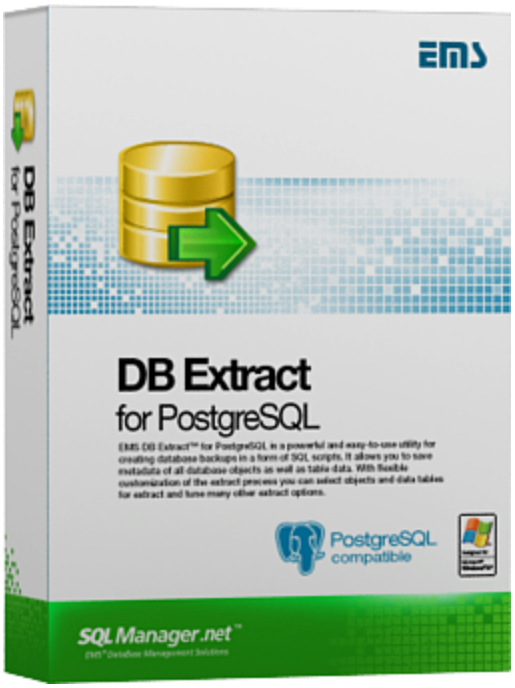
SQL Manager.net™
EMS® Software Development



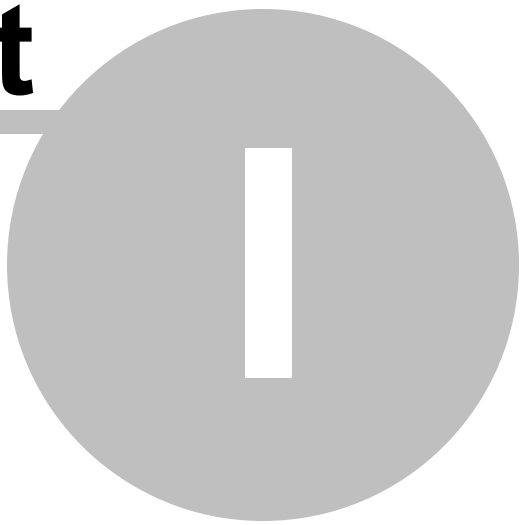
DB Extract for PostgreSQL User's Manual

DB Extract for PostgreSQL
User's Manual

Document generated on: 20.01.2025

Table of Contents

Part



1 Welcome to EMS DB Extract utility!

EMS DB Extract for PostgreSQL is a powerful and easy-to-use utility for creating database backups in the form of SQL scripts. It allows you to save metadata of all database objects as well as table data. The ability of flexible customization of the entire extract process allows you to select database objects and data tables for extraction and to define a number of extraction options. The distribution package of DB Extract for PostgreSQL includes a GUI wizard guiding you through the extraction process step by step, and a command-line service for creating backups quickly by using the console application which allows you to extract data in one-touch with script generation templates used.

Please visit our web-site available at https://www.sqlmanager.net/ for more information.

Key features

- User-friendly graphical wizard interface
- Extracting data from several tables of different databases located at one host within one session
- The ability to select database objects for extraction
- Extracting table data to SQL script as INSERT statements
- The ability to define constraints for extracted data tables
- The ability to insert statements for emptying tables before inserting extracted data
- Saving all the extraction parameters specified within the current wizard session
- The command-line utility to extract metadata and data with a previously created configuration file used
- Multi-language GUI support

Product information

Homepage:	https://www.sqlmanager.net/products/postgresql/extract
Support Ticket System:	https://www.sqlmanager.net/support
Register online at:	https://www.sqlmanager.net/products/postgresql/extract/buy

1.1 What's new

Version	Release date
DB Extract for PostgreSQL 3.0.3	February 14, 2023

What's new in DB Extract?

- Implemented support for PostgreSQL 15.
- Some minor fixes and improvements.

1.2 System Requirements

- 300-megahertz (MHz) processor; 600-megahertz (MHz) or faster processor recommended
- Microsoft® Windows NT4 with SP4 or later, Microsoft® Windows 2000, Microsoft® Windows 2000 Server, Microsoft® Windows XP, Microsoft® Windows 2003 Server, Microsoft® Windows 2008 Server, Microsoft® Windows Vista, Microsoft® Windows 7, Microsoft® Windows 8, Microsoft® Windows Server 2012
- 64MB RAM or more; 128MB or more recommended
- 20MB of available HD space for program installation
- Super VGA (800x600) or higher-resolution video adapter and monitor; Super VGA (1024x768) or higher-resolution video adapter and monitor recommended
- Microsoft® Mouse or compatible pointing device
- Possibility to connect to any local or remote PostgreSQL server
- Supported PostgreSQL server versions: from 7.3 up to 15

1.3 Installation

If you are **installing DB Extract for PostgreSQL for the first time** on your PC:

- download the DB Extract for PostgreSQL distribution package from the download page available at our site;
- unzip the downloaded file to any local directory, e.g. *C:\unzipped*;
- run *PgExtractSetup.exe* from the local directory and follow the instructions of the installation wizard;
- after the installation process is completed, find the DB Extract shortcut in the corresponding group of Windows Start menu.

If you want to **upgrade an installed copy of DB Extract for PostgreSQL** to the latest version:

- download the **DB Extract for PostgreSQL** distribution package from the download page available at our site;
- unzip the downloaded file to any local directory, e.g. *C:\unzipped*;
- close DB Extract application if it is running;
- run *PgExtractSetup.exe* from the local directory and follow the instructions of the installation wizard.

Also you can use the full distribution package to upgrade your current version of DB Extract for PostgreSQL. In this case, you should repeat the steps you have made for the first-time installation. Note that the full distribution package is larger than a single executable file.

See also:

System requirements
8

1.4 Registration

All purchases are provided by **PayPro Global** registration service. The **PayPro Global** order process is protected via a secure connection and makes on-line ordering by credit/debit card quick and safe.

PayPro Global is a global e-commerce provider for software and shareware sales via the Internet. It accepts payments in US Dollars, Euros, Pounds Sterling, Japanese Yen, Australian Dollars, Canadian Dollars or Swiss Franks by Credit Card (Visa, MasterCard/EuroCard, American Express, Diners Club), Bank/Wire Transfer.

If you want to review your order information, or you have questions about ordering or payments please visit our PayPro Global Shopper Support, provided by **PayPro Global.**

Please note that all of our products are delivered via ESD (Electronic Software Delivery) only. After purchase you will be able to immediately download the registration keys. Also you will receive a copy of registration keys by email. Please make sure to enter a valid email address in your order. If you have not received the keys within 2 hours, please, contact us at sales@sqlmanager.net.

Product distribution	**PayPro Global**
EMS DB Extract for PostgreSQL (Business license) + 1-Year Maintenance*	Buy Now!
EMS DB Extract for PostgreSQL (Business license) + 2-Year Maintenance*	
EMS DB Extract for PostgreSQL (Business license) + 3-Year Maintenance*	
EMS DB Extract for PostgreSQL (Non-commercial license) + 1-Year Maintenance*	
EMS DB Extract for PostgreSQL (Non-commercial license) + 2-Year Maintenance*	
EMS DB Extract for PostgreSQL (Non-commercial license) + 3-Year Maintenance*	
EMS DB Extract for PostgreSQL (Trial version)	Download Now!

*__EMS Maintenance Program__ provides the following benefits:

- Free software bug fixes, enhancements, updates and upgrades during the maintenance period
- Free unlimited communications with technical staff for the purpose of reporting Software failures
- Free reasonable number of communications for the purpose of consultation on operational aspects of the software

After your maintenance expires, you will not be able to update your software or get technical support. To protect your investments and have your software up-to-date, you need to renew your maintenance.

You can easily reinitiate/renew your maintenance with our online, speed-through Maintenance Reinstatement/Renewal Interface. After reinitiating/renewal you will receive a confirmation e-mail with all the necessary information.

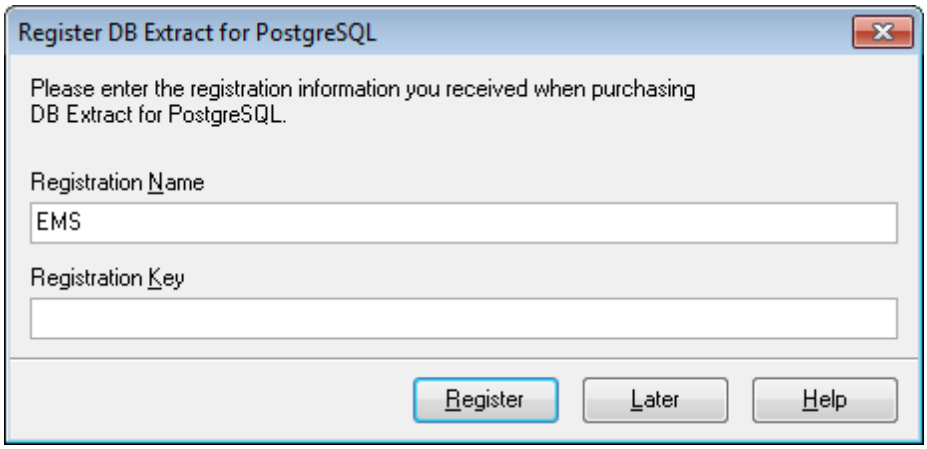
See also:

How to register EMS DB Extract 12

1.5 How to register EMS DB Extract

To **register** your newly purchased copy of EMS DB Extract for PostgreSQL, perform the following:

- receive the notification letter from **PayPro Global** with the registration info;
- enter the **Registration Name** and the **Registration Key** from this letter;
- make sure that the registration process has been completed successfully – check the registration information at the startup page 23.



See also:

Registration 10

1.6 EMS DB Extract FAQ

Please read this page attentively if you have questions about EMS DB Extract for PostgreSQL.

Table of contents

Question/answer list

Q: What is PostgreSQL Extract utility?
A: EMS DB Extract for PostgreSQL is a powerful and easy-to-use utility for creating database backups in the form of SQL scripts. It allows you to save metadata of all database objects as well as table data. DB Extract for PostgreSQL includes a GUI wizard 22 guiding you through the extract process step by step, and a command-line service for creating backups in one-touch.

Q: What do I need to start working with EMS PostgreSQL Extract?
A: First of all, you must have a possibility to connect to some local or remote PostgreSQL server to work with PostgreSQL DB Extract. You can download PostgreSQL database server from https://www.postgresql.org/download/ (download is free). Besides, you need your computer to satisfy the system requirements 8 of DB Extract for PostgreSQL. The utility runs on Windows NT4/2000/XP, CPU Pentium 166, 32 Mb RAM or higher is recommended.

Q: What is the easiest way to configure the template files for the PostgreSQL Extract console application?
A: You can configure the template files visually using the DB Extract wizard. Set the required extract options in all steps of the wizard and use the Tools | Save template 43 menu item. All the options will be saved to a *.ext template file which can be used afterwards in the console application 52.

Q: What is the difference between the Extract Database function available in SQL Manager for PostgreSQL and the standalone Extract utility for PostgreSQL?
A: DB Extract for PostgreSQL includes some additional features which are not available in SQL Manager for PostgreSQL, such as:
- console application allowing one to perform the extract operation in one-touch;
- extracting metadata from several databases at one host;
- faster execution speed.

Q: Are there any limitations implied in the trial version as compared with the full one?
A: Actually the trial version of the utility does not differ from the full version as far as the functionality is concerned. That is, you can test all the features implemented in DB Extract for PostgreSQL within the 30-day trial period.

Scroll to top 13

If you still have any questions, contact us at our Support Center.

1.7 Other EMS Products

Quick navigation

MySQL 15 | Microsoft SQL Server 16 | PostgreSQL 17 | InterBase / FireBird 17 | Oracle 18 | IBM DB2 19 | Tools & components 20

MySQL

SQL Management Studio for MySQL
EMS SQL Management Studio for MySQL is a complete solution for database administration and development. SQL Studio unites the must-have tools in one powerful and easy-to-use environment that will make you more productive than ever before!

SQL Manager for MySQL
Simplify and automate your database development process, design, explore and maintain existing databases, build compound SQL query statements, manage database user rights and manipulate data in different ways.

Data Export for MySQL
Export your data to any of 20 most popular data formats, including MS Access, MS Excel, MS Word, PDF, HTML and more.

Data Import for MySQL
Import your data from MS Access, MS Excel and other popular formats to database tables via user-friendly wizard interface.

Data Pump for MySQL
Migrate from most popular databases (MySQL, PostgreSQL, Oracle, DB2, InterBase/Firebird, etc.) to MySQL.

Data Generator for MySQL
Generate test data for database testing purposes in a simple and direct way. Wide range of data generation parameters.

DB Comparer for MySQL
Compare and synchronize the structure of your databases. Move changes on your development database to production with ease.

DB Extract for MySQL
Create database backups in the form of SQL scripts, save your database structure and table data as a whole or partially.

SQL Query for MySQL
Analyze and retrieve your data, build your queries visually, work with query plans, build charts based on retrieved data quickly and more.

Data Comparer for MySQL
Compare and synchronize the contents of your databases. Automate your data migrations from development to production database.

Scroll to top 15

Microsoft SQL Server

SQL Management Studio for SQL Server
EMS SQL Management Studio for SQL Server is a complete solution for database administration and development. SQL Studio unites the must-have tools in one powerful and easy-to-use environment that will make you more productive than ever before!

EMS SQL Backup for SQL Server
Perform backup and restore, log shipping and many other regular maintenance tasks on the whole set of SQL Servers in your company.

SQL Administrator for SQL Server
Perform administrative tasks in the fastest, easiest and most efficient way. Manage maintenance tasks, monitor their performance schedule, frequency and the last execution result.

SQL Manager for SQL Server
Simplify and automate your database development process, design, explore and maintain existing databases, build compound SQL query statements, manage database user rights and manipulate data in different ways.

Data Export for SQL Server
Export your data to any of 20 most popular data formats, including MS Access, MS Excel, MS Word, PDF, HTML and more

Data Import for SQL Server
Import your data from MS Access, MS Excel and other popular formats to database tables via user-friendly wizard interface.

Data Pump for SQL Server
Migrate from most popular databases (MySQL, PostgreSQL, Oracle, DB2, InterBase/Firebird, etc.) to Microsoft® SQL Server™.

Data Generator for SQL Server
Generate test data for database testing purposes in a simple and direct way. Wide range of data generation parameters.

DB Comparer for SQL Server
Compare and synchronize the structure of your databases. Move changes on your development database to production with ease.

DB Extract for SQL Server
Create database backups in the form of SQL scripts, save your database structure and table data as a whole or partially.

SQL Query for SQL Server
Analyze and retrieve your data, build your queries visually, work with query plans, build charts based on retrieved data quickly and more.

Data Comparer for SQL Server
Compare and synchronize the contents of your databases. Automate your data migrations from development to production database.

Scroll to top 15

PostgreSQL

SQL Management Studio for PostgreSQL
EMS SQL Management Studio for PostgreSQL is a complete solution for database administration and development. SQL Studio unites the must-have tools in one powerful and easy-to-use environment that will make you more productive than ever before!

EMS SQL Backup for PostgreSQL
Creates backups for multiple PostgreSQL servers from a single console. You can use automatic backup tasks with advanced schedules and store them in local or remote folders or cloud storages

SQL Manager for PostgreSQL
Simplify and automate your database development process, design, explore and maintain existing databases, build compound SQL query statements, manage database user rights and manipulate data in different ways.

Data Export for PostgreSQL
Export your data to any of 20 most popular data formats, including MS Access, MS Excel, MS Word, PDF, HTML and more

Data Import for PostgreSQL
Import your data from MS Access, MS Excel and other popular formats to database tables via user-friendly wizard interface.

Data Pump for PostgreSQL
Migrate from most popular databases (MySQL, SQL Server, Oracle, DB2, InterBase/Firebird, etc.) to PostgreSQL.

Data Generator for PostgreSQL
Generate test data for database testing purposes in a simple and direct way. Wide range of data generation parameters.

DB Comparer for PostgreSQL
Compare and synchronize the structure of your databases. Move changes on your development database to production with ease.

DB Extract for PostgreSQL
Create database backups in the form of SQL scripts, save your database structure and table data as a whole or partially.

SQL Query for PostgreSQL
Analyze and retrieve your data, build your queries visually, work with query plans, build charts based on retrieved data quickly and more.

Data Comparer for PostgreSQL
Compare and synchronize the contents of your databases. Automate your data migrations from development to production database.

Scroll to top 15

InterBase / Firebird

SQL Management Studio for InterBase/Firebird
EMS SQL Management Studio for InterBase and Firebird is a complete solution for database administration and development. SQL Studio unites the must-have tools in one powerful and easy-to-use environment that will make you more productive than ever before!

SQL Manager for InterBase/Firebird
Simplify and automate your database development process, design, explore and maintain existing databases, build compound SQL query statements, manage database user rights and manipulate data in different ways.

Data Export for InterBase/Firebird
Export your data to any of 20 most popular data formats, including MS Access, MS Excel, MS Word, PDF, HTML and more

Data Import for InterBase/Firebird
Import your data from MS Access, MS Excel and other popular formats to database tables via user-friendly wizard interface.

Data Pump for InterBase/Firebird
Migrate from most popular databases (MySQL, SQL Server, Oracle, DB2, PostgreSQL, etc.) to InterBase/Firebird.

Data Generator for InterBase/Firebird
Generate test data for database testing purposes in a simple and direct way. Wide range of data generation parameters.

DB Comparer for InterBase/Firebird
Compare and synchronize the structure of your databases. Move changes on your development database to production with ease.

DB Extract for InterBase/Firebird
Create database backups in the form of SQL scripts, save your database structure and table data as a whole or partially.

SQL Query for InterBase/Firebird
Analyze and retrieve your data, build your queries visually, work with query plans, build charts based on retrieved data quickly and more.

Data Comparer for InterBase/Firebird
Compare and synchronize the contents of your databases. Automate your data migrations from development to production database.

Scroll to top 15

Oracle

SQL Management Studio for Oracle
EMS SQL Management Studio for Oracle is a complete solution for database administration and development. SQL Studio unites the must-have tools in one powerful and easy-to-use environment that will make you more productive than ever before!

SQL Manager for Oracle
Simplify and automate your database development process, design, explore and maintain existing databases, build compound SQL query statements, manage database user rights and manipulate data in different ways.

Data Export for Oracle
Export your data to any of 20 most popular data formats, including MS Access, MS Excel, MS Word, PDF, HTML and more.

Data Import for Oracle
Import your data from MS Access, MS Excel and other popular formats to database tables via user-friendly wizard interface.

Data Pump for Oracle
Migrate from most popular databases (MySQL, PostgreSQL, MySQL, DB2, InterBase/Firebird, etc.) to Oracle

Data Generator for Oracle
Generate test data for database testing purposes in a simple and direct way. Wide range of data generation parameters.

DB Comparer for Oracle
Compare and synchronize the structure of your databases. Move changes on your development database to production with ease.

DB Extract for Oracle
Create database backups in the form of SQL scripts, save your database structure and table data as a whole or partially.

SQL Query for Oracle
Analyze and retrieve your data, build your queries visually, work with query plans, build charts based on retrieved data quickly and more.

Data Comparer for Oracle
Compare and synchronize the contents of your databases. Automate your data migrations from development to production database.

Scroll to top 15

IBM DB2

SQL Manager for DB2
Simplify and automate your database development process, design, explore and maintain existing databases, build compound SQL query statements, manage database user rights and manipulate data in different ways.

Data Export for DB2
Export your data to any of 20 most popular data formats, including MS Access, MS Excel, MS Word, PDF, HTML and more.

Data Import for DB2
Import your data from MS Access, MS Excel and other popular formats to database tables via user-friendly wizard interface.

Data Pump for DB2
Migrate from most popular databases (MySQL, PostgreSQL, Oracle, MySQL, InterBase/Firebird, etc.) to DB2

Data Generator for DB2
Generate test data for database testing purposes in a simple and direct way. Wide range of data generation parameters.

DB Extract for DB2
Create database backups in the form of SQL scripts, save your database structure and table data as a whole or partially.

SQL Query for DB2
Analyze and retrieve your data, build your queries visually, work with query plans, build charts based on retrieved data quickly and more.

Scroll to top

Tools & components

Advanced Data Export for RAD Studio VCL
Advanced Data Export for RAD Studio VCL allows you to save your data in the most popular office programs formats.

Advanced Data Export .NET
Advanced Data Export .NET is a component for Microsoft Visual Studio .NET that will allow you to save your data in the most popular data formats for the future viewing, modification, printing or web publication. You can export data into MS Access, MS Excel, MS Word (RTF), PDF, TXT, DBF, CSV and more! There will be no need to waste your time on tiresome data conversion - Advanced Data Export will do the task quickly and will give the result in the desired format.

Advanced Data Import for RAD Studio VCL
Advanced Data Import for RAD Studio VCL will allow you to import your data to the database from files in the most popular data formats.

Advanced PDF Generator for RAD Studio
Advanced PDF Generator for RAD Studio gives you an opportunity to create PDF documents with your applications written on Delphi or C++ Builder.

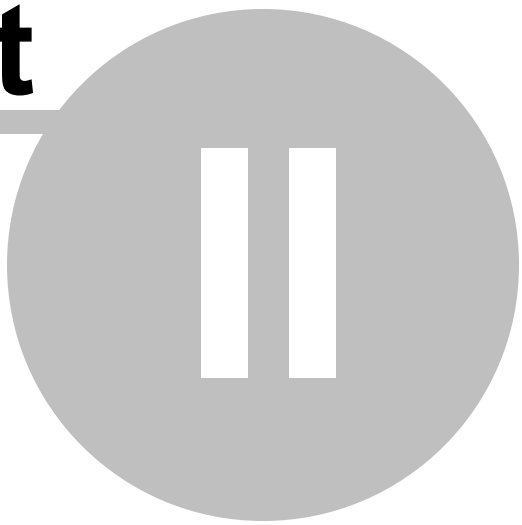
Advanced Query Builder for RAD Studio VCL
Advanced Query Builder for RAD Studio VCL is a powerful component for Delphi and C++ Builder intended for visual building SQL statements for the SELECT, INSERT, UPDATE and DELETE clauses.

Advanced Excel Report for RAD Studio
Advanced Excel Report for RAD Studio is a powerful band-oriented generator of template-based reports in MS Excel.

Advanced Localizer for RAD Studio VCL
Advanced Localizer for RAD Studio VCL is an indispensable component for Delphi for adding multilingual support to your applications.

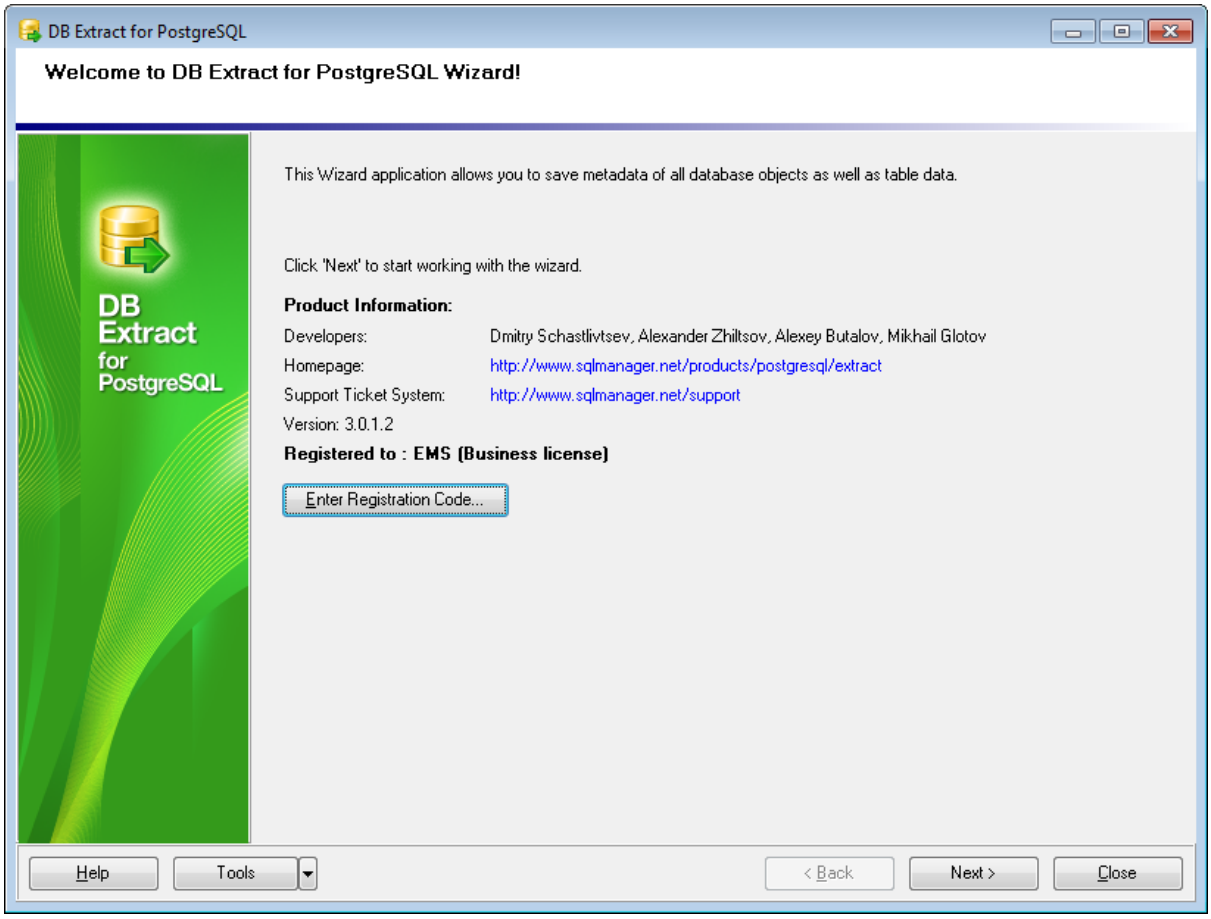
Scroll to top

Part



2 Wizard application

The GUI application of **DB Extract for PostgreSQL** provides easy-to-use wizard interface to set all extraction parameters visually.



See also:

Console Application 52

2.1 Using wizard application

Follow the steps of the wizard to extract metadata and data of your PostgreSQL database easily and quickly:

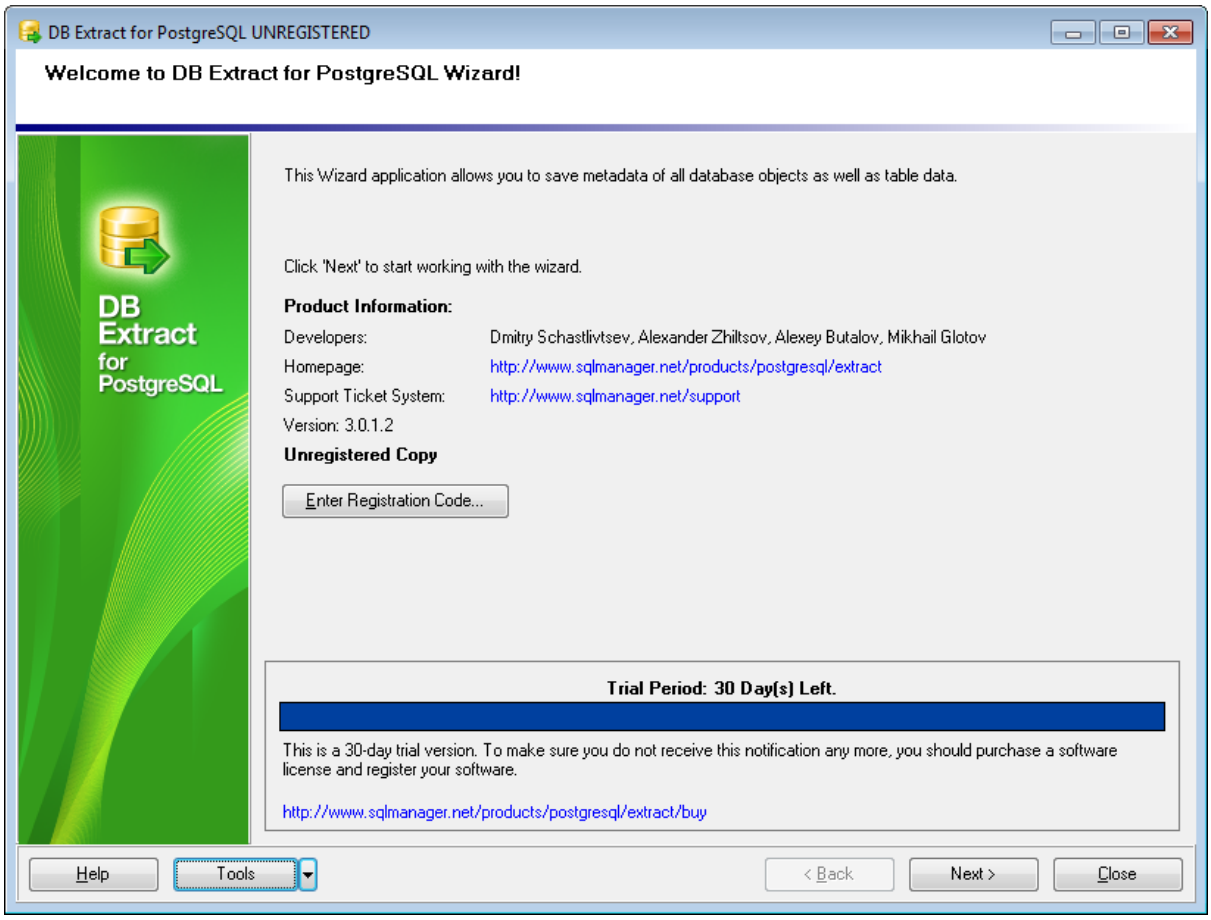
See also:

Using console application 53

2.1.1 Getting started

This is how DB Extract for PostgreSQL wizard application looks when you first start it.

This page allows you to view general information about the software product: **Homepage** address, the link to the online **Support Ticket System**, the **version** of the utility, **registration information**.



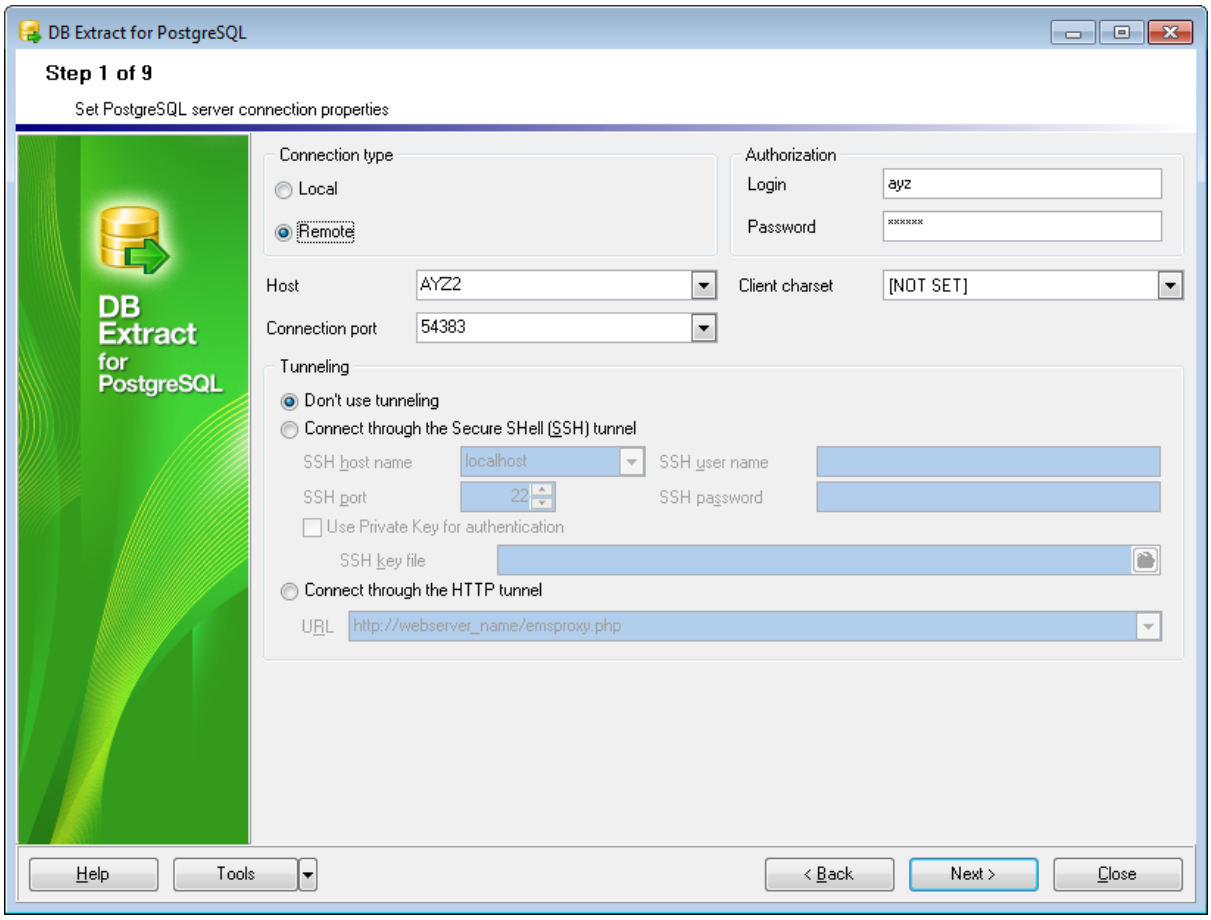
Press the **Next** button to proceed to Step 1 24 of the wizard.

See also:

Registration 10

2.1.2 Step 1 - Setting connection properties

At this step you should enter the necessary settings to establish connection to PostgreSQL server.



First select the **connection type**: *local* or *remote*.
Local connection is used to connect to PostgreSQL server launched on the same machine where DB Extract for PostgreSQL is running.
The **Remote** mode allows you to connect to PostgreSQL server launched on another computer in the network.

By default the program uses local connection. It is indicated by switch **Local** selected. If you wish to establish remote connection, you should select the **Remote** switch. For remote connection you should also enter PostgreSQL host name in the **Host** field. For both types you should enter PostgreSQL port to connect through in the **Connection port** field.

Afterwards you should specify *authorization* settings: **Login** and **Password**.
The default superuser name is 'postgres' with the password specified during PostgreSQL server installation.

If necessary, use the drop-down list to specify the preferable **Client charset** to be used by the application.
If you are using the EMS SQL Management Studio for PostgreSQL version of DB Extract for PostgreSQL then the **Select registered database** button is available. Click this button to pick a database already registered in the EMS SQL Management Studio in the Select Host

or Database 26 dialog.

Tunneling settings

To setup the connection via **SSH tunnel**, input the following values in the corresponding fields:

- **SSH host name** is the name of the host where SSH server is running
- **SSH port** indicates the port where SSH server is activated
- **SSH user name** stands for the user on the machine where SSH server is running (Note: it is a Linux/Windows user, not a user of PostgreSQL server)
- **SSH password** is the Linux/Windows user password

For details see SSH tunneling options 64.

To use **HTTP tunneling**, just upload the tunneling script to the webserver where PostgreSQL server is located, or to any other webserver from which direct connections to your PostgreSQL server are allowed. This script exposes the PostgreSQL API as a set of web-services which is used by DB Extract for PostgreSQL.

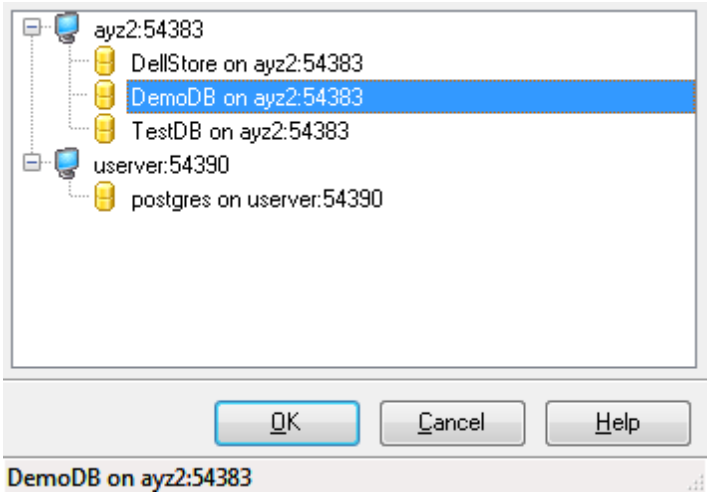
Note that the *emsproxy.php* script file is included into the distribution package and can be found in DB Extract installation directory.

For details see HTTP tunneling options 65.

When you are done, press the **Next** button to proceed to the next step 27 of the wizard.

2.1.2.1 Selecting registered database

Use this dialog to select a database for extract. This dialog is available only in EMS SQL Management Studio version of DB Extract for PostgreSQL.



All databases registered in EMS SQL Management Studio for PostgreSQL are displayed in the list.

Select the necessary database and click the **OK** button.

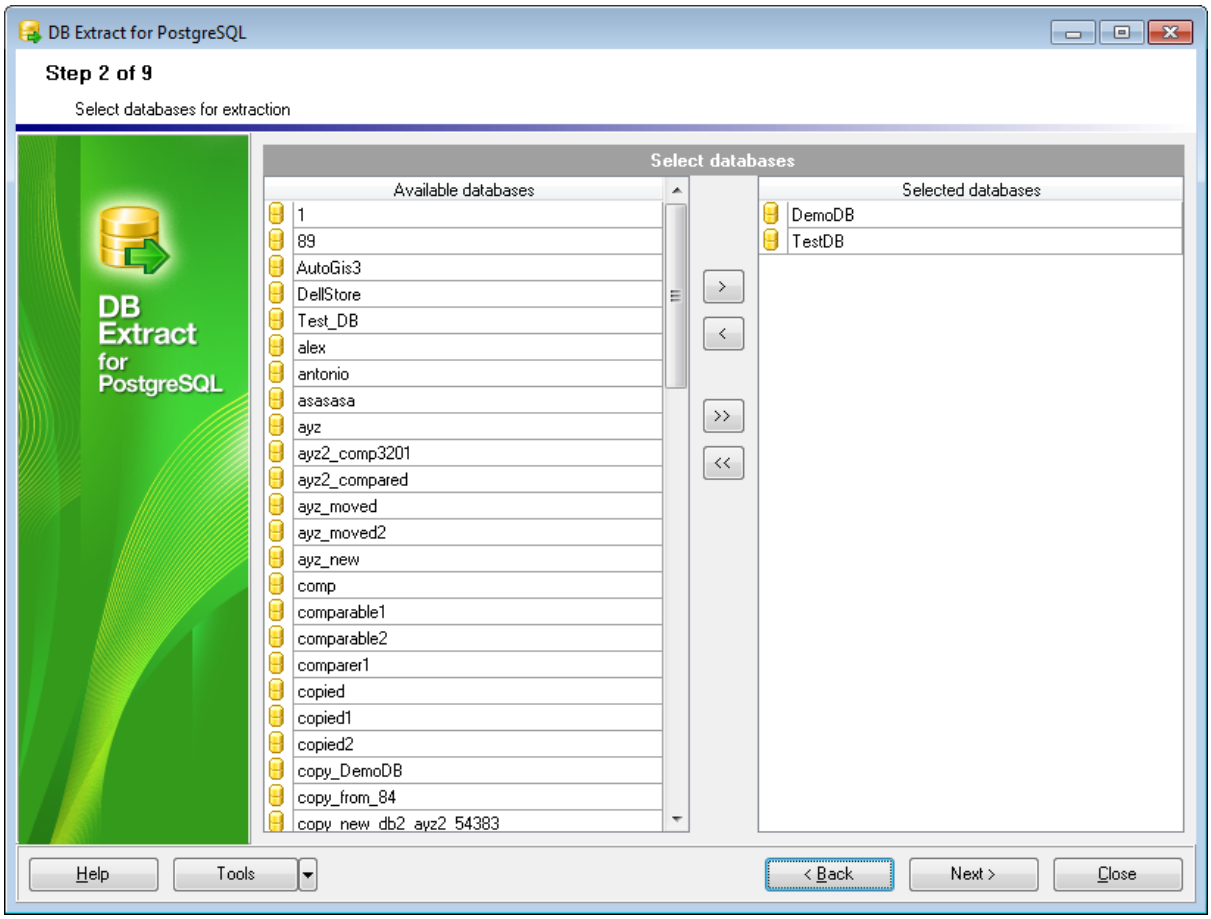
Database registration information will be filled on the first step 24 automatically.

2.1.3 Step 2 - Selecting databases

At this step you should select the **database(s)** from which **metadata and/or data** are to be extracted.

In the **Available Databases** list you can see all the databases which are available on the server. To select databases for extraction, move them to the **Selected Databases** list. To cancel a database selection, just remove it from the **Selected Databases** list. Use the  buttons or drag-and-drop operations to move the databases from one list to another.

Hint: To select multiple databases, hold down the *Shift* or *Ctrl* key while selecting the database names.



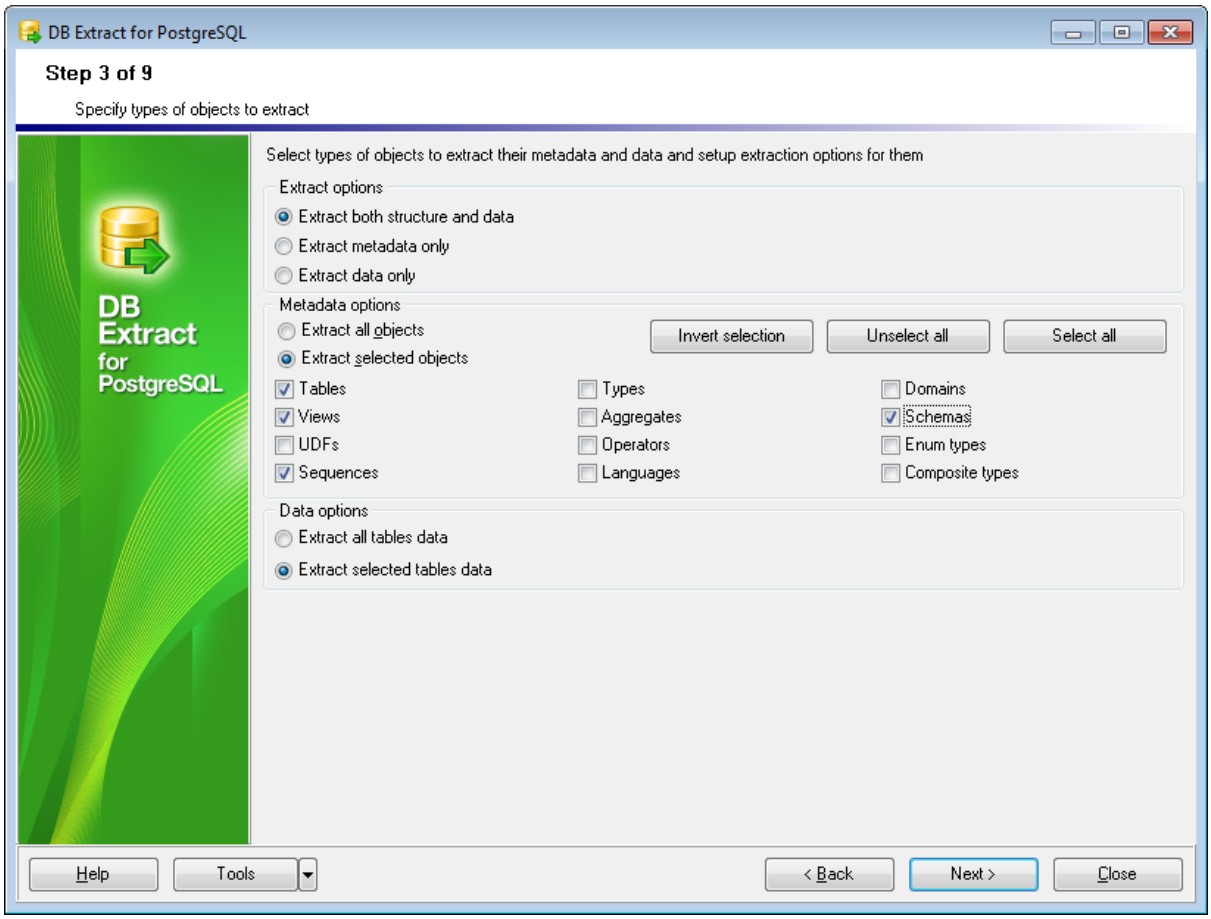
When you are done, press the **Next** button to proceed to the next step 28 of the wizard.

2.1.4 Step 3 - Specifying types of objects

At this step you can define **types of objects** for metadata and data extraction.

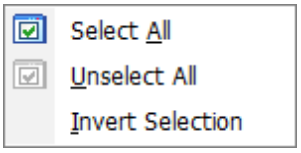
Extract options

This group allows you to choose whether *metadata only*, *data only* or *both* are to be extracted.



Metadata options

This group of options is only enabled for the *Extract metadata only* and the *Extract both structure and data* previously selected **Extract options**. Using options of this group you can either specify **all objects** or define **particular types of objects** to extract metadata from. For your convenience the *Invert selection*, *Unselect all* and *Select all* functions are implemented as the corresponding buttons. These functions are also available from the context menu of the objects list area.



Data options

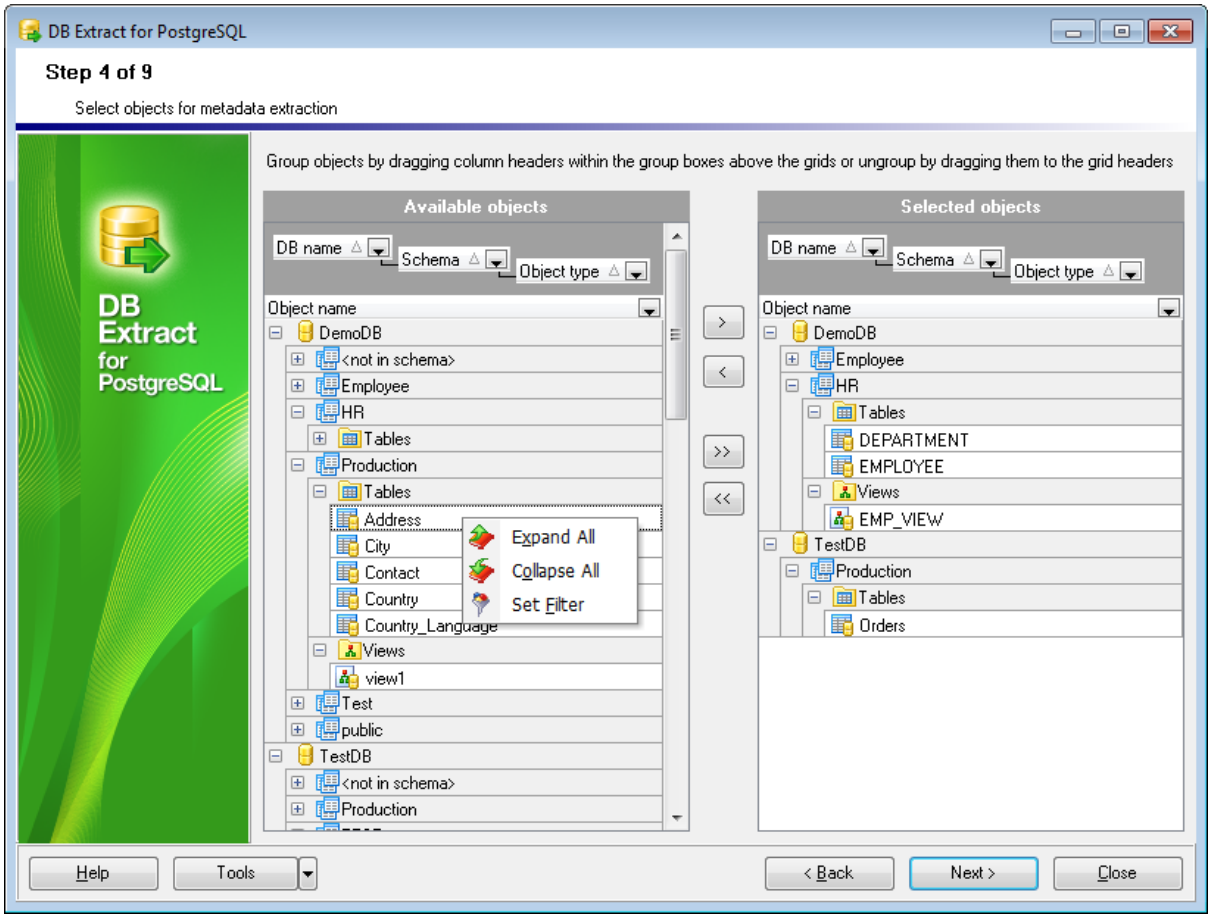
This group of options is only enabled for the *Extract data only* and the *Extract both structure and data* previously selected **Extract options**.
Here you should specify whether data are to be extracted **from all tables** or **from the selected ones** only.

When you are done, press the **Next** button to proceed to the next step of the wizard.

Depending on whether you have specified *Extract all objects / Extract all data tables* in the **Metadata Options** and the **Data Options** groups correspondingly, you will either proceed to the next step of the wizard 29, or you will be immediately forwarded to the Selecting tables for data extraction 31 or the Setting up extraction options 33 wizard steps.

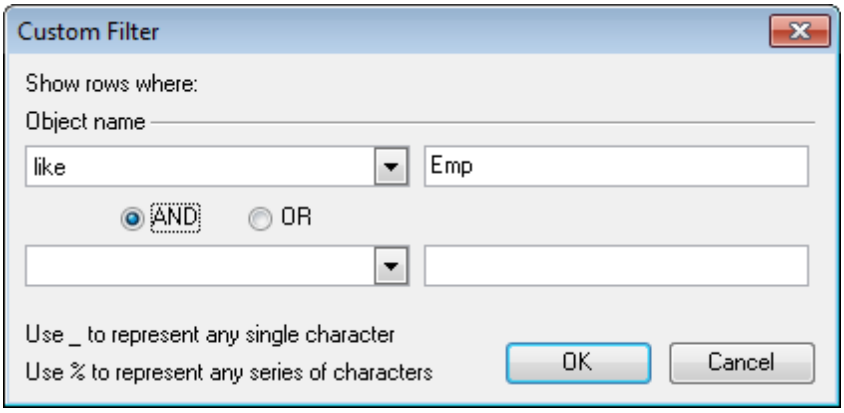
2.1.5 Step 4 - Selecting objects for metadata extraction

At this step you should select the **objects** from which **metadata** is to be extracted.



In the **Available objects** tree you can see the objects which have been selected for metadata extraction at the Specifying object types 28 step. Initially the objects are grouped by database names and object types. You can change grouping by dragging

column headers to the grey upper area or cancel grouping by dragging them back. Additionally, you can use the **Custom Filter** dialog allowing you to set conditions for filtering objects in the trees.

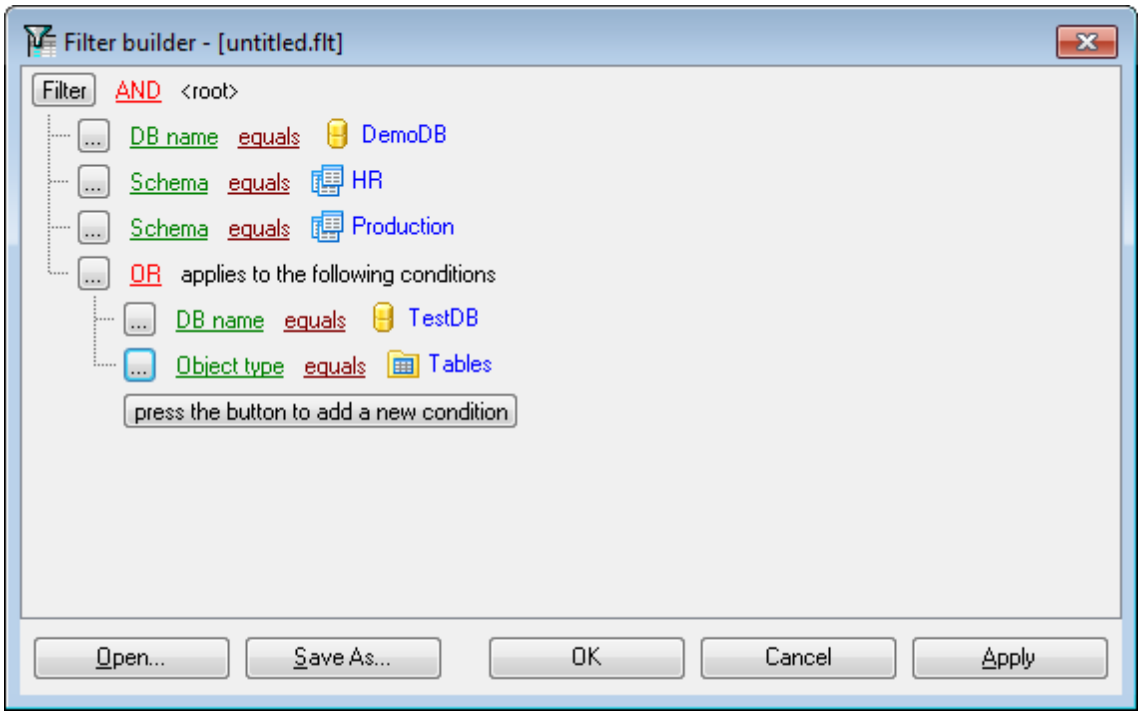


To select objects, move the items from the **Available objects** tree to the **Selected objects** tree. To cancel object selection, just remove it from the **Selected objects** tree. Use the > < >> << buttons or drag-and-drop operations to move the objects from one list to another.

Hint: To select multiple objects, hold down the *Shift* or *Ctrl* key while selecting the object names.

The context menus of the **Available objects** and the **Selected objects** areas allow you to browse the objects in the tree more effectively: you can expand/collapse objects viewed in the tree or specify filter conditions within the **Filter builder** dialog.

The **Filter builder** dialog allows you to facilitate creating and applying filter criteria for the objects viewed in the trees. It is also possible to save filter criteria to an external **.flt* file and load them from that file any time afterwards by using the **Save as...** and the **Open...** buttons.

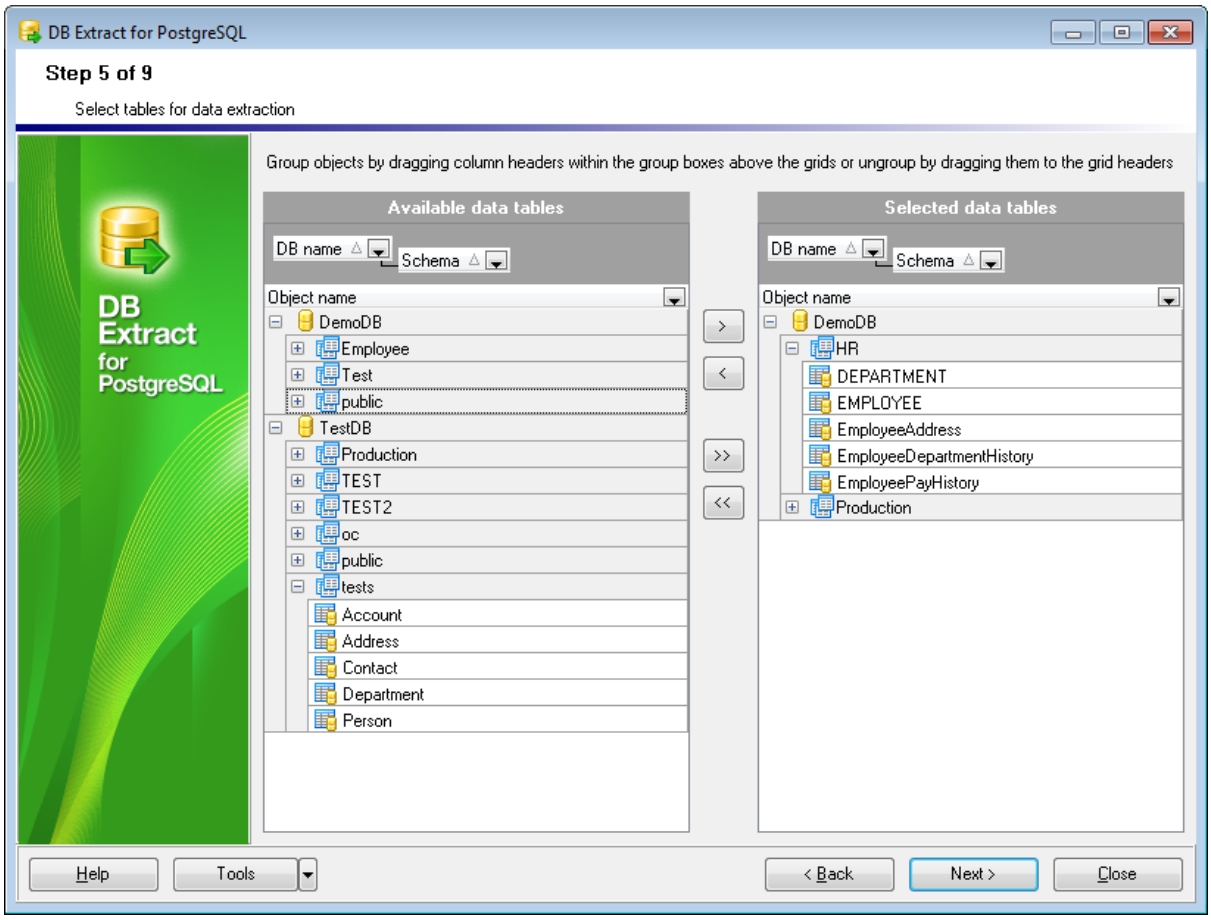


When you are done, press the **Next** button to proceed to the next step of the wizard.

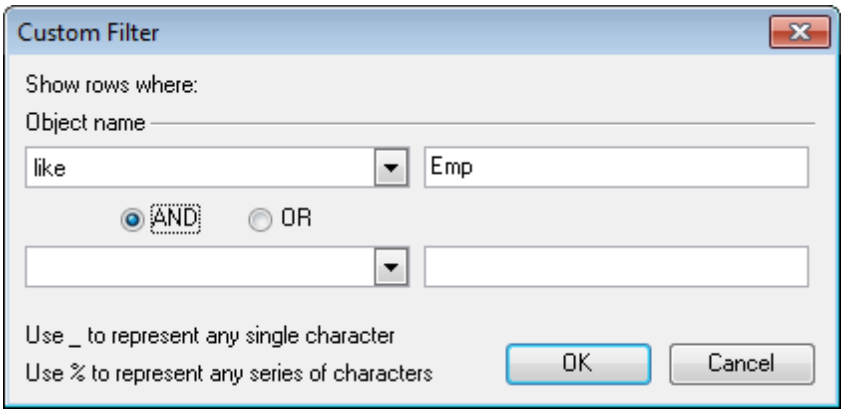
Depending on whether you have specified *Extract all data tables* in the **Data Options** group at the Specifying object types 28 step, you will either proceed to the next step of the wizard 31, or you will be immediately forwarded to the Setting up extraction options 33 wizard step.

2.1.6 Step 5 - Selecting tables for data extraction

At this step you should select the **tables** from which **data** is to be extracted.



In the **Available data tables** tree you can see the tables belonging to the databases specified at the Selecting objects for metadata extraction 29 step. Initially the tables are grouped by DB names and schemas. You can change grouping by dragging column headers to the grey group boxes above the grids or ungroup them by dragging to the grid headers. Additionally, you can use the **Custom Filter** dialog allowing you to set conditions for filtering data tables in the trees.



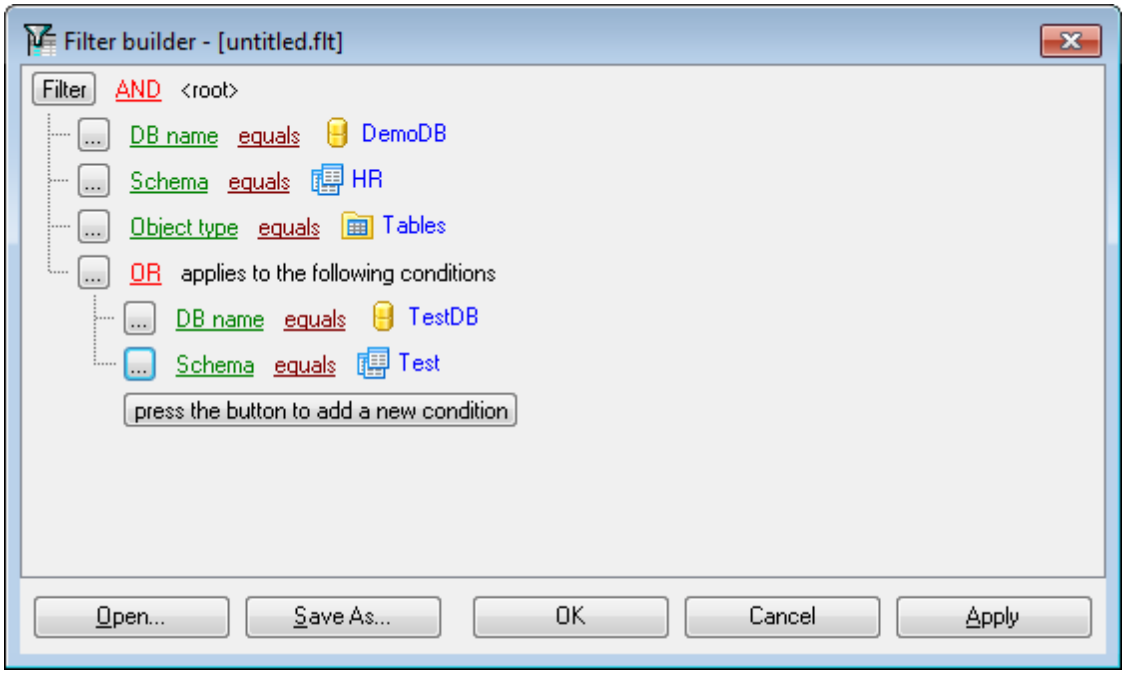
To select tables, move the items from the **Available data tables** tree to the **Selected**

data tables tree. To cancel table selection, just remove it from the **Selected data tables** tree. Use the  buttons or drag-and-drop operations to move the tables from one list to another.

Hint: To select multiple tables, hold down the *Shift* or *Ctrl* key while selecting the table names.

The context menus of the **Available data tables** and the **Selected data tables** areas allow you to browse the tables in the tree more effectively: you can expand/collapse the tables viewed in the tree or specify filter conditions within the **Filter Builder** dialog.

The **Filter Builder** dialog allows you to facilitate creating and applying filter criteria for the tables viewed in the trees. It is also possible to save filter criteria to an external **.flt* file and load them from that file any time afterwards by using the **Save as...** and the **Open...** buttons.



When you are done, press the **Next** button to proceed to the next step 33 of the wizard.

2.1.7 Step 6 - Setting up extraction options

At this step you can set the advanced extraction parameters and define query options for data extraction.

Metadata options

☑ **Generate "CREATE TABLESPACE" statements**
Check this option to add the *CREATE TABLESPACE* statement(s) to the extraction script.

☑ **Generate "DROP" statements**
Check the option to add the DROP statements for the extracted objects.

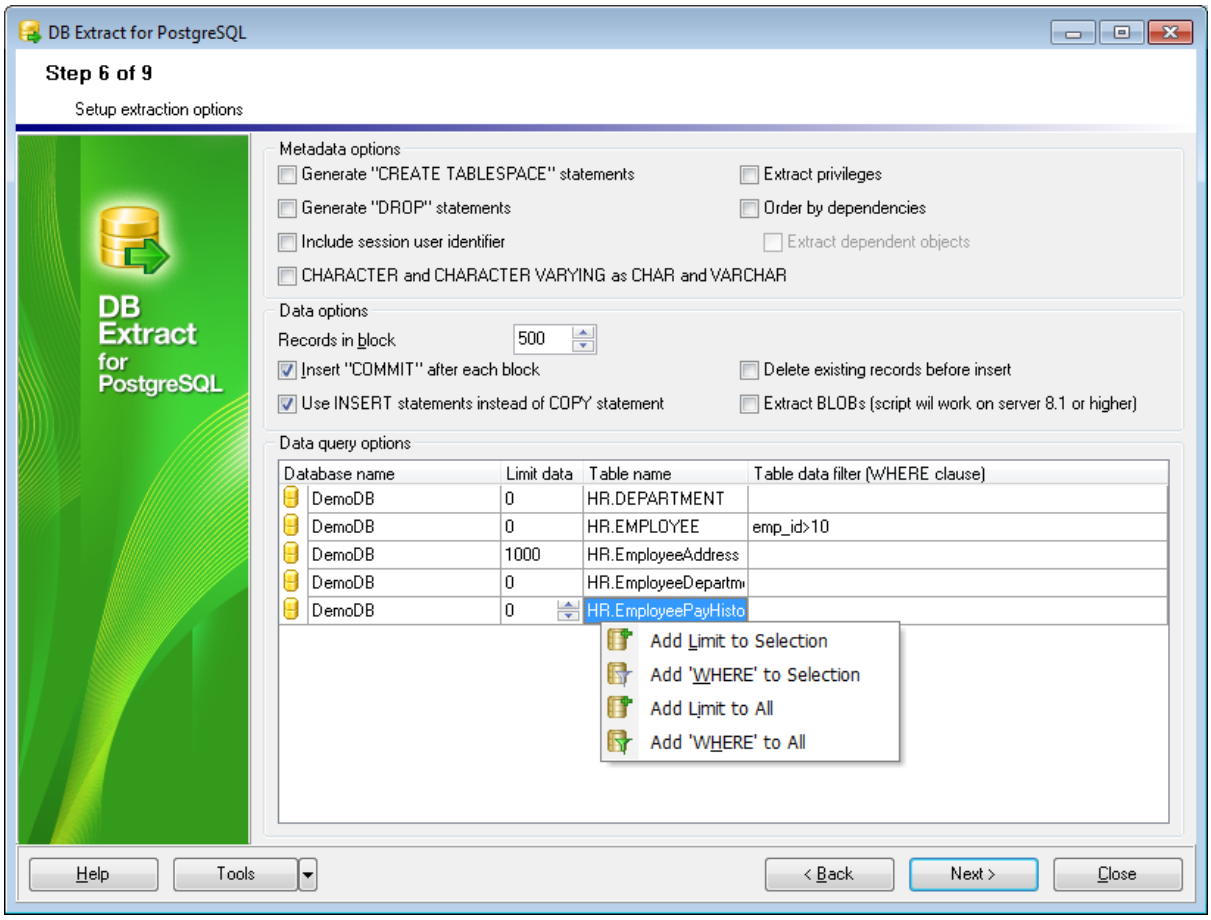
☑ **Extract privileges**
Tick off the option if you want the privileges (permissions on the objects) to be extracted.

☑ **Order by dependencies**
This option specifies whether objects should be ordered by their dependencies in the result script or not. If this option is disabled the objects will be ordered by OID.

☑ **Extract dependent objects**
This option determines the usage of dependencies between objects in the extraction process.

☑ **CHARACTER and CHARACTER VARYING as CHAR and VARCHAR**
Check this option to enable conversion of the corresponding data types in the result script.

☑ **Include session user identifier**
Setting this option adds the current session user identifier to the extraction script.



Data options

Records in block / ☑ Insert "COMMIT" after each block
These controls allow you to define whether the COMMIT statement is inserted into the script or not, and to define the number of records in each block to be supplemented with this statement.

☑ Delete existing records before insert
Generates the DELETE FROM statements before the INSERT INTO statements.

☑ Use "INSERT" statements instead of "COPY" statement
If this option is checked, INSERT INTO statements are generated instead of PostgreSQL COPY statements to populate the extracted tables with data.

☑ Extract BLOBs
This option enables/disables BLOB fields extraction. Please note that in this case the generated SQL script will work correctly on version 8.1 and higher.

Data query options

This grid allows you to specify additional options for the SELECT statements used for data extraction.

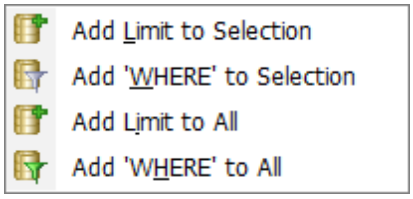
Database name
This column represents the list of the databases containing the tables selected for data extraction.

Limit data
By setting non-zero values in this column you can limit the number of records extracted from each table.

Table name
This column contains the names of the tables (with the names of the schemas they belong to).

Table data filter
Here you can specify the WHERE clauses for data extraction from each of the tables.

Note that you can define data query options not only for a single table, but also for multiple tables at a time by using corresponding items of the context menu of the **Data query options** grid.



When you are done, press the **Next** button to proceed to the next step 36 of the wizard.

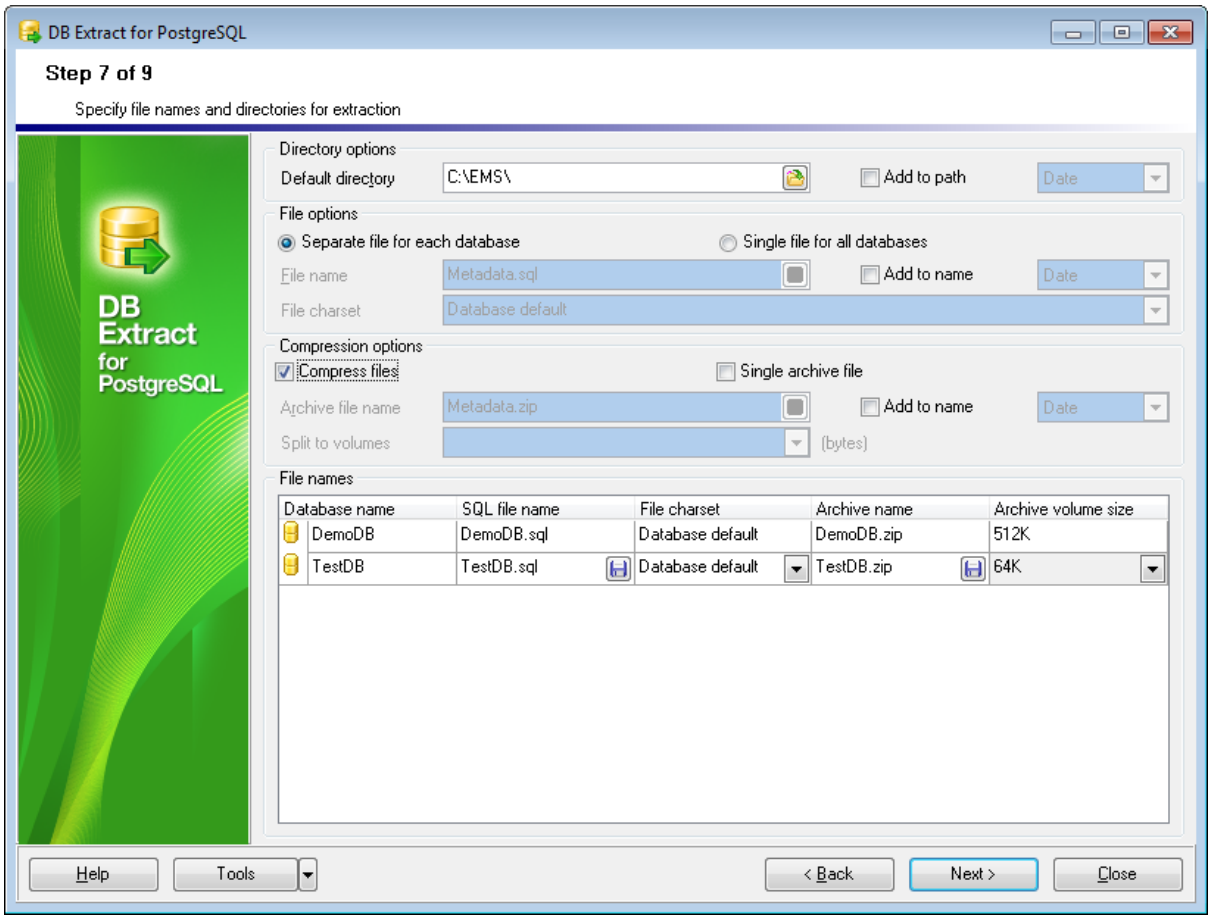
2.1.8 Step 7 - Specifying file names and directories

At this step you should specify the file name and the directory where the result script will be saved.

Directory options

Default directory
Type in the path or use the button to specify the default directory for the result files to be placed in.

Add to path
Check this option to add current date, time or datetime (can be specified at the corresponding drop-down list) to the folder name.



File options

This group of options allows you to specify whether the source databases are to be placed into a single SQL script file or divided into several files of smaller size, each for a separate extracted database. This option is only available if objects from several databases have been specified for extraction.

File name

Set a name for the result **.sql* file and type in or use the button to specify the path to this file on your local machine or on a machine in the LAN.

File charset

Choose the necessary charset for the file.

Add to name

Check this option to add current date, time or datetime (can be specified at the corresponding drop-down list) to the filename.

Compression options

Compress files

Check this option if you wish to add the result SQL script to a ZIP file.

Single archive file
Check this option to indicate whether the result SQL script is to be placed into a single ZIP archive file or divided into several archive files of smaller size, each for a separate extracted database. This option is only available if objects from several databases have been specified for extraction.

Archive file name
Set a name for the compressed **.zip* file and type in or use the button to specify the path to this archive file on your local machine or on a machine in the LAN.

Add to name
Check this option to add current date, time or datetime (can be specified at the corresponding drop-down list) to the archive filename.

Split to volumes
If compression in a single archive is enabled you can split the archive to volumes of defined size. The size of an archive volume is in bytes by default, kilobyte if the value is followed by 'K' and megabyte if the value is followed by 'M'.

File names

This grid allows you to view the summary of the result **.sql* and **.zip* files selection.

Database name
This column represents the databases corresponding to the specified **.sql* (**.zip*) files (if the **Separate file for each database** option has been selected).

SQL file name
This column represents the list of **.sql* files, each for a separate extracted database.

Archive name
This column represents the list of **.zip* archive files, each for a separate extracted database.

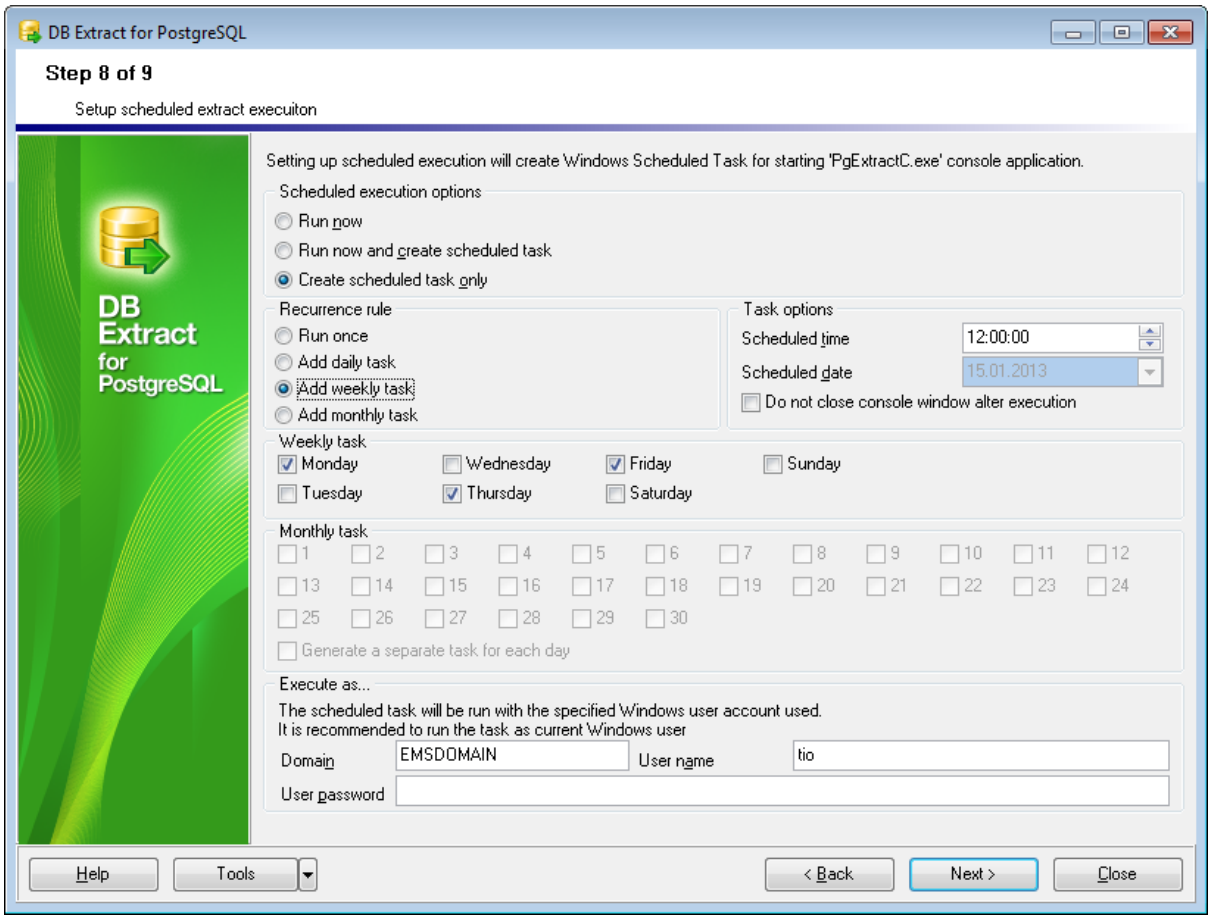
When you are done, press the **Next** button to proceed to the next step 38 of the wizard.

2.1.9 Step 8 - Scheduling options

At this step you can setup scheduled execution of the extraction task with DB Extract command-line service used.

Scheduled execution options
Choose here if the extraction task is to be run within the current session of the GUI wizard, or whether the task is to be scheduled for running later, or both.

Recurrence rule
Set the **Run once** option to execute the extraction task one time, or select a **daily**, a **weekly** or a **monthly** Recurrence Rule to repeat the extraction task periodically.



Task options

Scheduled time
This box allows you to set the time of the task execution.

Scheduled date
This box allows you to set the date of the extraction task execution if the **Recurrence Rule** is set to **Run once**.
Please note that this value cannot be greater than one month forward.

☑ **Do not close console window after execution**
This option is used to disable/enable closing the console window after the scheduled extraction is complete.

Note: You must have the **Task Scheduler** service running to be able to use these settings. Please open **Windows Control Panel | Administrative Tools | Services** (or open the **Start | Run...** dialog and use the *services.msc* command) to start the **Task Scheduler** service.

Weekly task / Monthly task

These groups contain the lists of days of the week/month that can be set for the

extraction task to be executed (applied when the **Recurrence Rule** is set to **weekly** or **monthly**)

☑ **Generate a separate task for each day**
Check this option if you want several tasks (each corresponding to the specified day) to be created for Windows Task Scheduler.

Execute as...
In these fields you must specify Windows **Domain** (if a domain login is being used), **User name** and **User password** for the task execution. It is recommended to run the task as current Windows user.

When you are done, press the **Next** button to proceed to the last step 40 of the wizard.

2.1.10 Step 9 - Start of extraction process

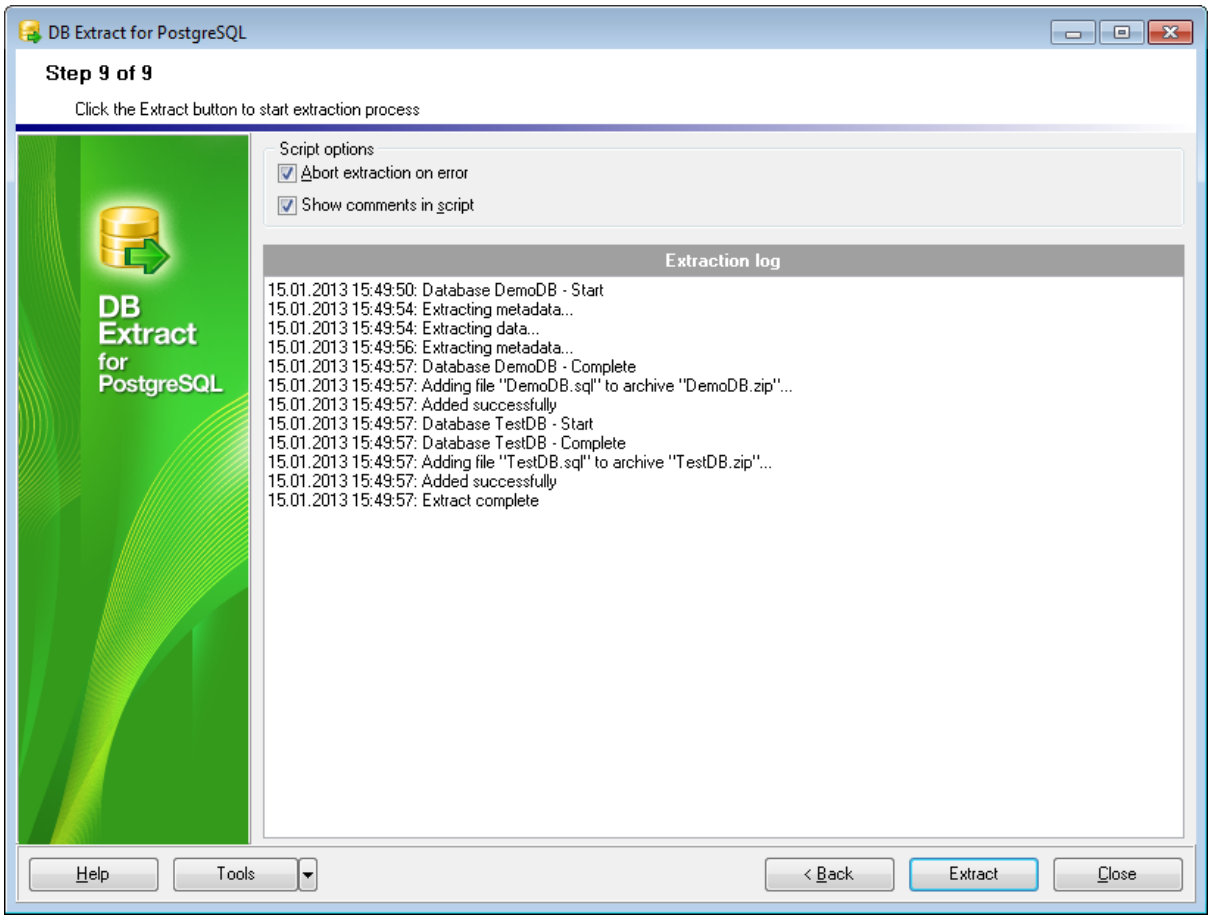
This step is aimed at informing you that all the extraction parameters are set, and you can now start the extraction process.

Script options

☑ **Abort extraction on error**
This option determines whether the extraction process should be stopped or forced to continue if an error occurs.

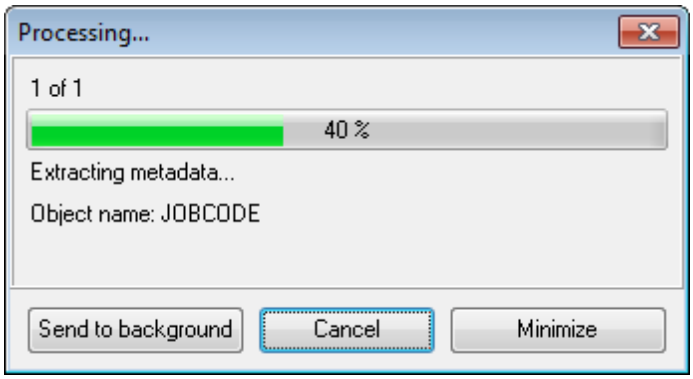
☑ **Show comments in script**
Set this option to allow adding comments on the extraction process to the result SQL script.

If all necessary DB Extract settings are specified correctly, press the **Extract** button to start the process. If you want to change something, you can return to any of the wizard steps using the **Back** button.



Please do not forget to save the extraction options 43 if you intend to repeat the extraction process with the same or similar settings later.

While the extraction process you can use the **Send to background** button to reduce the priority of the extraction operation, the **Cancel** button to interrupt the process and the **Minimize** button to to minimize the utility window.



See also:

Using configuration files 43
Setting program preferences 45

2.2 Using configuration files

DB Extract for PostgreSQL allows you to store its configuration in external **.ext* files if you need to repeat the extraction process many times.

You can load the previously saved configuration to the wizard application if you need to make some changes before extraction, or you can run it with the console application 52 for quicker extraction.

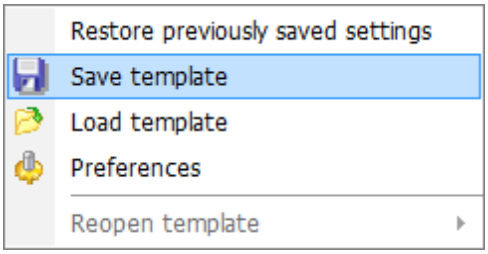
See also:

Using wizard application 23

Setting program preferences 45

2.2.1 Saving configuration file

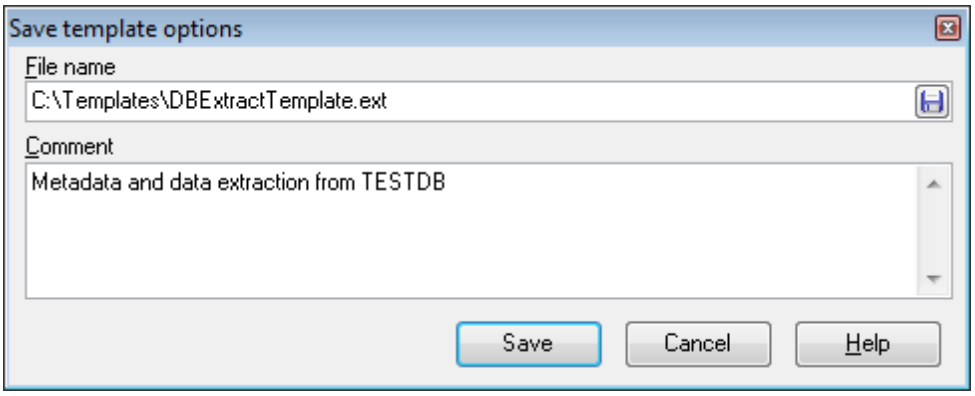
The **Save template** item allows you to save current configuration for future use. Please note that a configuration file (template) can be saved only on Step 7 36 and the succeeding steps of the wizard.



Save template options:

File name
Specify the template file name and select its location using the button to open the **Save As...** dialog.

Comment
If necessary, set a comment for your template file in this field.

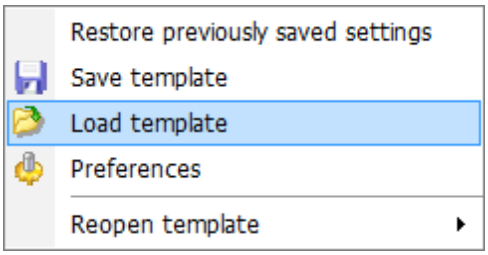


See also:

Loading configuration file 44

2.2.2 Loading configuration file

Previously saved DB Extract templates are loaded within the **Open template** dialog. To call this dialog, press the **Tools** button and select the **Load template** popup menu item.



Please note that you can **reopen a template** at any step of the wizard using the corresponding popup menu item of the **Tools** menu.

See also:

Saving configuration file 43

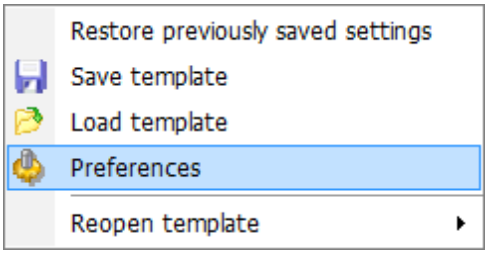
2.3 Setting program preferences

DB Extract for PostgreSQL provides full customization of the program interface by setting various options within the **Preferences** dialog. This chapter is intended to inform you how to use these options.

General options 45
These options define general behavior of DB Extract for PostgreSQL

Localization 46
This page allows you to select a language to be applied for your copy of DB Extract for PostgreSQL.

Interface 48
This branch contains several pages with a number of options allowing you to customize the application interface style according to your liking.



See also:

Using wizard application 23
Using configuration files 43

2.3.1 Setting general options

☑ **Show database list**
If this option is checked, all databases available on the host are displayed in the **Available Databases** list at Step 2 27 of the wizard, and you can select databases from the list to add them to the **Selected Databases** list. Otherwise you must type the database name manually and add them to the **Available Databases** list one by one using the  button.

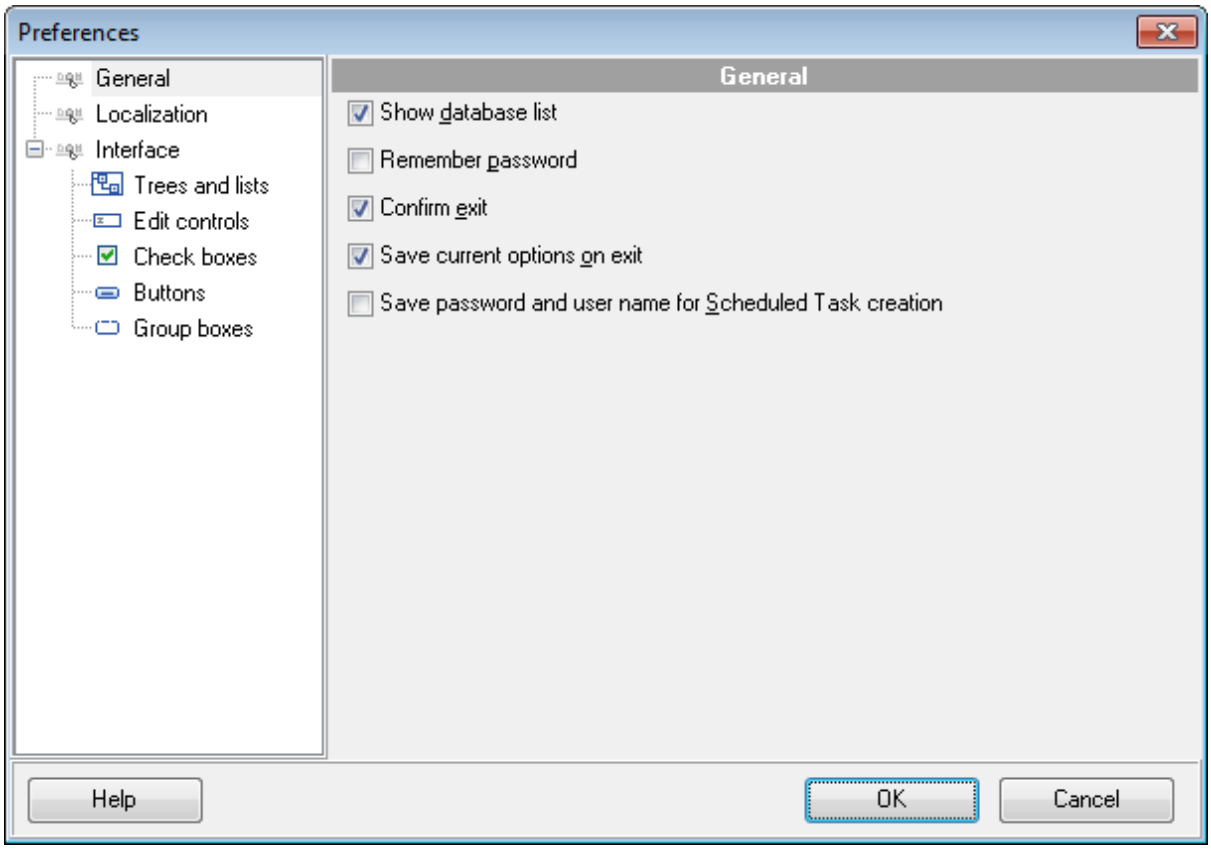
☑ **Remember password**
Setting this option allows you to save passwords used for access to the database server automatically upon closing the application. Please note that checking this option saves the latest password used for connection to the database (including the SSH server password)

☑ **Confirm exit**
Enables/disables confirmation upon exiting the program.

☑ **Save current options on exit**

Setting this option allows you to save all the extraction options automatically upon exiting the application.

☑ **Save password and user name for Scheduled Task creation**
Set this option to remember Windows login information provided for the scheduled task execution.



See also:

Setting program language 46
Defining interface style 48

2.3.2 Setting program language

The **Localization** page is provided for DB Extract for PostgreSQL interface localization files management.

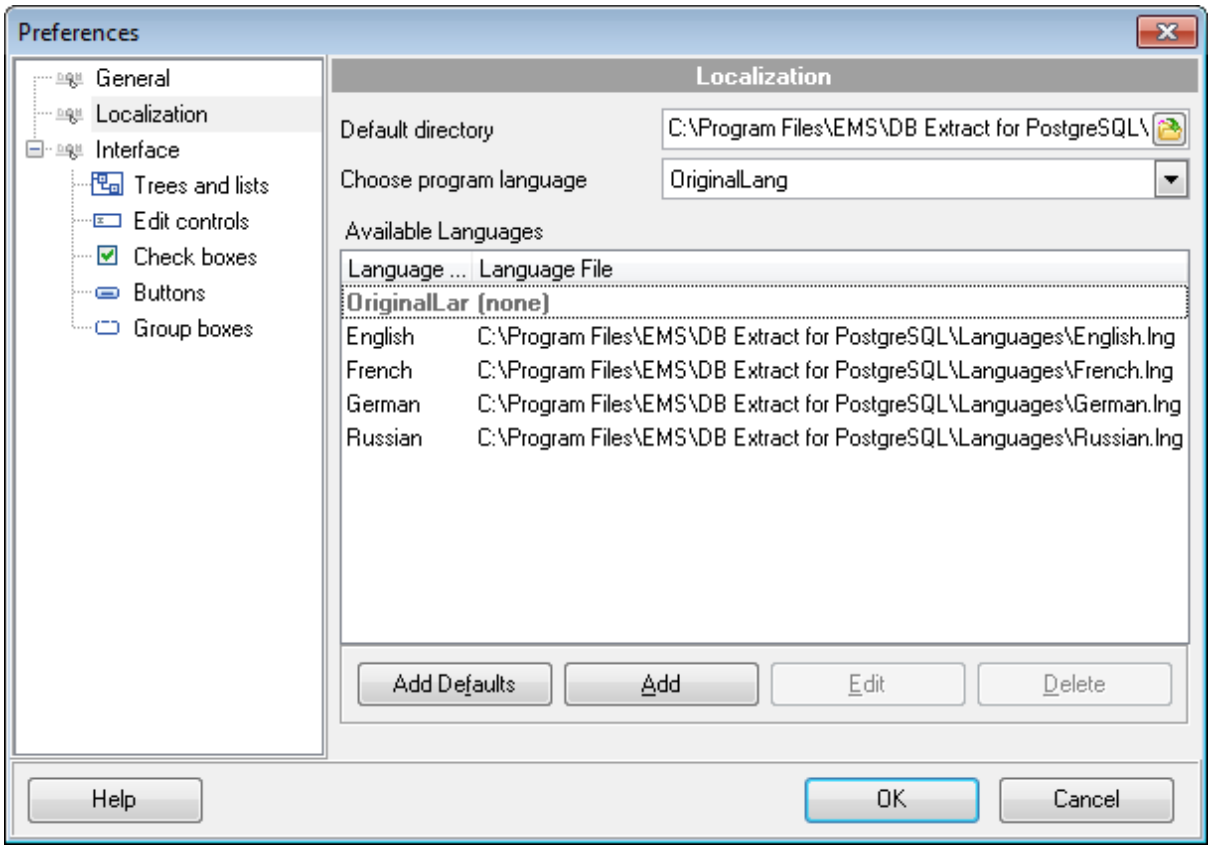
You can create your own **.lng* files similar to those available in the *%program_directory%\Languages* folder, add them to the list of the available languages and apply a new language as the program interface language.

Default directory

Use the button to specify the directory where the **.lng* files are stored by default.

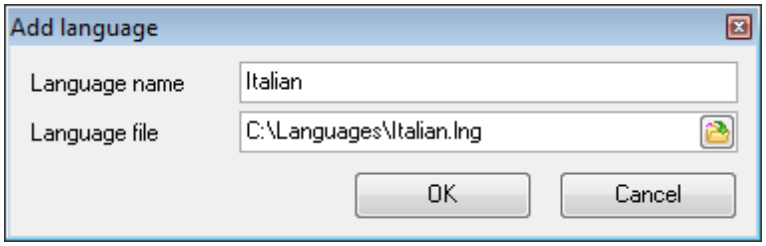
Choose program language
Select the language you wish to be applied to the GUI application from the drop-down list of available languages.

In the **Available Languages** area the list of available languages and the names of the corresponding localization (**.lng*) files are displayed. You can manage the list of the languages using the buttons below.

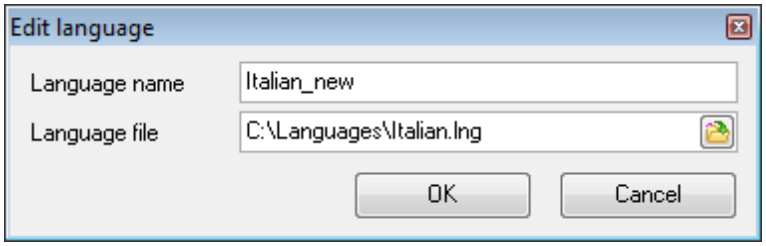


Add defaults
Adds languages from the default directory to the list of available languages.

Add
Opens the *Add language* dialog where you can specify your own localization file and set the language name.



Edit
Opens the *Edit language* dialog where you can change the language name or select another localization file for the specified language.



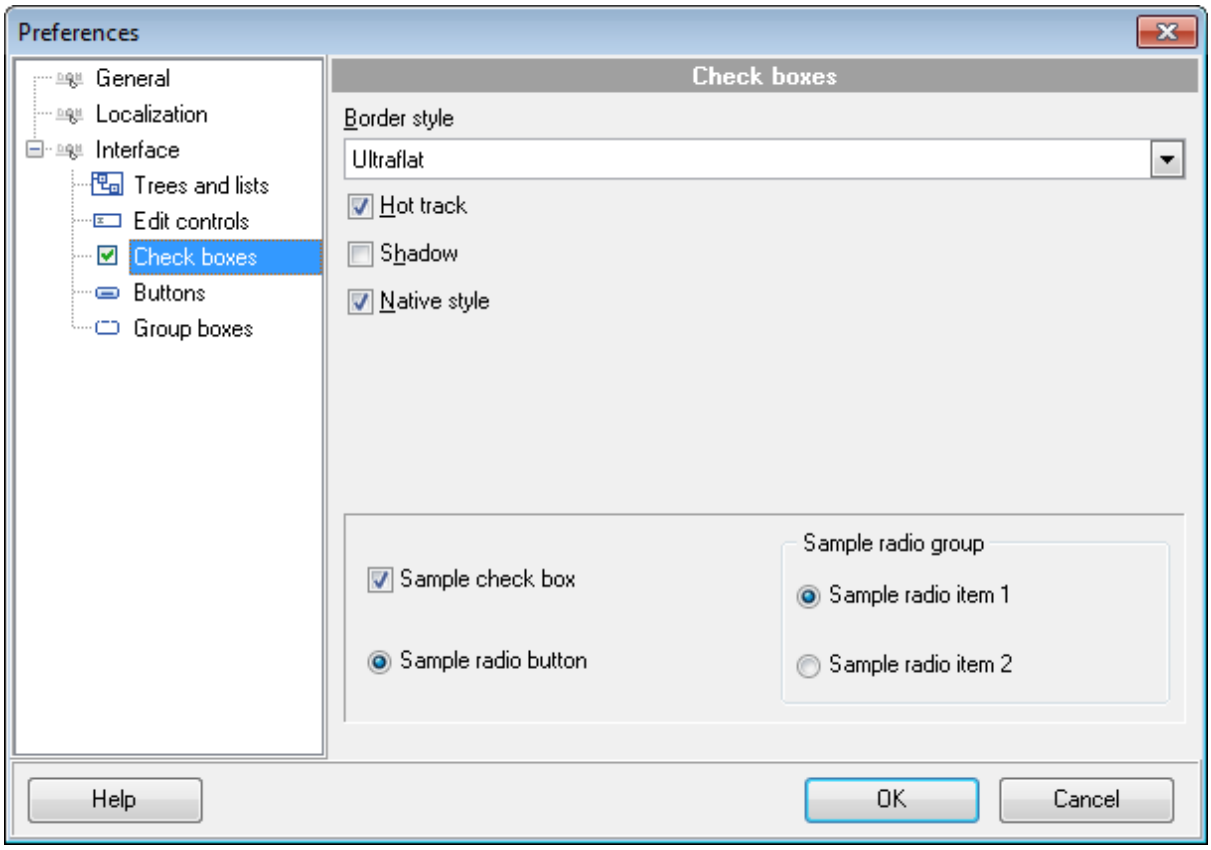
Delete
Removes the selected language from the **Available languages** list (without confirmation).

See also:
Setting general options 45
Defining interface style 48

2.3.3 Defining interface style

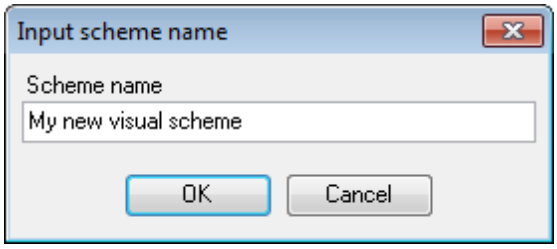
This page allows you to customize the application interface style according to your liking.

Use the **Scheme name** drop-down list to select an interface scheme according to your liking: *Classic*, *Office XP style*, *Windows XP* native style, etc.



It is also possible to create one's own interface scheme, if necessary:

- set your preferences within the available branches of the **Interface** node (*Trees and Lists*, *Edit Controls*, *Check Boxes*, *Buttons*, *Group Boxes*);
- return to the **Interface** page and click the **Save As** button;
- specify the scheme name in the **Input scheme name** dialog.

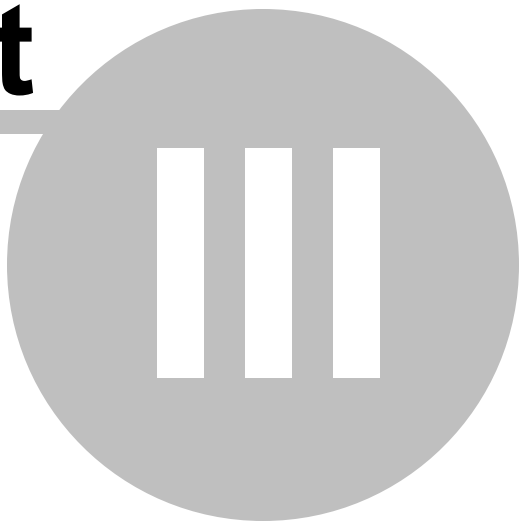


Note: For your convenience the previews illustrating the changes are displayed in the **Sample group** area of each branch of the **Interface** node.

See also:

Setting general options 45
Setting program language 46

Part



3 Console application

Additionally to **the GUI version** which is implemented in the form of a wizard application, the installation package of DB Extract for PostgreSQL includes **the console version** which is intended for being run from Windows command line with a template file name used as the execution parameter.

DB Extract for PostgreSQL command line utility is intended for quick and powerful metadata and data extraction from PostgreSQL databases.

See also:

Wizard application 22

3.1 Using console application

All the extraction options are set in **template** (**.ext*) files. A template can be also used in the **Console version** of DB Extract for PostgreSQL

To create a template file, follow the instructions below:
- start DB Extract for PostgreSQL Wizard application 22;
- set all the required options in all steps of the wizard;
- test the extraction process at the last step;
- save all generation options in the template file 43.

The easiest way to start DB Extract for PostgreSQL console application is to double-click the generated **.ext* configuration file. The other way is to enter the command line and type the appropriate command.

Usage:

<path to DB Extract for PostgreSQL console application>\PgExtractC.exe TemplateFile [-L] [-B]

TemplateFile
Stands for the **.ext* template file to be used as the console version execution parameter

[-L]
Selects current localization 46 set in Wizard application 22 (GUI)

[-B]
Use this parameter in the command line to run the console version of DB Extract for PostgreSQL in background mode

Example:

"C:\Program Files\EMS\PostgreSQL Extract\PgExtractC.exe" "C:\Program Files\EMS\PostgreSQL Extract\DBExtract1.ext" -L

Note: The following exit codes can be returned by DB Extract for PostgreSQL to the operating system after performing the latest task:
0 - successful completion;
1 - error(s) occurred during task performing;
2 - fatal error occurred. The task was not performed.

See also:

Using wizard application 23
Configuration file format 54

3.2 Configuration file format

DB Extract configuration file is divided into several sections, each corresponding to a particular group of settings specified on different steps of the GUI application 22.

See also:

Using console application 53

3.2.1 General and Connection sections

The very first section of DB Extract configuration file is **[#General#]** - the product name and its major version are indicated in this section.

The **[#Connection#]** section corresponds to the values entered on Step 1 24 of Wizard application 23.

The configuration parameters are listed below.

The section contains database connection parameters: **Host**, **Login** and **Password**. These parameters are obligatory.

Remote
0 = local connection
1 = remote connection

SSHHostName, **SSHPort**, **SSHUserName**, **SSHPassword** values correspond to the settings for connection via SSH Tunnel (if used)

SSHKeyFile
The path to the Private Key used for the SSH connection (if **SSHUseKeyFile** = True)

PassPhrase
This parameter has a value only if a SSH Private Key is used for the SSH connection

TunnelType
Indicates the type of the tunneling being used: SSH, HTTP, or none (**TunnelType** = ttNotUse)

HTTPUrl
Contains the URL to the *emsproxy.php* script file uploaded to your web-server (for HTTP tunneling)

CharSet
Stores the client character set specified for the connection

See also:
Common Options section 55
Extract Options section 56
File Options section 57
Scheduled Task sections 59
Data Query sections 60
Databases section 61

3.2.2 Common Options section

Section **[#Options#]** represents the options corresponding to those specified on Step 3 28 of Wizard application 23.

The configuration parameters are listed below.

ExtractOptionsIndex
0 = Extract both structure and data
1 = Extract metadata only
2 = Extract data only

ExtractAllMetaObjects
0 = Extract selected types of objects only
1 = Extract all objects

ExtractMetadataFrom (applicable if **ExtractAllMetaObjects** = *0*)
The value of this option is a list of zero ("0") and one ("1") values
Each value corresponds to a certain object type in the order they are listed on Step 3 28:
Tables, Views, UDFs, Sequences, Types, Aggregates, Operators, Languages, Domains, Schemas, Composite types

ExtractAllData
0 = Extract selected data tables
1 = Extract all data tables

The following two options correspond to the last step 40 of the GUI application 23.

AbortOnError
0 = Do not abort script execution if an error occurs during execution
1 = Abort script execution on error

InsertComments
0 = Do not add comments to the result script
1 = Allow adding comments to the result script

See also:

General and Connection sections 54
Extract Options section 56
File Options section 57
Scheduled Task sections 59
Data Query sections 60
Databases section 61

3.2.3 Extract Options section

Section **[#ExtractOptions#]** stores values set on Step 6 33 of Wizard application 23.

The configuration parameters are listed below.

CreateDatabaseStmt
0 = Do not add CREATE DATABASE statement to the extraction script.
1 = Add CREATE DATABASE statement to the extraction script.

DropTableStmt
0 = Do not add DROP statements for the extracted objects
1 = Add DROP statements for the extracted objects to the result script

RecordsInBlock
The number of INSERT statements in a block after which the COMMIT statement is to be added

InsertCommit
0 = Do not insert COMMIT statement after each block
1 = Insert COMMIT statement after each block

DeleteAllRecords
0 = Do not delete any records from the tables before the INSERT statements
1 = Delete all records from the tables before the INSERT statements

Tablespaces
0 = Do not include definition of tablespaces into the extraction script
1 = Include definition of tablespaces into the extraction script

Privileges
0 = Do not include access privileges for the extracted objects
1 = Include access privileges for the extracted objects

ExtractDependentObjects
0 = Extract dependent objects
1 = Do not extract dependent objects

CharacterAsChar
0 = Do not change CHARACTER and CHAR data types
1 = Change CHARACTER data type to CHARACTER VARYING and CHAR to VARCHAR

DescribeOwner
0 = Do not include the session user identifier into the extraction script
1 = Include the session user identifier into the extraction script

Inserts
0 = Perform data extraction using a single COPY statement
1 = Perform data extraction using the INSERT INTO statements (one for each record)

Blobs
0 = Do not extract BLOB data
1 = Extract BLOB data

See also:
General and Connection sections 54
Common Options section 55
File Options section 57
Scheduled Task sections 59
Data Query sections 60
Databases section 61

3.2.4 File Options section

Section **[#FileOptions#]** stores values set on Step 7 36 of Wizard application 23.

The configuration parameters are listed below.

SingleFile
0 = Create a separate file for each of the databases (see Databases section 61)
1 = All metadata and data are extracted into one file

SingleFileName
Stores the file name (if **SingleFile** = *1*)

AddDateTimeToFile
0 = Do not add the current date and time to the file name(s)
1 = Add the current date and time to the file name(s)

AddDateTimeTypeFile
0 = Date will be added to the filename
1 = Time will be added to the filename
2 = Datetime will be added to the filename

CompressFiles
0 = Do not compress files
1 = Compress files

SingleArchiveFile
0 = Create separate archive file for each of the databases (see Databases section 61)
1 = Compress all the script files into a single archive file

SingleArchiveFileName
File name (if **SingleArchiveFile** = *1*)

SingleArchiveVolumeSize
Sets the size of an archive volume in bytes by default, kilobyte if the value is followed by 'K' and megabyte if the value is followed by 'M'.

AddDateTimeToArc
0 = Do not add the current date and time to the archive name(s)
1 = Add the current date and time to the archive name(s)

AddDateTimeTypeArc
0 = Date will be added to the archive name
1 = Time will be added to the archive name
2 = Datetime will be added to the archive name

InitialDir
The path to the directory where the script files are to be saved by default

AddFolderWithDate
0 = Do not create a folder with the current date and time as the name inside the default directory (which is specified in the **InitialDir** parameter)
1 = Create a folder with the current date and time as the name inside the default directory (which is specified in the **InitialDir** parameter)

AddDateTimeTypeFolder
0 = Date will be added to the folder name
1 = Time will be added to the folder name
2 = Datetime will be added to the folder name

See also:

General and Connection sections 54
Common Options section 55
Extract Options section 56
Scheduled Task sections 59
Data Query sections 60

Databases section 61

3.2.5 Scheduled Task sections

Section **[#ScheduledTask#]** stores values set on Step 8 38 of Wizard application 23.

The configuration parameters are listed below.

TaskType
0 = Run the scheduled task once
1 = Run the scheduled task daily
2 = Run the scheduled task weekly
3 = Run the scheduled task monthly

ScheduledPrefIndex
0 = Run extraction now
1 = Run extraction now and create Windows scheduled task
2 = Create Windows scheduled task only

SchellTime
Stores the scheduled task execution time

ScheduledDate
Stores the scheduled task execution date (applicable only for **TaskType** = *0*)

WeeklyList
The days of the week when the task is scheduled to run (applicable only for **TaskType** = *2*)
The value of this option is a list of zero ("0") and one ("1") values
Each value corresponds to a certain day of the week in the following order:
Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
e.g. *WeeklyList=1,0,0,0,1,0,0* indicates running scheduled task weekly on Mondays and Fridays

DaysList
The days of the month when the task is scheduled to run (applicable only for **TaskType** = *3*)
The value of this option is a list of zero ("0") and one ("1") values
Each value corresponds to a certain day of the month in the calendar order

SeparateTask (applicable only for **TaskType** = *3*)
0 = Create a single scheduled task for all selected days of the month
1 = Create a separate scheduled task for each selected day of the month

TaskDomain
Windows domain of the user specified to run the scheduled task

TaskUserName
Windows user name specified to run the scheduled task

TaskPassword
Windows user password specified to run the scheduled task

NotCloseConsole
0 = Close the console window after execution of the scheduled task
1 = Do not close the console window after execution of the scheduled task

Section **[#Comment#]** stores your comment for the template file

e.g. *Line0 = Template1 for metadata and data extraction*

See also:
General and Connection sections 54
Common Options section 55
Extract Options section 56
File Options section 57
Data Query sections 60
Databases section 61

3.2.6 Data Query sections

The following two sections of the template store data query options set on Step 6 33 of Wizard application 23.

The configuration parameters are listed below.

[#Limits#]
Stores parameters in the following format: <database name>.<schema name>.<table name> = <records limit>

[#WhereClauses#]
Stores parameters in the following format: <database name>.<schema name>.<table name> = <WHERE clause>

See also:
General and Connection sections 54
Common Options section 55
Extract Options section 56
File Options section 57
Scheduled Task sections 59
Databases section 61

3.2.7 Databases section

This section of DB Extract template contains the list of the database objects specified for extraction, and particular extraction parameters.

The configuration parameters are listed below.

OutputFileName
The name of the result **.sql* script file (if **SingleFile** = *0*, see File Options section 57)

ArchiveFileName
The name of the result **.zip* archive file (if **SingleArchiveFile** = *0*, see File Options section 57)

The list of the objects specified for extraction is represented in the following format:

<ObjectType>Count
Stores the number of selected objects of this type, or equals to the **'ALL'** string value (which means that all objects of this type are to be extracted)

TablesXX
Each parameter of this type stores the name of the table specified for metadata extraction (**XX** stands for the table unique identifier, e.g. *Tables0 = TestDB.TestSchema.Account*)

The list of objects that are included into the databases section is taken from the **ExtractMetadataFrom** parameter value (see Common Options section 55 and Step 3 28 of the GUI application)

Next is list of tables to extract their data in the following format.

DataTablesCount
Stores the number of tables specified for data extraction, or equals to the **'ALL'** string value (which means that data from all tables of the database are to be extracted)

DataTablesXX
Each parameter of this type stores the name of the table specified for data extraction (**XX** stands for the table unique identifier, e.g. *DataTables0 = TestDB.TestSchema.Address*)

See also:
General and Connection sections 54
Common Options section 55
Extract Options section 56
File Options section 57
Scheduled Task sections 59
Data Query sections 60

Part

4 Appendix

4.1 SSH tunneling options

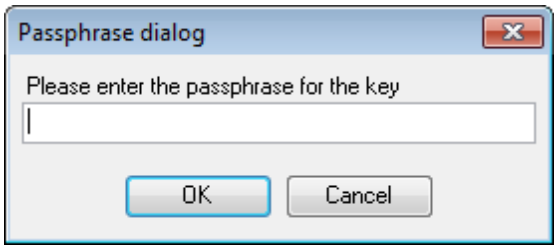
To setup the connection via **SSH tunnel**, input the following values in the corresponding fields:

- **SSH host name** is the name of the host where SSH server is running
- **SSH port** indicates the port where SSH server is activated
- **SSH user name** stands for the user on the machine where SSH server is running (Note: it is a Linux/Windows user, not a user of PostgreSQL server)
- **SSH password** is the Linux/Windows user password

Please note that PostgreSQL **host name** should be set relatively to the SSH server in this case. For example, if both PostgreSQL and SSH servers are located on the same computer, you should specify *localhost* as **host name** instead of the server external host name or IP address.

☑ **Use Private Key for authentication**
If the SSH encryption is enabled on the SSH server, a user can generate a pair of cryptographic keys (the **Private key** and the **Public key**). The **Public key** is placed on the SSH server, and the **Private key** is the part you keep secret inside a secure box that can only be opened with the correct passphrase (or an empty string as the passphrase). When you wish to access the remote system, you open the secure box with your passphrase (if any), and use the private key to authenticate yourself with the Public key on the remote Linux computer.

SSH Key file
Specify the location (the secure box) of the **Private key** file on your local machine. Supported Private Key file formats are:
OpenSSH
Putty
SSH.com
Note that you need to trust your local machine not to scrape your passphrase or a copy of your Private key file while it is out of its secure box.



4.2 HTTP tunneling options

To use **HTTP tunneling**, just upload the tunneling script to the webserver where PostgreSQL server is located, or to any other webserver from which direct connections to your PostgreSQL server are allowed. This script exposes the PostgreSQL API as a set of web-services used by DB Extract for PostgreSQL.

In case of using this connection method the response will be slower as compared to the direct connection or the SSH Tunneling method, since the data are XML encoded and HTTP is stateless by nature. However, all the features of DB Extract for PostgreSQL are available.

Note that the *emsproxy.php* script file is included into the distribution package and can be found in DB Extract installation directory.

Credits

Software Developers:

Alex Karpovich

Dmitry Schastlivtsev

Alexey Butalov

Alexander Zhiltsov

Technical Writers:

Semyon Slobodenyuk

Dmitry Doni

Olga Ryabova

Cover Designer:

Tatyana Makurova

Translators:

Anna Shulkina

Serge Fominikh

Team Coordinators:

Dmitry Schastlivtsev

Alexander Chelyadin

Roman Tkachenko