

# 1 Configuration of the program and description of the configuration with the MS SQL database

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## 1.1 Differences between the main configurations of the program

The program **Art-Zvit Pro** has four main configurations (see Table 1).

Tabl. 1. Differences between the configurations

Configuration of the program	Application	Licensing
Standart with SQLite DB	<p>Configuration for processing reports on one or more workstations, whose teamwork is not provided by program's mechanics.</p> <p>In this case, the database of program in SQLite format stored separately on each workstation. Differentiation of access rights, as well as roles, are not supported by the mechanisms of the program.</p>	Default license
Standart with MS SQL DB	<p>Configuration for processing reports on several workstations, providing for their teamwork on the network with a common DB.</p> <p>In this case, the program database is stored in MS SQL format on a separate server in the corporate network. If several users work from the same workstation, required a terminal license.</p> <p><i>Note:</i></p> <p><i>The MS SQL server is a product of Microsoft, which licensed separately. There is also a free Express version of the server that has a number of limitations. More details:</i></p> <p><a href="https://www.microsoft.com/ru-ru/sql-server">https://www.microsoft.com/ru-ru/sql-server</a></p>	Default of Terminal license
PostgreSQL DB	<p>Configuration for processing report on several workstations, providing for their teamwork on the network from one DB.</p> <p>The program is installed only on the terminal server, which is available on the corporate network.</p> <p>The executable program file on the network runs on each of the workstations.</p> <p>If several users work from the same workstation, required a terminal license.</p> <p><i>Note:</i></p> <p><i>PostgreSQL Server is an open-source product with a free license.</i></p>	Default of Terminal license

Configuration of the program	Application	Licensing
Terminal	<p>Configuration for processing reports on a single workstation for multiple users, providing for their teamwork with a single instance of the program through a remote connection.</p> <p>The program installed only on the terminal server, which is available on the corporate network.</p> <p>The executable program file is launched over the network on each of the workstations. The processing report is actually performed only on the terminal server. At the same time, access rights are differentiated, as well as roles.</p>	Terminal license



The configurations of the MS SQL or PostgreSQL DB should be used when the database size exceeds 2 GB.  
If the size of the DB is close to this boundary value, should upgrade to a full version of SQL or PostgreSQL.

## 1.2 System requirements for the configuration of the program from the MS SQL DB

The configuration of the program with the SQL database is designed to work on IBM PC-compatible personal computers. To use the program, you must have the following hardware and software configuration:

- 32- or 64-bit x86 processor with a frequency of at least 1 GHz;
- RAM - at least 2 GB for each user;
- hard disk with free space - at least 1 GB;
- video card and color display - 16 million colors, 800 × 600 or higher;
- device for reading CD-ROM (for installing the program);
- printer (if necessary, print reports);
- the keyboard;
- a mouse-type manipulator;
- network adapter 10/100 Ethernet;
- OS Microsoft Windows 2003 Server, Windows 7 and Windows 10;
- the rights of the local administrator in the OS (for installation);
- disconnected User Account Control (UAC) in Microsoft Windows 7 (for updates);
- Internet connection (for sending reports and receiving receipts, receiving automatic updates and registering the program).

### **For the program to work in the OS, the next program's components should be present:**

- for Windows 2003: Microsoft Windows Installer 3.1, Microsoft C ++ Runtime Library 2010, Microsoft .NET Framework 4.0;
- for Windows Vista: Microsoft C ++ Runtime Library 2010.

**The system requirements of the SQL server are described in the relevant sections of the Microsoft documentation:**

- MS SQL Server 2016: <https://docs.microsoft.com/ru-ru/sql/sql-server/install/hardware-andsoftware-requirements-for-installing-sql-server>
- MS SQL Server 2014: [https://msdn.microsoft.com/ru-ru/library/ms143506\(v=sql.120\).aspx](https://msdn.microsoft.com/ru-ru/library/ms143506(v=sql.120).aspx)
- MS SQL Server 2012: [https://msdn.microsoft.com/ru-ru/library/ms143506\(v=sql.110\).aspx](https://msdn.microsoft.com/ru-ru/library/ms143506(v=sql.110).aspx)
- MS SQL Server 2008 R2: [https://msdn.microsoft.com/ru-ru/library/ms143506\(v=sql.105\).aspx](https://msdn.microsoft.com/ru-ru/library/ms143506(v=sql.105).aspx)

PostgreSQL system requirements depending on the server distribution.

### 1.3 Installing the configuration from the MS SQL DB

Standard installation according to the instruction:

[http://docs.art-zvit.com.ua/index.html?5\\_1\\_2\\_installation\\_process.htm](http://docs.art-zvit.com.ua/index.html?5_1_2_installation_process.htm)

### 1.4 Installing SQL Server

According to Microsoft's documentation:

[https://msdn.microsoft.com/ru-ru/library/mt803150\(v=sql.1\).aspx](https://msdn.microsoft.com/ru-ru/library/mt803150(v=sql.1).aspx)

Installation of PostgreSQL performed according to the documentation of the selected distribution.

### 1.5 Configuring SQL Server

Depending on the version of the SQL server, and special technical requirements dictated by the implementation of this software product, its configuration is performed.

The program **Art-Zvit Pro** does not put forward additional requirements for the implementation of the SQL server, so this product is customized for the specific needs of end users, according to Microsoft's recommendations, ITIL principles, IT standards of a particular enterprise, etc.

The SQL server can be installed on a separate physical server or virtual server. The database can be stored both on a separate physical server, and in the SAN or in the Cloud-storage.

Some of the mechanisms for providing fault tolerance can be used, or the system can work without them.

The final implementation of the SQL server is completely dependent on the final task.

SQL database reservation is not performed by means of **Art-Zvit Pro**.

It is strongly recommended that you back up the database using SQL.



For advice on implementing SQL Server, you can contact Microsoft partners:

<https://www.microsoft.com/uk-ua/solution-providers/search>

### 1.6 Configuring PostgreSQL Server

The server settings are performed depending on the PostgreSQL version, as well as the technical requirements that apply to the selected distribution,

**Art-Zvit Pro** does not make additional requirements for the implementation of the PostgreSQL server, so this product is customized to the specific needs of end users, ITIL principles, IT standards of a particular

enterprise, etc. The PostgreSQL software server itself can be installed on a separate physical server as well as on a virtual one. The database can be stored on a separate physical server, as well as in a SAN or Cloud storage.

## 1.7 Customizing Art-Zvit Pro for working with MS SQL database

To work with MS SQL, you must connect to the SQL database. To do this, select the menu **Сервіс** → **Параметри програми/Service** → **Program parameters** or press <Ctrl + Alt + Shift + O>

In the opened window (Fig. 1), select MS SQL Server or PostgreSQL, then an additional window will open (Fig. 2), in which you need to register the connection string to the DB. After making all the settings, you should save the changes by pressing the [**Зберегти/Save**] button.



Setting up the terminal version of Art-Zvit Pro for working with MS SQL or PostgreSQL database performed in Monopoly mode. Read more:

[http://docs.art-zvit.com.ua/index.html?7\\_terminal\\_config.htm](http://docs.art-zvit.com.ua/index.html?7_terminal_config.htm)

Параметри програми

Загальне Звіти Списки Квитанції Оновлення Розширення Налаштування проксі

База даних

SQLite  MS SQL Server  PostgreSQL

Шлях до файлу БД: [Redacted]

Попередження

Попереджати про наближення дати закінчення строку дії сертифікату відповідальної особи за 45 днів

Попереджати про наближення дати закінчення річного строку використання сертифікату відповідальної особи за 45 днів

Попереджати про наближення дати закінчення строку дії ліцензії за 14 днів

Попереджати, якщо кількість доступних для обміну документів менша за 300 одиниць

Резервна копія бази даних

Створювати резервну копію при закритті програми

C:\ProgramData\AM-SOFT\ArtZvit\Backups

Максимальна кількість резервних копій: 10

Сховище сертифікатів

C:\Certificates

Ставити мітку часу під час підписання

Архів PDF - документів

C:\ProgramData\AM-SOFT\ArtZvit\PDFStore

Звіти/ запити  ПН/ПК  Неприйняті  Накладати підпис  Штамп реєстрації  Штамп підписів

Зберегти Відмінити

Fig. 1. Window **Program parameters**

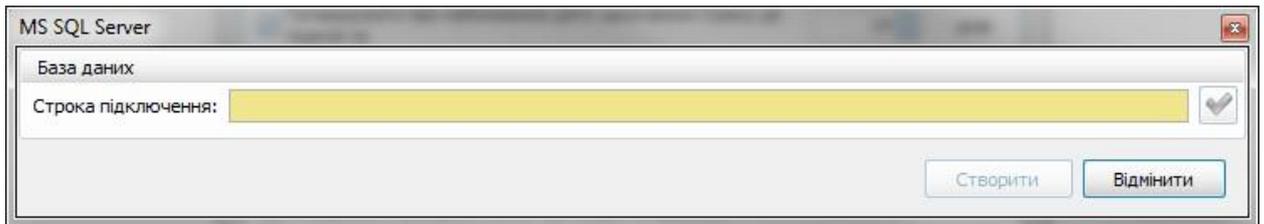


Fig. 2. The connection string to the DB



Examples of connection string to the database:

#### MS SQL

*Data source=myServerAddress; Database=myDataBase;  
User ID=myUsername; Password=myPassword where:*

- myServerAddress – hostname;
- myDataBase – database name;
- myUsername – username;
- myPassword – password.

#### PostgreSQL

*User ID=myUserId; Password=myPassword; Host=myServerAddress;  
Port=myPort; Database=myDatabase; Pooling=true;*



When FIRST connection to the database created, the data transferred from the user database in the SQLite to the SQL or PostgreSQL server.

The transfer occurs by pressing the [**Створити/Create**] button. After that, the [**Створити/Create**] button changes to [**Під'єднатись/Connect**]. It is highly recommended to perform the first connection to the server from the workstation on which the current database is located, which must be transferred to the MS SQL or PostgreSQL server.

With subsequent connections, data transfer will not occur. You will still be able to connect to an existing database using the [**Підключитись/ Connect**] button.

Import / Export of data can be performed by means of MS SQL or PostgreSQL .



The reverse database transfer from MS SQL or PostgreSQL to SQLite (as well as data transfer from MS SQL to PostgreSQL in the reverse direction) not provided by **Art-Zvit Pro**

After entering the connection parameters to the database, press the [] button. If everything is done correctly, a window will open with information about the successful connection (Fig. 3). Then click on the [**Під'єднатись/Connect**] button (Fig. 4) to connect to the database, or abort the operation by clicking on the [**Відмінити/Cancel**] button.

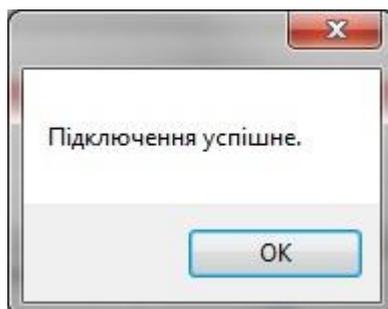


Fig. 3. Information message about successful connection to the database

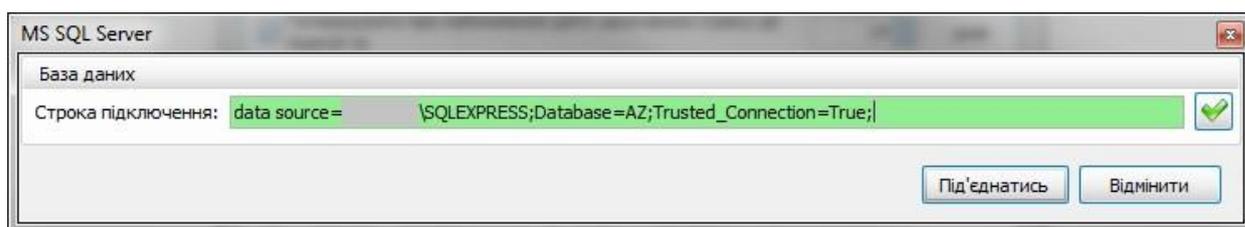


Fig. 4. Connecting to the database

After connecting to the database, all generated reporting will be stored on the MS SQL or PostgreSQL server. The Parameters window will change the view (Figure 5). If necessary, edit the connection string using the [  ] button.

Also here you can revert to the previous format of the SQLite DB by selecting the corresponding item at the top of the program.



If you change the database type, you will need to restart the program.

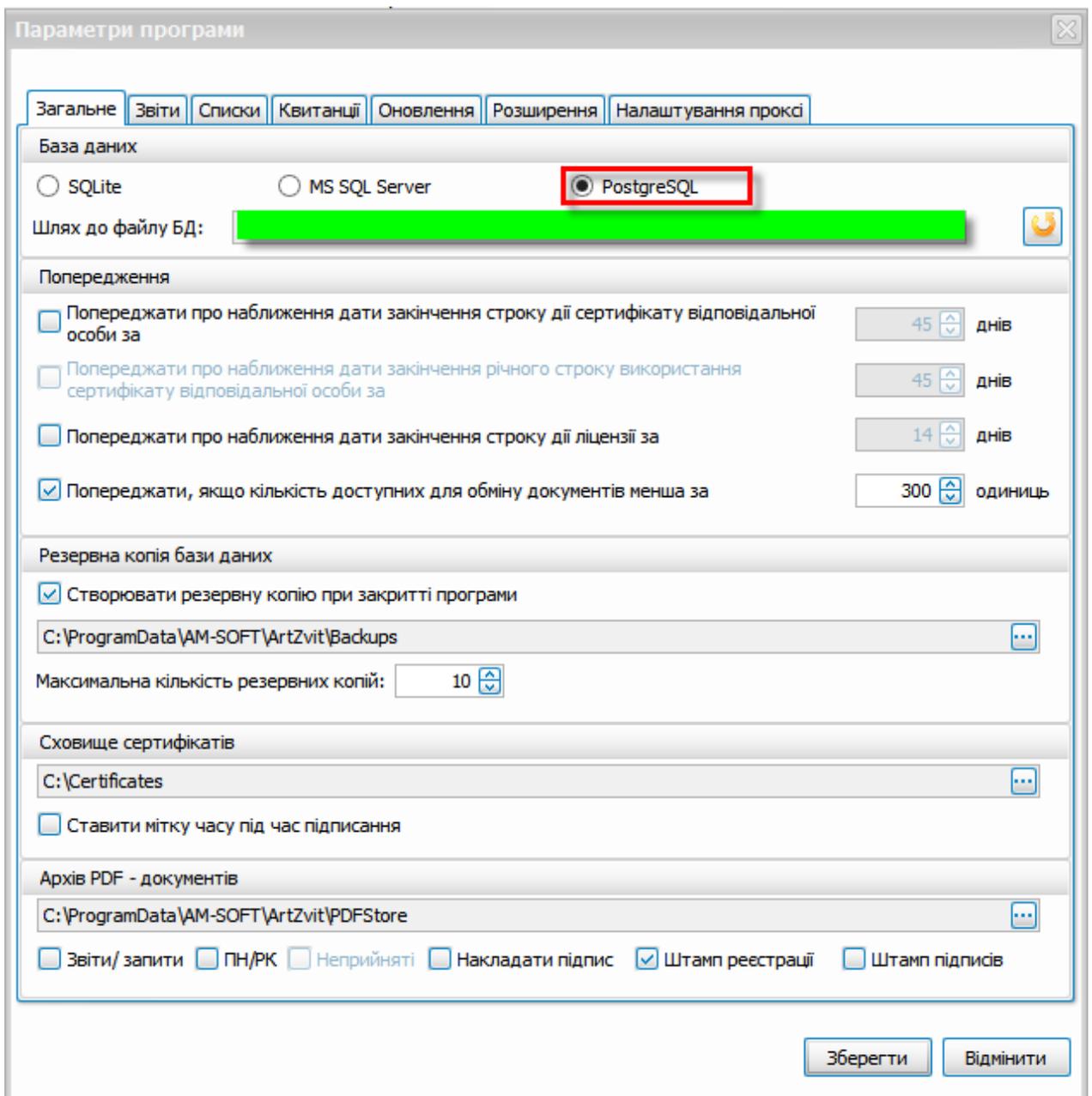


Fig. 5. Modified view of the **Program parameters**