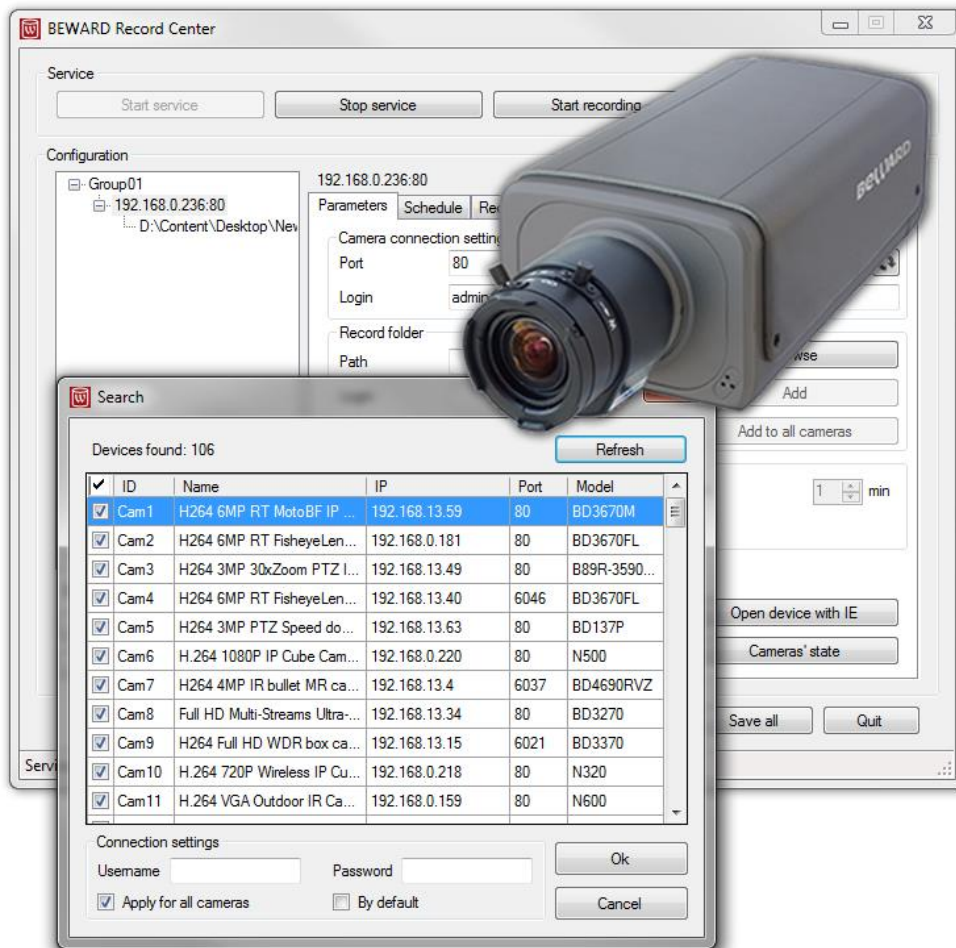


# 2018

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# BEWARD Record Center Software Operation User Manual



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Please, read this Manual before using BEWARD Record Center software.  
Some parts of the Manual, as well as menus of the application, could be changed without reasonable notice.

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## Chapter 1. General Information

### 1.1. BEWARD Record Center Overview

This manual contains information about installation and setting of the BEWARD Record Center software that is used for making a video surveillance system based on IP cameras and IP servers.

#### **ATTENTION!**

Read this manual carefully before using the software! Incorrect installation or setting may cause malfunction of the software as well as the whole video surveillance system!

IP cameras are video surveillance cameras which have a built-in web server, a network interface and which are connected to the Ethernet networks.

Video servers digitize an analogue video signal and transmit it over IP networks, providing remote access to a real-time video stream through the local area network or Internet. A video server is equipped with a built-in motion detector and has powerful monitoring functions based on trigger and scheduled events.

BEWARD Record Center is feature-rich software that provides recording, storing and playing video information of centralized and remote video surveillance systems. Video record from up to 36 devices, including IP cameras and IP servers, is supported by the software.

### 1.2. Advantages of IP Video Surveillance Systems

IP surveillance by means of IP cameras or IP servers replaces analogue surveillance systems and DVR systems. However, existent networks TCP/IP Ethernet are used for video surveillance needs. It helps to unify a net infrastructure and allows a customer to avoid costs of wiring separate cable lines.

IP systems have a variety of advantages in comparison with traditional analogue systems:

- **More effective network's infrastructure using**

Surveillance systems which are based on IP technology don't need a layer of expensive coaxial cable as in analogue systems but use "twisted pair" cable or wireless communication systems for a connection. Using the "twisted pair" also means an absence of separate wire connection that is necessary for a transmission of control signals and energizing of a video camera. Furthermore, where laying cables are expensive or not practicable, wireless Wi-Fi technologies could be used.

- **Openness and compatibility**

In distinction from traditional analogue systems that represents "black boxes" and being closed technical decisions, equipment of IP surveillance systems is based on open

standards that allow using equipment of different manufacturers in one surveillance system, for instance, switchboards, routers, servers and applicable software. All these considerably reduce surveillance systems' cost and increase its technical specification.

- **Network convergence using**

Many organizations as a rule use only Ethernet (based on IP protocol) networks for various data transmission that makes their control more effective and economically profitable.

- **Easy system integration**

IP surveillance technology is an open, easy integrated platform. Because the integration of systems becomes a more and more important requirement, there must be assurance that systems of control access, conditioning, managing, applets and other systems could be easily and effectively integrated into a whole system.

- **Remote access ability**

It is possible to get access to an image of any camera or displaying recorded video in real time from any place in the world with by means of wire or wireless net connection.

- **Expandability**

If necessary, IP networks make possible to expand security surveillance system easily. In case of an additional video camera needs to be used, it is just connected to a local network and it is ready to work. Besides, it is possible not just to add cameras but increase a volume of data's storage by spreading information through the entire network. IP networks are possible to support a multiply subscriber's access to the same information at the same time.

- **Intelligent processing of video image**

A variety of built-in functions allows the IP camera to make decisions such as when to trigger alarm, when it is necessary to send a video, and even control the frequency and quality of transmitting video (it depends on a channel width). In this way, a video access and making decisions becomes better because of the basing on IP surveillance systems.

- **Reliability**

An ability of data's transmission using an IP protocol makes possible to use external data storage units, to realize reservation of the data, to use server and archive architectures. In case of using standard server and network equipment, the time of changing damaged devices is much less than in case of using analogue equipment. The software makes possible to observe the surveillance system's condition in real time and inform about different problems. Moreover, an arrangement of reserve power supply is much easier than in case of analogue systems.

- **Quality of image**

Modern IP systems use H.264 (MPEG-4 Part10) video compression format that allows using the network more effectively in comparison with Motion JPEG or MPEG-4 format. User gets the most qualitative image in conditions of using limit capacity channels. Furthermore, the space of hard drive is consumed slowly than in case of the codec of the previous generation.

- **Noise resistance**

Working with surveillance systems makes obviously that a process of installation and checking of such system is quite long and demands a lot of efforts. Quite often a noise appears in the image after the first start due to influence of some other electric devices. Removing the noise is always a difficult process. The process of installation and checking becomes faster with IP cameras because they are exposed to noises less than other cameras.

### 1.3. System Requirements

#### Supported operation systems

Windows 7 SP1, Windows 8, Windows 8.1, Windows 10.

#### Minimal PC requirements

**CPU:** 2.0 GHz and higher;

**RAM:** 1 GB;

**HDD:** 40 GB;

**Sound card:** is necessary in case of using a microphone or speakers (for feedback function), or alarm sounds;

**Video card:** compliant with DirectX 9; 128 MB memory size.

**Network interface controller:** 100 Mbit/s transfer rate.

## **Chapter 2. Introduction to BEWARD Record Center**

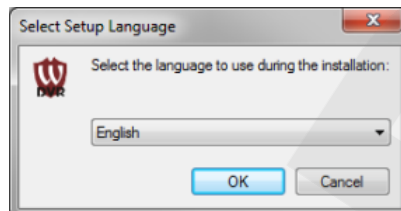
The professional IP systems software BEWARD Record Center provides the following essential mostly used functions:

- 1. Automatic record process and executing it regardless of whether the user logged in or logged out.**
- 2. Recording on hard drives of the LAN.**
- 3. Recording in specific formats for user's convenience:**
  - \*.avi – from N, BD series cameras;
  - \*.mp6 – from B series cameras.
- 4. Application controls the current free space on the computer and overwrites data when it is not enough.**
- 5. Different modes of recording:**
  - permanent, 24 hour a day;
  - on motion detection;
  - on sensor activation;
  - on audio detection;
  - on the schedule set by the user.
- 6. Nonstop information record: size of a video file is limited by adjustable parameters. When the limit of one file is reached the application continues recording the next one.**
- 7. Watching records from the archive via a built-in player.**

## Chapter 3. BEWARD Record Center Installation

**Step 1:** insert the disc with the BEWARD Record Center software into the CD/DVD-ROM computer drive.

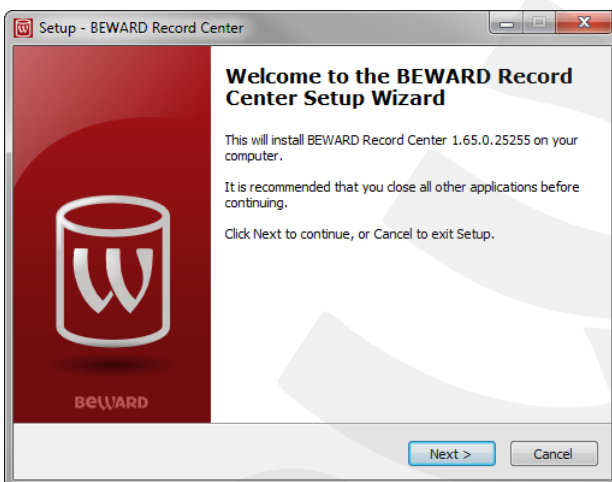
**Step 2:** open the disc using the File Explorer and run the installation program. The window of language selection will appear (*Pic. 3.1*). Select the language you prefer from the list and click [OK].



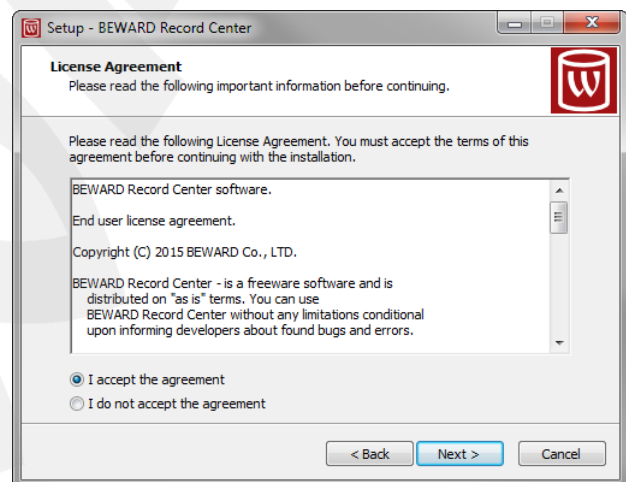
*Pic. 3.1*

**Step 3:** click [Next >] in the Setup window to continue installation (*Pic. 3.2*).

**Step 4:** read carefully a License Agreement (*Pic. 3.3*). Choose “I accept the agreement” and click [Next >].



*Pic. 3.2*

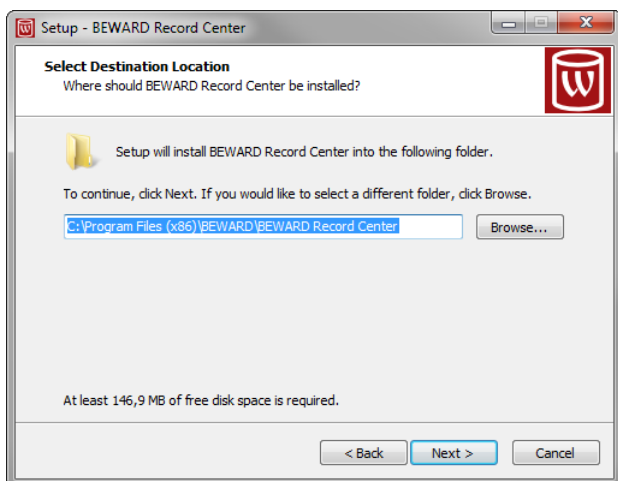


*Pic. 3.3*

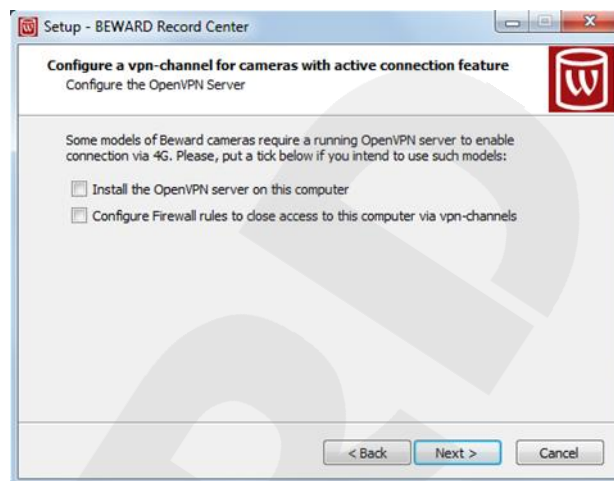
**Step 5:** click [Browse...] (*Pic. 3.4*) to select a destination folder (take into account the free space required for installation). Click [Next >].

**Step 6:** if you intend to use devices, which support active 4G-connection (e.g. cameras B1510-4G or B2710-4G), you might need a VPN-server. The BEWARD Record Center installation program will offer you to install an OpenVPN server and configure Windows Firewall rules (*Pic. 3.5*). Select “Install the OpenVPN server on this computer” and “Configure Firewall rules to close access to this computer via vpn-channels” if you plan to use active 4G-connection.





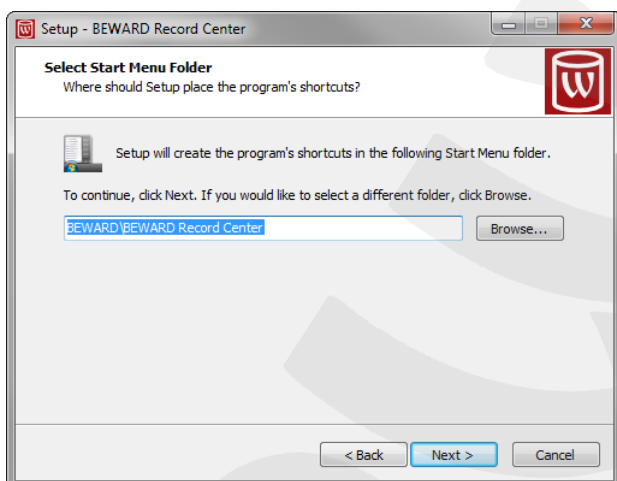
Pic. 3.4



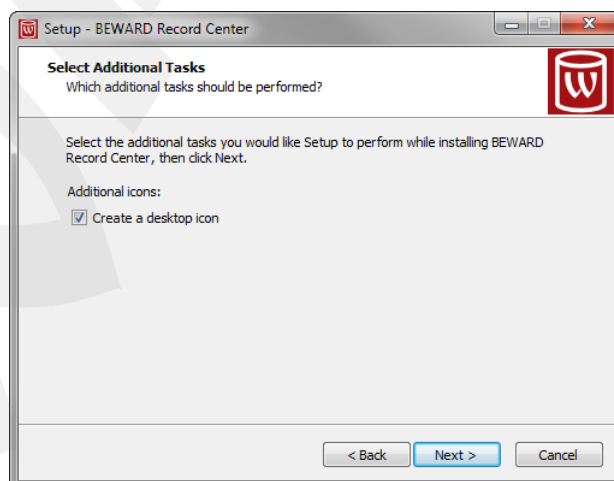
Pic. 3.5

**Step 7:** select a folder in the “Start” menu for program’s shortcut (Pic. 3.6). Click **[Browse...]** to select another folder. Then, click **[Next >]** to continue.

**Step 8:** if necessary, create a desktop shortcut, selecting “Create a desktop icon” (Pic. 3.7). Click **[Next >]** to continue.



Pic. 3.6



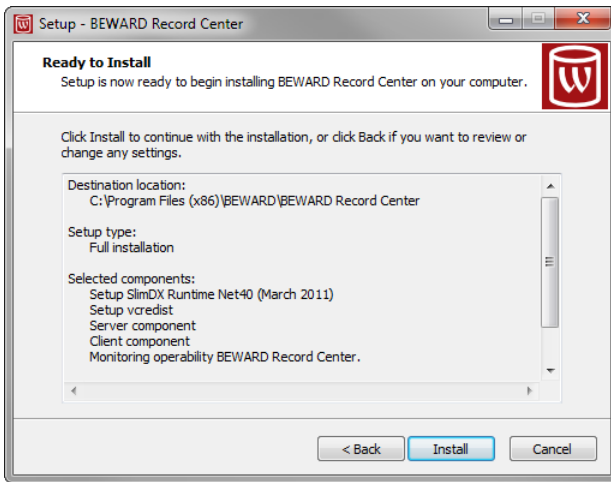
Pic. 3.7

**Step 9:** click **[Install]** in the next window (Pic. 3.8). If necessary, click **[< Back]** to change installation settings were specified previously.

#### ATTENTION!

The Service Pack for the MS SQL 2005 Express Edition may be required to provide proper installation and operation of .the BEWARD Record Center in OS Windows 7.

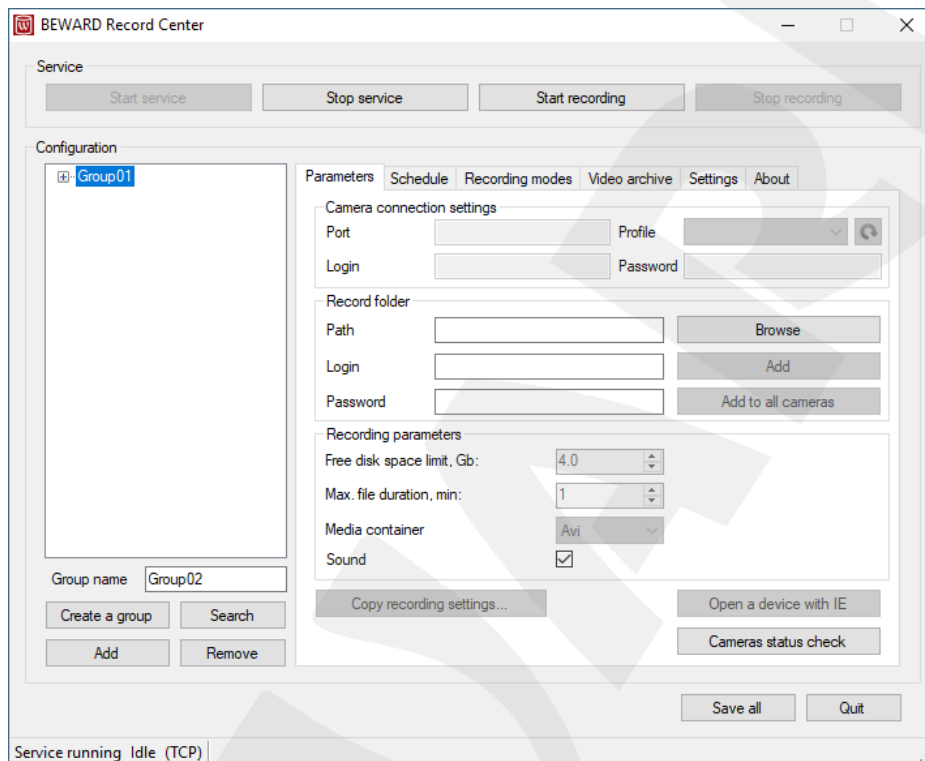
**Step 10:** click **[Finish]** to complete the installation and close the Setup program (Pic. 3.9). Run the application using one of the created shortcuts.

*Pic. 3.8**Pic. 3.9*

## Chapter 4. Work with the Application

### 4.1. The Main Window of BEWARD Record Center

Run the application, using one of the shortcuts created during the installation. The main window will open (*Pic. 4.1*).



*Pic. 4.1*

Press **[F1]** to open the Operation User Manual in the pdf format.

BEWARD Record Center consists of two parts:

1. a Windows' service that performs recording from IP video cameras and servers (further, "Service").
2. a special application that allows you to control and set the Service (further, "Controller").

## 4.2. Buttons on the “Service” Form

The four buttons of the group “Service” are showed on the *Picture 4.2*.



*Pic. 4.2*

The **[Start service]** button runs the operation of the Service and makes a request for the current settings. The button is active after clicking the **[Stop service]** button.

The **[Stop service]** button saves Service’s current state (does the recording performs or not) and stops its operation.

### **NOTE!**

If the Service was stopped last time during the recording, the process continues with clicking **[Start service]** automatically.

The **[Start recording]** button runs the recording of all devices in the list, according to the settings which were applied with the last click of the **[Save all]** button (it is situated in the lower right corner of the main window).

### **NOTE!**

In case of door stations (the B series devices such as DS03M, DS03MP), the on-screen text of date and time is automatically turn on, when clicking **[Start recording]**.

The **[Stop recording]** button stops the recording of all devices in the list.

### 4.3. Addition of Devices

The list of devices added in the application consists of groups. The settings of the groups of connected devices are shown on the *Picture 4.3*.



*Pic. 4.3*

Click the **[Create group]** button to create in the list above an empty group which is used to unite the devices you will add further. Before creating you can enter group's name in the text field **"Group name"**.

#### **NOTE!**

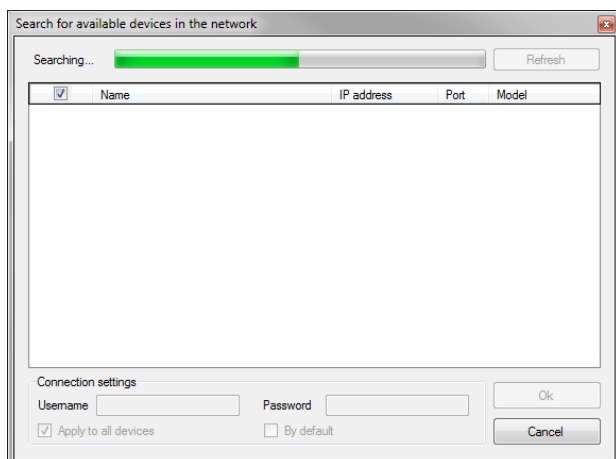
By default the groups are named as "Group01", "Group02" etc.

Click the **[Save all]** button in the lower right corner of the main window to apply new settings.

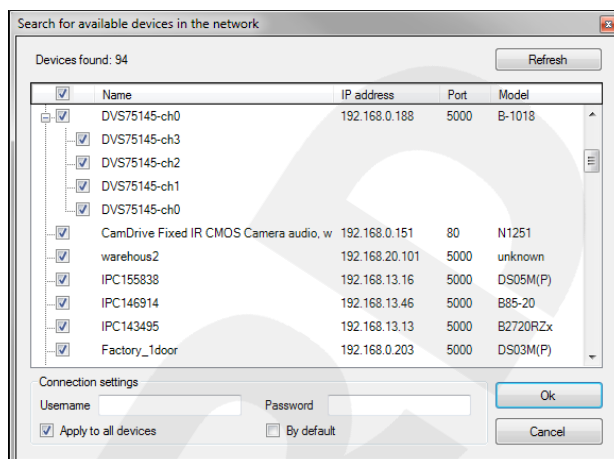
Click the **[Search]** button to find in your local network available devices which you can record (*Pic. 4.4*). The result of this automatic search is the list of devices with their names, IP addresses and other information (*Pic. 4.5*).

#### **NOTE!**

For multichannel devices you can add separate channels. It is necessary to choose the numbers of the channels you need in the drop-down list for this purpose.



Pic. 4.4



Pic. 4.5

Choose with ticks the devices you want to add in the group in the left column (Pic. 4.5).

Enter the username and the password in the corresponding text fields for each device. You can click the check box “**By default**” and the fields will be filled in with “**admin**” / “**admin**” automatically. You can also click the check box “**Apply for all cameras**” to apply the entered data to all devices in the list.

#### NOTE!

To apply username and password to several devices, choose them with a mouse, pressing keyboard's buttons **[Ctrl]** or **[Shift]**, and enter the data.

The **[Refresh]** button (Pic. 4.5) in the upper right corner of the “**Search**” window allows you to perform the search procedure again.

Click the **[Ok]** button to add the chosen devices in the group or **[Cancel]** to close the “**Search**” window.

Click the **[Save all]** button in the lower right corner of the main window to apply new settings.

Click the **[Add]** button (Pic. 4.3) to add a device manually. This function is useful when some devices can't be found by the automatic search, for example, when they are in Internet. After pressing the **[Add]** button, the following window will appear:

Pic. 4.6

**Login, Password:** enter username and password in these text fields to get access to the device.

**Default:** click this check box and the fields above will be filled in with “**admin**” / “**admin**” automatically.

**Use URL:** this option allows you to add the device using its URL address.

**IP address:** enter the IP address of the device.

**HTTP port:** enter the HTTP port of the device.

**Data port:** this port has the default value of “**5000**” for B series devices, but it is necessary to leave “**0**” for other devices.

When the all connection parameters are specified, click the [**Check**] button to start connecting to the device (to stop connecting, click the [**Stop**] button). If the connection is established, you will see “**Camera was connected successfully**” above the buttons and the fields of the device description will be filled in (Pic. 4.7).

Pic. 4.7

**Model:** this field displays a model of the connected device.

**MAC-address:** this field displays a MAC-address of the connected device.

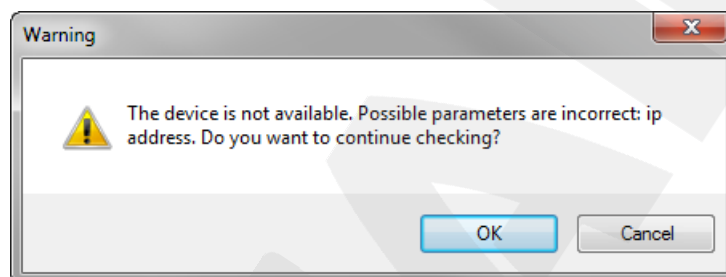
**Firmware version:** this field displays a version of connected device's firmware.

#### NOTE!

For multichannel devices there will be an additional area with a list of channels where you can choose the separate channels to add them in the application.

Click the **[Add]** button to add the device in the group or **[Cancel]** to close the “Add a new device” window.

If the device is not available, the following notification will appear:



Pic. 4.8

To continue the connection check, click **[OK]**. To return to entering the connection parameters, click **[Cancel]**.

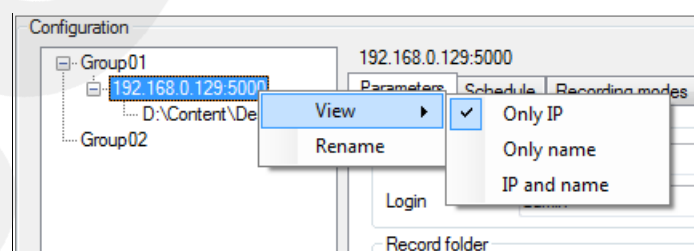
Click the **[Save all]** button in the lower right corner of the main window to apply new settings.

The **[Remove]** button (Pic. 4.3) is used for removing an added device or a created group from the list. For this purpose you can also use the **[Delete]** button on the keyboard.

Click the **[Save all]** button to apply new settings.

#### Context Menu

Right-click an IP address of the added device in the list to display a context menu (Pic. 4.9). Using this menu, you can change device's name and its view in the list.



Pic. 4.9



## 4.4. Operation Setting

### 4.4.1. “Parameters” Tab

The “Parameters” tab (Pic. 4.10) contains general settings of the recording. It is divided into three forms: “Camera connection settings”, “Record folder” and “Recording parameters”.

Pic. 4.10

The “**Camera connection settings**” group-box is shown below:

Pic. 4.11


#### NOTE!

The settings in the group-box will be available if the device is selected in the list. Click the device with the left mouse button for selecting.

**Port:** the number of device’s data transmission port.

**Login:** or username that is used to connect to the device (by default – “admin”).

**Password:** it is used to connect to the device (by default – “admin”).

**Profile:** the list of video stream profiles available for recording which vary depending on device’s series: “Main stream” / “Additional stream” for B and BS series; “MJPEG (<resolution>)”, “H.264-1 (<resolution>)”, “H.264-2 (<resolution>)” etc. for BD series; “Profile1”, “Profile2” etc. (by default) for N series. The button  is used for refreshing the list.

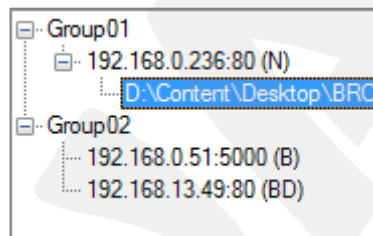
Click the [**Save all**] button in the lower right corner of the main application window to apply new settings.

The “**Record folder**” group-box is shown below:

Pic. 4.12

**Path:** enter a path to the folder which will be used for saving recorded files from the added device(s).

You can also use the **[Browse]** button to specify the archive folder. Select a device or a group in the list with a left mouse click and press **[Browse]**. Choose a folder in the opened window or create a new one. Click the **[Add]** button (Pic 4.12). As a result, the path to the archive folder will appear under device’s name in the list:



Pic. 4.13

Click the **[Add to all cameras]** button (Pic 4.12) to use the current archive folder for all devices in the list.

**Login, Password:** fill in these text fields if you use a remote archive folder which requires the authorization procedure for access.

#### ATTENTION!

It is not recommended to change the structure of the archive folder as well as to add or remove recorded files from it manually.

#### NOTE!

To run the Beward Record Service using the required user account, do as follows: go to “**Computer Management**” – “**Services and Applications**” – “**Services**”, find the Beward Record Service and double-click it. Then, go to the “**Log On**” tab, pick “**This account**” and fill in the text fields. After that, restart the Service.

Click the **[Save all]** button in the lower right corner of the main application window to apply new settings.

The “**Recording parameters**” group-box is shown below:



Pic. 4.14

**Free disk space limit:** specify a volume of the free disk space (in gigabytes) which will not be used by the Service. The limit is set separately for each storage partition containing record folders. The limit of the one folder which is used for recording from several devices is not summed up.

The option will be available when the path to the archive folder is selected in the list of added devices.

#### ATTENTION!

In the versions of BEWARD Record Center higher 1.36.0 the free disk space limit can't be less than 4096 MB to prevent the decrease of system performance.

Beginning with the version 1.111.0, the free disk space limit may have any value and can be equal to the whole volume of the partition which contains the record folder. But it is not recommended to set a maximal value of the limit because the records will be removed right after closing the files.

The Service will overwrite the data (remove the oldest files for recording new ones) when the limit is reached.

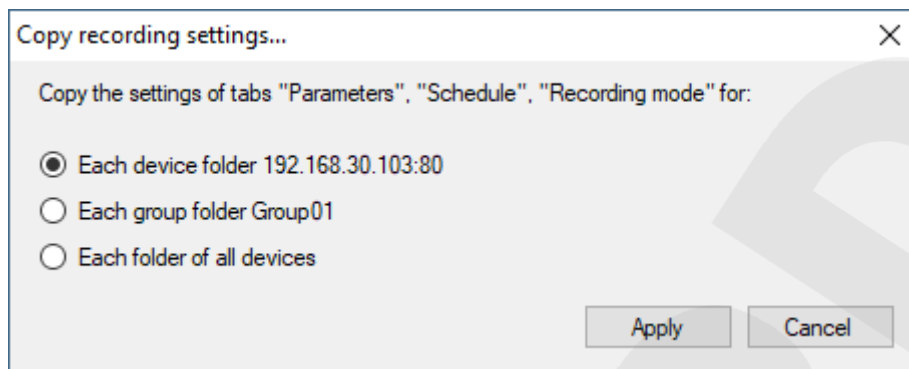
**Max file length:** specify the maximal duration of the video record. The option will be available when the path to the archive folder is selected in the list of added devices.

Click the **[Save all]** button in the lower right corner of the main application window to apply new settings.

**Sound:** click this check box and if the camera has a built-in microphone or an external microphone is connected to it through the audio input, you will record both video and audio information. By default the check box is empty.

The option will be available when the device is selected in the list.

The **[Copy recording settings...]** button in the bottom of the "Parameters" tab becomes active when the path to the archive folder is selected in the list of added devices. Clicking this button opens the window (Pic. 4.15) where you can choose what folders the recording settings of the current one need to be copied for.



Pic. 4.15

The following variants are available:

- **Each device folder <device name>** – copy recording settings for all folders of the current device;
- **Each group folder <group name>** – copy recording settings for all folders of the current group;
- **Each folder of all devices** – copy recording settings for all folders of all devices in the list.

The copying settings include: recording mode, durations of recording before and after alarm, file duration, recording schedule, and a record video format.

Click the **[Save all]** button in the lower right corner of the main application window to apply new settings.

**[Open a device with IE]:** click this button to open the web interface of the device selected in the list, using Internet Explorer.

**[Cameras status check]:** click this button to review in a separate window the current state of the added devices (Pic. 4.16).

IP address	Device name	Channel	Port	Camera status	Folder	Record status	Last frame time
192.168.0.51		0	5000	Disconnected	D:\Content\Desktop\BRC	not executing	
192.168.0.236	N	0	80	Connected	D:\Content\Desktop\BRC	not executing	
192.168.13.49	BD	0	80	Disconnected	D:\Content\Desktop\BRC	not executing	

The number of lines in the list: 3

Pic. 4.16

**IP address:** device's current network address;

**Channel:** the number of server's channel (in case of the camera is connected to the IP video server);

**Port:** the number of device's port;

**Camera status:** device's connection status; the field can have the following values:

- **Connected:** the connection is established;
- **Connecting:** the connection is establishing;
- **Disconnected:** the connection is not established;
- **Reconnect:** the connection is trying to be established again (the process lasts 20 s);
- **VideoLost:** the connection is established but the video signal is lost;
- **ConnectionErr:** the connection failed to be established because of some error;
- **GetVideoStreamErr:** failed to get the video stream from the camera during the connection.

BEWARD Record Center requests device's status every 500 ms.

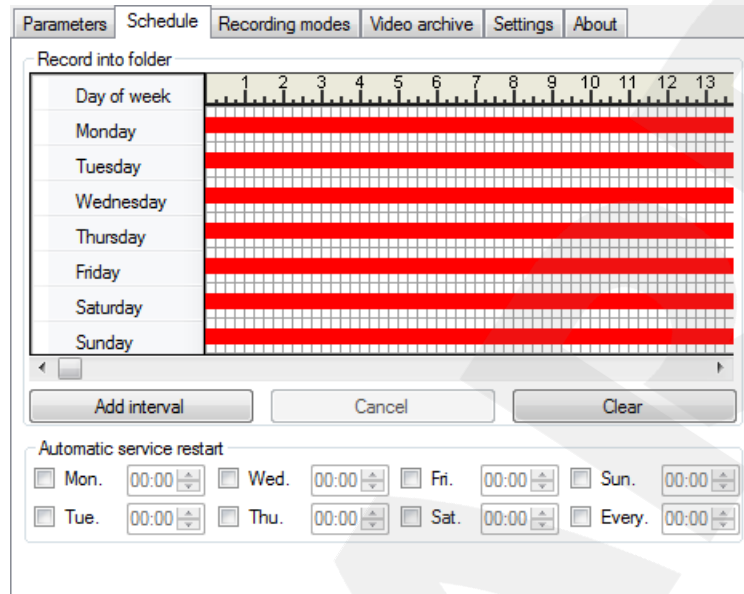
**Folder:** the full path to the archive folder;

**Record status:** the current status of the recording to the specified archive folder; the field can have the following values:

- **By schedule:** the recording is performed in accordance with the schedule created for the current folder;
  - **Permanently:** the schedule for the current folder is not created; the recording is performed in a 24 hour mode;
  - **By motion detection:** the recording is performed on motion detection triggering;
  - **By sensor alarm:** the recording is performed on camera's sensor triggering;
  - **By call button:** the recording is performed on pressing the "Call" button of the door station;
  - **By sensor and motion:** the recording is performed on simultaneous motion detection and camera's sensor triggering;
  - **Not executing:** the recording is not performed;
  - **Error:** some error occurred during the recording; in this case, a new video file tries to be recorded every 60 s;
  - **Not enough free space:** BEWARD Record Center automatically checks the free disk space during the recording and if it is not enough, the application will remove the oldest files from the folder;
  - **Interrupt:** the recording was interrupted.
- Last frame time:** the date and time of the last saved frame from the camera.

#### 4.4.2. “Schedule” Tab

The “Schedule” tab is shown on the picture below:



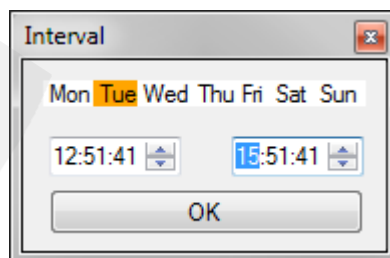
Pic. 4.17

The “Schedule” tab is used for setting time intervals of the recording of video data from the added devices. It contains a schedule mesh: its cells are formed by days of the week (horizontally) and time periods of a 24-hour day (vertically). Each cell is a 15 minutes time period.

#### ATTENTION!

The “Schedule” tab will be available for setting when the path to one of archive folders is selected in the list of added devices.

Click **[Add interval]** to add a time interval in the recording schedule of the selected folder (Pic. 4.18).




Pic. 4.18

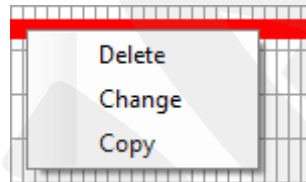
In the opened window choose a day of the week and then enter (or specify using the arrow-buttons) the time of the record’s beginning in the left field, and the time of its end in the right field. Then click **[OK]**. Repeat these steps to add all necessary time intervals.

The added time interval is displayed as a red line with the length that is in accordance with the specified time.

You can use the mouse for adding the time intervals. In this case click the cell you need and hold the mouse button pressed; move the mouse to the left or right, selecting the cells or, in other words, the necessary time period (adding the time intervals use the scrollbar under the schedule mesh if necessary). The selected time period will be colored with blue. Then right-click it and choose “Create” in the context menu. The time interval will be added.

You can also move the red segments of the added time intervals within the schedule mesh with the mouse. For this purpose, click the segment and hold the mouse button pressed (when the cursor is on the segment, it looks as follows: ); move the segment to the cell or week day's line you need.

The context menu which appears after a right-click on any segment of the added time intervals contains the following options (*Pic. 4.19*):



*Pic. 4.19*

**Delete:** choose to remove the added time interval from the schedule.

**Change:** choose to change settings of the current time interval. The same window as it is shown on the *Picture 4.18* appears after clicking.

**Copy:** choose to make a copy of the current time interval for some another day of the week. Click “Copy”, move the cursor to the line of the day you need, then right-click and in the new context menu choose “Paste”.

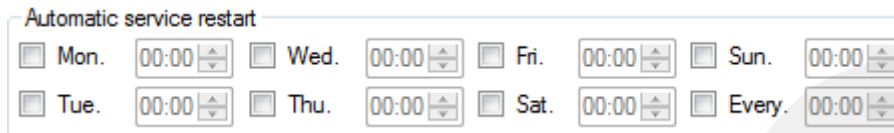
Using the methods described above you can arrange several time intervals (red segments) in the one line of the day you need with spaces between them.

The [**Cancel**] button (*Pic. 4.17*) is used for undoing the changes made in the schedule. If necessary, you can undo all the changes one by one.

The [**Clear**] button (*Pic. 4.17*) is used for removing all the time intervals from the current schedule.

If there are no added time intervals in the schedule, the data will be recorded in the “Permanently” mode.

**Automatic service restart:** this group-box contains settings of the automatic restart of the Service by schedule (*Pic. 4.20*).

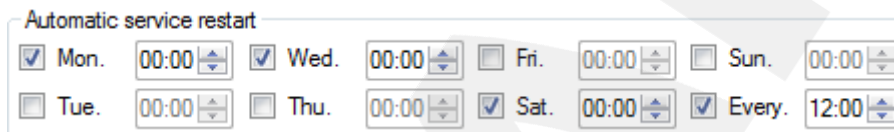


Day	Time	Day	Time	Day	Time	Day	Time
<input type="checkbox"/> Mon.	00:00	<input type="checkbox"/> Wed.	00:00	<input type="checkbox"/> Fri.	00:00	<input type="checkbox"/> Sun.	00:00
<input type="checkbox"/> Tue.	00:00	<input type="checkbox"/> Thu.	00:00	<input type="checkbox"/> Sat.	00:00	<input type="checkbox"/> Every.	00:00

Pic. 4.20

This schedule is available not depending on what the item is selected in the list of the groups.

To set the automatic restart of the Service on some day (or all days) of the week, select the corresponding check box(es) and specify the appropriate time. Furthermore, you can select the check box "Every." to set performing the restart every day in the specific time in addition to the week schedule. So it is possible to set performing the restart of the Service twice a day in the time you need (Pic. 4.21).



Day	Time	Day	Time	Day	Time	Day	Time
<input checked="" type="checkbox"/> Mon.	00:00	<input checked="" type="checkbox"/> Wed.	00:00	<input type="checkbox"/> Fri.	00:00	<input type="checkbox"/> Sun.	00:00
<input type="checkbox"/> Tue.	00:00	<input type="checkbox"/> Thu.	00:00	<input checked="" type="checkbox"/> Sat.	00:00	<input checked="" type="checkbox"/> Every.	12:00

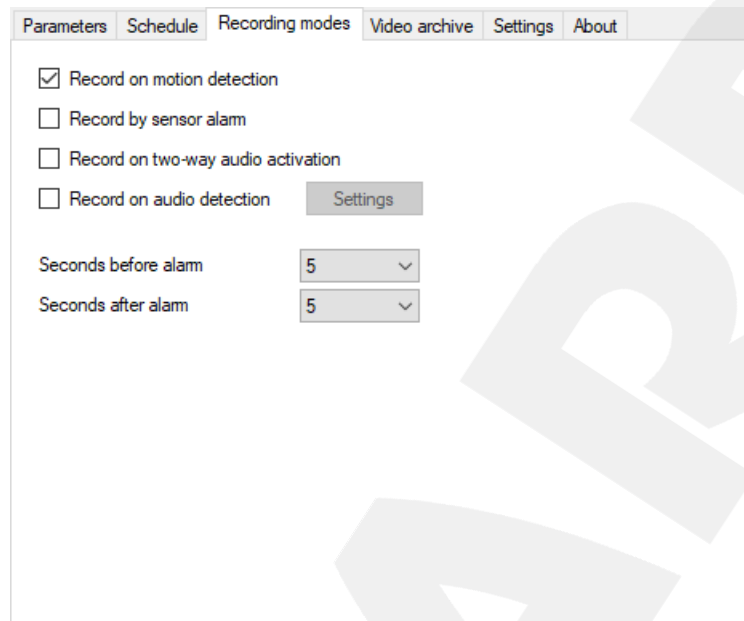
Pic. 4.21

Click the **[Save all]** button in the lower right corner of the main window to apply new settings.



#### 4.4.3. “Recording modes” Tab

The “Recording modes” tab is shown on the picture below:



Pic. 4.22

The following modes of the data recording are available on the tab:

- by motion alarm;
- by sensor alarm;
- on two-way audio activation;
- by audio alarm.

And there is one else recording mode, which is available when the door station is added in the application:

- on pressing the call button of the door station.

#### ATTENTION!

If both the recording schedule and one of the modes above are used for the folder, data will record in accordance with the specified mode but only in the time determined by the schedule.

“Record by motion alarm” is a recording mode when data are started recording on activation of the camera motion detection.

#### ATTENTION!

The motion detection option must be enabled in camera settings.

“Record by sensor alarm” is a recording mode when data are started recording on activation of the alarm sensor connected to the camera.


**ATTENTION!**

The alarm sensor option must be enabled in camera settings.

“Record on two-way audio activation” option means that data are started recording when the user enables a two-way audio mode in the **BEWARD IP Visor** software and the recording is finished when this mode is disabled. In this case, the recorded data will be included the sound from the camera as well as the sound from user’s microphone.

**ATTENTION!**

Both applications BEWARD Record Center and BEWARD IP Visor must be installed on the same computer.

To start recording data it is necessary to click the button  (turning on the two-way audio mode) in the main window of the BEWARD IP Visor application or in the event pop-up window. In that case you need select the check box “Recording when talk enabled” in settings of the event pop-up window. Parameters of the pop-up window in the BEWARD IP Visor application are available when setting the “Motion detection” and “Sensor alarm” events (see BEWARD IP Visor Operation User Manual).

If you enable the “Record on two-way audio activation” mode, all the other recording modes will be disabled.

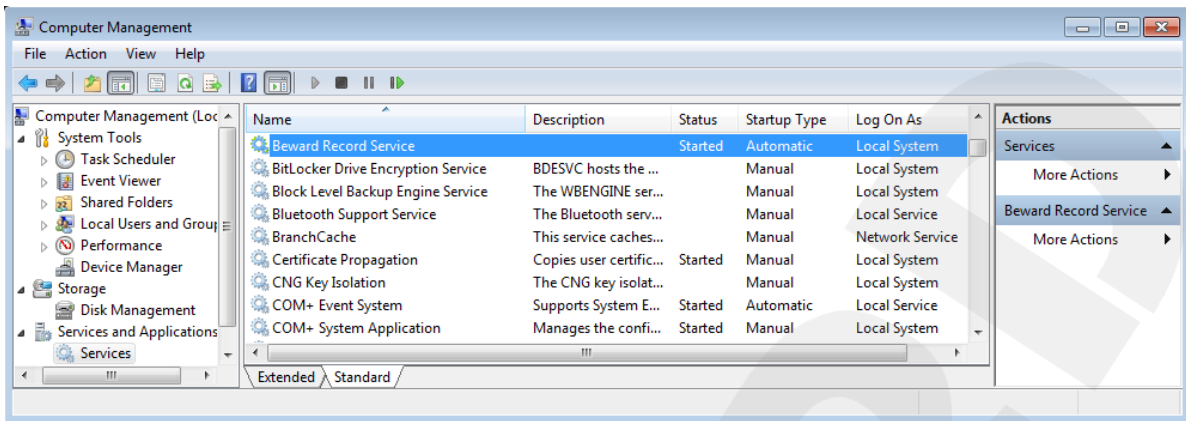
**NOTE!**

After you enabled the “Record on two-way audio activation” mode, all files from the current device are recorded with sound (if the recording with sound was disabled before).

**NOTE!**

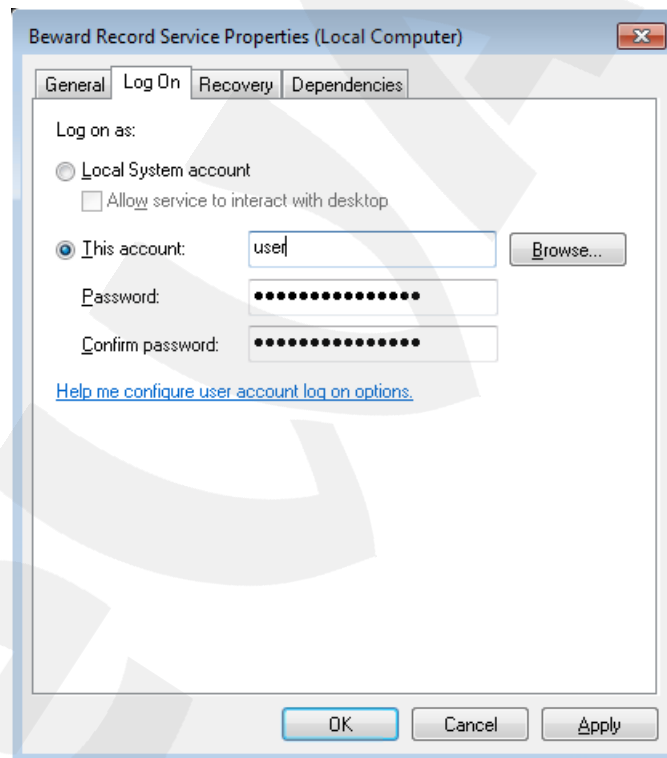
The BEWARD Record Service must be logged on with a user account different from the system one, in other words, not as “Local System”.

By default, the BEWARD Record Service logs on with the “Local System” account (*Pic. 4.23*).



Pic. 4.23

To change the type of the account, do as follows: go to **“Computer Management”** – **“Services and Applications”** – **“Services”**, find the Beward Record Service and double-click it. Then, go to the “Log On” tab, pick “This account” and specify the account you need (Pic. 4.24).



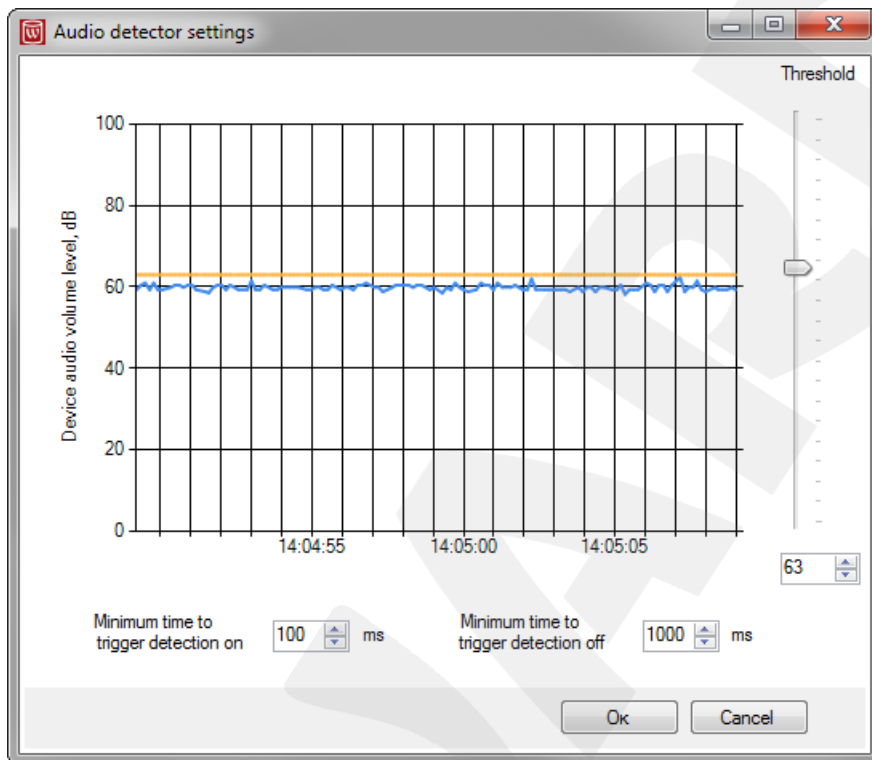
Pic. 4.24

“Record by audio alarm” is a recording mode when data are started recording on exceeding a specific volume level threshold by the sound from the camera.

#### ATTENTION!

The “Record by audio alarm” option is available when the device supports sound transmission.

Click the **[Settings]** button to open “Audio detector settings” window, which you can use for watching the volume level of the audio signal from the camera changes in real time, and adjusting necessary parameters (*Pic. 4.25*).



*Pic. 4.25*

Set the value of the volume level threshold (orange line) for audio detector operation.

**Minimum time to trigger detection on:** use this setting to prevent the audio detector triggering on some accidental short sounds (for example, clicks of the microphone).

**Minimum time to trigger detection off:** sometimes, the volume level of an audio signal can be lower than the threshold. Use this setting to not let the audio detector stop triggering too early and to perform data recording without interruption.

**Seconds before alarm:** specify how long it needs to record video before alarm activation (*Pic. 4.22*). It is available to specify from 0 to 10 seconds, where “0” means that the function is disabled. 5 seconds is set by default.

**Seconds after alarm:** specify how long it needs to record video after alarm deactivation (*Pic. 4.22*). It is available to specify from 0 to 20 seconds, where “0” means that the function is disabled. 5 seconds is set by default.

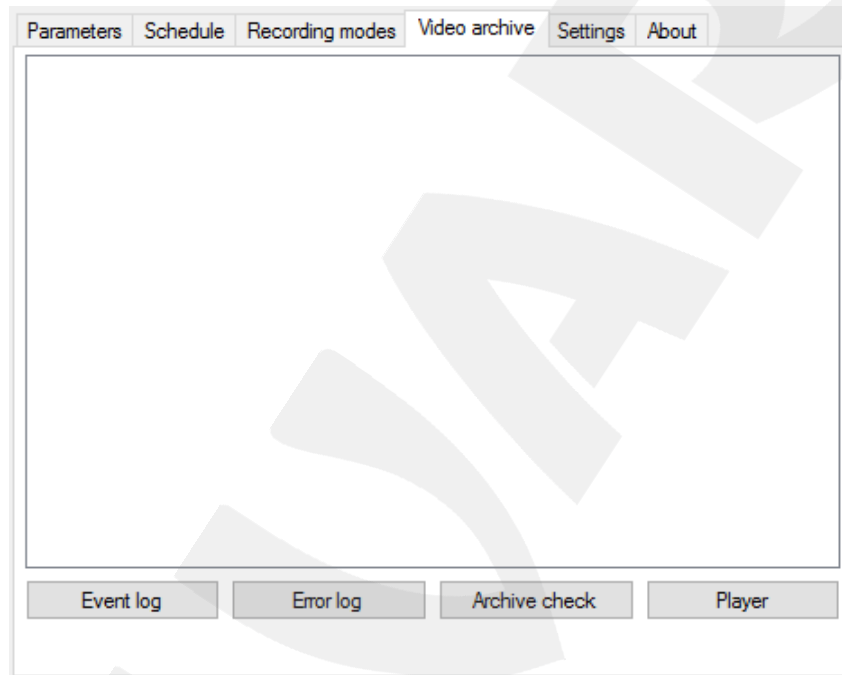
The option of recording on pressing the call button of the door station is available when the door station is added in the application. The recording starts at the moment of pressing the call button and finishes in one of the following cases:

1. the user disabled the “Talk” mode using BEWARD IP Visor;
2. 2 minutes passed.

Click the **[Save all]** button in the lower right corner of the main window to apply new settings.

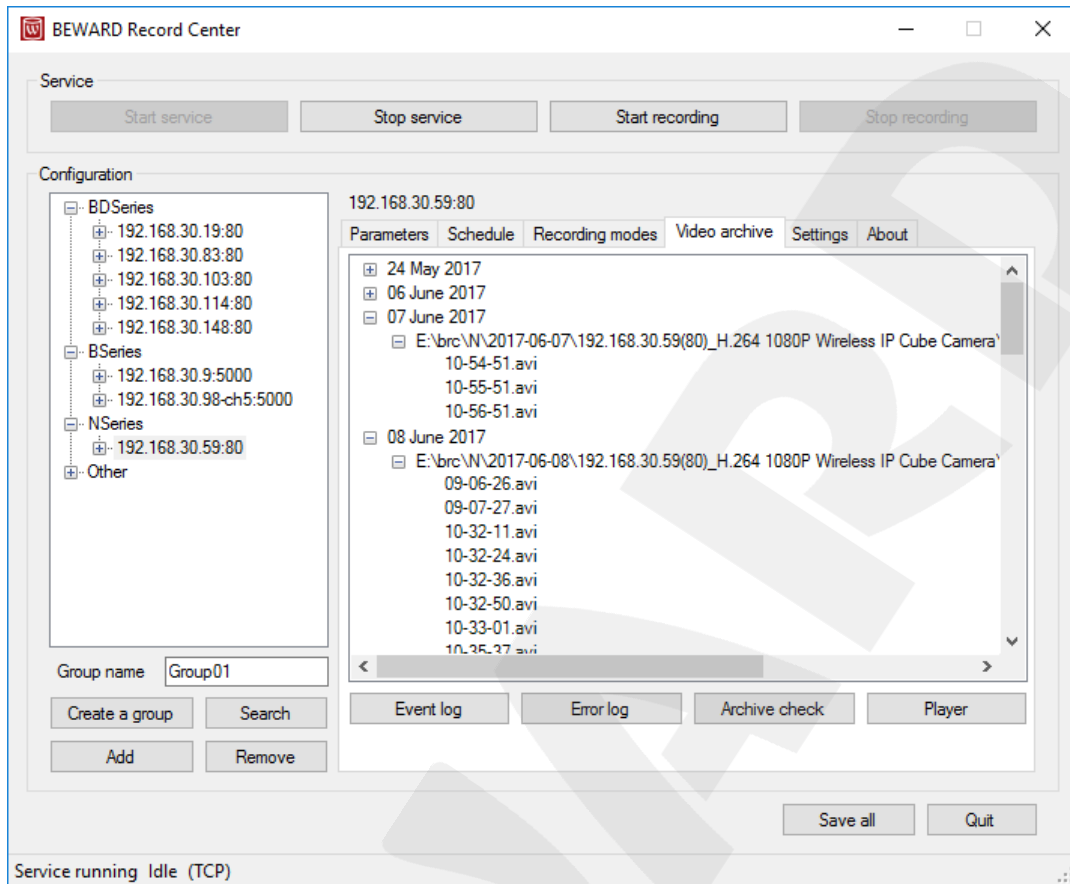
#### 4.4.4. “Video archive” Tab

The “Video archive” tab is shown on the picture below:



Pic. 4.26

Use this tab to look through the list of video files recorded from the devices which were added to the application. The files are arranged in the list in accordance with the source device, date and archive folder (Pic. 4.27).



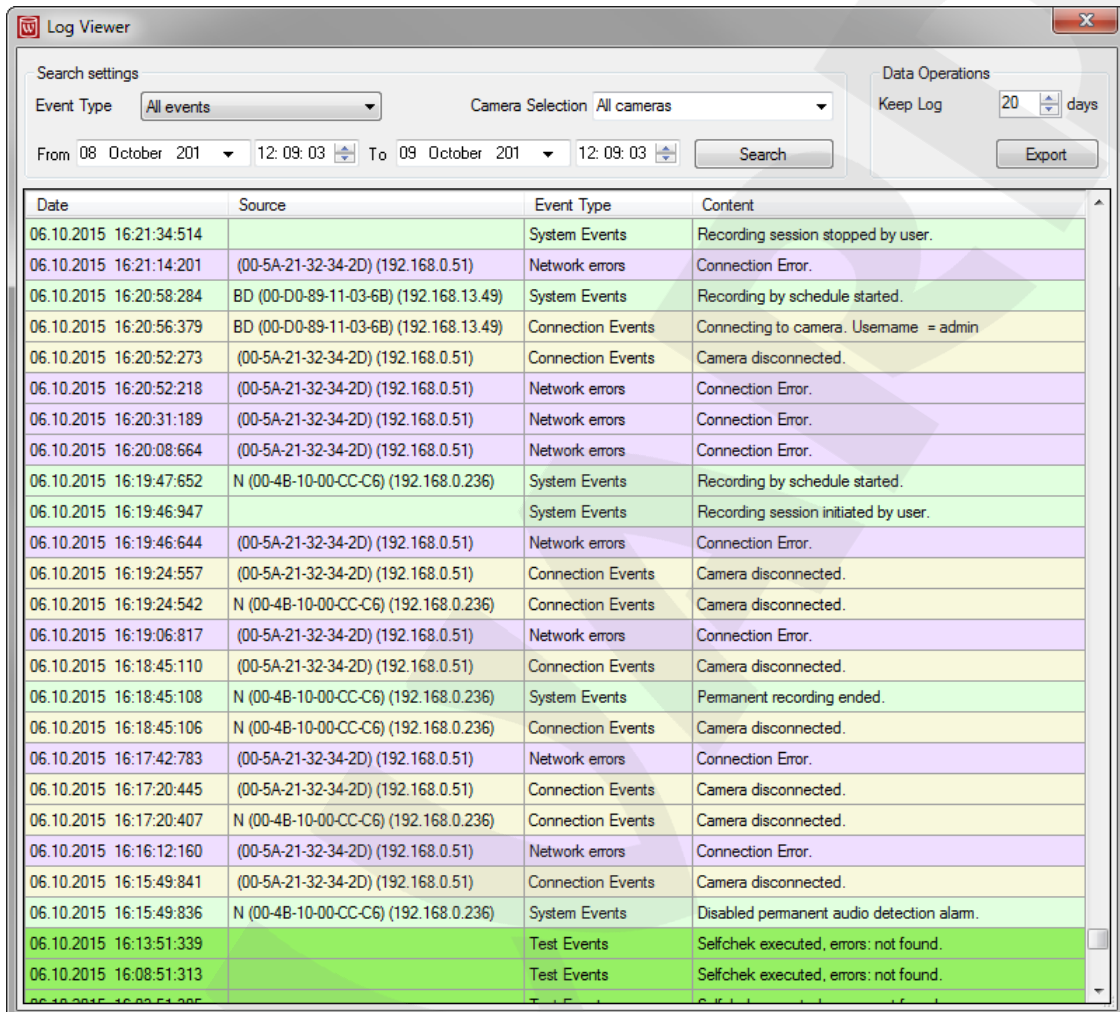
Pic. 4.27

Double-click some file in the list to play it in the new opened window of the built-in player. The player can be also opened by pressing the **[Player]** button. Besides that button two else buttons are situated on the “Video archive” tab, these are **[Event log]** and **[Error log]**. They need for opening windows of the corresponding logs which are described further in the present manual.

The **[Archive check]** button is used for synchronizing the data base records with the contents of the catalogs, which are set for recording.

#### 4.4.5. Event log (“Video archive” Tab)

Click the [Event log] button on the “Video archive” tab (Pic. 4.27). The following window will be opened:



The screenshot shows the 'Log Viewer' window with search settings and a table of events. The search settings include 'Event Type' set to 'All events', 'Camera Selection' set to 'All cameras', and a date range from '08 October 201' to '09 October 201' at '12:09:03'. The table contains the following data:

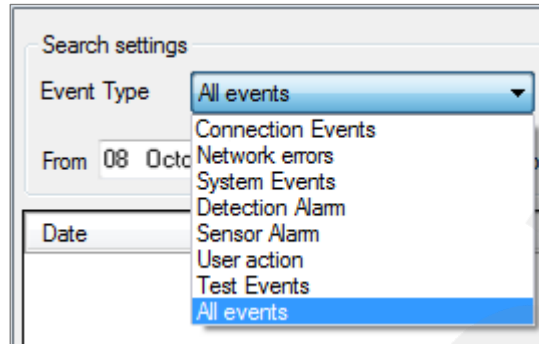
Date	Source	Event Type	Content
06.10.2015 16:21:34:514		System Events	Recording session stopped by user.
06.10.2015 16:21:14:201	(00-5A-21-32-34-2D) (192.168.0.51)	Network errors	Connection Error.
06.10.2015 16:20:58:284	BD (00-D0-89-11-03-6B) (192.168.13.49)	System Events	Recording by schedule started.
06.10.2015 16:20:56:379	BD (00-D0-89-11-03-6B) (192.168.13.49)	Connection Events	Connecting to camera. Username = admin
06.10.2015 16:20:52:273	(00-5A-21-32-34-2D) (192.168.0.51)	Connection Events	Camera disconnected.
06.10.2015 16:20:52:218	(00-5A-21-32-34-2D) (192.168.0.51)	Network errors	Connection Error.
06.10.2015 16:20:31:189	(00-5A-21-32-34-2D) (192.168.0.51)	Network errors	Connection Error.
06.10.2015 16:20:08:664	(00-5A-21-32-34-2D) (192.168.0.51)	Network errors	Connection Error.
06.10.2015 16:19:47:652	N (00-4B-10-00-CC-C6) (192.168.0.236)	System Events	Recording by schedule started.
06.10.2015 16:19:46:947		System Events	Recording session initiated by user.
06.10.2015 16:19:46:644	(00-5A-21-32-34-2D) (192.168.0.51)	Network errors	Connection Error.
06.10.2015 16:19:24:557	(00-5A-21-32-34-2D) (192.168.0.51)	Connection Events	Camera disconnected.
06.10.2015 16:19:24:542	N (00-4B-10-00-CC-C6) (192.168.0.236)	Connection Events	Camera disconnected.
06.10.2015 16:19:06:817	(00-5A-21-32-34-2D) (192.168.0.51)	Network errors	Connection Error.
06.10.2015 16:18:45:110	(00-5A-21-32-34-2D) (192.168.0.51)	Connection Events	Camera disconnected.
06.10.2015 16:18:45:108	N (00-4B-10-00-CC-C6) (192.168.0.236)	System Events	Permanent recording ended.
06.10.2015 16:18:45:106	N (00-4B-10-00-CC-C6) (192.168.0.236)	Connection Events	Camera disconnected.
06.10.2015 16:17:42:783	(00-5A-21-32-34-2D) (192.168.0.51)	Network errors	Connection Error.
06.10.2015 16:17:20:445	(00-5A-21-32-34-2D) (192.168.0.51)	Connection Events	Camera disconnected.
06.10.2015 16:17:20:407	N (00-4B-10-00-CC-C6) (192.168.0.236)	Connection Events	Camera disconnected.
06.10.2015 16:16:12:160	(00-5A-21-32-34-2D) (192.168.0.51)	Network errors	Connection Error.
06.10.2015 16:15:49:841	(00-5A-21-32-34-2D) (192.168.0.51)	Connection Events	Camera disconnected.
06.10.2015 16:15:49:836	N (00-4B-10-00-CC-C6) (192.168.0.236)	System Events	Disabled permanent audio detection alarm.
06.10.2015 16:13:51:339		Test Events	Selfchek executed, errors: not found.
06.10.2015 16:08:51:313		Test Events	Selfchek executed, errors: not found.

Pic. 4.28

The Event log is used for writing down and monitoring system events that take place during application operation.

The “Search settings” group-box in the top of the window “Log Viewer” contains different tools that make search of the events more convenient.

**Event Type:** use this drop-down list to choose a specific type of the system events so only these events would be displayed in the log after searching. By default the “All events” type is set.



Pic. 4.29

The following event types are available (Pic. 4.29):

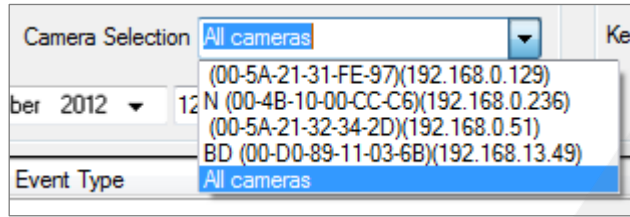
1. Connection Events;
2. Network errors;
3. System Events;
4. Detection Alarm;
5. Sensor Alarm;
6. User action;
7. Test Events;
8. All Events.

Event Type	Description
Connection Events	Events of connection / disconnection of devices to the application.
Network errors	Errors that occurred during devices connection.
System Events	Events that relate to the whole system operation, such as start of the application.
Detection Alarm	Events of start and end of the alarm activated by camera motion detection.
Sensor Alarm	Events of start and end of the alarm activated by the camera sensor.
User action	Actions were done by the user, for example, in response to motion detection trigger.
Test Events	Events of the tests which are automatically run by the application.

Lines in the log have their own color for each event type (Pic. 4.28).

**Camera Selection:** use this drop-down list to choose a specific device added to the application (see paragraph 4.3) so only the events for this camera would be displayed in the log after searching. By default the “All cameras” type is set.






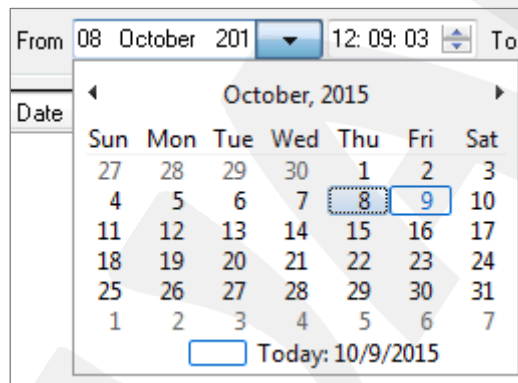
Pic. 4.30

**From / To:** use these date and time fields to specify a time interval for searching events.



Pic. 4.31

Click the button  to open a calendar where you can pick the date you need (Pic. 4.32).



Pic. 4.32

**[Search]:** click this button to find all necessary events in accordance with the filter parameters you specified.

The “Data Operation” group-box is situated in the upper right corner of the window “Log Viewer”. Data are kept in the log for the time that you can specify in the “**Keep Log**” field in days. The maximum term is 55 days, the minimum one is 10. To increase search speed the oldest events are automatically removed from the log (by default, in 20 days).

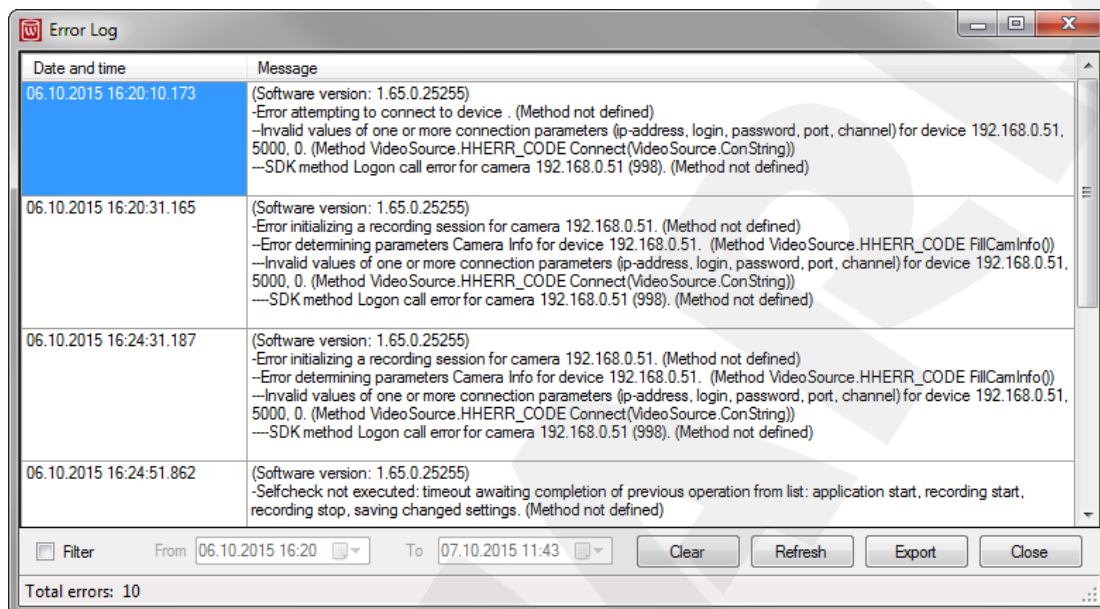
**[Export]:** click this button to save data of the current log as the Excel (\*.xls) file in the folder you need.

**ATTENTION!**

Microsoft Office 2007 or higher needs to be installed to export the log as the Excel (\*.xls) file.

#### 4.4.6. Error log (“Video archive” Tab)

Click the **[Error log]** button on the “Video archive” tab (Pic. 4.27). If the Service works correctly the following message will appear: “Record service error log is empty, missing or temporarily unavailable”. If there some errors take place the following window will be opened:

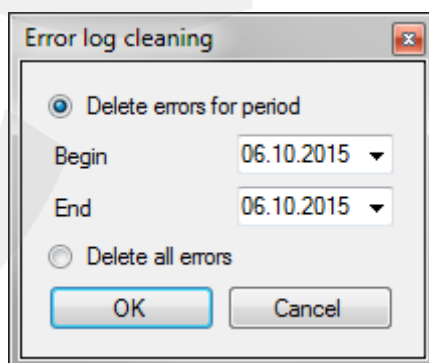


Pic. 4.33

If there are records in the Error log it is strongly recommended to export the log and send its file to the support service e-mail address: [support@beward.ru](mailto:support@beward.ru).

**Filter:** select this check box to get access to the fields “From” and “To” where you can specify date and time to display in the log only records of the time interval you need.

**[Clear]:** click this button if you want to remove some / all records from the Error log. The following window will appear:



Pic. 4.34

You can remove the records that were made for some time period specifying its beginning and end in the corresponding fields, or choose “Delete all errors”. Click **[OK]** to start the process of removing.

**[Refresh]**: click this button to reload the Error log.

**[Export]**: click this button to save the contents of the Error log as a separate file in the folder you need; then you can send it to the support service.

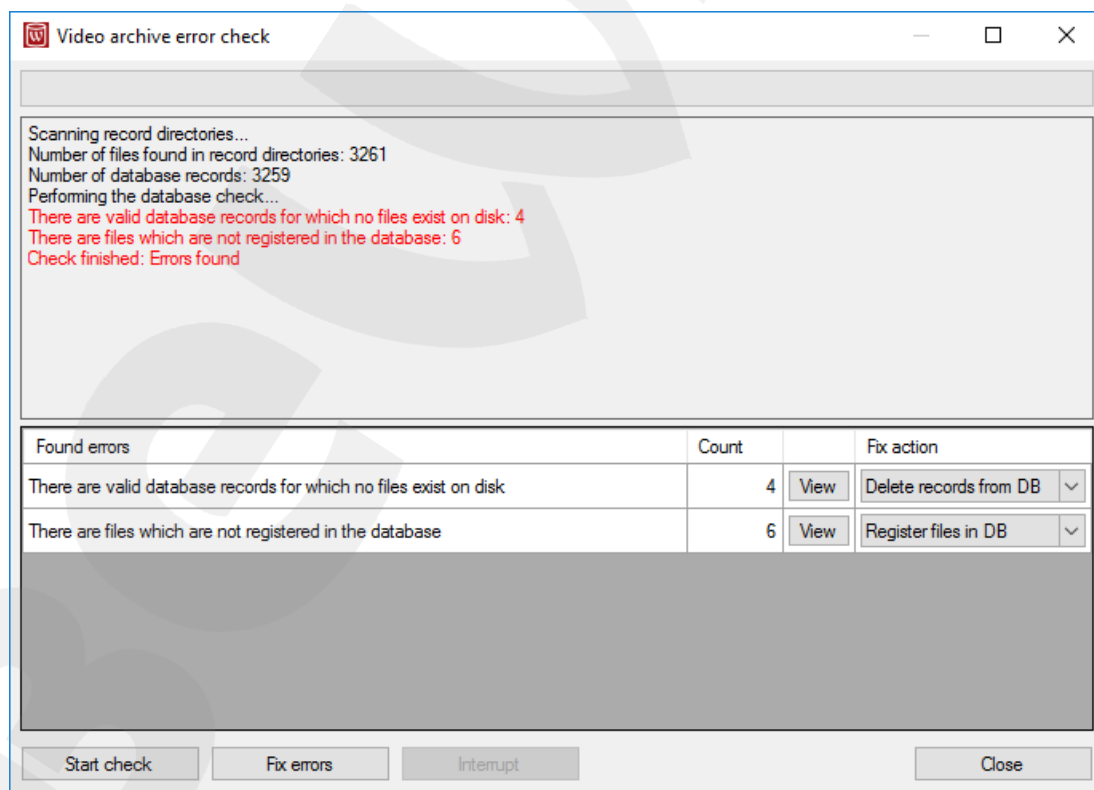
#### 4.4.7. Archive check (“Video archive” Tab)

Click the **[Archive check]** button (*Pic. 4.26*) to display a form which is used for searching for errors in the video archive and fixing them.

There can be different causes of errors in the video archive. For example, if electric supply of a PC is suddenly disconnected during recording video files from cameras, then the files, which were not completely recorded to the disc, will not be registered in the data base and can't be watched in the built-in player. One more possible reason is removing or replacing some video files by the user to another catalog on the disc. In these cases the built-in player may still show that the files exist, but it will not be able to play them.

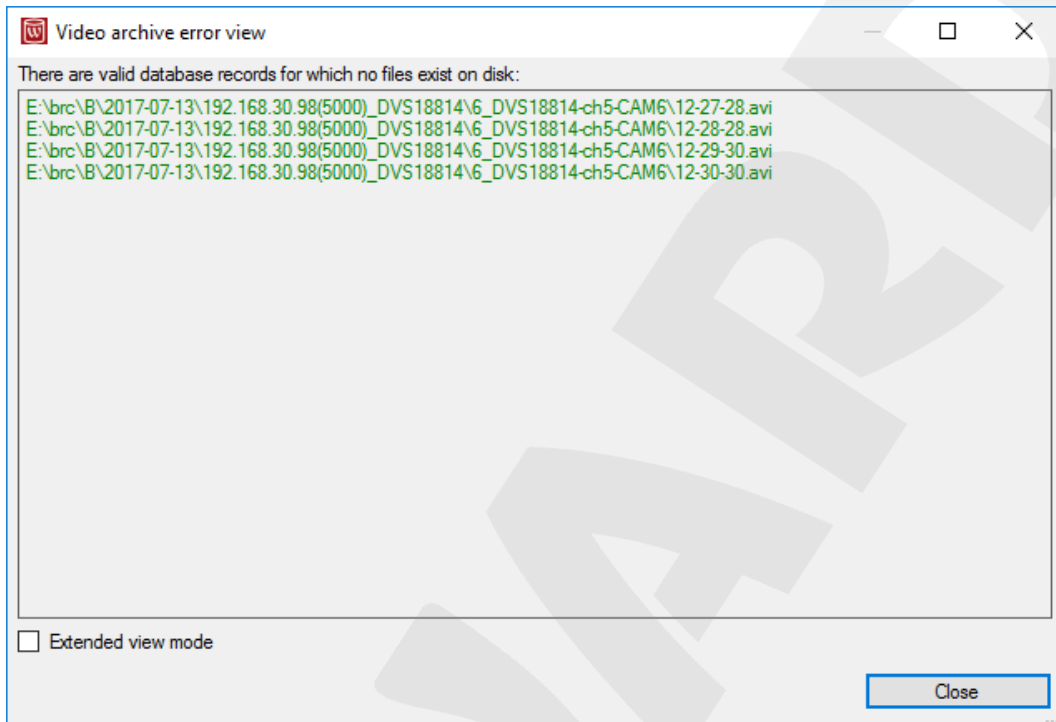
The “Archive check” function can find these and other types of errors and fix them automatically, synchronizing files in the data base with the ones on the disc.

The **[Start check]** button initiates the check procedure. All the actions, which are performed during the procedure, are shown in the upper part of the window. In case some errors are found during the check they are listed in the lower part of the window (*Pic. 4.35*).

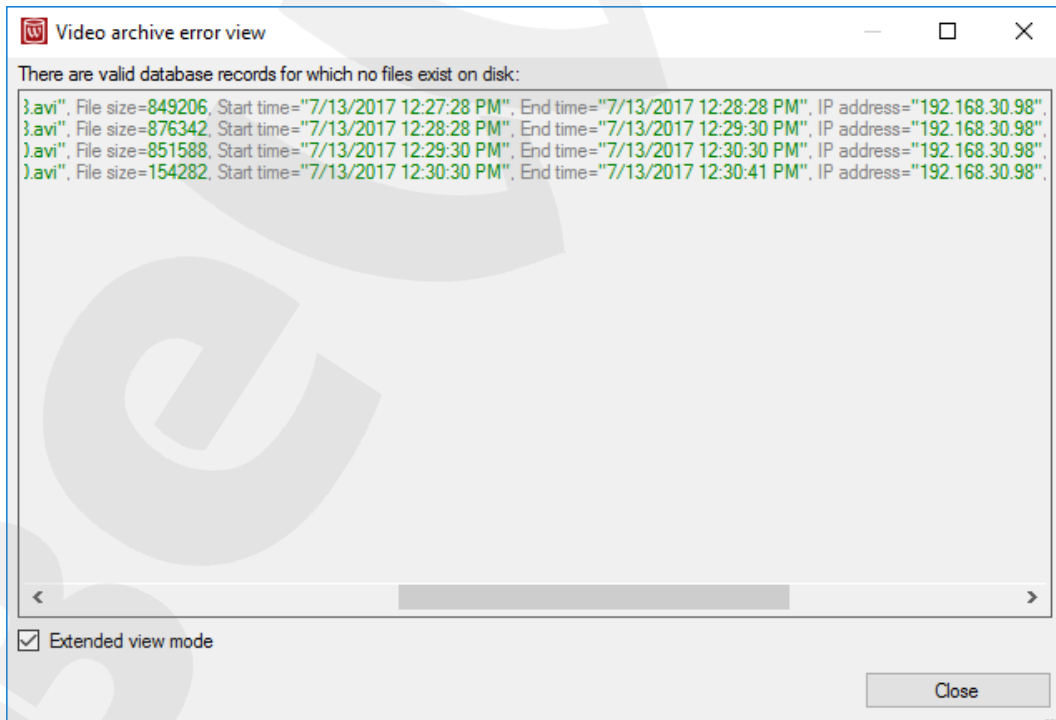


*Pic. 4.35*

There is a list of files or records in the data base, which are related to each error. You can look through this list in a separate window, in a usual (*Pic. 4.36*) or in an extended (*Pic. 4.37*) view mode after clicking the **[View]** button.



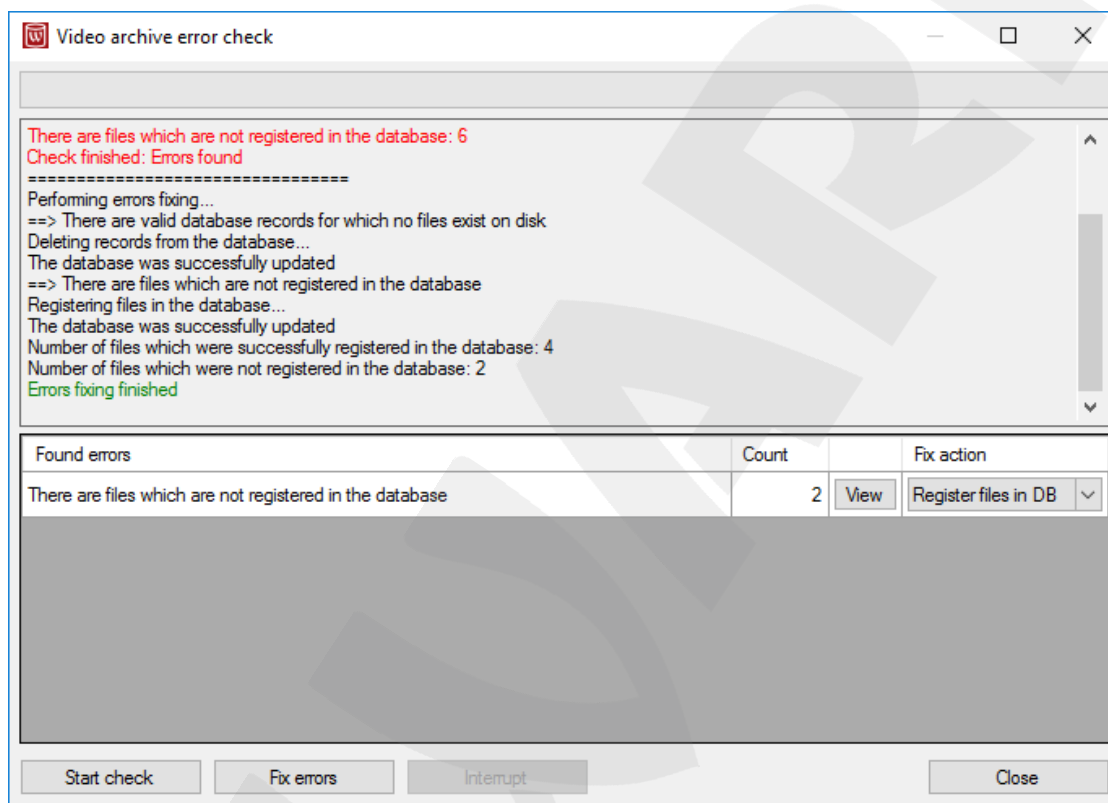
*Pic. 4.36*



*Pic. 4.37*

The **[Fix errors]** button initiates the process of correction of the found errors. An action, which will be performed during correction of each error, can be chosen from the drop-down list in advance. The actions by default are appropriate in most cases.

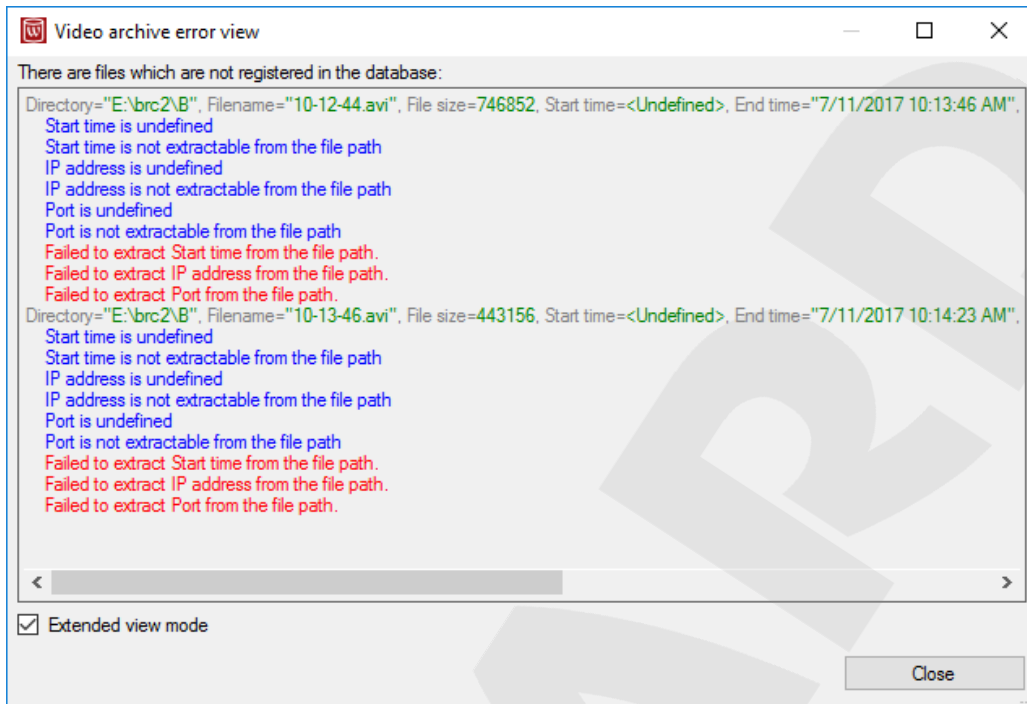
If some files failed to be registered in the data base while fixing errors, or some records already included in the data base can't be corrected, then the corresponding errors remain in the list (*Pic. 4.38*).



*Pic. 4.38*

Clicking the **[View]** button allows the user to see a list of files or records with some problems. The following information is situated under each record: blue-colored text is a list of problems, which were found during the check procedure (in other words, why the record was processed as incorrect); red-colored text is a list of problems, which appeared during record correction (in other words, why the found errors failed to be fixed).

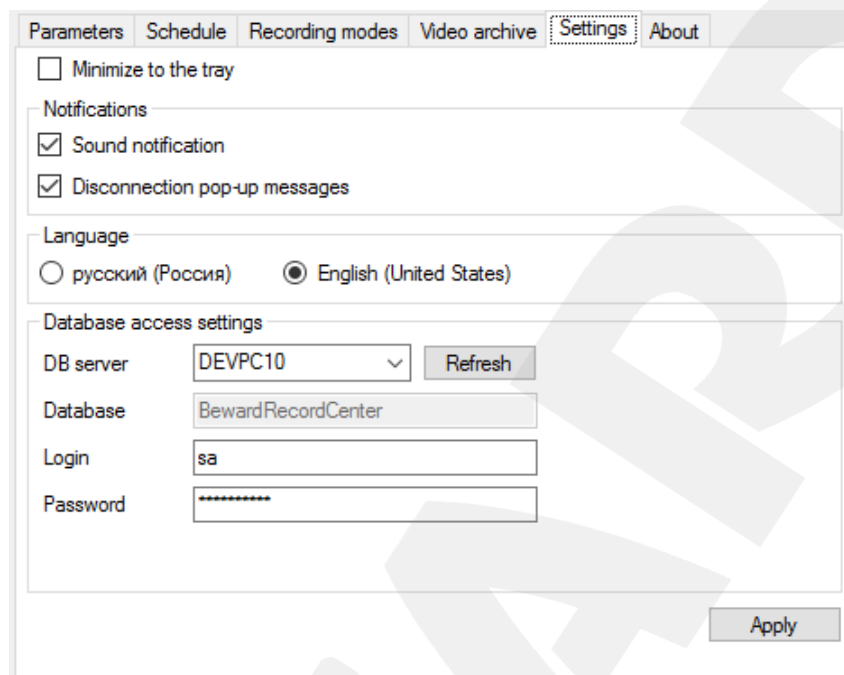
The *Picture 4.39* shows that two files were not registered in the data base, because they were copied by the user to the one of video recording catalogs without saving a correct structure of the catalogs. To fix such error the user can replace the files to the correct catalog or remove them from the catalog at all and run the video archive check again.




Pic. 4.39

#### 4.4.8. “Settings” Tab

The “Settings” tab is shown on the picture below:



Pic. 4.40

**Minimize to tray:** enable this option to hide the application main window to the notification area (lower right corner of the desktop) of the Windows taskbar. When it is disabled and you click the button  in the upper right corner of the application main window, the window hides and it is displayed as a button on the Windows taskbar.

Click the **[Save all]** button in the lower right corner of the main window to apply the “Minimize to tray” option.

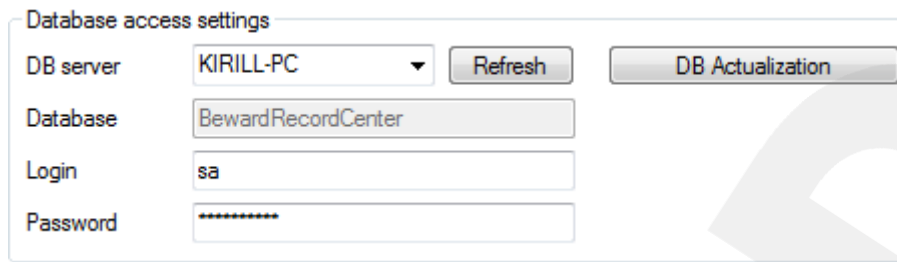
The “**Notifications**” group-box contains two types of notifications that can be used when alarm events happen (Pic. 4.40).

**Sound notification:** use this option to be notified of camera disconnection with a sound signal from a built-in speaker in the computer case (if the speaker is installed). If the option is enabled the sound signal will be actuated anyway, regardless of whether the BEWARD Record Center Controller has been run or hasn't.

**Pop-up messages:** use this option to be notified of camera disconnection with pop-up messages in the lower right corner of the desktop. The option only works when the BEWARD Record Center Controller has been run.

The “**Language selection**” group-box contains two languages of the application interface you can set (Pic. 4.40).

The “**Database access settings**” group-box is shown on the picture below:



Database access settings

DB server: KIRILL-PC (dropdown), Refresh button, DB Actualization button

Database: BewardRecordCenter

Login: sa

Password: \*\*\*\*\*

Pic. 4.41

Using these settings, you can connect to the MSSQL database which registers recorded video data.

**ATTENTION!**

By default, the login is “sa”, the password is “SQL2005key”. The error message will appear in case of entering other authorization parameters.

**DB server:** this drop-down list contains database servers (MSSQL) available at the moment of application operation. The list is filled in automatically as you open the “Settings” tab first time.

Open the list and choose the database you need. If there is no necessary database in the list, you need to enter its name or IP address in the same list field.

**[Refresh]:** click this button to refresh the list of database servers.

**Database:** the field is not available for editing. By default, the value is “BewardRecordCenter”.

**Login / Password:** enter authorization parameters to get access to the database user account (by default, “sa” / “SQL2005key”).

**ATTENTION!**

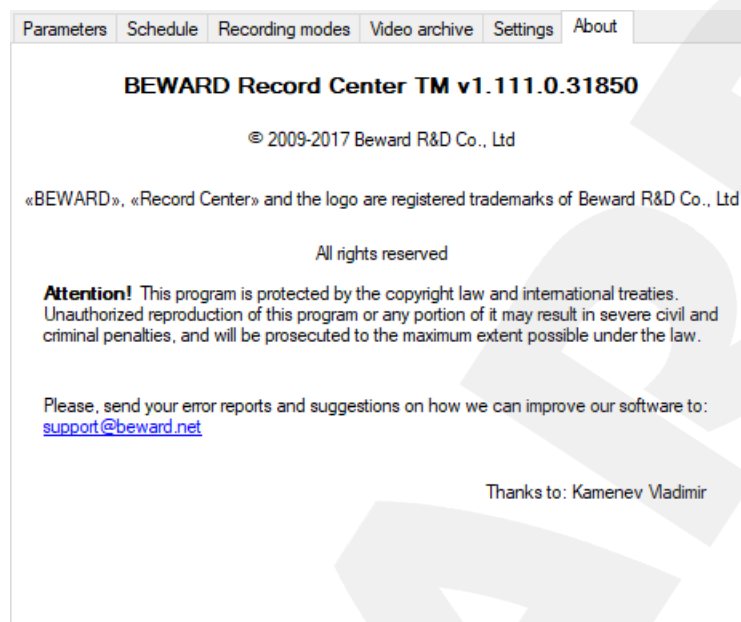
If you use a database user account different from the default one, for correct operation of the Service you need have rights for creating databases. Creating Beward Record Center Database manually it is necessary to give rights for making tables in this database.

**[Apply]:** click this button to apply new settings in the “Database access settings” group-box.



#### 4.4.9. “About” Tab

The “About” Tab is shown on the picture below:



Pic. 4.42

This tab contains information of the BEWARD Record Center version, support service e-mail address, registered trademarks and the rights of the use and distribution of the software.

#### 4.5. Setting up active 4G-connection

The essence of an active 4G-connection is that a device initiates the connection to client software by itself. Such a connection scheme needs a mediator on the client side and that is a VPN server. In case all settings are correct (devices are configured, the VPN server is set up and running, the Firewall is configured) devices are added to the software via active connection the same way as the other ones are, using an automatic device search or manually (you need to know device VPN IP-addresses in this case).

##### ATTENTION!

In case of troubles with the devices connected via active 4G-connection, first of all, check the SIM-card balance, whether you have any internet traffic left.

To connect and set up the devices refer to their user manuals (all necessary user manuals you can find on <http://www.beward.net/> or on the disc from the device package contents).

The steps below need to be done to ensure that all the settings on the client side are made correctly.

**Step 1**

A VPN server needs to be run on the client PC (the OpenVPN server is included in the BEWARD Record Center installer (see *Pic. 3.5*). You can check if it is run going to: *This PC* → *Manage* → *Services*. There you need to find the OpenVPN Service.

If the OpenVPN Service is absent, it needs to be installed (for this purpose it is recommended to use the BEWARD Record Center installer).

If the service is not running, it needs to be started. An OpenVPN Service Startup type needs to be “Automatic”. In case the type is different, you can change it, using the service properties (right click on the service name and select “Properties” in the context menu).

**Step 2**

BEWARD Record Center interoperates with the OpenVPN server through the “beward-openvpn-status.log” file. This file must be located in the OpenVPN install folder (usually “C:\Program Files (x86)\OpenVPNlog” for 64-bit versions of Windows and “C:\Program Files\OpenVPNlog” for 32-bit versions). This file must contain descriptions of the clients currently connected to the OpenVPN server (see *Pic. 4.43*). If this file is absent, empty or does not contain any client descriptions (highlighted with grey on the picture), restart the OpenVPN Service.

```

1 OpenVPN CLIENT LIST
2 Updated,Thu Jul 06 07:39:33 2017
3 Common Name,Real Address,Bytes Received,Bytes Sent,Connected Since
4 BewardVPNClient,192.168.30.175:4066,4701,3715,Thu Jul 06 07:39:20 2017
5 BewardVPNClient,192.168.30.163:62581,260635,3715,Thu Jul 06 07:39:18 2017
6 ROUTING TABLE
7 Virtual Address,Common Name,Real Address,Last Ref
8 10.2.1.3,BewardVPNClient,192.168.30.175:4066,Thu Jul 06 07:39:26 2017
9 10.2.1.2,BewardVPNClient,192.168.30.163:62581,Thu Jul 06 07:39:27 2017
10 GLOBAL STATS
11 Max bcast/mcast queue length,2
12 END

```

*Pic. 4.43***Step 3**

The BEWARD Record Center installation program offers to configure Firewall rules to close access to the client computer via VPN-channels (see *Pic. 3.5*). If this option was chosen during the installation process, the installer should have added the following five inbound Firewall rules (if it was not done earlier):

Windows Firewall rules for correct operation of the BEWARD Record Center service

№	Name	Action	Program	Local address	Protocol	Local port	Remote port
1	BewardVPNServer	Block	Any	10.2.1.0/24	TCP	Any	Any
2	BewardVPNServer	Block	Any	10.2.1.0/24	UDP	Any	1-1899, 1901-65535
3	BewardVPNServer	Allow	Any	Any	TCP	1201	Any
4	BewardRecordCenter	Allow	Path <sup>1</sup>	10.2.1.0/24	UDP	Any	1900
5	BewardRecordCenter	Allow	Path <sup>2</sup>	10.2.1.0/24	UDP	Any	1900

<sup>1</sup> – a path to the BEWARD Record Center service executable.

<sup>2</sup> – a path to the BEWARD Record Center service controller executable.

These rules are needed for BEWARD Record Center to work properly with devices, added via the active connection.

You can check whether the needed rules exist, having a look at the Windows Firewall Advanced settings (*Control Panel* → *Windows Firewall* → *Advanced settings* → *Inbound rules*).

#### ATTENTION!

If some Firewall rules are in conflict with ones given in the table above, correct operation of BEWARD Record Center with the devices added via the active connection is not possible.

If you need to change a VPN IP-address range (“server” parameter) or a port, used by the OpenVPN server for accepting inbound connection requests (“port” parameter), then you need to edit its configuration file “beward-server.ovpn”. This file is located in the OpenVPN install folder (usually “*C:\Program Files (x86)\OpenVPN\config*” for 64-bit versions of Windows and “*C:\Program Files\OpenVPN\config*” for 32-bit versions) and can be opened in the “Notepad” application.

#### ATTENTION!

Make a backup of the OpenVPN configuration file before editing it. Restart the OpenVPN Service after editing this file.

VPN IP-address range changing requires the “Local address” parameter to be changed in the rules 1, 2, 4 and 5 of the Windows Firewall for correct operation of the BEWARD Record Center service (see the table above).

Port changing requires the “Local port” parameter to be changed in the rule 3.

Adding to the BEWARD Record Center application the devices connected via active 4G-connection, it is important to keep in mind that VPN IP-addresses of the devices can change, when they are disconnected from the VPN server. So any of them may get a different VPN IP-address when reconnecting to the VPN server for any reason (OpenVPN service restart, device reboot, network errors).

#### ATTENTION!

For correct operation of BEWARD Record Center it is necessary to assign different main network interface (usually LAN) IP-addresses to the devices connected via the active connection, before adding them to the application. It is important, because exactly these addresses are used when creating record directory names. Moreover, these addresses are shown in the application in parenthesis next to the VPN IP-addresses for convenience.

## Chapter 5. Bug Report

The “Bug Report” application is included into the installation set of BEWARD Record Center and it is used for collecting information on the operation errors and sending it to the Beward support service.

Run the “Bug Report” application using the shortcut which was created during the installation. A path by default: **“Start” – “All programs” – “BEWARD” – “BEWARD Record Center” – “Bug report BEWARD Record Center”**. You can also click **[Report]** exactly when any error appears.

### ATTENTION!

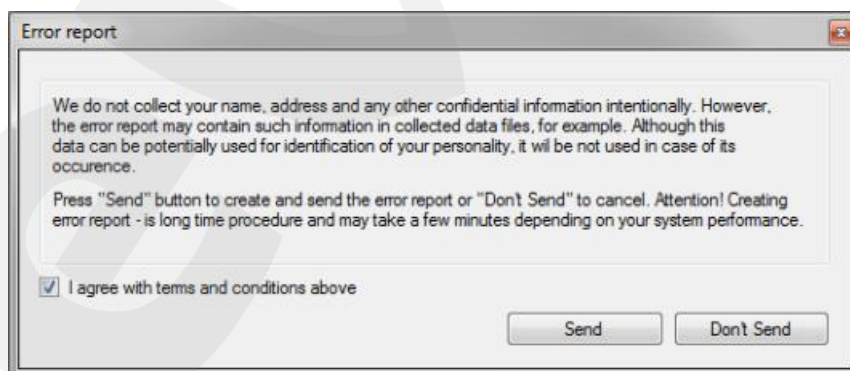
To provide correct operation of the “Bug Report” application in Windows 7, it is necessary to change when to be notified about changes to your computer to the minimum (Parameters of the user account control). Go to **“Start” – “Control Panel” – “User Accounts” – “Change User Account Control settings”** and move the cursor to “Never notify” in the new opened window.

### NOTE!

User Account Control (UAC) is used to notify the user about changes of system parameters which require the right of the administrator. By default the UAC notifications will be displayed if there are any attempts to change computer parameters by programs.

In the first case you will see the “Error report” window. Click **[Create report]** to continue or **[Quit]** to close the application.

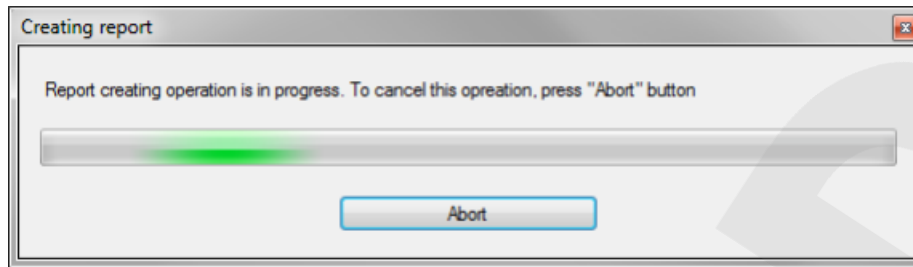
In the second case the following window will appear:



Pic. 5.1

Click the check-box if you agree with the given terms and click the **[Send]** button. Otherwise, click **[Don't Send]** to close the “Bug Report” application.

The report will start forming after clicking the **[Send]** button (Pic. 5.2).



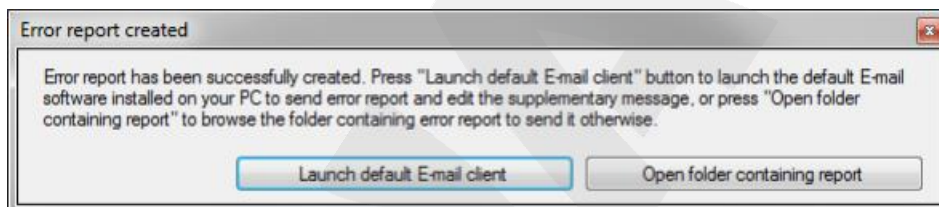
Pic. 5.2

To stop the process, click **[Abort]**.

**ATTENTION!**

The process of forming the bug report may last quite a long time.

The following window is opened after the bug report was created:



Pic. 5.3

Click **[Launch default E-mail client]** to run the E-mail client application you use by default. In this case a new message window will be opened. This message will be addressed to *support@beward.ru* and will include a reference to the created bug report.

**ATTENTION!**

The file of the created bug report is not automatically attached to the E-mail letter. So you need attach the report to the letter before sending.

Click **[Open folder containing report]** if you need to look through the created bug report. The bug report file is an archive with the \*.bbr extension which contains files with settings of the database and program errors. You can open the archive using any file archiver program. If the bug report is created from the "Start" menu, the "LastError" file, which is included to the archive, will be empty.

Bug reports and your suggestions on how we can improve our software send to support@beward.ru.

BEWARD

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