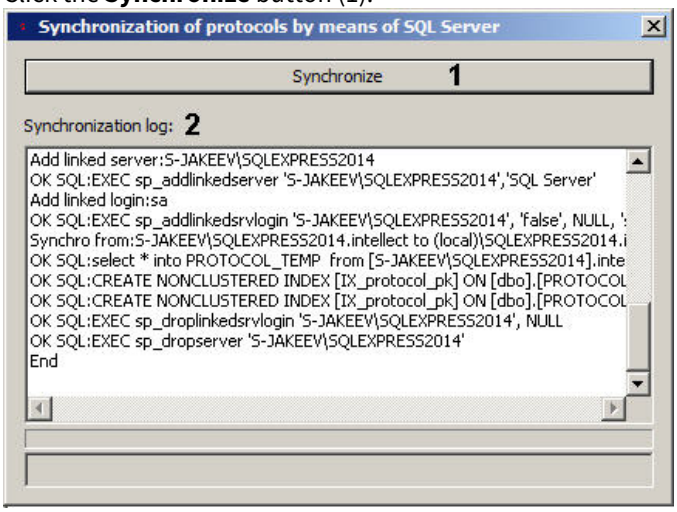


To shut down the SyncProtocol.exe utility click the button in the upper-right corner of the window.

16.2 Synchronization of event log database using the SyncProtocol.exe utility

Synchronize the event log database using the SyncProtocol.exe utility as follows:

1. Preconfigure the system and start the SyncProtocol.exe utility (see The purpose of the SyncProtocol.exe utility. Starting and shutting-down the utility).
2. Click the **Synchronize** button (1).



3. The information on the synchronization process is displayed in the **Synchronization log** field (2).
4. When the process is completed shutdown the utility by clicking the button.

The event log database is now synchronized using the SyncProtocol.exe utility.

17 The FileSystemCheck.exe utility for scanning and checking index files

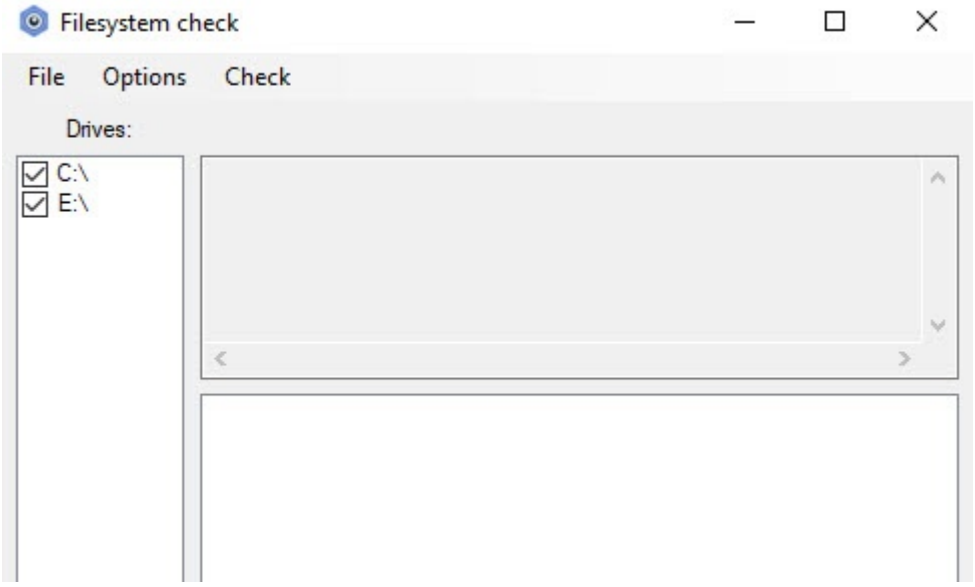
17.1 The purpose of the FileSystemCheck.exe utility. Starting and shutting-down the utility

Purpose of the *FileSystemCheck.exe* utility

The *FileSystemCheck.exe* utility is used for scanning and checking the index files.

Starting and shutting down the utility

You can start the *FileSystemCheck.exe* utility from the Tools64 folder in the *Axxon PSIM* installation directory. For example: C:\Program Files\PSIM\Tools64\FileSystemCheck.exe.
As a result, the screen displays the *FileSystemCheck.exe* utility window.



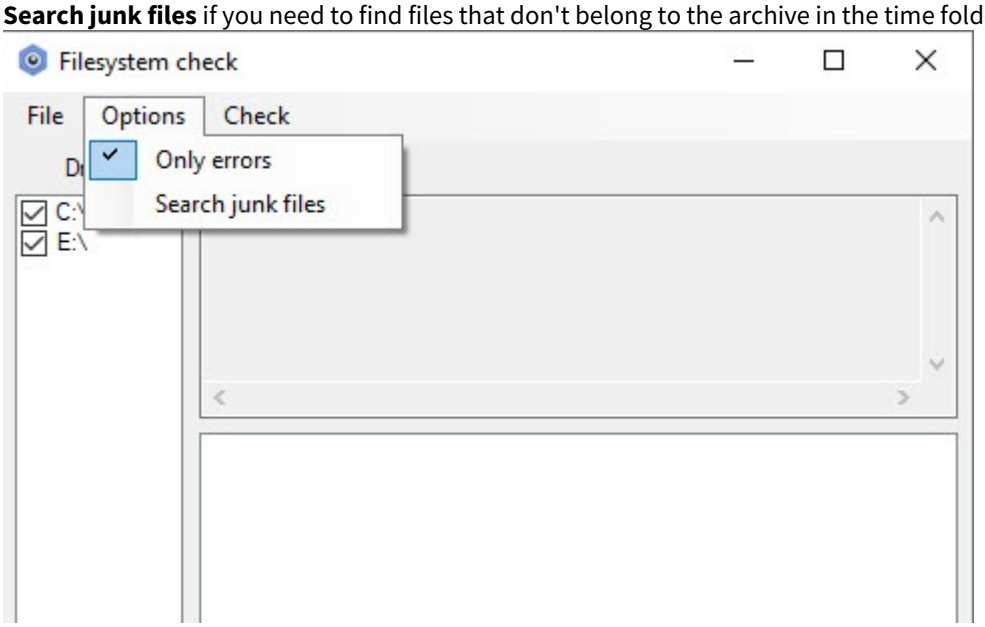
To shut down the FileSystemCheck.exe utility, click the button in the upper right corner of the window.

17.2 Working with the FileSystemCheck.exe utility

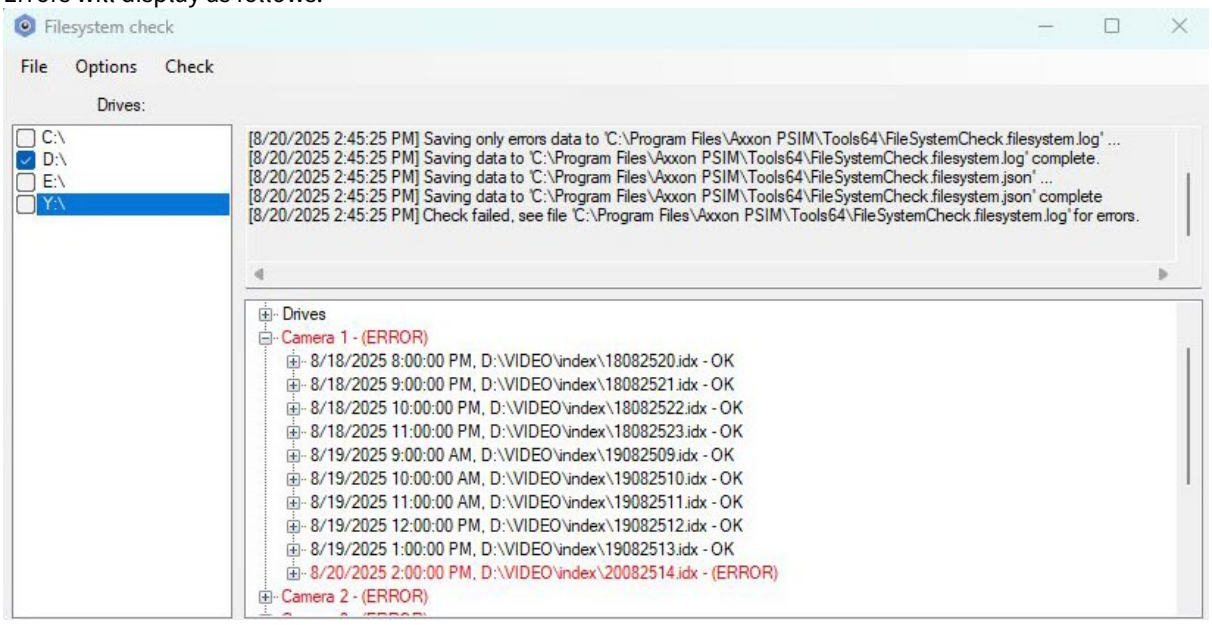
To work with the *FileSystemCheck.exe* utility, do the following:

1. Start the *FileSystemCheck.exe* utility (see The purpose of the FileSystemCheck.exe utility. Starting and shutting-down the utility).
2. Click the **Options** button.
3. Select one or two items from the **Options** drop-down list:
    a. **Only errors** if you need to check that the files and folders specified in the index exist;

b. **Search junk files** if you need to find files that don't belong to the archive in the time folders.



4. Click the **Check** button.
5. Select **Start** from the drop-down list.
   As a result of the check, all utility actions are logged in the FileSystemCheck.filesystem.log file. If you select **Search junk files**, the files that don't belong to the archive in the time folders are moved to the LOST folder at the <Archive disk>:\VIDEO\LOST path.
   Errors will display as follows:



18 The openRTSP.exe utility for checking RTSP workability

The openRTSP.exe utility is a console application without a graphical user interface. This utility is intended for use in scripts to check workability of the RTSP Server module. Please visit http://www.live555.com/openRTSP/ for details about the utility.

The openRTSP.exe file is located in the <*Axxon PSIM* installation directory>\Tools folder.

An example of a script to test the workability of RTSP is given below. This script runs the openRTSP.exe utility by timer, then the utility takes 1 sec of video and checks the status of the RTSP Server. If a rejection from the RTSP Server itself is received, the StreamingServer.run process is restarted.

Note.

Create and configure the **Timer** object for the required check period – see Creating and using the Timer object.

```
function check_cam(addr)
{
  var scmd = "./Tools/openRTSP.exe -V -D 10 -d 1 "+addr;
  DebugLogString("run:"+scmd);

  var s = run_cmd_timeout(scmd, 10000);

  DebugLogString(s);
  if(s.indexOf("Receiving streamed data")< 0)
  {
    DebugLogString("restarting");
    var msg = CreateMsg();
    msg.StringToMsg("SLAVE|COMP_NAME|EXECUTE|restart<1>,command<streamingserver.run>")
; //change COMP_NAME to the name of the computer where the process runs
    DoReact(msg);
  }
}

if(Event.SourceType == "LOCAL_TIMER" && Event.SourceId == "TEST_RTSP")
{
  check_cam("rtsp://127.0.0.1:5544/1"); //the link is formed as described in the
"Configuring the RTSP Server Module" section
  check_cam("rtsp://127.0.0.1:5545/4");
}
```

19 The Automatic Update Service

19.1 Function and operation of the Automatic Update Service

The Automatic Update Service is used to configure the automatic update of *Axxon PSIM* and vertical solutions in a distributed network. The service is installed in addition to the main product and works independently of it.

19.1.1 Service components

There is the update server (installation type is **Server (Administrator's workplace)**) that distributes the version for the update, and the client (installation type is **Client (Workstations)**) that are dependent servers that receive the version from the update server and install it. In addition, the *Update manager* program is installed to manage the updates together with the update server. Thus, you need to select the distributor server and install the **Server (Administrator's workplace)** on it, and install the **Client (Workstations)** on the servers that need to be automatically updated. For details, see Installing the Update Service.

After installation, you need to configure the update server and the clients—see Configuring the update server (distributor) in the Update manager and Configuring the client (receiver).

19.1.2 Principle of operation

Once configured, it works as follows:

1. The clients connect to the update server.
2. The update server contains a list of available updates.
3. The automatic update parameters for the clients are configured on the update server using the **Update manager** program.
4. At some point in time (depending on the settings in the *Update manager*), the client receives an update task in the form of an installation package. This package updates *Axxon PSIM* on the client. For more details, see Configuring the client (receiver).

19.1.3 Requirements for user permissions in Windows OS

The update server is installed in Windows OS as a service, so you must install it with Administrator privileges in Windows OS.

Note that the automatic update on the client starts a software installation that can require Administrator privileges in Windows OS.

The behavior is as follows:

1. When updating as a standard user with UAC enabled: during installation there is a start request requiring an Administrator password.
2. When updating as an Administrator with UAC enabled: during installation there is an installation permission request.
3. When updating with UAC disabled: there aren't any additional requests.

Updating Axxon PSIM

19.1.4 Collecting information about the Automatic Update Service in the Support.exe utility

If necessary, you can collect information about the operation of the Automatic Update Service in The utility for collecting configuration data on servers and RWS for the Technical Support. The generated archive contains the UpdateService folder containing files of logs, settings, and possible failures in the operation of the client and update server.

19.2 Installing, repairing, updating, and removing the Automatic Update Service

19.2.1 Installing the Update Service

On the page:

Distribution package

To get the current version, contact the AxxonSoft technical support.

The distribution package contains a setup.exe file.

Installation procedure

You must install the **Server (Administrator's workplace)** on the computer that will distribute updates as the update server. You must install the **Client (Workstations)** on each computer that requires automatic updates in the future (that is, on the clients).

Any computer can be an update server even if it doesn't have *Axxon PSIM* installed. Any *Axxon PSIM* servers, Remote Administrator's workstations, and Remote clients can be clients (the differences are described in Configuration procedure for servers, clients and remote workstations).

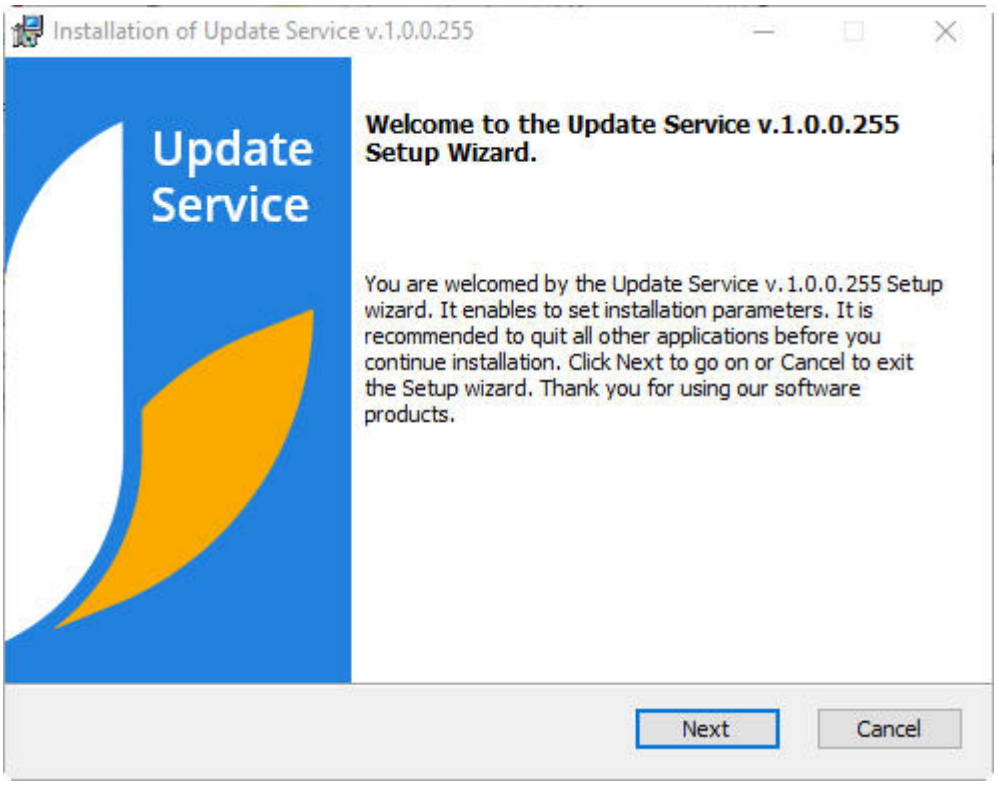
Attention!

You must run the installation files as a Windows Administrator.

Installing the server

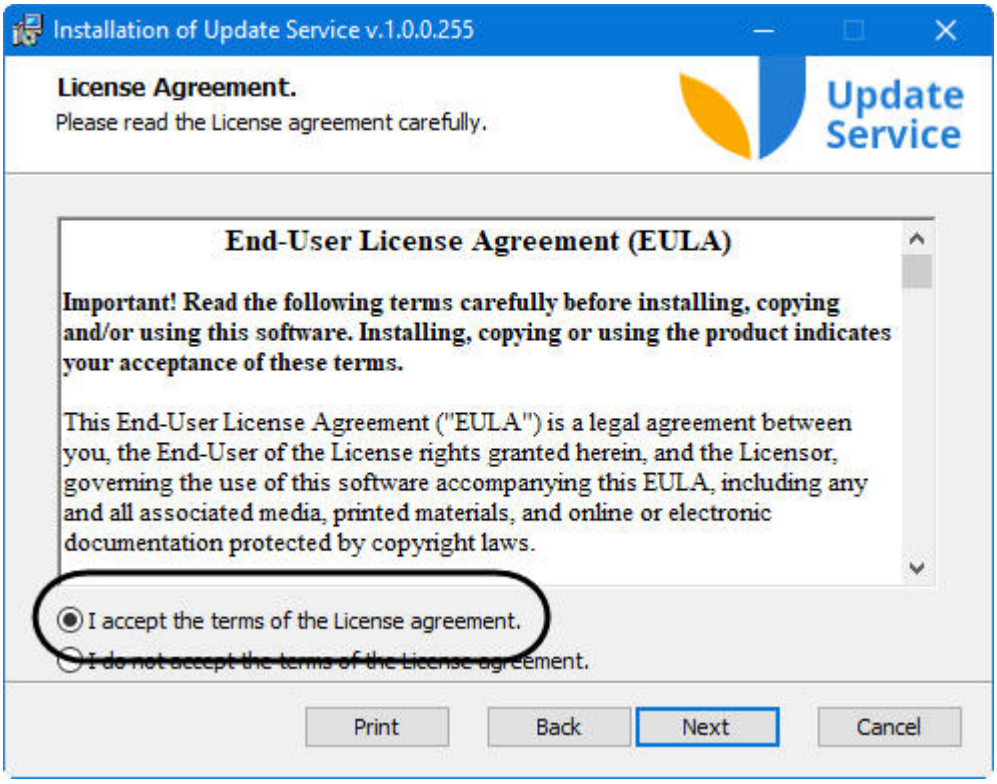
1. Run the setup.exe file.
   An installation window opens.

2. Click the **Next** button.



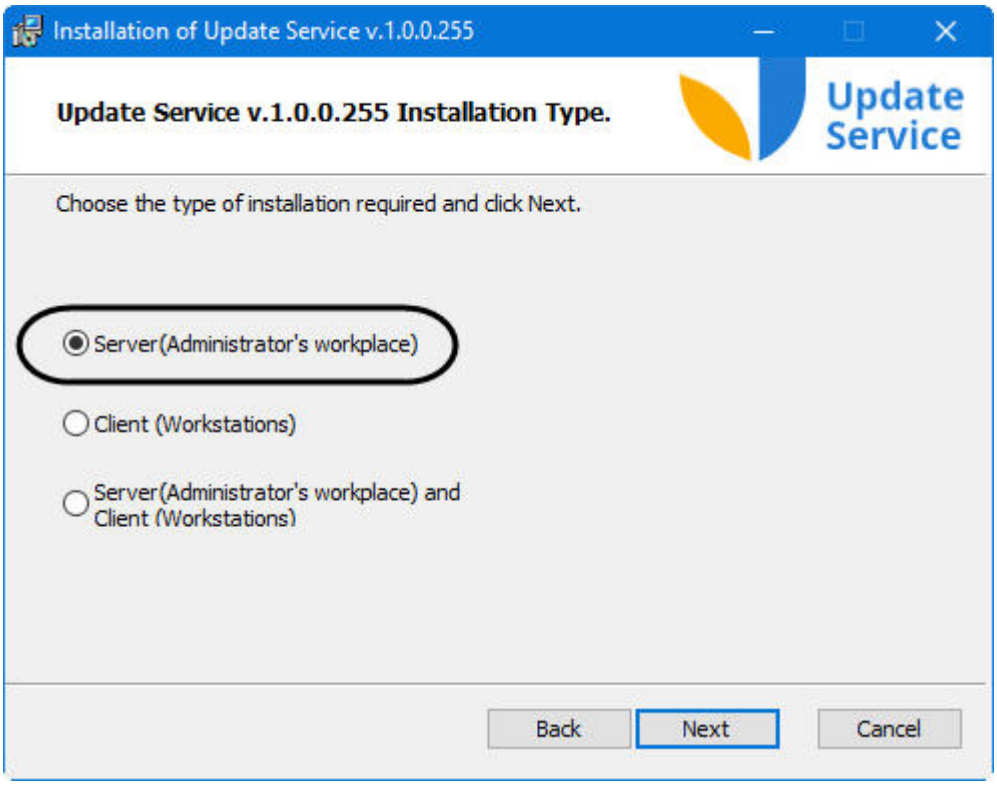
A window with the text of the license agreement opens.

3. Read the license agreement and select **I accept the terms of the License agreement**.
4. Click the **Next** button.

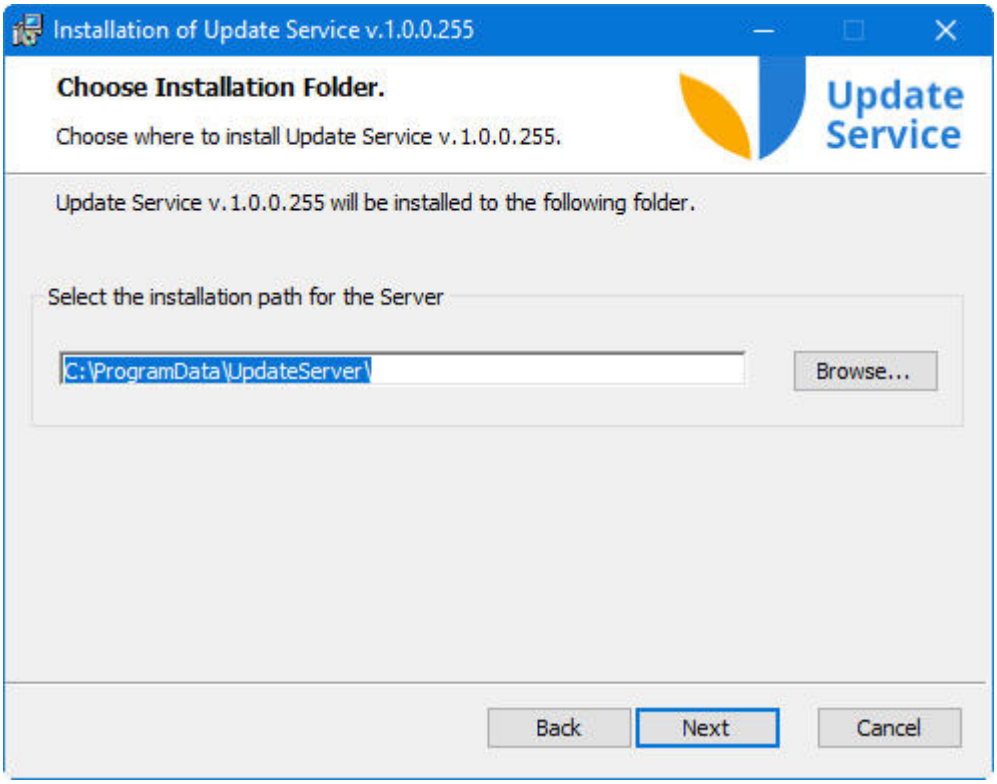


> **Note**
>
> You can print the license agreement. To do this, click the **Print** button.

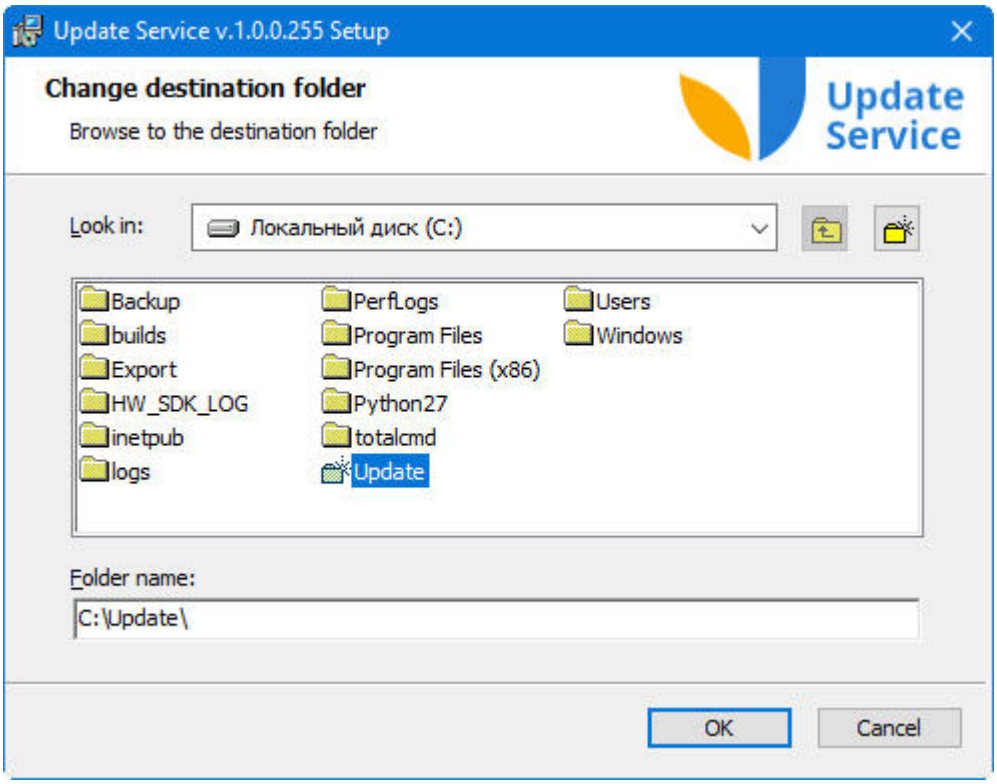
5. A window for selecting the installation type opens.
   To install the update server separately, select **Server (Administrator's workplace)**.
6. Click the **Next** button.



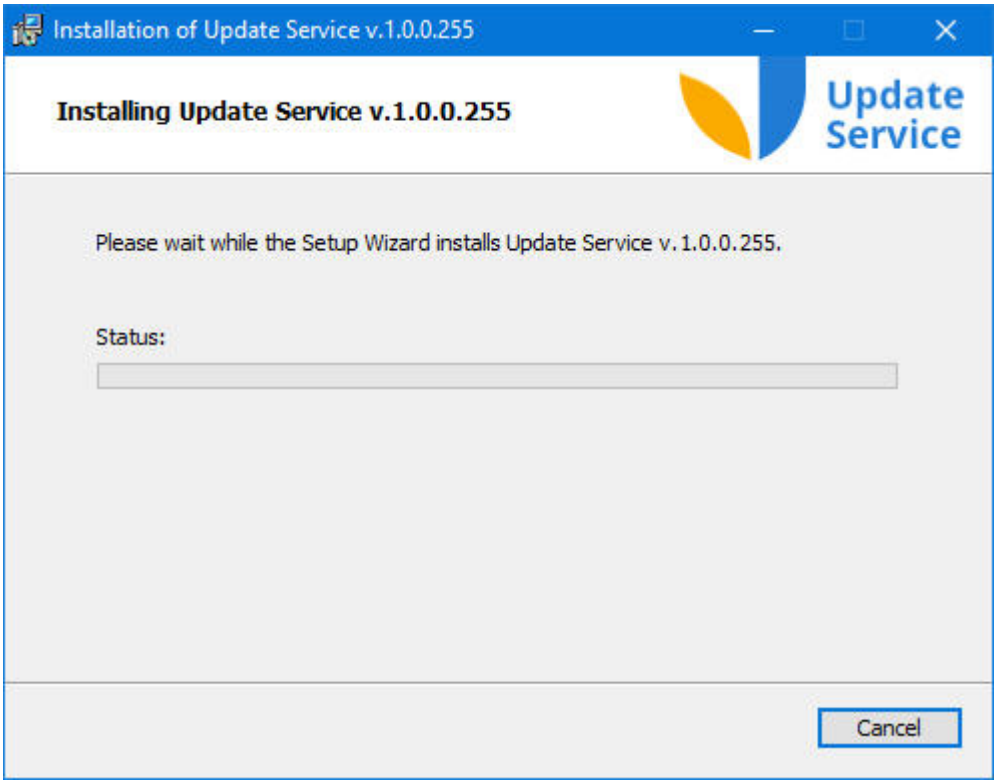
7. A window for selecting the installation path opens. By default, the **Server (Administrator's workplace)** is installed in C:\ProgramData\UpdateServer.



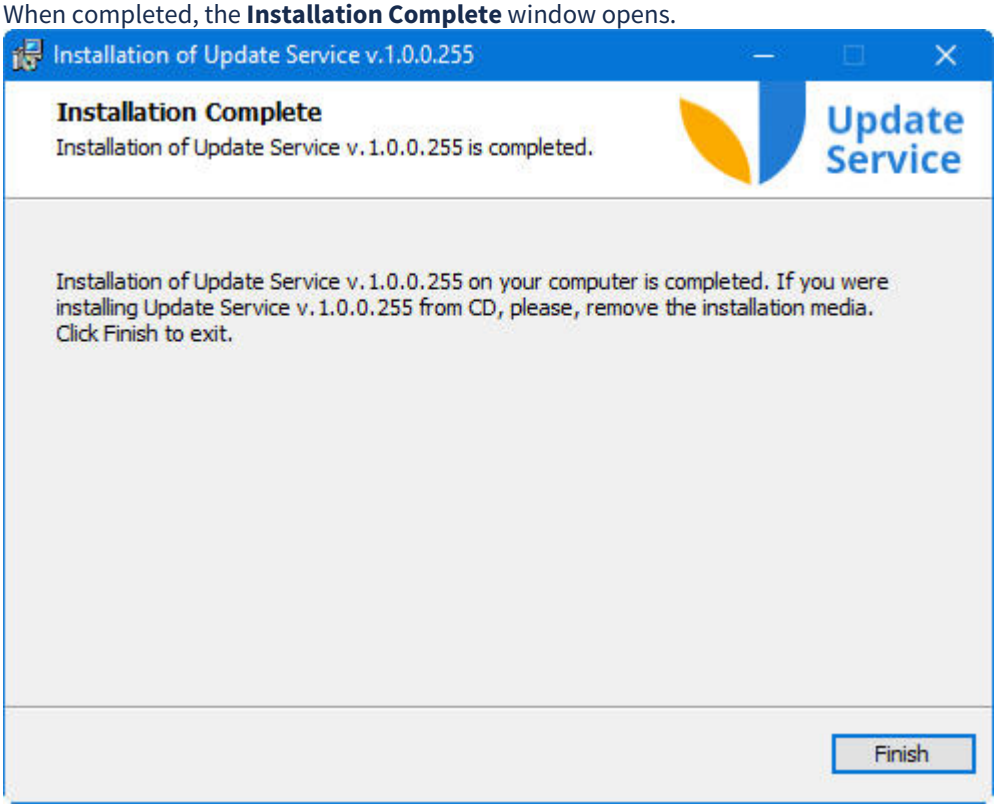
You can change the installation path. To do this, click the **Browse** button and in the window that opens, select or create another folder and click the **OK** button.



8. After you select the installation path, click the **Next** button.
   The installation process starts, and progress is displayed in the installer window:

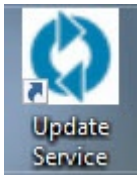


When completed, the **Installation Complete** window opens.



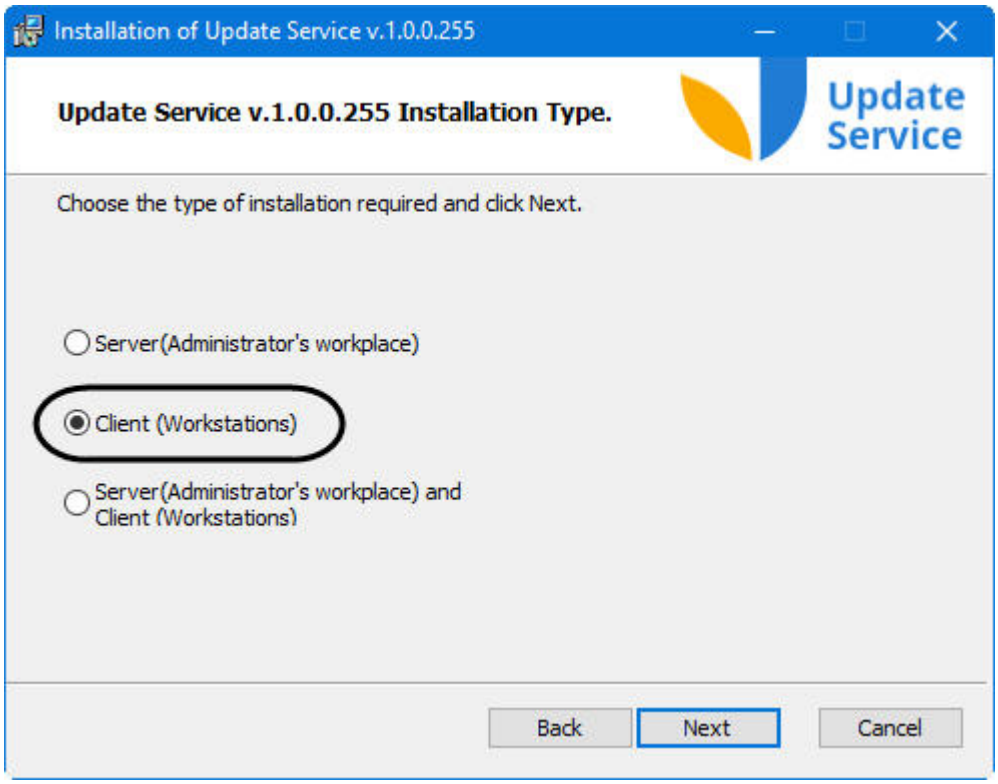
9. Click the **Finish** button.

As a result, the update server is installed in the selected folder, and the **Update Service** shortcut appears on the desktop:



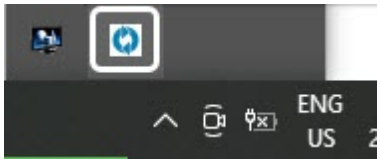
Installing the client

The client installation is similar to the update server installation described above: you must run the setup.exe file and go through the same installation steps. The only difference is step 5, where you must select the **Client (Workstations)** installation type:



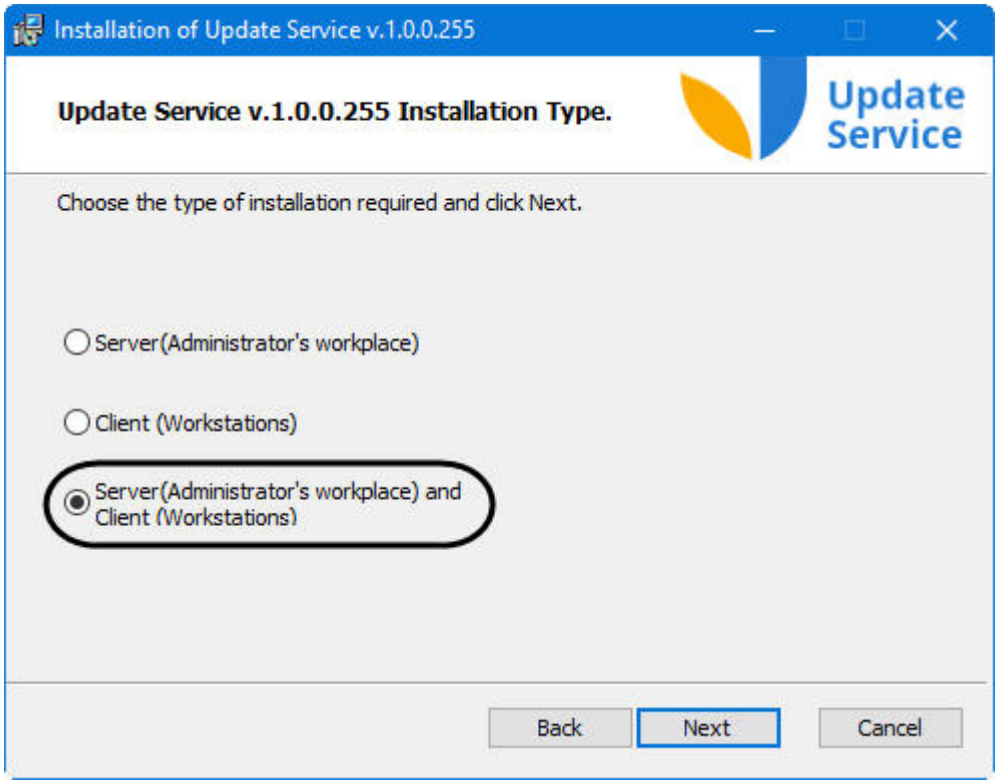
By default, the client is installed in the C:\ProgramData\UpdateAgent\ folder.

As a result of the client installation, the icon appears in the system tray:

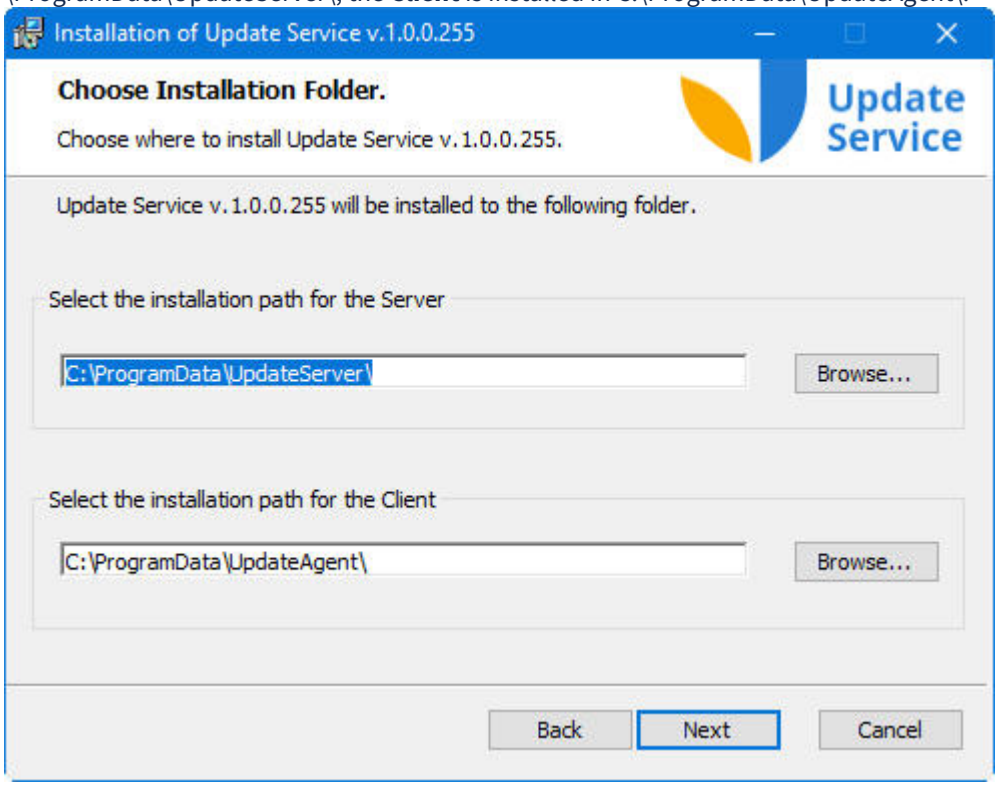


Installing server and client

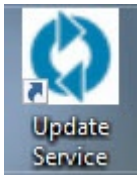
The installation of both server and client on the same computer is similar to the update server installation described above: you must run the setup.exe file and go through the same installation steps. The only difference is step 5, where you must select the **Server (Administrator's workplace) and Client (Workstations)** installation type.



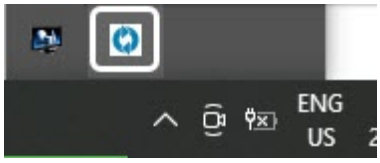
A window for selecting the installation path for the **Server** and **Client** opens. By default, the **Server** is installed in C:\ProgramData\UpdateServer\, the **Client** is installed in C:\ProgramData\UpdateAgent\:



As a result, the server is installed in the selected folder, and the **Update Service** shortcut appears on the desktop:

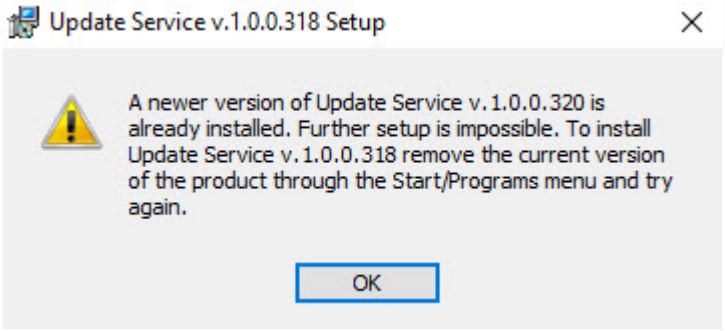


The client is also installed, and the icon appears in the system tray:



Note

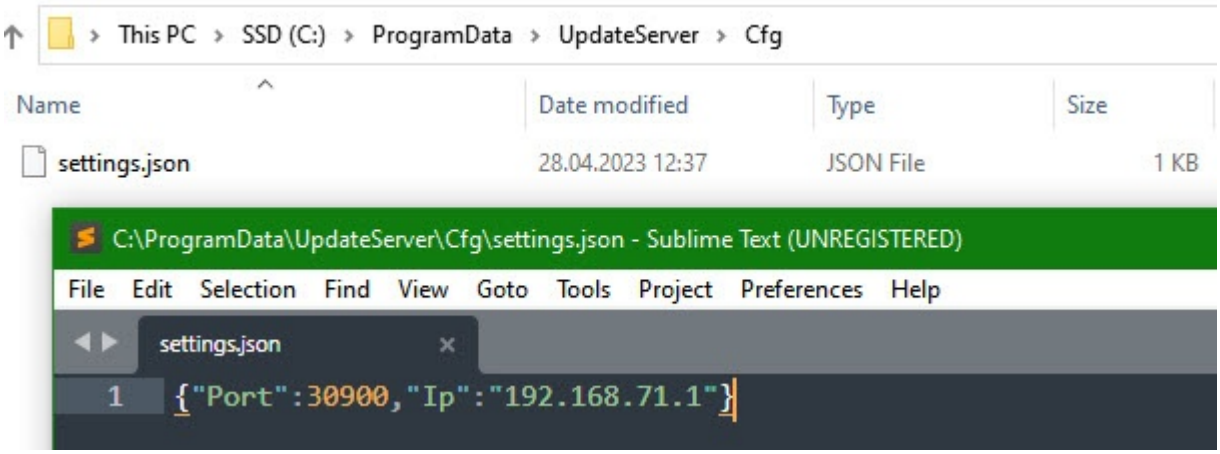
When you run the *Update Service* for the first time, the IP address and port of the update server are automatically detected and written to the **settings.json** file. If necessary, you can change them—Changing the IP address of the update server.
When you install the *Update Service,* a separate branch HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Update Service is created in the registry. The branch is deleted from the registry when you remove the *Update Service* (see Axxon PSIM base version, for the information on working with the registry, see Working with Windows OS registry).
When you try to install an older version of the *Update Service*, a warning window opens:



Configuring the update server (distributor) in the Update manager
Configuring the client (receiver)

19.2.2 Changing the IP address of the update server

When you run the update server for the first time, its IP address and port are automatically detected and written to the **settings.json** file located at C:\ProgramData\UpdateServer\Cfg:



If necessary, you can change the IP address and port of the update server manually. To do this, do the following:

1. Open the settings.json file with any text editor (for example, Notepad).
2. Enter new values for "Port" and "Ip".
3. Save the changes in the file.
4. Restart the *Update Server* (by default, update_server.exe is located in the C:\ProgramData\UpdateServer folder).

As a result, the update server will use the new address written in the **settings.json** file.

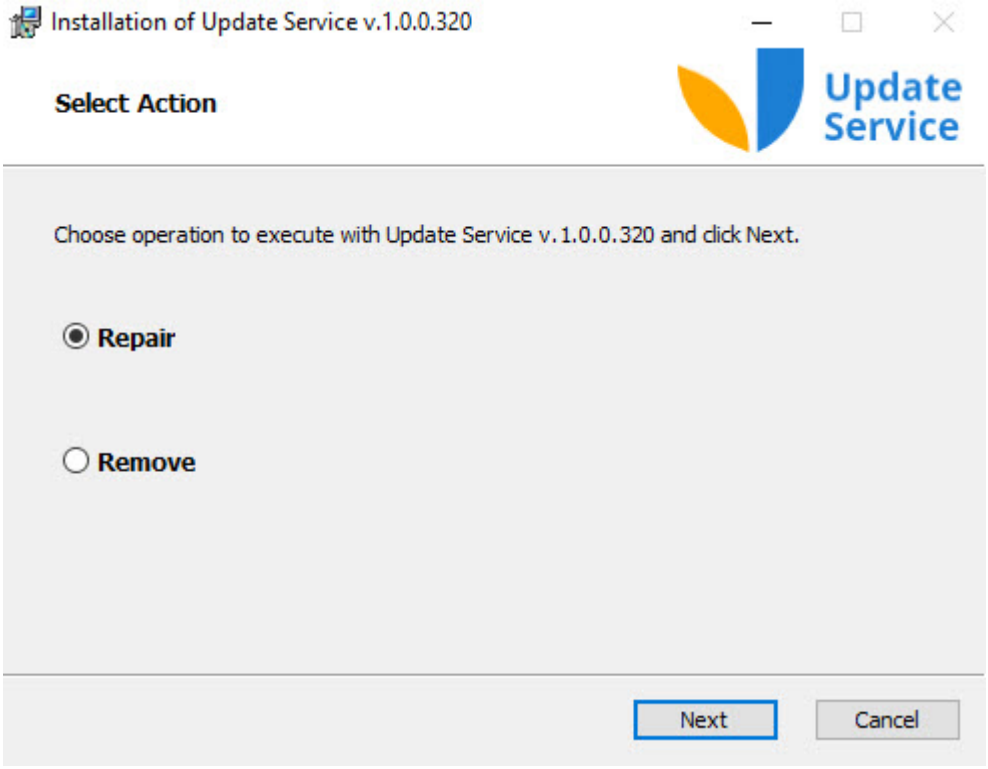
19.2.3 Repairing the Update Service

The repairing process is the same regardless of the installation type: server, client, or server and client.

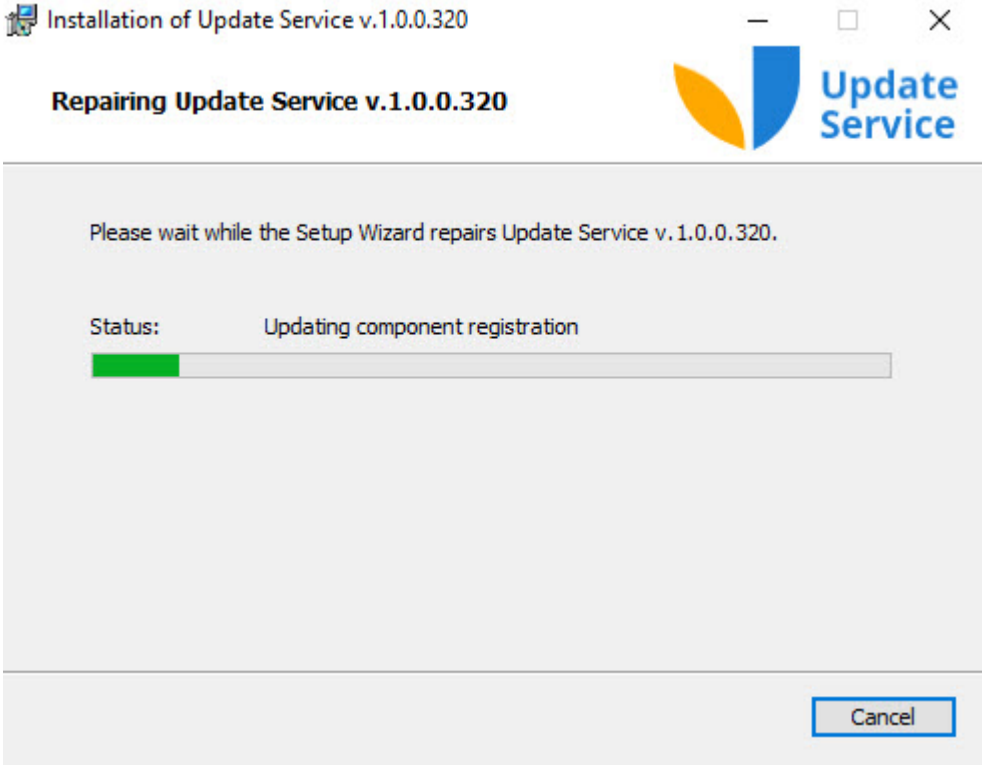
To repair the *Update Service*, do the following:

1. Run the setup.exe file that was in the distribution package that you received (see Installing the Update Service).

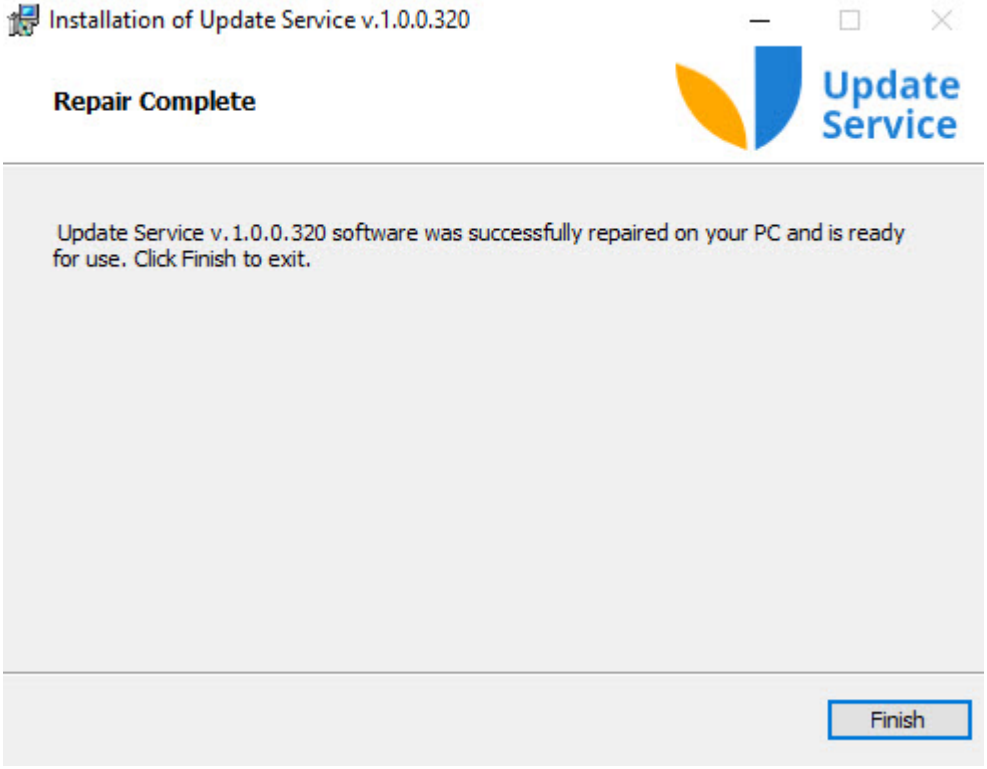
2. In the window that opens, select **Repair**.



3. Click the **Next** button.
The repairing process starts. The progress is displayed in the window.



4. The **Repair Complete** window opens if the repairing process is successful. Click the **Finish** button.



Repairing the *Update Service* is complete.

19.2.4 Automatic update of the client using the Update Service

To update the client on the receiving servers, you can use the Automatic Update Service.

To do this, do the following:

1. Add the installation package of the new version to the *Update Service*;
2. Run the update in the same way as the update of *Axxon PSIM* or its vertical solutions.

For more details, see The Updates tab and The Agents tab.

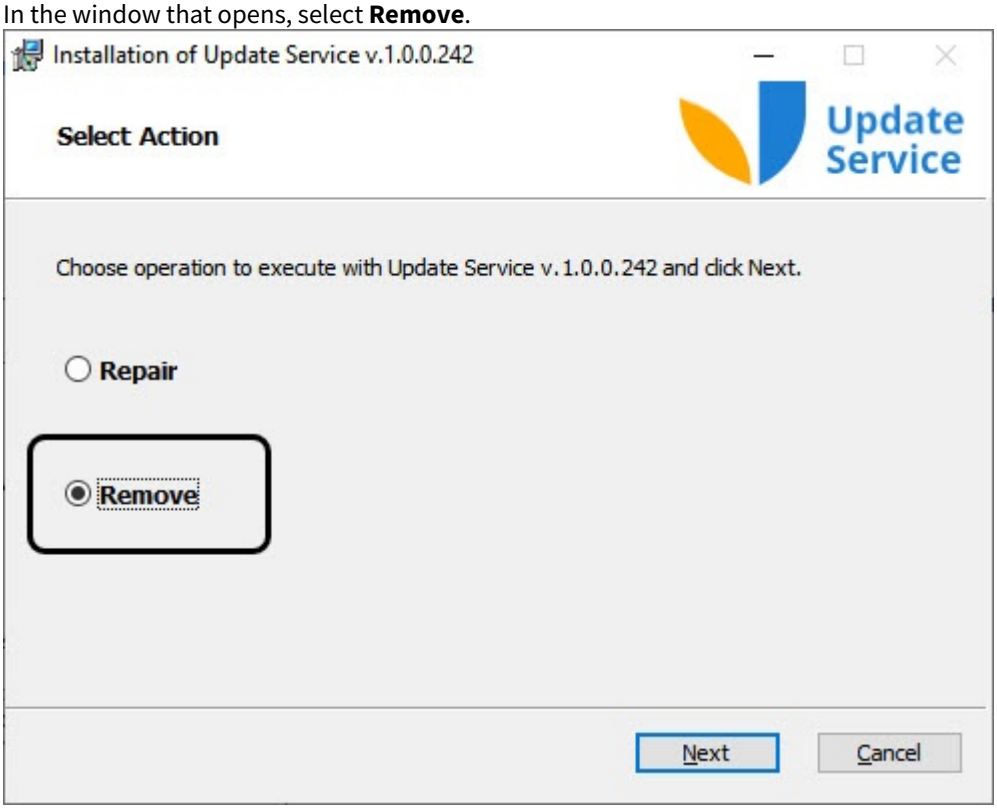
19.2.5 Removing the Update Service

You can remove the *Update Service* in the same way regardless of the type of installation: server, client, or server and client.

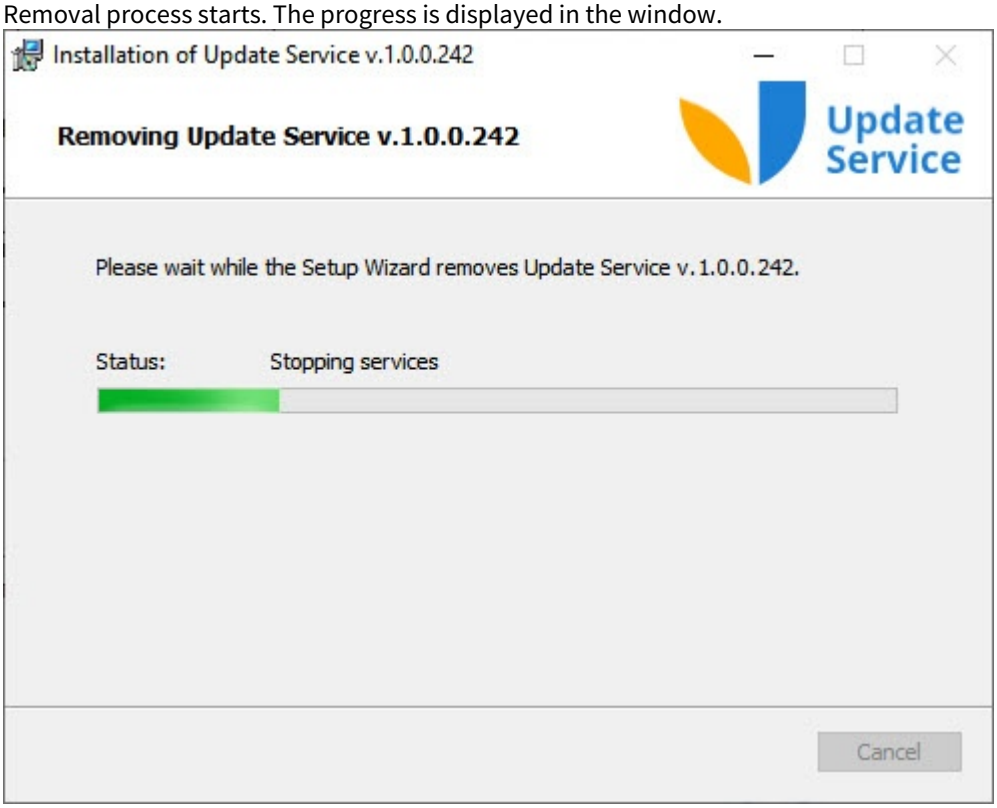
To remove the *Update Service*, do the following:

1. Run the setup.exe file that was included in the distribution package (see Installing the Update Service).

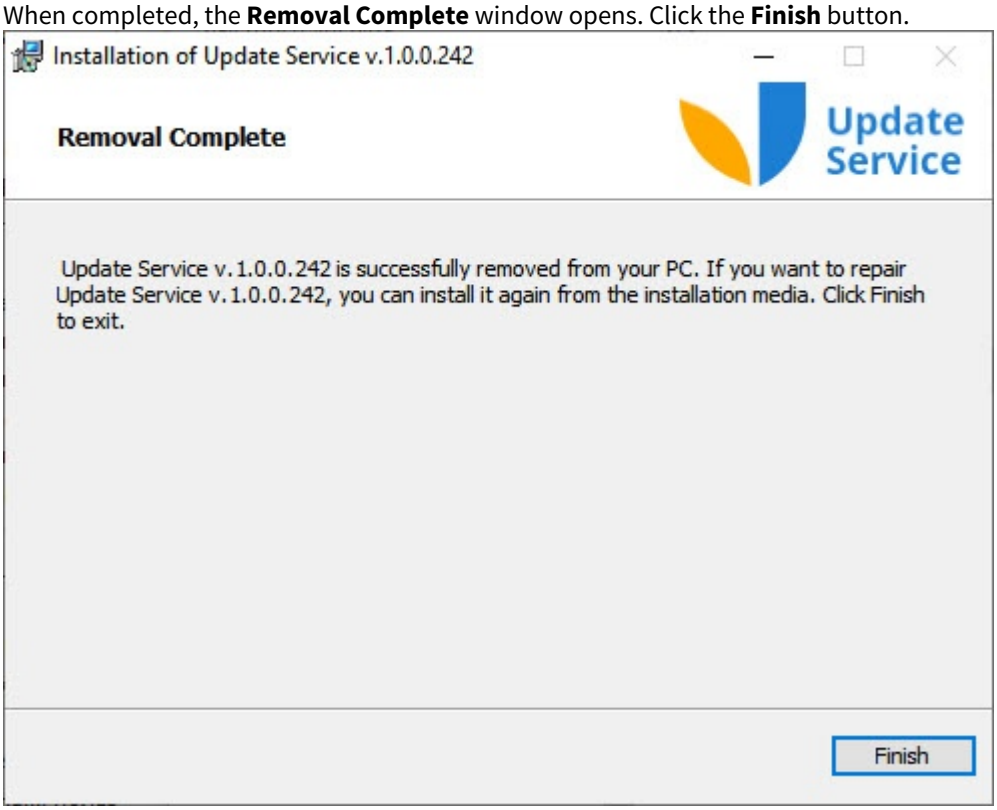
2. In the window that opens, select **Remove**.



3. Click the **Next** button.
Removal process starts. The progress is displayed in the window.



4. When completed, the **Removal Complete** window opens. Click the **Finish** button.



Removing the *Update Service* is complete.

19.2.6 Installing, repairing, updating, and removing the Automatic Update Service in the quiet mode

You can install, update, and remove the *Update Service* in the quiet mode, that is, without the user interface.

> **Note**
>
> You may need to restart your system while the setup program is running. After you restart the system, the installation continues automatically.

The criterion for the completion of the setup program is the termination of the Redist.exe process in the Windows Task Manager.

This type of installation occurs when you specify the parameters of the setup.exe file in the Windows command line. The parameters of the setup file are listed in the table.

Parameter of the setup file in the command line	**Description**
/x	Remove the Automatic Update Service
/uninstall	Remove the Automatic Update Service

Parameter of the setup file in the command line	Description
/qn	Install/update the Automatic Update Service
/quiet	Install/update the Automatic Update Service
/norestart	Disable automatic system restart during installation
/LANG=”en”	Select English language for the setup program
/INSTALLTYPE="Client"	Select the **Client (Workstations)** installation type
/INSTALLTYPE="Server"	Select the **Server (Administrator's workplace)** installation type
/INSTALLTYPE="ClientAndServer"	Select the **Server (Administrator's workplace) and Client (Workstations)** installation type
AGENTNSTALL='1'	Installation as a service
/CMD="[commands]"	Values of properties of the basic setup program, where commands is [Property]=\"[Value]\" or [Property]='[Value]'. The available properties of the setup program are listed in the table below
/CMD="UPDATEAGENTFOLDER=\"path\""	Select the installation path for the **Client (Workstations)** installation type
/CMD="INSTALLFOLDER=\"path\""	Select the installation path for the **Server (Administrator's workplace)** installation type
/CMD="INSTALLFOLDER=\"path\" UPDATEAGENTFOLDER=\"path\""	Select the installation path for the **Server (Administrator's workplace) and Client (Workstations)** installation type

Example of running the installation/update of the Automatic Update Service in the quiet mode:

setup.exe /quiet /LANG="en" /INSTALLTYPE="Server" /CMD="INSTALLFOLDER=\"c:server\""

As a result of this action, the setup.exe file is launched with the following parameters:

1. The setup program installs the *Update Service* in the quiet mode (/quiet).
2. The language of the setup program is English (/LANG=”en”).
3. Type of installation is **Server (Administrator's workplace)** (/INSTALLTYPE="Server").
4. The installation is performed with the following property (/CMD=): the installation path is c:server ("INSTALLFOLDER=\"c:server\"").

Example of running the program to remove the Automatic Update Service in the quiet mode:

setup.exe /uninstall /quiet /norestart

As a result of this action, the setup.exe removal file is launched with the following parameters:

1. The setup program uninstalls the *Update Service* (/uninstall).
2. The setup program uninstalls the *Update Service* in the quiet mode (/quiet).
3. Automatic system restart during uninstallation is disabled (/norestart).

Installing, repairing, updating, and removing the *Update Service* in the quiet mode is complete.

19.3 Configuring the update server (distributor) in the Update manager

To configure the update server and automatically update the clients, use the *Update manager* program that is usually installed with the update server **Server (Administrator's workplace)**.

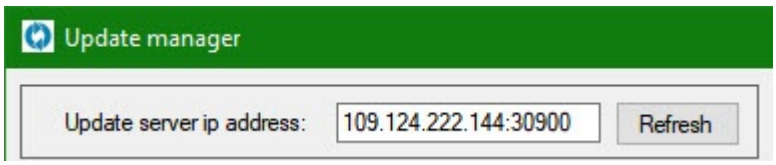
To run it, you can either use a shortcut on the desktop or run the update_manager.exe file in the folder in which the server was installed.

This section describes the interface and main functions of the *Update manager*:

1. The Primary server address—field with the IP address of the update server.
2. The Updates tab—list of the available update packages. You can also add new packages.
3. The Agents tab—list of the connected client. You can also update them.
4. The Activity tab—list of computers on which the update is in progress, completed, or scheduled.
5. The Journal tab—list of all actions on the update server.

19.3.1 The Primary server address

At the top of the window, there is a field with the current IP address and port of the update server. The default is port **30900**. To change the server address, enter a new address in the **Update server ip address** field and click the **Refresh** button:



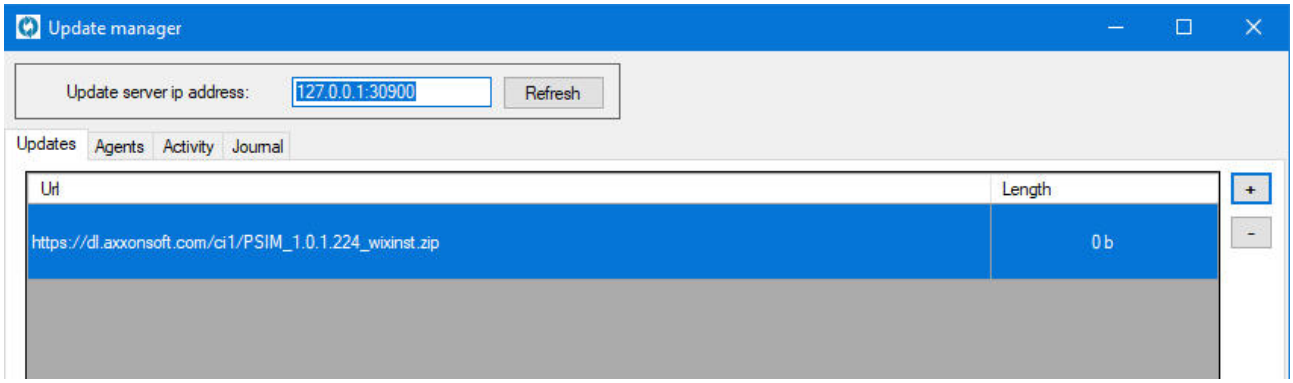
Entry format: IP address and port separated by a colon.

Note

When you run the **Update Service** for the first time, the IP address and port of the update server are automatically detected and written to the **settings.json** file. If necessary, you can change them—see Changing the IP address of the update server.

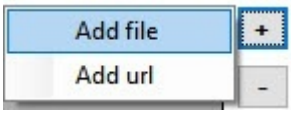
19.3.2 The Updates tab

The **Updates** tab lists the available update files and their length:

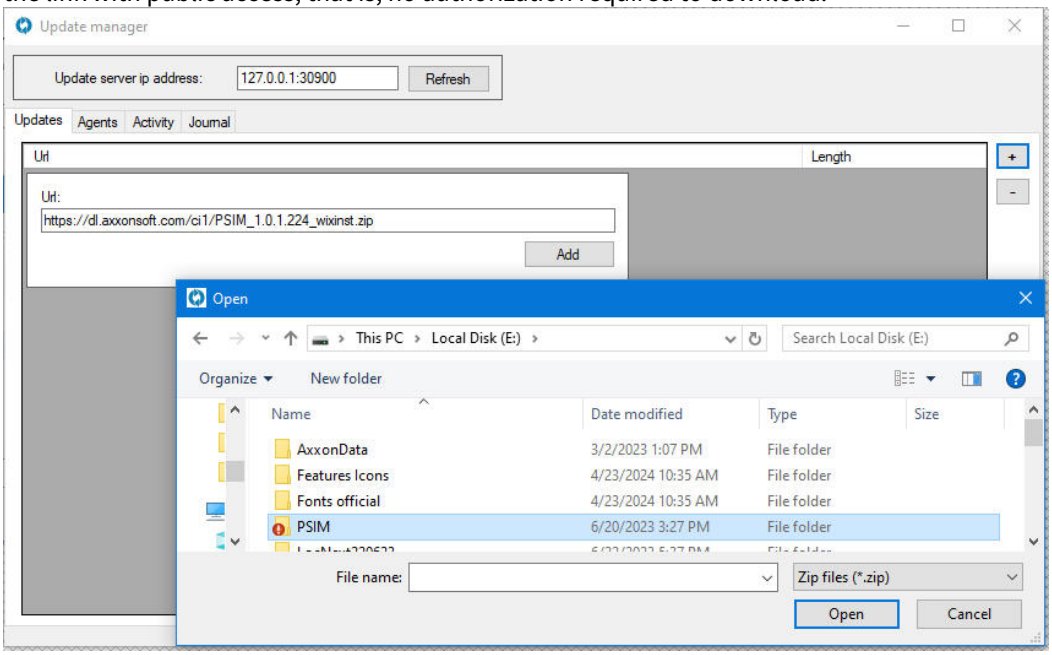


To add a new update package, do the following:

1. Click **+**:



2. Select a package depending on the file type:
   a. **Add file**: a standard Windows File Explorer window opens in which you need to specify the path to the zipped update package.
   b. **Add url**: in the window that opens, enter the link to the file and click **Add**. Requirements:
      - the direct link to the file, that is, the link must lead to a direct download of the installation package in ZIP format;
      - the link with public access, that is, no authorization required to download.



As a result, the selected packages appear in the list.

To delete a package, select it in the list with a mouse and click -.

19.3.3 The Agents tab

The **Agents** tab displays a list of clients that are connected to the server. On this tab, you can configure and run automatic updates for each client.

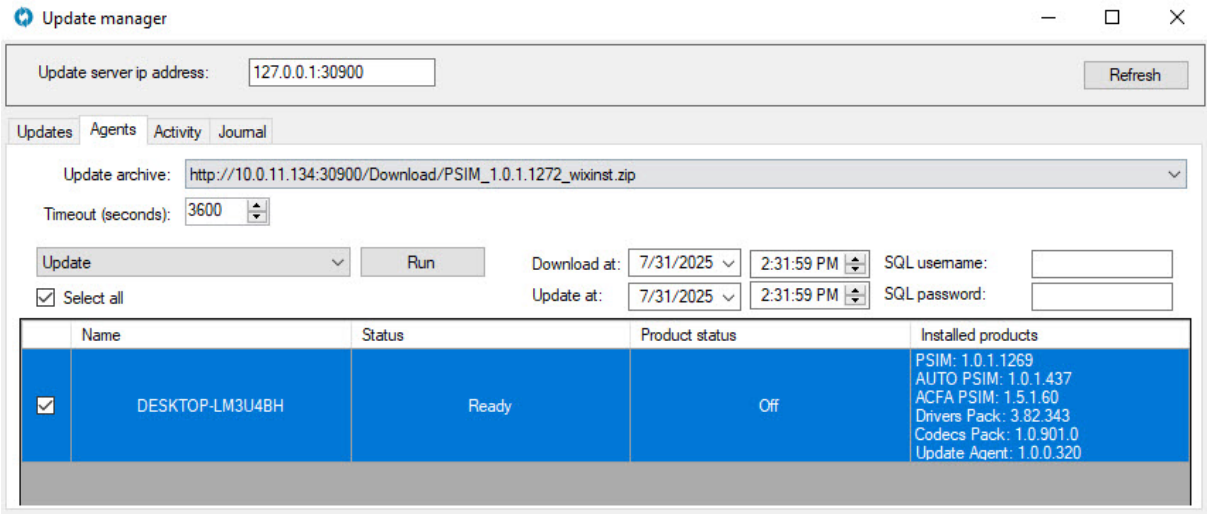
The list of clients

The list of clients is a table of all clients that have connected to the server at least once. It contains the following information about each client:

1. **Name** is the name of the computer on which the client is installed.
2. **Status** is the status of the computer. The computer can be available (**Ready**) or not available (**No connection**).
3. **Product status** is the status of the installed software package: running (**On**) or not (**Off**).
4. **Installed products** is the list of versions of the installed software components.

Configuring and running updates

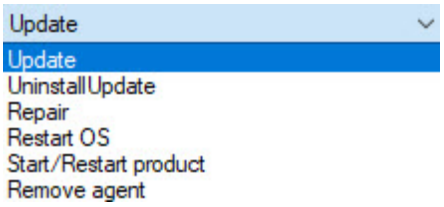
1. From the **Update archive** drop-down list, select one of the available update packages.



2. In the **Timeout (seconds)** field, set the update timeout in seconds—the time in which the installation process must be completed. If the installation isn't completed within this time, it is forced to stop. The default value is **3600** seconds.
3. Set the checkboxes next to the clients on which you want to perform the action from the drop-down list (see step 6). To select all clients, set the **Select all** checkbox.
4. If you want to run the download and update at a scheduled time, set the date and time in the corresponding **Download at** and **Update at** fields. By default, the current time is set.

> **Note**
>
> You can schedule the download and update for different dates and times.
> You can set only the current time or future time in the **Download at** and **Update at** fields.
> If the update time is earlier than the download time, the update begins immediately.

5. In the **SQL username** and **SQL password** fields, specify the username and password to access the database.
6. From the drop-down list, select the action you want to perform on the selected clients (see step 3). You can also open the list of actions by right-clicking any client.

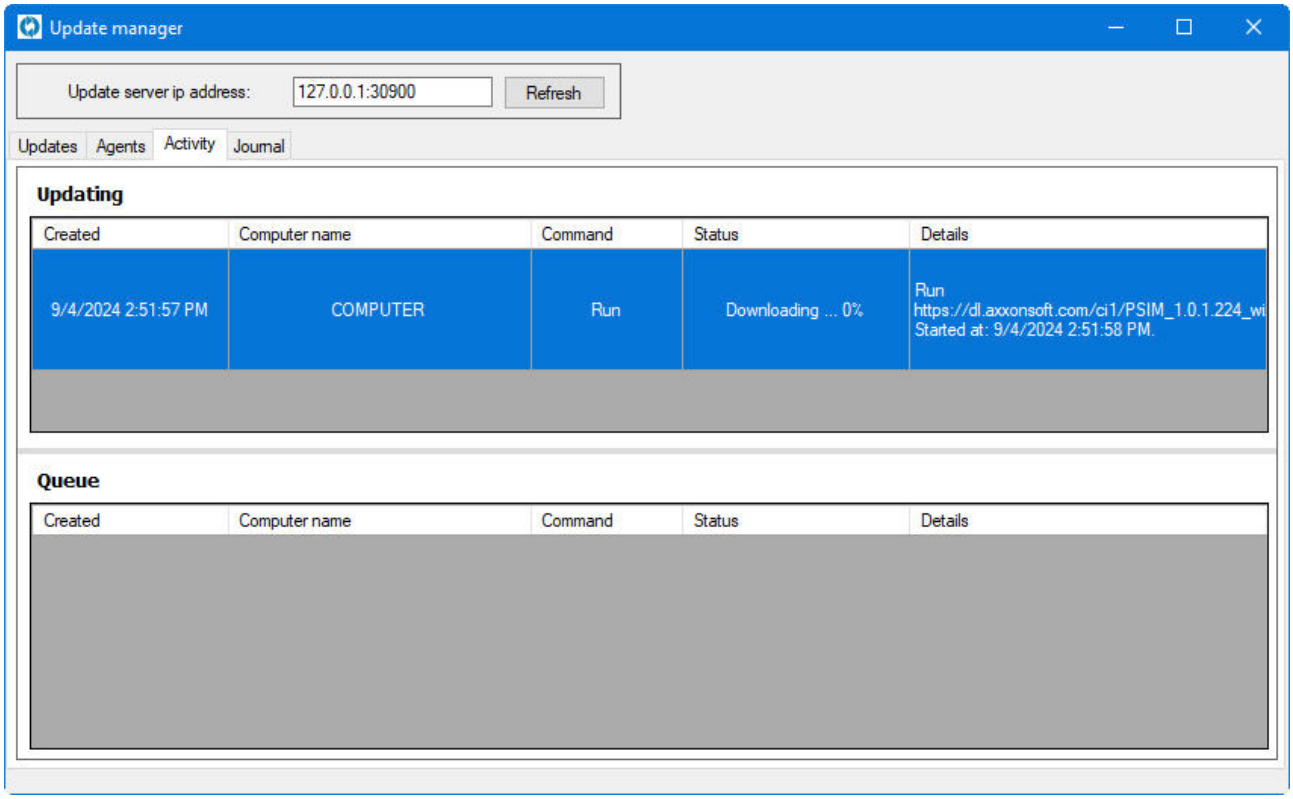


a. **Update**—install the selected update.
b. **Uninstall/Update**—uninstall the current version of *Axxon PSIM* and install the selected update.
c. **Repair**—repair *Axxon PSIM*.
d. **Restart OS**—restart the operating system.
e. **Start/Restart product**—if *Axxon PSIM* isn't running on the client, it starts. If *Axxon PSIM* is running, it restarts.
f. **Remove agent**—remove the client from the list regardless of whether it is connected or not. The next time the client connects to the server, it appears in the list again.

7. Click the **Run** button.

19.3.4 The Activity tab

The **Activity** tab displays the computers with the clients on which the update is in progress or completed (the **Updating** table), as well as the computers on which the update is scheduled (the **Queue** table):



The following information is displayed for each operation:

1. **Created**—date of creation.
2. **Computer name**—name of the computer with the installed client.
3. **Command**—type of an operation:
   a. Run—start the update,
   b. Restart—restart the computer,

   c. StartProduct—start *Axxon PSIM.*
4. **Status**—status of the update downloading:
   a. If the update download is in progress, "Downloading" and the download percentage is displayed;
   b. If the status is "Waiting", the update has been downloaded and is waiting for the time specified for download.
5. **Details**—details about an operation. The details depend on an operation type and can be the following:
   a. Error—error and its description,
   b. Started at—start time,
   c. Completed at—completion time,
   d. Duration at—duration,
   e. Status: "Running"—update is in progress, "Finished successfully"—update is successfully completed, "Canceled"—operation was canceled by an operator, "Faulted"—failure or error during operation execution.

> **Note**
>
> You can adjust the height of the **Updating** and **Queue** tables by dragging the gray bar between them.

19.3.5 The Journal tab

> **Note**
>
> When you go to the **Journal** tab, information about the status of running tasks is automatically updated.

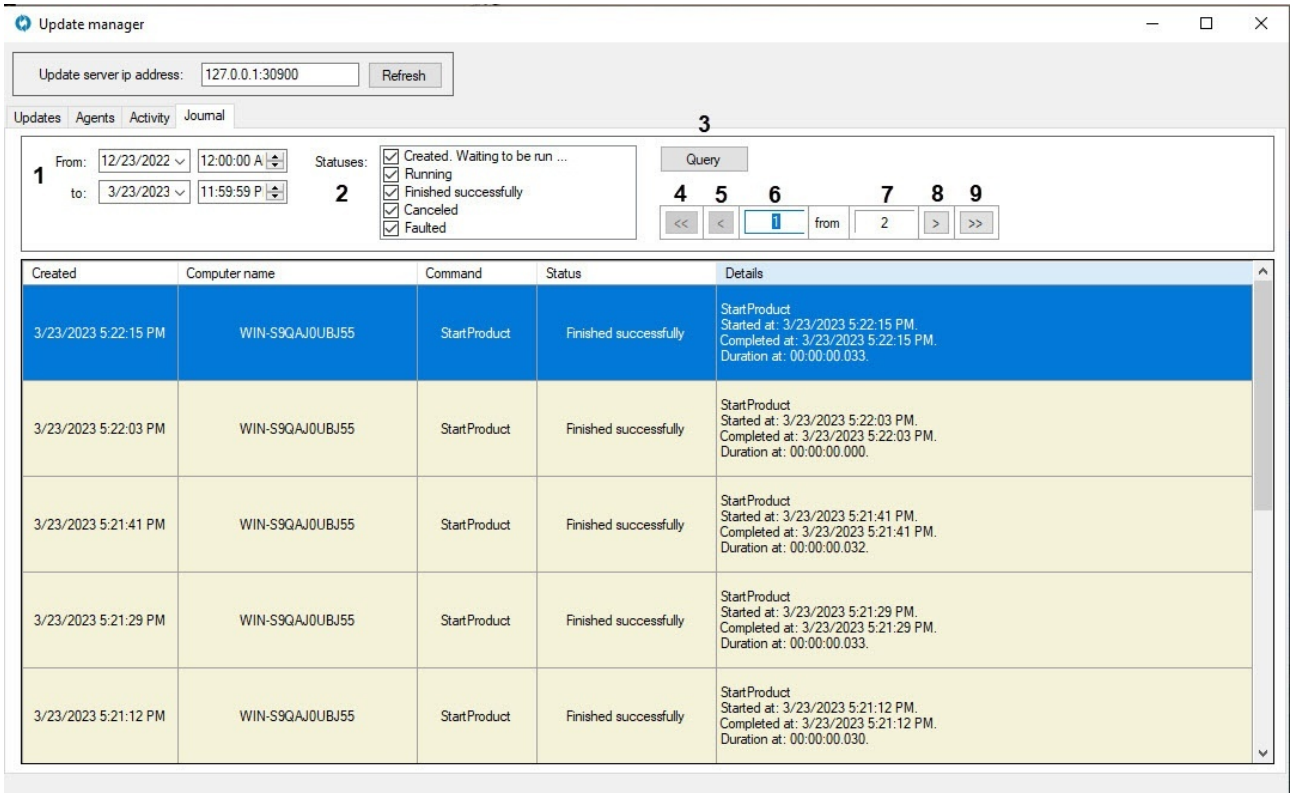
The **Journal** tab displays a list of all actions on the update server. At the top, there is a selection of dates and statuses that you can use to filter the journal.

To display the journal, do the following:

1. In the **From** and **to** fields, select the period to display the actions (**1**).
2. Set the checkboxes next to those operation statuses that you want to display (**2**).
3. Click the **Query** button (**3**).

As a result, the table displays the list of actions, taking into account the set filters. If there are several pages of the journal, you can navigate through them (see the numbering on the screenshot):

- **4**—go to the first page;
- **5** and **8**—previous/next page;
- **6**—number of the displayed page;
- **7**—number of pages;
- **9**—go to the last page.

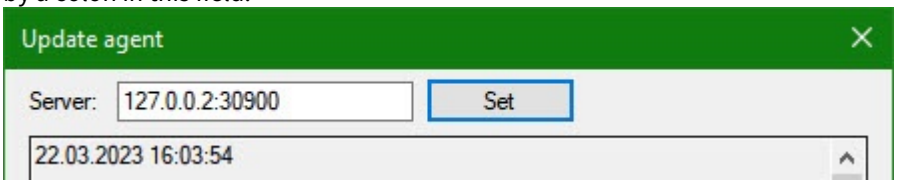


The journal contains information about all operations. The **Activity** tab contains information about operations that are running (see The Activity tab).

19.4 Configuring the client (receiver)

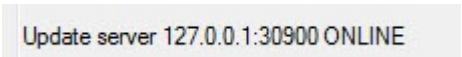
In each update agent, you must specify the update server. To do this, do the following:

1. Double-click the icon in the tray.
2. In the **Update agent** window that opens, click the Change button.
3. As a result, the **Server** field becomes editable. Enter the IP address and port of the update server separated by a colon in this field:



4. Click the **Set** button.

As a result, the window displays information about the connected update server and its status—ONLINE or OFFLINE:



19.4.1 General update procedure on the client

> **Attention!**
>
> The update parameters (time, *Axxon PSIM* start, and so on) depend on the selected settings in the *Update manager* (see Configuring the update server (distributor) in the Update manager).

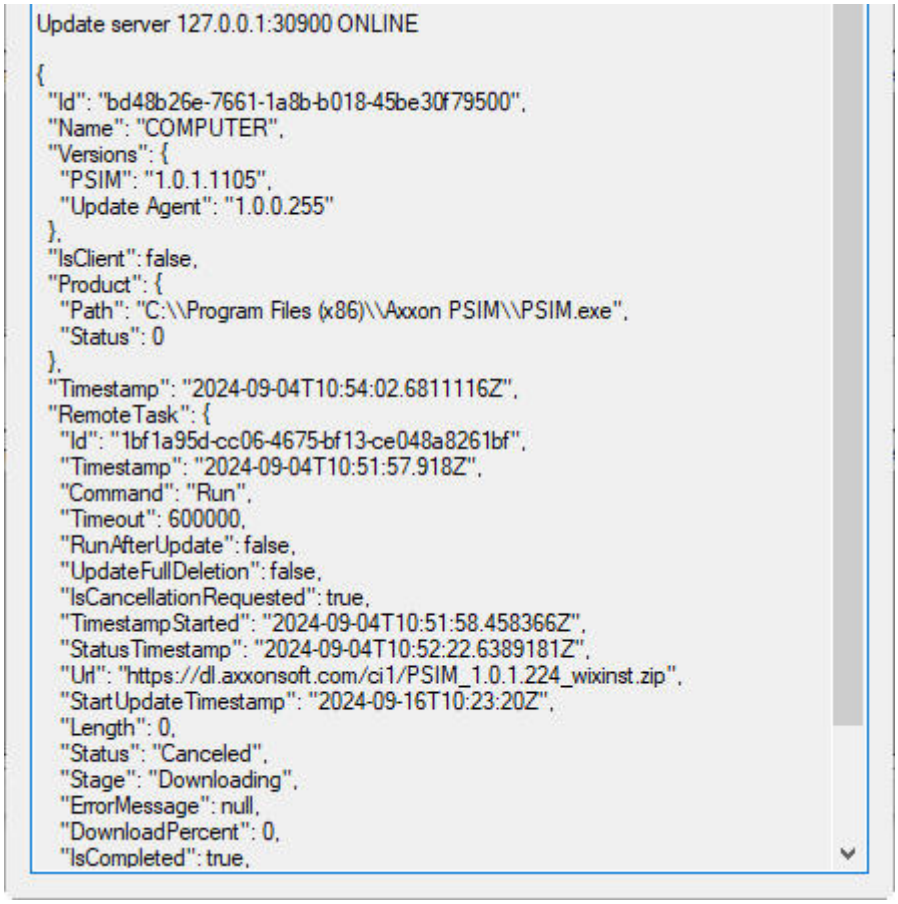
1. The client receives the update task from the *Update manager*.
2. The client requests from the server the installation package with the required version in ZIP format, downloads it, and unzips it.
3. Then the update runs in the quiet mode:
    a. If *Axxon PSIM* is running at this time, the client stops it;
    b. The client runs the update;
    c. After a successful update, if it was specified during configuration that *Axxon PSIM* must be restarted, the client restarts it. It is also possible to restart the computer if this was specified.
4. After the update, the client deletes the installation package.

Special cases:

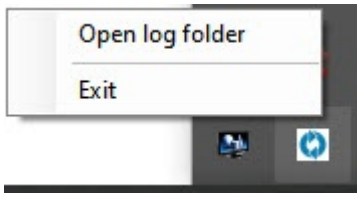
1. If an update fails (for example, installation error, update cancellation, or computer shutdown), the update is considered completed, and the client deletes the installation package. A new run in the *Update Service* is required to update again.
2. If the client receives an installation package with an older version, it tries to install that version, but ultimately the current version remains unchanged.

19.4.2 Features of the client (update agent)

The bottom part of the **Update agent** window displays information about the client (update agent):



If you right-click the tray icon, a dialog window opens:



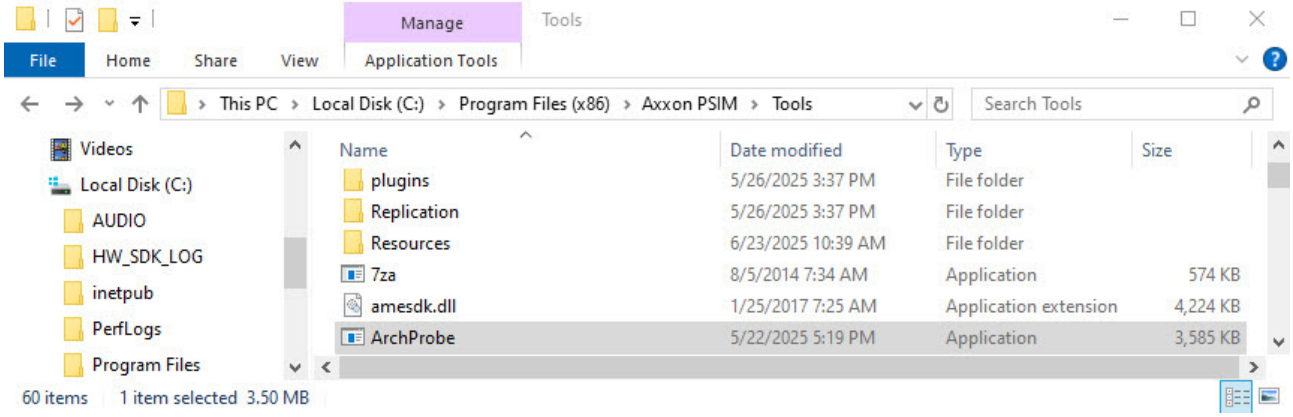
If you click **Exit**, the update agent stops. If you click **Open log folder**, a folder with the logs of the update agent opens.

To restart the update agent, go to its installation folder and run the update_agent.exe file.

Click ✕ to hide the **Update agent** window without stopping it.

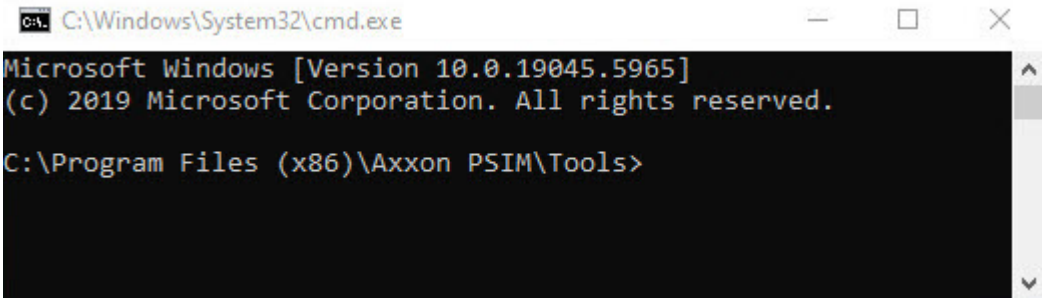
20 ArchProbe console utility

You can use the *ArchProbe* console utility to check the integrity of video archive files recorded in the internal *Axxon PSIM* format.
The utility is located in the **<Axxon PSIM installation folder >\Tools**.



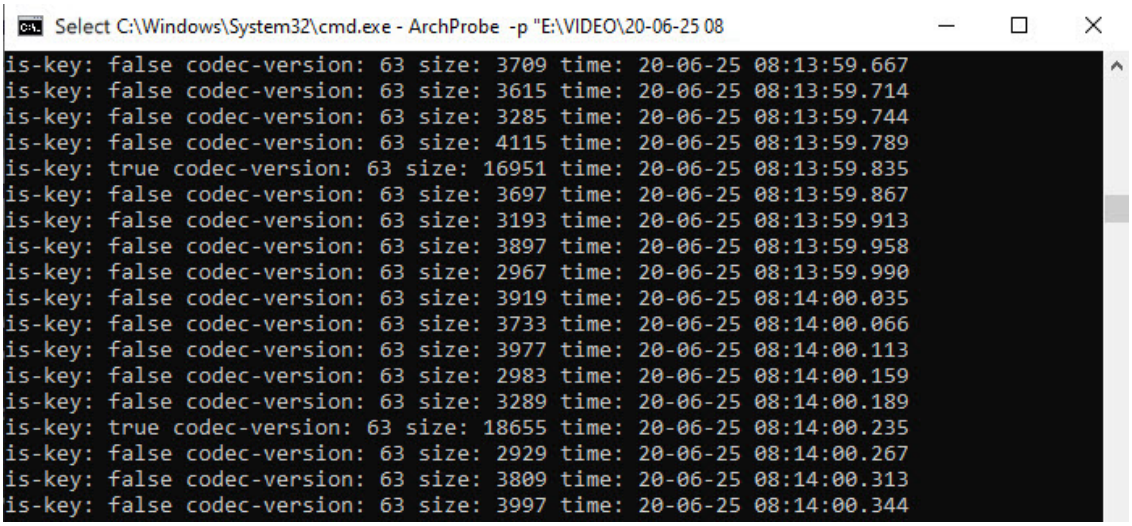
For the utility operation, do the following:

1. Run the command line using the cmd command to the C:Program Files (x86)\Axxon PSIM\Tools utility folder.



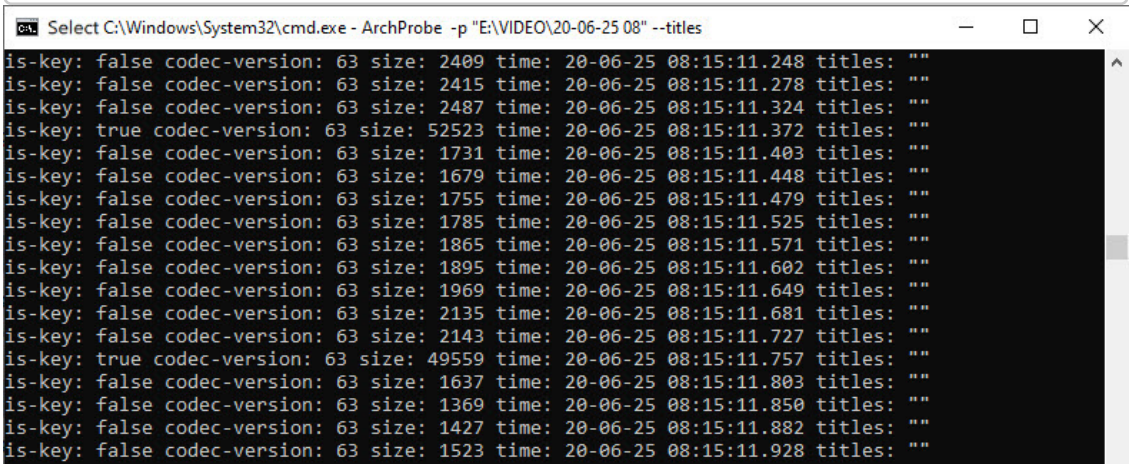
2. Specify the path to the folder with archive recordings or to a specific file.
   To simplify the export in the *ArchProbe* utility, you can check the integrity of video frames by displaying the frame hash and title text.
   Example of commands:
   a. To check the integrity of video frames:

```
C:\Program Files (x86)\Axxon PSIM\Tools>ArchProbe -p "E:\VIDEO\20-06-25
08"
```



b. To check titles:

```
C:\Program Files (x86)\Axxon PSIM\Tools>ArchProbe -p "E:\VIDEO\20-06-25
08" --titles
```



As a result, the system displays the information about each frame of the specified video archive.