

Data Import for Interbase/Firebird User's Manual

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Data Import for Interbase/Firebird User's Manual

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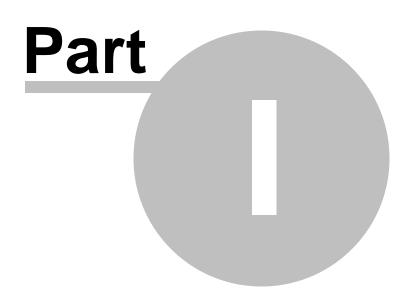
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Table of Contents

Part I	Welcome to EMS Data Import utility!	6
	What's new	7
	System requirements	8
	Installation	
	How to buy Data Import	
	How to register Data Import	
	EMS Data Import FAQ	
	Other EMS Products	16
Part II	Wizard application	23
	Working with wizard application	24
	Getting started	
	Step 1 - Setting connection properties	
	Selecting registered database	
	Step 2 - Selecting files to import	
	Step 3 - Setting XML file type	
	Step 4 - Mapping fields	
	MS Excel 97-2003 MS Excel	
	MS Word	
	MS Access	
	DBF	
	XML	
	XML Document	
	TXT	
	CSV	
	HTML	
	ODS	
	Step 5 - Setting base data formats	
	Format specifiers Step 6 - Settings data formats for each field	
	Step 7 - Specifying import mode	
	Step 8 - Selecting key columns	
	Step 9 - Setting common options	
	Step 10 - Defining scripts	
	Step 11 - Start of data import process	65
	Using data import configuration files	67
	Setting program preferences	69
	General	-
	Skipped steps	
	Languages	

Part III	Console application	77
	Working with console application	
	Configuration file format	80
Part IV	Appendix	84
	Supported file formats	84
	SSH tunneling options	85
	Add/Edit field	86
	Add/Edit Range	88

4



1 Welcome to EMS Data Import utility!

EMS Data Import for Interbase/Firebird is a powerful program to import your data quickly from MS Excel, MS Word, MS Access, DBF, TXT, CSV, Open Document, HTML files to Interbase/Firebird tables. It provides adjustable import parameters, including source data formats for all the fields and destination data formats for the selected fields, commit options, number of records to skip, etc. Data Import for Interbase/Firebird includes a wizard which allows you to set all the import options for different files visually, and a command-line utility to execute import in one-touch.

Visit our web-site: <u>https://www.sqlmanager.net/</u> for details.

Key features

6

- Import from most popular formats: MS Excel, MS Access, XML, DBF, TXT, CSV, MS Word, Open Document Format and HTML
- Importing data to one or several tables or views from different databases
- Automatically creates table structure
- Special batch insert commands allow to import data at the maximum possible speed
- A number of import modes Insert All, Insert New, Insert or Update, and others
- Secure Shell (SSH) tunneling support
- Adjustable import parameters for each source file
- Saving all import parameters set on current wizard session
- Command-line utility to import data using the configuration file
- Powerful visual options module
- User-friendly localizable wizard interface

Product information

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

1.1 What's new

Version Data Import for Interbase/Firebird 4.1.0 Release date

July 12, 2023

What's new in EMS Data Import?

- Support for Windows 11 ARM implemented.
- Restart of the Wizard is now available at the last step.
- Check for column name length added on creating a new table.
- Default values for separator and quotes are available for CSV now.
- The password is now saved correctly to the template file.
- XML files without header are now processed with no issues.
- Implemented localization in the command-line version.
- Exit codes are corrected for working in the console version.
- Other improvements and fixes.

7

1.2 System requirements

System requirements for Data Import for Interbase/Firebird

- Microsoft® Windows XP, Microsoft® Windows 2003 Server, Windows® 2008 Server, Microsoft® Windows Vista, Microsoft® Windows 7, Microsoft® Windows 8, Microsoft® Windows 2012 R2 Server, Microsoft® Windows 2012 Server, Microsoft® Windows 8.1, Microsoft® Windows 10, Microsoft® Windows 2016 Server, Microsoft® Windows 2019 Server, Microsoft® Windows 11, Microsoft® Windows 11 ARM
- 512 MB RAM or more
- 50MB of available HD space for program installation
- 32-bit Interbase/Firebird client library
- Possibility to connect to any local or remote Interbase/Firebird server
- Supported InterBase and Firebird server versions: InterBase up to 2020; Firebird - up to 5.0

1.3 Installation

If you are **installing Data Import for Interbase/Firebird for the first time** on your PC:

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

Installation FAQs

If you want to **upgrade an installed copy of Data Import for Interbase/Firebird** to the latest version:

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

See also:

System requirements

9

1.4 How to buy Data Import

10

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 <u>PayPro Global Shopper Support</u>, 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.

To obtain **MORE INFORMATION** on this product, visit us at <u>https://www.sqlmanager.net/</u> products/ibfb/dataimport

Product distribution	PayPro Global
EMS Data Import for Interbase/Firebird (Business license) + 1-Year Maintenance*	
EMS Data Import for Interbase/Firebird (Business license) + 2-Year Maintenance*	
EMS Data Import for Interbase/Firebird (Business license) + 3-Year Maintenance*	Dung Norma
EMS Data Import for Interbase/Firebird (Non-commercial license) + 1- Year Maintenance*	- <u>Buy Now!</u>
EMS Data Import for Interbase/Firebird (Non-commercial license) + 2- Year Maintenance*	
EMS Data Import for Interbase/Firebird (Non-commercial license) + 3- Year Maintenance*	
EMS Data Import for Interbase/Firebird (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
- Access to personalized sqlmanager.net account
- online, speed-through maintenance renewal
- Advanced and exclusive notification of software promotions

• "Maintenance Owner ONLY" product promotions

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 Data Import 12

1.5 How to register Data Import

12

To **register** your newly purchased copy of EMS Data Import for Interbase/Firebird, 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 <u>startup page</u> 24.

Register Data Import for InterBase and Firebird	×
Please enter the registration information you received when purchasing Data Import for InterBase and Firebird.	
Registration <u>N</u> ame	
Registration <u>K</u> ey	

See also: How to buy Data Import

1.6 EMS Data Import FAQ

13

Please read this page attentively if you have questions about Data Import for Interbase/ Firebird.

Table of contents

- What is EMS Data Import for InterBase/Firebird? [13]
- What do I need to start working with EMS Data Import for InterBase/Firebird? [13]
- What is the difference between the Import feature of SQL Manager for InterBase/ Firebird and the Data Import for InterBase/Firebird utility?
- Are there any limitations implied in the trial version as compared with the full one?
- What is the easiest way to configure the template files for the Data Import console application?
- <u>I work behind a firewall (router)</u>. Can EMS Data Import connect to a remote Interbase/ <u>Firebird server?</u>
- Why cannot I connect to the local InterBase/Firebird Server? 13 Why cannot I connect to a remote InterBase/Firebird server? 13

Question/answer list

- Q: What is EMS Data Import for Interbase/Firebird?
- A: EMS Data Import for Interbase/Firebird is a powerful tool to import your data quickly from MS Access, MS Excel, DBF, TXT, CSV, XML, MS Excel 2007, MS Word 2007, HTML, ODF files to Interbase/Firebird tables. It provides adjustable import parameters, including source data formats for all the fields and destination data formats for the selected fields, commit options, number of records to skip, etc. Data Import includes a wizard which allows you to set all the import options for different files visually, and a command-line utility to execute import in one-touch.
- Q: What do I need to start working with EMS Data Import for Interbase/Firebird?
- A: First of all, you must have a possibility to connect to some local or remote Interbase/ Firebird server to work with Data Import. You can download Interbase/Firebird database server from <u>https://www.embarcadero.com/products/interbase</u> (the latest commercial version of InterBase server) or Firebird client and server from <u>https:// www.firebirdsql.org</u>. Besides, you need your workstation to satisfy the <u>system</u> requirements of Data Import for Interbase/Firebird.
- Q: What is the difference between the Import feature of SQL Manager for Interbase/ Firebird and the Data Import for Interbase/Firebird utility?
- A: First of all, Data Import for Interbase/Firebird works faster as it is a considerably lighter application. Besides, it provides additional features for query building, namely:
 - import data to several tables simultaneously;
 - import data to tables selected from different databases;
 - the command-line version of the utility to import data using the configuration (template) file with all import settings;
- automatically creates table structure.

Q: Are there any limitations implied in the trial version as compared with the full one? A: Actually the trial version of the utility only allows you to import 20% of records into each table. With this limitation, you can test all the features implemented in Data Import for Interbase/Firebird within the 30-day trial period.

Note: There is a 100 records (instead of 20%) limitation when importing from CSV, TXT or MS Access files.

- Q: What is the easiest way to configure the template files for the Data Import console application?
- A: You can configure the template files for each table visually using the Data Import Wizard application. Set the required options and select the Tools | Save Template menu item. All the options will be saved to the template file which can be used by the console application.
- Q: I work behind a firewall (router). Can EMS Data Import connect to a remote Interbase/Firebird server?
- A: If due to the security policy accepted in your corporate network or by your host provider you cannot connect to your PostgreSQL server directly through TCP/IP (for example a firewall prevents this), you can use SSH or HTTP tunneling feature of SQL Manager to fulfill your task.
- Q: Why cannot I connect to the local InterBase/Firebird server?
- A: There are several reasons why you cannot connect to the local database. If during connection you get the error "Connection failed. Server is stopped or unproper client library is used to establish connection to the server. SQLCode: -904 IB Error Number: 335544375", then you should check if the port or service used for server connection is set correctly and if a local server is running. To check if the service is launched, open Control Panel- >Administrative Tools- >Services and find service InterBase Guardian (if you use InterBase) or Firebird Guardian (if you use Firebird). In case you find it, run it with the Start button or use Start item in the context menu. If you cannot launch this service, then probably your server is installed incorrectly and you need to reinstall it. Another possible reason for this error is that the client library version does not coincide with the server version. If you get the error like "Your user name and password are not defined. Ask your database administrator to set up a Firebird login. SQL Code: -902 IB Error Number: 335544472" then the reason for this is that the registration data you enter are absent in your server security database. You should register the user with the proper login and password on your server.
- Q: Why cannot I connect to a remote InterBase/Firebird server?
- A: There could be several possible reasons that prevent you from successful connection to remote database. If the error message says "Connection failed. Server is stopped or unproper client library is used to establish connection to the server. SQLCode: -904 IB Error Number: 335544375" then probably you should check the correctness of port and host name you've entered and also if the remote server is run. It often happens that the port through which the connection is set with InterBase/Firebird server (normally, it's 3050) is closed for the security reasons by local firewall, corporate firewall or remote server firewall. Please check this with your system administrator or ISP. In order to avoid this limitation you can use SSH tunnel (50, 55).

If the error message says "Your user name and password are not defined. Ask your

database administrator to set up a Firebird login. SQL Code: -902 IB Error Number: 335544472", then the reason is that the user doesn't have permission to access the database. You should register the user with the proper login and password on your server.

Scroll to top 13

If you still have any questions, contact us at <u>Support Center</u>.

1.7 Other EMS Products

Quick navigation



MySQL

16

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 16

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 SOL Backup for SOL 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 16

PostgreSQL

18

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



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 16

InterBase / Firebird

SOL 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.



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 16

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.

<u>Data Pump for Oracle</u>

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

5

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 16

IBM DB2

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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.



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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 16

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

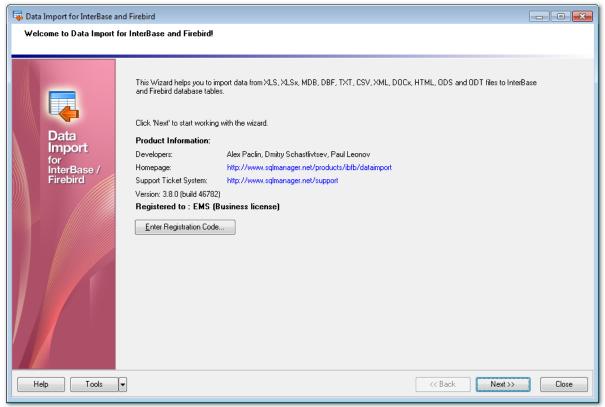
Advanced Localizer for RAD Studio VCL is an indispensable component for Delphi for adding multilingual support to your applications.

Scroll to top 16



2 Wizard application

Data Import for Interbase/Firebird wizard application provides easy-to-use wizard interface to set all data import parameters visually.



Working with wizard application [24] Using configuration files [67] Setting program preferences [69]

See also:

Console Application 77

2.1 Working with wizard application

Follow the steps of the wizard to import data to Interbase/Firebird tables for your needs.

Getting started 24
Step 1 - Setting connection properties 25
Step 2 - Selecting files to import 28
Step 3 - Setting XML file type 32
Step 4 - Mapping fields 32
<u>Step 5 - Setting base data formats</u>
Step 6 - Setting data formats for each field 56
Step 7 - Specifying import mode 60
Step 8 - Selecting key columns to exclude from import process 62
Step 9 - Setting common options
Step 10 - Defining scripts to execute before and after import 64
Step 11 - Start of data import process 65

See also:

24

<u>Using data import configuration files</u> ଜିମ୍ବି <u>Setting program preferences</u> ଜିବି

2.1.1 Getting started

This is how Data Import for Interbase/Firebird **wizard application** looks when you first start it.

This page allows you to view registration information. If you have not registered Data Import for Interbase/Firebird yet, you can do it by pressing the **Register** button and <u>entering your registration information</u> [12].

📮 Data Import for InterBase	and Firebird
Welcome to Data Import	for InterBase and Firebird!
Data Import for InterBase / Firebird	This Wizard helps you to import data from XLS, XLSx, MDB, DBF, TXT, CSV, XML, DOCx, HTML, ODS and ODT files to InterBase and Firebird database tables. Click 'Next' to start working with the wizard. Product Information: Developers: Alex Paclin, Dmitry Schastlivtsev, Paul Leonov Homepage: http://www.sqlmanager.net/products/blb/dataimport Support Ticket System: http://www.sqlmanager.net/support Version: 3.8.0 (build 45782) Briter Registration Code
Help Tools	▼ <<< Back Next >> Close

Press the **Next** button to proceed to <u>Setting connection properties</u> 25.

See also:

How to buy Data Import 10

2.1.2 Step 1 - Setting connection properties

At this step you should specify necessary settings to establish **connection** to the target Interbase/Firebird database.

🐺 Data Import for InterBase	e and Firebird				- 🗆 X
Step 1 of 11					
Set InterBase and Fireb	ird server connectio	n options			
		Con	nectio	n Properties	
	Host	tester1	~	Login	SYSDBA
	Port	3050	~	Password	•••••
	Role			Authentication	~
Data Import	Protocol	TCP/IP	~	Database file	D:\Shared\DB\C1.FDB
for InterBase /	Client library	D:\Shared\LIBS\fb3_0\fbclient.dll	2	<u>E</u> mbedded root	C:\Program Files (x86)\Firebird\Firebird_2_5
Firebird	Client certificate		2	CA file	ibservercafile.pem 🧧
	Passphrase file	D:\Store\passphrase.key	2	CA path	D:\Store\
	Passphrase				
	Don't use tunne	eling			
	O Connect through	gh the Secure SHell (<u>S</u> SH) tunnel			
	SSH <u>h</u> ost	localhost	\sim	SSH <u>l</u> ogin	tester
	SSH <u>p</u> ort		22 🔺	SSH pa <u>s</u> sword	•••••
	🗹 Use Private Key	for authentication			
	SSH <u>k</u> ey file	C:\SSHKeys\dsa_key.ppk			21
Help Tools	-				<< Back Next >> Close

Connection settings

For connection you should enter Interbase/Firebird host name in the **Host** field and specify the preferable **Network protocol** (*TCP/IP*, *NetBEUI*, *Novel SPX*). The **Host** drop-down list contains the list of already registered hosts. For both types you should enter Interbase/Firebird port to connect through in the **Port** field.

Afterwards you should specify *authorization* settings: **Login** and **Password**. The default superuser name is 'SYSDBA' and the default password is 'masterkey'.

You also need to specify the path to the **Client library** and the path to the **Database** file (*.gdb for InterBase or *.fdb for Firebird) in the corresponding fields. For successful connection to the server it is crucial to use the appropriate client library - the one that is compatible with the server you are using: gds32.dll for InterBase and fbclient.dll for Firebird. Please note that the client library file must be located on your local machine (e.g. in the directory where the utility is installed). Bear in mind that the path to the database file should be set relatively to the Interbase/Firebird server file system.

If you are using the EMS SQL Management Studio for Interbase/Firebird version of Data Import for Interbase/Firebird 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 <u>Select Host or Database</u> [27] dialog.

Please note that you need to have sufficient privileges to be able to write to the destination database on Interbase/Firebird server.

Tunneling settings

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

- SSH host is the name of the host (IP address) where SSH server is running
- **SSH port** indicates the port where SSH server is activated (default is "22")
- **SSH login** stands for the user on the machine where SSH server is running (**Note:** it is a Linux/Windows user, not a user of Interbase/Firebird server)
- SSH password is the Linux/Windows user password

W 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

556.000

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.

Passphrase dialog	×
Please enter the passphrase for the key	
OK Cancel	

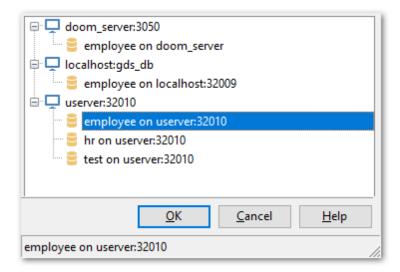
If you get any difficulties connecting to the database, it can be useful to look through FAQs [13].

NOTE: The **Tools** button gets access to saving/loading import templates or adjusting program <u>Preferences</u> लिंगे.

When you are done, press the **Next** button to proceed to the <u>next step</u> 28.

2.1.2.1 Selecting registered database

Use this dialog to select a database for importing data. This dialog is available only in EMS SQL Management Studio version of Data Import for Interbase/Firebird.



All databases registered in EMS SQL Management Studio for Interbase/Firebird are displayed in the list.

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

Database registration information will be filled on the <u>first step</u> [25] automatically.

2.1.3 Step 2 - Selecting files to import

At this step you should **select source file(s) to be imported**.

Click the **Add File** button to select the source file name using the **Open file...** dialog. Repeat this operation to add more source files (if necessary).

You can choose among the following types of the source data file:

- MS Excel
- MS Excel 2007
- MS Word 2007
- MS Access
- DBF
- TXT
- CSV
- HTML
- XML Data Packet
- XML MS Access
- XML Doc
- ODS
- ODT

The open file dialog allows you to set a filter on the source file format.

If you have selected the file of a format that is not supported the **Select Import Type** dialog appears.

File name:	
C:\EMS\Data files\public_a	ll_types2.dbt
Import Type	
MS Excel 97-2003	O MS Excel
O MS Access	O MS Word
○ DBF	
O TXT ○	○ XML Document
⊖ CSV	○ ODS
◯ XML	
Associate Extension	

Here you can select which import type for supported file formats should be applied to import the selected file.

To delete a file from the list, select it and click the **kernove File** button.

You can also change the order of the source files in the list using the **Up** and the **Down** buttons.

Selected Files								
🛃 Add file 🚽 🙀 Remove file	•							
File	Table							
C:\EMS\docs\COUNTRY.xls	DEMODB.HumanResources.COUNTRY							
C:\EMS\docs\CUSTOMER.mdb	DEMODB.HumanResources.CUSTOMER							
La C:\EMS\docs\DEPARTMENT.ods	DEMODB.HumanResources.DEPARTMENT							
E:\EMS\docs\DISCOUNTS.odt	DEMODB.HumanResources.DISCOUNTS							
C:\EMS\docs\EMPLOYEE.xlsx	DEMODB.HumanResources.EMPLOYEE							
C:\EMS\docs\JOB.csv	DEMODB.HumanResources.JOB							
C:\EMS\docs\PAYMENT.xml	DEMODB.HumanResources.PAYMENT							
C:\EMS\docs\PRODUCT.docx	DEMODB.HumanResources.PRODUCT							
C:\EMS\docs\PROJECT.dbf	DEMODB.HumanResources.PROJECT							
L								

Note: For the spreadsheet files: if you need to import data from different sheets into different tables you are to include that multi-sheet spreadsheet file into the list several times (equal to the number of sheets to be imported to different tables).

When a file is selected the **Select Table** dialog appears:

🐺 Select Table			×				
C:\EMS\Data files3\COUNTRY.xls							
Database:	D:\\TES	TER1_01.GDB					
O Insert into ex	isting table		Refresh				
COMPAN	PTIONS LES 1 pes		^				
F_ARTICL			~				
Create new t	able						
COUNTRY							
		ОК	Cancel				

File name

Displays the name of the imported file and full path.

The **Database** value is taken from the previous step.

Insert into existing table

Select this option to import data to the existing table. The active area contains the list of tables in the selected database. You can refresh the list by clicking the **Refresh** button.

Create new table

Use this option to create import destination table.

To change the target Interbase/Firebird table that has been already assigned to a source data file, select the table in the list and press the ellipsis is button to call the **Select Table** dialog again.

When you are done, press the **Next** button to proceed to the <u>next step</u> 32° .

2.1.4 Step 3 - Setting XML file type

32

This step appears if you have selected **.xml* file for importing data from.

Files ⊉ _HRDEPARTMENTmdt ✓ ≌ HR_EMPLOYEE.xml ✓	XML file type	XML MS Access	
	IXML Data Packet	🔿 XML Doc File	
Database: DemoDB Tables: "HR"."EMPLOYEE"			

XML file type

Select the type of **.xml* file from which you are importing data:

 Auto Detect - file type will be detected automatically whether it is XML MS Access or XML data packet file;

 XML MS Access - select this option if your *.xml file has the same structure as files exported from MS Access;

 XML Data Packet - select this option if your *.xml file has data representation format used by Embarcadero;

XML Doc File - select this option to map fields of a <u>Generic XML document</u> [42] manually.

When you are done, press the **Next** button to proceed to the <u>next step</u> 32^{1} .

2.1.5 Step 4 - Mapping fields

This step of the wizard allows you **to set correspondence** between columns of the source file and fields of the target Interbase/Firebird table, according to the source data format.

- <u>MS Excel 97-2003</u> 33
- <u>MS Excel mapping</u> 34
- <u>MS Word mapping</u> 37
- <u>MS Access mapping</u> [38]
- DBF mapping 39
- XML mapping 41

- XML Document mapping 42
- TXT mapping 44
- <u>CSV mapping</u> 45
- HTML Document 47
- ODS mapping 48
- ODT mapping 50

To get more information about the file formats, see the <u>Supported file formats</u> at page.

When you are done, press the **Next** button to proceed to the <u>next step</u> 51.

2.1.5.1 MS Excel 97-2003

Table

Select the sheet for importing data from.

Select the needed source file from the list. Then specify ranges in the grid for the target and source fields:

- select a field of the target Interbase/Firebird table in the Fields list;
- proceed to the sheet grid: click a column caption to select the whole column or click the row number to select the whole row;
- the selected column/row of the source file gets green highlight, and a new range indicating the source and target fields correspondence appears in the **Range** list;
- repeat the operation for all the fields you need to be included in the import process.

If the source file and the destination Interbase/Firebird table have the same order of

columns, you can use the **Auto Fill Columns** mode (default) to set correspondence between them automatically. If source file and destination Interbase/

Firebird table have different order of columns but identical names you can use the **Auto Fill by Captions** mode to set the correspondence based on name's identity. You

can also use the **Auto fill Rows** to set the correspondence between destination table fields and source file rows.

If new table creation was selected at the previous step 28, then fields needed for the import procedure will be created automatically.

You can <u>manage destination table fields</u> if needed. Use the corresponded context menu item to **New/Edit/Drop** field.

New columnEdit columnDrop column(s)

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

If necessary, you can choose to skip a defined number of the source file columns and/or rows using the **Skip Col(s)** and **Skip Row(s)** spin-edits.

Files SALES.html FILM.xlsx DEPARTMENT. EMPLOYEE.do PAYMENT.dbf COUNTRY.xls ACTOR.txt SALARY.csv	* *	•	country_id (country (VA		P]		Range [Sheet 1]A-COLFINISH; Table Sheet 1	~	
CITY.odt		2		51 (a)	1				
CUSTOMER.m	db			Skip row(s)	1	Skip co	ol(s) 0		
			1	Α	B	с			_
			1	country_id	country	last_update			
				1	-	15.02.2006 /			
			3	2	Algeria	15.02.2006 -			
			4	3	American Sa	15.02.2006 4			
			5	4	Angola	15.02.2006 •			
			6	5	Anguilla	15.02.2006 4			
			7	6	Argentina	15.02.2006 4			
			8	7	Armenia	15.02.2006 4			
Database:	sakila		9	8	Australia	15.02.2006 4			
			10	9	Austria	15.02.2006 4			
Tables:	country								\sim

If your spreadsheet file contains several sheets, you are able to set different mapping for each sheet.

To clear ranges for a field, select the field in the Fields list and press the button .	Clear
To clear all ranges specified for the target table fields, press the Clear A l	ll button.

To <u>set a range of data</u> to be imported from the file, use the **Add range** button.

To remove a range, use the **Delete range** button.

Using the **Move Up** and the **Move Down** buttons you can change the order of ranges applied to data.

Click the **Next** button to proceed to the <u>Setting base data formats</u> step of the wizard.

2.1.5.2 MS Excel

Table

Select the sheet for importing data from.

Select the needed source file from the list. Then specify ranges in the grid for the target and source fields:

select a field of the target Interbase/Firebird table in the Fields list;

- proceed to the sheet grid: click a column to assign the column to the selected target table field;
- the selected column of the source file gets gray highlight;
- repeat the operation for all the fields you need to be included in the import process.

If the source file and the destination Interbase/Firebird table have the same order of

columns, you can use the **Auto Fill Columns** mode (default) to set correspondence between them automatically. If source file and destination Interbase/

~

Firebird table have different order of columns but identical names you can use the **Auto Fill by Captions** mode to set the correspondence based on name's identity.

Note: The number of the column for which correspondence was set is displayed at the **Col.** control. You can use it for setting the fields correspondence as well.

If new table creation was selected at the <u>previous step</u> [28], then fields needed for the import procedure will be created automatically.

You can <u>manage destination table fields</u> if needed. Use the corresponded context menu item to **New/Edit/Drop** field.

New column
Edit column
Drop column(s)

If necessary, you can choose to **skip** a defined number of the source file rows or columns using the **Skip lines** or **Skip cols** spin-edit.

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

Files		\$	▼ →>	×	75]	+ -	+			
SALES.html FILM.xlsx DEPARTMENT.ods EMPLOYEE.docx PAYMENT.dbf	~		ilm_id [SMA itle [VARCH lescription [AR] TEXT]			Range 🎹 [sheet1]C1	-COLFINISH			
CUSTOMER.mdb COUNTRY.xls ACTOR.txt SALARY.csv	* * * *	i i	elease_year anguage_id original_langu ental_durati Skip row(s) [[TINYINT] uage_id [TII on [TINYIN	T]		Table sheet1	,			~
RENTAL.xml	~		A	B	C	D	E	F	G	н	^
		1	film_id	title			yea language_id				9
		2	1		A Epic Dram A Astoundin		1	null	6 3	0,99 4.99	-
		4	3		A Astoundin		1	null	7	2,99	-
		5	4		A Fanciful D		1	null	5	2,99	
		6	5		A Fast-Pace		1	null	6	2,99	-
		7	6 7		A Intrepid Pa A Touching		1	null	3	2,99 4.99	•
		<	1	AIRFEANE 3	Arouching	2000	1	(IIIII	0	>	
Database: sakila Tables: film			elect the colu the right cel				row click its nu ft" button.	mber. To sele	ct several ce	lls at on	ice

× To remove a correspondence, select the field in the **Fields** list and press the Clear Field Ranges button.

To remove all correspondences, press the **Clear All Ranges** button.

If your spreadsheet file contains several sheets, you are able to set different mapping for each sheet.

× To clear ranges for a field, select the field in the **Fields** list and press the **Clear** button.

To clear all ranges specified for the target table fields, press the Clear All button.

To <u>set a range of data</u> [88] to be imported from the file, use the **Add range** button.

To remove a range, use the **Delete range** button.

Using the **Move Up** and the **Move Down** buttons you can change the order of ranges applied to data.

Click the **Next** button to proceed to the Setting base data formats [51] step of the wizard.

2.1.5.3 MS Word

37

Specify ranges in the grid for the target and source fields:

- select a field of the target Interbase/Firebird table in the New fields list;
- proceed to the sheet grid: click a column to assign the column to the selected target table field;
- the selected column of the source file gets gray highlight;
- repeat the operation for all the fields you need to be included in the import process.

If the source file and the destination Interbase/Firebird table have the same order of

columns, you can use the **Auto Fill Columns** mode (default) to set correspondence between them automatically. If source file and destination Interbase/

Firebird table have different order of columns but identical names you can use the **Auto Fill by Captions** mode to set the correspondence based on name's identity.

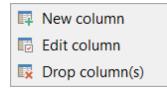
Table

In case the file contains several tables select the require one from the dropdown menu.

The number of the column which correspondence is set for are displayed at the **Grid Column** column. You can use it for setting the fields correspondence as well.

If new table creation was selected at the <u>previous step</u> [28], then fields needed for the import procedure will be created automatically.

You can <u>manage destination table fields</u> if needed. Use the corresponded context menu item to **New/Edit/Drop** field.



If necessary, you can choose to **skip** a defined number of the source file rows using the **Skip lines** spin-edit.

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

Files SALES.html Files Files Files Files Files Files Files Files Files Files Files Files Files Files Files Files Files Files Files Files Files Files Files Fil		New fie EMI FIR: LAS PHC HIR DEP JOB	P_NO [INTEGER ST_NAME [VAR T_NAME [VARC DNE_EXT [INTEC E_DATE [VARCH T_NO [INTEGER _CODE [VARCH	CHAR] CHAR] GER] HAR]				~		
KENTALXMI	~	1	2	3	4	5	6	7	8	۶ ۸
		EMP_NO	FIRST_NAM	LAST_NAME	PHONE_EXT	HIRE_DATE	DEPT_NO	JOB_CODE	JOB_GRADE	J
		2	Robert	Nelson	250	12/28/1988 ·	600	VP	2	U
		4	Bruce	Young	233	12/28/1988 ·	621	Eng	2	U
		5	Kim	Lambert	22	2/6/1989 12:		Eng	2	U
		8	Leslie	Johnson	410	4/5/1989 12:		Mktg	3	U
		9	Phil	Forest	229	4/17/1989 1:		Mngr	3	U
		11	K. J.	Weston	34	1/17/1990 1:		SRep	4	U
		12	Terri	Lee	256	5/1/1990 12:		Admin	4	U
Database: sakila		14	Stewart	Hall	227	6/4/1990 12:	900	Finan	3	L v
New table: employe	ee	<							2	>

To remove a correspondence, select the field in the **New fields** list and press the **Clear** button.

To remove all correspondences, press the **Clear All** button.

Click the **Next** button to proceed to the <u>Setting base data formats</u> step of the wizard.

2.1.5.4 MS Access

Switch between existing **Access table** and custom **Access SQL query** to retrieve data from.

Set correspondence between the source MS Access fields and the target Interbase/ Firebird table fields:

- select a field of the target Interbase/Firebird table in the Table fields list;
- proceed to the sheet grid: click a column to assign the column to the selected target table field;
- the selected column of the source file gets gray highlight;
- repeat the operation for all the fields you need to be included in the import process.

If new table creation was selected at the <u>previous step</u> 28, then fields needed for the import procedure will be created automatically.

You can <u>manage destination table fields</u> if needed. Use the corresponded context menu item to **New/Edit/Drop** field.

Ŗ	New column
	Edit column
	Drop column(s)

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

If you choose a query as the data source, you also can load a SQL query from a *.sql file or save the current query text to a file using the **Load from File...** and the **Save to File...** buttons correspondingly.

Use the **Auto Fill Columns** button to set correspondence between the source and target fields automatically on the basis of their order.

Files]	* -	×	**							
FILM.xlsx			New fields			Ma ^		Acce	ss table			
_	~		CUST_N	io (intege	R]	CUST.		EXPORT	TABLE			$\overline{}$
			CUSTO	MER [VARC	HAR]	CUST			-	1		
EMPLOYEE.docx			CONTA	CT FIRST IN	ARCHAR]	CONT			ss SQL queŋ			
PAYMENT.dbf	~			CT LAST IV	-	CONT	Ρ.					
COUNTRY.xls	~			NO [VARC	-	PHON						\cap
ACTOR.txt	~	5		SS_LINE1 [\	-	ADDR						
a, SALARY.csv				SS_LINE2 [\								
CITY.odt	~			55_LINE2 [1	ANCHAN		_					·
💼 RENTAL.xml	~		CUST_NO	CUSTOMER	CONTACT_F	CONTACT_L	PH	ONE_NO	ADDRESS_I	ADDRESS_L	CITY	5 م
CUSTOMER.mdb		13	1001	Signature De	Dale J.	Little	(61	19) 530-2	15500 Pacifi	i	San Diego	C
		8	1002	Dallas Techr	Glen	Brown	(21	14) 960-23	P. O. Box 47		Dallas	Т
			1003	Buttle, Griffit	James	Buttle	(61	17) 488-1(2300 Newbi	Suite 101	Boston	N
		8	1004	Central Banł	Elizabeth	Brocket	61	211 99 8	66 Lloyd Str		Manchester	
			1005	DT Systems	Tai	Wu	(85	52) 850 43	400 Connau		Central Hong	
			1006	DataServe Ir	Tomas	Bright	(61	13) 229 33	2000 Carling	Suite 150	Ottawa	C
			1007	Mrs. Beauva		Mrs. Beauva			P.O. Box 22	•	Pebble Beac	C
			1008	Anini Vacati	Leilani	Briggs	(80	08) 835-7(3320 Lawai		Lihue	H
			1009	Max	Max		22	01 23	1 Emerald Co		Turtle Island	
			1010	MPM Corpor	Miwako	Miyamoto	38	880 77 19	2-64-7 Sasa		Tokyo	
Database: sakila			1011	Dynamic Inte	Victor	Granges	01	221 16 50	Florhofgass		Zurich	~
New table: custor	mers		<	-							3	>

To remove a correspondence, select the field in the Fields list and press the **Clear** button.

To remove all correspondences, press the **Clear All** button.

Click the **Next** button to proceed to the <u>Setting base data formats</u> step of the wizard.

2.1.5.5 DBF

Set correspondence between the source DBF columns and the target Interbase/Firebird table fields:

• select a field of the target Interbase/Firebird table in the Table Fields list;

- proceed to the grid: click a column to assign the column to the selected target table field;
- the selected column of the source file gets gray highlight;
- repeat the operation for all the fields you need to be included in the import process.

If new table creation was selected at the <u>previous step</u> 28, then fields needed for the import procedure will be created automatically.

You can <u>manage destination table fields</u> if needed. Use the corresponded context menu item to **New/Edit/Drop** field.

New column
Edit column
Drop column(s)

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

Use the **Auto Fill Columns** button to set correspondence between the source and target fields automatically on the basis of their order.

Charset

Use this field to specify the source file character set.

Skip deleted rows

Use the option to exclude records marked as deleted in source DBF file.

Files SALES.html FILM.xlsx DEPARTMENT.ods EMPLOYEE.docx PAYMENT.dbf CUSTOMER.mdb CUSTOMER.mdb ACTOR.txt	custome staff_id rental_id amount	t_id [SMALL er_id [SMALL (TINYINT] d [INTEGER] [DECIMAL] t_date [DAT	INT] PAY LINT] CUS STA REN AMG	MENT_I TOMER FF_ID TTAL_ID DUNT MENT_I	Charset None ☑ Skip d	eleted rows		~
SALARY.csv	last_upd	ate [TIMEST	AMP] LAS					
🖬 CITY.odt 🗸 🗸	PAYMENT_ID	CUSTOMER_	STAFF_ID	RENTAL_ID	AMOUNT	PAYMENT_C	LAST_UPDAT	^
RENTAL.xml 🗸	1	1	1	76	2.9900	25.05.2005	15.02.2006	
	2	1	1	573	0.9900	28.05.2005	15.02.2006	
	3	1	1	1185	5.9900	15.06.2005	15.02.2006	
	8 4	1	2	1422	0.9900	15.06.2005	15.02.2006	
	5	1	2	1476	9.9900	15.06.2005	15.02.2006	
	6	1	1	1725		16.06.2005	15.02.2006	
	7	1	1	2308		18.06.2005	15.02.2006	
	8	1	2	2363		18.06.2005	15.02.2006	
	9	1	1	3284	3.9900	21.06.2005	15.02.2006	
	10	1	2	4526		08.07.2005	15.02.2006	
Database: sakila	11	1	1	4611		08.07.2005	15.02.2006	
Tables: payment	12	1	1	5244	4.9900	09.07.2005	15.02.2006	~

To remove a correspondence, select the field in the Fields list and press the **Clear** button.

To remove all correspondences, press the **Clear All** button.

Click the **Next** button to proceed to the <u>Setting base data formats</u> step of the wizard.

2.1.5.6 XML

Set correspondence between the source XML columns and the target Interbase/Firebird table fields:

- select a field of the target Interbase/Firebird table in the Table Fields list;
- proceed to the grid: click a column to assign the column to the selected target table field;
- the selected column of the source file gets gray highlight;
- repeat the operation for all the fields you need to be included in the import process.

If new table creation was selected at the <u>previous step</u>^[28], then fields needed for the import procedure will be created automatically.

You can <u>manage destination table fields</u> and if needed. Use the corresponded context menu item to **New/Edit/Drop** field.

New column	
Edit column	
Drop column(s)	

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

Use the **Auto Fill Columns** button to set correspondence between the source and target fields automatically on the basis of their order.

Encoding

Use this field to select the file encoding.

Files]	* -	X *						
SALES.html FILM.xlsx	~		Fields		1	Ma ^	Encoding			
	~		🔲 rental_i	id [INTEGER]	r	ental .	Unicode (UTF-8)			\sim
			rental_	date (DATETIME] г	ental				
EMPLOYEE.docx			invento	ory_id [MEDIUM	NT] i	nven				
PAYMENT.dbf	×.			er_id [SMALLIN		usto				
COUNTRY.xls	×.			date [DATETIME]	•					
ACTOR.txt	~	5								
a) SALARY.csv		8	_	date [TIMESTAMF	01	v				
CITY.odt	~	÷.							1	_
RENTAL.xml	 ✓ 	131	rental_id	rental_date	inventory_i	d customer_	id return_date	staff_id	last_update	^
CUSTOMER.mdb		ŝ.	1	24.05.2005 0:00	367	130	26.05.2005 0:00	1	15.02.2006 0:00	
		÷.	2	24.05.2005 22:54	1 525	459	28.05.2005 19:40	1	15.02.2006 21:30	
		÷.	3	24.05.2005 23:03	1 711	408	01.06.2005 22:12	1	15.02.2006 21:30	
		8	4	24.05.2005 23:04	2 452	333	03.06.2005 1:43	2	15.02.2006 21:30	
			5	24.05.2005 23:05	2 079	222	02.06.2005 4:33	1	15.02.2006 21:30	
			6	24.05.2005 23:08	2 792	549	27.05.2005 1:32	1	15.02.2006 21:30	
			7	24.05.2005 23:11	3 995	269	29.05.2005 20:34	2	15.02.2006 21:30	
			8	24.05.2005 23:31	2 346	239	27.05.2005 23:33	2	15.02.2006 21:30	,
			9	25.05.2005 0:00	2 580	126	28.05.2005 0:22	1	15.02.2006 21:30	,
			10	25.05.2005 0:02	1 824	399	31.05.2005 22:44	2	15.02.2006 21:30	
Database: sakila		1	11	25.05.2005 0:09	4 443	142	02.06.2005 20:56	2	15.02.2006 21:30	
Tables: rental			<		1			1		>

To remove a correspondence, select the field in the Fields list and press the $\ensuremath{\textbf{Clear}}$ button.

To remove all correspondences, press the **Clear All** button.

Click the **Next** button to proceed to the <u>Setting base data formats</u> of the wizard.

2.1.5.7 XML Document

In order to set mapping of a Generic XML document, you should first select the desired XML Document in the **Files** list. The tree-like structure of source document is displayed in the area located to the right from the **New fields** list. Select a node in the tree to get its relative path or type the path manually in the editor below (the path must be specified in the XPath format). Upon pressing the **Fill grid** button the grid gets filled with *Sub Nodes Text* or *Attributes* values of the selected node.

Note: if the source XML document contains huge amount of data, building the tree may take a long time.

Set correspondence between the source XML file columns and the target Interbase/ Firebird table fields:

- select a field of the target Interbase/Firebird table in the Fields list;
- proceed to the source grid viewer area: click a column to assign the column to the selected target table field;
- the selected column of the source file gets gray highlight;
- repeat the operation for all the fields you need to be included in the import process.

You can use the **Auto Fill Columns** button to set correspondence between the source and target fields automatically according to their order (mapping is started from the first attribute value in this case).

When you import data to a newly created table, the **Analyze** button appears. Use this button for automatic field creation.

The number of the column which correspondence is set for are displayed at the **Grid Column** column. You can use it for setting the fields correspondence as well.

If necessary, you can choose to **skip** a defined number of the source file lines using the **Skip Lines** spin-edit.

Files E COUNTRY.xls	•	New fields	×	*	Grid Col] []	QueineName	paceSchemaLocation	
CUSTOMER.n DEPARTMEN DISCOUNTS. EMPLOYEE.xl JOB.csv PAYMENT.xm PROJECT.dbf SALES.html	T.ods 🖌 odt Isx 🖌	ity_id city_id city [V/	[DOUBLE] ARCHAR(21) /_id [DOUBI idate [VARC	.E]	3 4 5 6		CITY city_jd city city city city city city_jd city city city_jd ci		-
STORES.txt CITY.xml FILM.docx		Skip line(s)	0			Sub Noc		Fill grid Fill grid Analyze	
		Node name CITY CITY CITY CITY CITY CITY CITY	Text 1,000000A (2,000000Ab 3,000000Ab 4,000000Ac 5,000000Ad 6,000000Ad 7,000000Ad	2,000000 3,000000 4,000000 5,000000 6,000000 7,000000	city A Corua (La Abha Abu Dhabi Acua Adana Addis Abeba Aden	82,000000 101,00000 60,000000 97,000000 31,000000 107,00000	15.02.2006 ! 15.02.2006 ! 15.02.2006 ! 15.02.2006 !		
Database: New table:	DIOMED TESTER.CITY	CITY CITY	8,000000Ad 9,000000Ah		Adoni Ahmadnagai	44,000000 44,000000	15.02.2006 ! 15.02.2006 !		-

To remove all correspondences, press the **Clear All** button.

If you choose to import data to the newly created table, at this step you need to create necessary fields. Use the corresponded context menu item to manage fields [86].

Ŗ	New column
	Edit column
X	Drop column(s)

Note: If table was properly created or already exists, it will be marked with a tick 🛩. If

an error occurs during table creation, this table will be marked with a cross X.

Click the **Next** button to proceed to the <u>Setting base data formats</u> [51] step of the wizard.

2.1.5.8 TXT

Set correspondence between the source text file columns and the target Interbase/ Firebird table fields:

- select a field of the target Interbase/Firebird table in the Fields list;
- double-click in the text viewer area to add vertical separators delimiting the source column bounds;
- click the area between the separators to assign the column to the selected target table field the selected source column gets black highlight;
- repeat the operation for all the fields you need to be included in the import process.

The **Fields** list also allows you to view the following values:

Pos represents the starting point of your selection;

Length displays the width of the selected area.

You can change these parameters manually or by moving the slider in the grid.

If necessary, you can choose to **skip** a defined number of the source file lines using the **Skip lines** spin-edit.

If the source text file and the destination Interbase/Firebird table have the same order of

columns, you can use the **Auto Fill Columns** button to set correspondence between them automatically.

The source file character set can be defined at the **Encoding** field.

Auto scroll

This option scrolls the document automatically when you switch to the next field for mapping.

When you import data to a newly created table, the **Analyze** button appears. Use this button for automatic field creation.

 SALES.html FILM.xlsx DEPARTMENT.ods EMPLOYEE.docx PAYMENT.dbf COUNTRY.xls ACTOR.txt SALARY.csv CITY.odt RENTAL.xml 	× × × × ×	Fields Pos Leng actor_id [SMALLINT] 0 9 first_name [VARCHAR] 9 12 last_name [VARCHAR] 21 13 last_update [TIMESTAMP] 34 15 Skip line(s) 0 •
CUSTOMER.mdb		actor_id first_name last_name last_update 1 PENELOPE GUINESS 15.02.2006 4:34 2 NICK WAHLBERG 15.02.2006 4:34 3 ED CHASE 15.02.2006 4:34 4 JENNIFER DAVIS 15.02.2006 4:34 5 JOHNNY LOLLOBRIGIDA 15.02.2006 4:34 6 BETTE NICHOLSON 15.02.2006 4:34 7 GRACE MOSTEL 15.02.2006 4:34 8 MATTHEW JOHANSSON 15.02.2006 4:34 9 Double-click in the text viewer area to add (remove) vertical separator V

To remove all correspondences, press the

Clear All button.

If you choose to import data to the newly created table, at this step you need to create necessary fields. Use the corresponded context menu item to manage fields [86].

New column	
Edit column	
📑 Drop column(s)	

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

Click the **Next** button to proceed to the <u>Setting base data formats</u> step of the wizard.

2.1.5.9 CSV

Set correspondence between the target table fields and the source CSV file columns:

- select the **Delimiter** and **Quote** characters for CSV files using the corresponding drop-down lists of the **CSV Parameters** group;
- select a field of the target Interbase/Firebird table in the Fields list;
- proceed to the source grid viewer area: click a caption to assign the column to the selected target table field;
- the selected column of the source file gets gray highlight;
- repeat the operation for all the fields you need to be included in the import process.

The source file character set can be defined at the **Encoding** field.

If the source file and the destination Interbase/Firebird table have the same order of

columns, you can use the **Auto Fill Columns** mode (default) to set correspondence between them automatically. If source file and destination Interbase/

Firebird table have different order of columns but identical names you can use the **Auto Fill by Captions** mode to set the correspondence based on name's identity.

When you import data to a newly created table, the **Analyze** button appears. Use this button for automatic field creation.

If necessary, you can choose to **skip** a defined number of the source file rows using the **Skip lines** spin-edit.

The number of the column which correspondence is set for are displayed at the **Grid Column** column. You can use it for setting the fields correspondence as well.

Files SALES.html FILM.xlsx DEPARTMENT.ods FILM.vlsx FILM.xlsx FILM.xlsx COUNTRY.xls ACTOR.txt SALARY.csv CITY.odt	* * * *	CHANG	X INTEGER E_DATE [D/ ER_ID [VAR LARY [VAR T_CHANGE LARY [VAR	ATETIME] CHAR] CCHAR] [FLOAT] CHAR]	Ma 1 2 3 4	Delimiter Quote Encoding Unicode	9 (UTF-8)	; "	> >
RENTAL.xml	~	Skip lin	e(s) 1	▲ ▼				Analyze	
CUSTOMER.mdb			2	3	4	5	6		
		1 EMP NO	-	UPDATER_ID		-	-		
		28	15.12.1992 (20 000.00	10.00	22 000.00		
		2	15.12.1992 (98 000.00	8.06	105 899,98		
		4	15.12.1992 (admin2	90 000,00	8,33	97 499,97		
		5	15.12.1992 (admin2	95 000,00	8,16	102 749,91		
		11	15.12.1992 (admin2	70 000,00	7,50	75 250,00		
		12	15.12.1992 (admin2	48 000,00	7,50	51 600,00		
		14	15.12.1992 (admin2	62 000,00	7,50	66 650,00		
Database: sakila		15	15.12.1992 (admin2	60 000,00	7,50	64 500,00		
New table: salary		20	15.12.1992 (admin2	80 000,00	7,50	86 000,00		~

To remove all correspondences, press the **Clear All** button.

If you choose to import data to the newly created table, at this step you need to create necessary fields. Use the corresponded context menu item to manage fields [86].

Ŗ	New column
	Edit column
	Drop column(s)

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

Click the **Next** button to proceed to the <u>Setting base data formats</u> of the wizard.

2.1.5.10 HTML

Set correspondence between the target table fields and the source HTML file columns:

- select a field of the target Interbase/Firebird table in the New fields list;
- proceed to the source grid viewer area: click a column to assign the column to the selected target table field;
- the selected column of the source file gets gray highlight;
- repeat the operation for all the fields you need to be included in the import process.

If the source file and the destination Interbase/Firebird table have the same order of

columns, you can use the **Auto Fill Columns** mode (default) to set correspondence between them automatically. If source file and destination Interbase/

Firebird table have different order of columns but identical names you can use the **Auto Fill by Captions** mode to set the correspondence based on name's identity.

The number of the column which correspondence is set for are displayed at the **Grid Column** column. You can use it for setting the fields correspondence as well.

If new table creation was selected at the <u>previous step</u> [28], then fields needed for the import procedure will be created automatically.

You can <u>manage destination table fields</u> and if needed. Use the corresponded context menu item to **New/Edit/Drop** field.

New column
🛃 Edit column
Drop column(s)

Table number

Select the number of the table for retrieving data from the dropdown menu. Can be used if the HTML file consists more than one table.

If necessary, you can choose to **skip** a defined number of the source file rows using the **Skip lines** spin-edit.

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

Files		* -	×	×		7				
FILM.xlsx DEPARTMENT.ods EMPLOYEE.docx PAYMENT.dbf CUSTOMER.mdb COUNTRY.xls ACTOR.txt SALARY.csv CITY.odt	> >>>> >		io (Float) Rep (Integ Status (Date (Va Ate (Varc) IEEDED (VA	ier] Varchar] Rchar] 'Har]	Ma ↑ 1 2 3 4 5 6 7	Table nu	~			
RENTAL.xml	~	1	2	3	4	5	6	7	8	^
		PO_NUMBEF			ORDER_STA					C
		V91E0210	1,004	11	shipped		3/5/1991 12:		У	1
		V92E0340	1,004	11	shipped		10/16/1992			7
		V92J1003	1,010	61	shipped		8/4/1992 12:		*	1
		V93J2004	1,010	118	shipped		12/2/1993 1:		-	3
		V93J3100	1,010	118	shipped		8/20/1993 1:		У	1
		V92F3004	1,012	11	shipped		1/16/1993 1:		-	3
		V93F3088	1,012	134	shipped		9/8/1993 12:		n	1
)atabase: sakila		V93F2030	1,012	134	open	12/12/1993	null	null	У	1
New table: sales		<								>

To remove all correspondences, press the **Clear All** button.

Click the **Next** button to proceed to the <u>Setting base data formats</u> atep of the wizard.

2.1.5.11 ODS

The **OpenDocument** format is used by Mobile Office, as well as other well-known desktop applications, such as OpenOffice, StarOffice and KOffice. **ODS** stands for **OpenDocument Spreadsheet** (*.ods).

Specify ranges in the grid for the target and source fields:

- select a field of the target Interbase/Firebird table in the New fields list;
- proceed to the sheet grid: click a column to assign the column to the selected target table field;
- the selected column of the source file gets gray highlight;
- repeat the operation for all the fields you need to be included in the import process.

V

If the source file and the destination Interbase/Firebird table have the same order of

columns, you can use the **Auto Fill Columns** mode (default) to set correspondence between them automatically. If source file and destination Interbase/

Firebird table have different order of columns but identical names you can use the **Auto Fill by Captions** mode to set the correspondence based on name's identity.

The number of the column which correspondence is set for are displayed at the **Grid Column** column. You can use it for setting the fields correspondence as well.

If new table creation was selected at the <u>previous step</u> 28° , then fields needed for the import procedure will be created automatically.

You can <u>manage destination table fields</u> if needed. Use the corresponded context menu item to **New/Edit/Drop** field.

New column
Edit column
Drop column(s)

Table

Select the sheet for importing data from.

If necessary, you can choose to skip a defined number of the source file rows using the **Skip line(s)** spin-edit.

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

Files]	* -	X	**						
SALES.html SALES.html FILM.xlsx DEPARTMENT.c EMPLOYEE.doc PAYMENT.dbf CUITED 150	×		DEPART	io (integei iment (va dept (integei no (integei	RCHAR] GER]	Ma ^ A B C	Table Shee	-		~	·
CUSTOMER.md COUNTRY.xls ACTOR.txt SALARY.csv CITY.odt			BUDGET	I [INTEGER] ON [VARCH NO [VARCI	IAR]	·····					
		÷.	A	В	С	D	E	F	G	,	^
		3	DEPT_NO	DEPARTMEN	HEAD_DEPT	MNGR_NO	BUDGET	LOCATION	PHONE_NO		
		ŝ	000	Corporate H	null	105	1000000	Monterey	(408) 555-1:		
			100	Sales and M	000	85	2000000	San Francis	(415) 555-1:		
			600	Engineering	000	2	1100000	Monterey	(408) 555-1:		
			900	Finance	000	46	400000	Monterey	(408) 555-1:		
			180	Marketing	100	null	1500000	San Francis	(415) 555-1;		
			620	Software Pr	600	null	1200000	Monterey	(408) 555-1:		
			621	Software De	620	null	400000	Monterey	(408) 555-1:		
Database: s	akila	-	622	Quality Assu	620	9	300000	Monterey	(408) 555-1:		
New table: d	epartment		623	Customer St	620	15	650000	Monterey	(408) 555-1:		v

To remove a correspondence, select the field in the **New fields** list and press the **Clear** button.

To remove all correspondences, press the

🛛 🗮 Clear All button.

×

If your OpenDocument Spreadsheet file contains several sheets, you are able to set

different mapping for each sheet.

Click the **Next** button to proceed to the <u>Setting base data formats</u> of the wizard.

2.1.5.12 ODT

The **OpenDocument** format is used by Mobile Office, as well as other well known desktop applications such as OpenOffice, StarOffice and KOffice. **ODT** stands for **OpenDocument Text** (*.odt*).

Table

Select the sheet for importing data from.

Specify ranges in the grid for the target and source fields:

- select a field of the target Interbase/Firebird table in the New fields list;
- proceed to the Table grid: click a column to assign the column to the selected target table field;
- the selected column of the source file gets gray highlight;
- repeat the operation for all the fields you need to be included in the import process.

 ∇

If the source file and the destination Interbase/Firebird table have the same order of

columns, you can use the **Auto Fill Columns** mode (default) to set correspondence between them automatically. If source file and destination Interbase/

Firebird table have different order of columns but identical names you can use the **Auto Fill by Captions** mode to set the correspondence based on name's identity.

Table

In case the file contains several tables select the require one from the dropdown menu.

The number of the column which correspondence is set for are displayed at the **Grid Column** column. You can use it for setting the fields correspondence as well.

If new table creation was selected at the <u>previous step</u>^[28], then fields needed for the import procedure will be created automatically.

You can <u>manage destination table fields</u> if needed. Use the corresponded context menu item to **New/Edit/Drop** field.

Rew column	
Edit column	
Drop column(s)	

If necessary, you can choose to skip a defined number of the source file rows using the **Skip line(s)** spin-edit.

Note: If table was properly created or already exists, it will be marked with a tick \checkmark . If an error occurs during table creation, this table will be marked with a cross \varkappa .

Files SALES.html FiLM.xlsx FILM.xlsx FILM.xlsx FILMPLOYEE.docx	* * * *	city [V/	SMALLINT ARCHAR] id [SMALL Jate [TIMES	.INT]	Ma 1 2 3 4	Table Table1 ~
RENTAL.xml CUSTOMER.mdb	~	Skip lin	e(s) 1	3	4	
		city_id	∠ city	country_id	4 last update	
		1	A Corua (La		15.02.2006 4:45	-
		2	Abha	82	15.02.2006 4:45	-
		3	Abu Dhabi	101	15.02.2006 4:45	-
		4	Acua	60	15.02.2006 4:45	-
		5	Adana	97	15.02.2006 4:45	-
		6	Addis Abeba	31	15.02.2006 4:45	
		7	Aden	107	15.02.2006 4:45	
Database: sakila		8	Adoni	44	15.02.2006 4:45	-
			Ahmadnaga		15.02.2006 4:45	-1

To remove a correspondence, select the field in the **Fields** list and press the **Clear** button.

To remove all correspondences, press the **Clear All** button.

If your OpenDocument Text file contains several tables, you are able to set different mapping for each table.

Click the **Next** button to proceed to the <u>Setting base data formats</u> step of the wizard.

2.1.6 Step 5 - Setting base data formats

This step of the wizard provides a number of options for setting **base formats** for each source data file. The specified format should match the source data representation.

Files CUSTOMER.mdb DEPARTMENT.ods DISCOUNTS.odt MPLOYEE.xlsx JOB.csv PAYMENT.xml PROJECT.dbf SALES.html STORES.txt CITY.xml FILM.docx	Separators Decimal , Thousand #160 Date . Time : Date/Time formats Date dd.MM.yyyy Time h:mm	Constants Boolean true True Boolean false False Null values Null
Database: DIOMED Table TESTER.COUNTR ^v	Skip this step	

Separators

These options set the separator for the source file to ensure correct import. Make sure that they strongly correspond to the source file data.

Decimal

Set a character to delimit the decimal parts of the imported numbers.

Thousand

Set a character to separate the digit groups in the imported numbers.

Date

Set a character to separate the year, month and day parts of date values.

Time

Set a character to separate the hour, minute and second parts of time values.

Constants

Set the values as they are represented in the source file for correct recognition. **Boolean True**

Set one or more variants of TRUE value representation in the imported table, e.g. 'Yes' or '+'. Use a new line for each additional option.

Boolean False

Set one or more variants of FALSE value representation in the imported table, e.g. 'No' or '-'. Use a new line for each additional option.

Null Values

Set one or more variants of NULL value representation in the imported table, e.g. 'Null'.

Use a new line for each additional option.

Date/Time formats

Use these fields to set date and time formats so that they strongly correspond to the source file format for correct processing of data. For more information refer to the Format specifiers [53] page.

NOTE: Date and Time formats only reflect data format view, not separators. Separators must be set in the **Separators** group above.

Skip this step

Check this option to skip the current step in the future. To edit the list of skipped steps, use the **Skipped Steps** group available in the <u>General</u> [70] section of the <u>Preferences</u> [69] dialog.

When you are done, press the **Next** button to proceed to the <u>next step</u> 56.

2.1.6.1 Format specifiers

The following format specifiers are supported in the format string:

Float/Integer format

0

Digit place holder. If the value being formatted has a digit in the position where the '0' appears in the format string, then that digit is copied to the output string. Otherwise, a '0' is stored in that position in the output string.

#

Digit placeholder. If the value being formatted has a digit in the position where the '#' appears in the format string, then that digit is copied to the output string. Otherwise, nothing is stored in that position in the output string.

•

Decimal point. The first '.' character in the format string determines the location of the decimal separator in the formatted value; any additional '.' characters are ignored.

′

Thousand separator. If the format string contains one or more ',' characters, the output will have thousand separators inserted between each group of three digits to the left of the decimal point. The placement and number of ',' characters in the format string does not affect the output, except to indicate that thousand separators are wanted.

E+

Scientific notation. If any of the strings 'E+', 'E-', 'e+', or 'e-' are contained in the format string, the number is formatted using scientific notation. A group of up to four '0' characters can immediately follow the 'E+', 'E-', 'e+', or 'e-' to determine the minimum number of digits in the exponent. The 'E+' and 'e+' formats cause a plus sign to be output for positive exponents and a minus sign to be output for negative exponents. The 'E-' and 'e-' formats output a sign character only for negative exponents.

Date/Time format

С

Displays the date using the format using the Short Date Format, followed by the time using the Long Time Format. The time is not displayed if the date-time value indicates midnight precisely.

d

Displays the day as a number without a leading zero (1-31).

dd

Displays the day as a number with a leading zero (01-31).

ddd

Displays the day as an abbreviation (Sun-Sat) using the strings of the Short Day Names.

dddd

Displays the day as a full name (Sunday-Saturday) using the strings of the Long Day Names.

ddddd

Displays the date using the Short Date Format.

ddddd

Displays the date using the Long Date Format.

е

Displays the year in the current period/era as a number without a leading zero (Japanese, Korean and Taiwanese locales only).

ee

Displays the year in the current period/era as a number with a leading zero (Japanese, Korean and Taiwanese locales only).

g

Displays the period/era as an abbreviation (Japanese and Taiwanese locales only).

gg

Displays the period/era as a full name. (Japanese and Taiwanese locales only).

m

Displays the month as a number without a leading zero (1-12). If the m specifier immediately follows an h or hh specifier, the minute rather than the month is displayed.

mm

Displays the month as a number with a leading zero (01-12). If the mm specifier immediately follows an h or hh specifier, the minute rather than the month is displayed.

mmm

Displays the month as an abbreviation (Jan-Dec) using the strings given of the Short Month Names.

mmmm

Displays the month as a full name (January-December) using the strings of the Long Month Names.

уу

Displays the year as a two-digit number (00-99).

уууу

Displays the year as a four-digit number (0000-9999).

h

Displays the hour without a leading zero (0-23).

hh

Displays the hour with a leading zero (00-23).

n

Displays the minute without a leading zero (0-59).

nn

Displays the minute with a leading zero (00-59).

S

Displays the second without a leading zero (0-59).

SS

Displays the second with a leading zero (00-59).

Z

Displays the millisecond without a leading zero (0-999).

zzz

Displays the millisecond with a leading zero (000-999).

t

Displays the time using the Short Time Format.

tt

Displays the time using the Long Time Format.

am/pm

Uses the 12-hour clock for the preceding h or hh specifier, and displays 'am' for any hour before noon, and 'pm' for any hour after noon. The am/pm specifier can use lower, upper, or mixed case, and the result is displayed accordingly.

a/p

Uses the 12-hour clock for the preceding h or hh specifier, and displays 'a' for any hour before noon, and 'p' for any hour after noon. The a/p specifier can use lower, upper, or mixed case, and the result is displayed accordingly.

ampm

Uses the 12-hour clock for the preceding h or hh specifier, and displays the contents of the TimeAMString global variable for any hour before noon, and the contents of the TimePMString global variable for any hour after noon.

/ Displays the date separator character using the Date Separator.

:

Displays the time separator character using the Time Separator.

'xx'/"xx"

Characters enclosed in single or double quotes are displayed as-is, and do not affect formatting.

2.1.7 Step 6 - Settings data formats for each field

This step of the wizard allows you to set **formats** for each imported field separately, in case additional formatting is required.

Select a field in the list and use the **Field Customization** group to adjust format options that will be applied to this field only: generator value, generator step, constant value, NULL value, default value, function, script, left/right quotation, quotation action, character case, character set.

Generator value

Use this field to set the initial value of the autoincrement field.

Generator step

Set the step of the autoincrement field. If it is 0 or if the field is of *Identity* one, then the value of the generator will be ignored.

Constant value

Use this field to set a constant value for the field.

Null value

Set the value which will be considered as NULL to set the default value.

Default value

Set the default value of the NULL field.

Files		Fie	eld	Field Customization	
🗐 COUNTRY.xls			EMP_NO [SMALLINT]	Generator value	0
DUSTOMER.mdb	b			Generator step	
[🙋 DEPARTMENT.d			LAST_NAME [VARCHAR(20)]	Constant value	
DISCOUNTS.odt			PHONE_EXT [VARCHAR(4)]		
			HIRE_DATE [TIMESTAMP(0)]	Null value	
➡ JOB.csv ■ PAYMENT.xml		0		Default value	
PROJECT.dbf			JOB_CODE [VARCHAR(5)] JOB GRADE [SMALLINT]	Function	None 💌
SALES.html			JOB_GRADE [SMALLIN] JOB_COUNTRY [VARCHAR(15)]	Script	
STORES.txt		:			
CITY.xml			FULL_NAME [VARCHAR(37)]	Left quotation	
FILM.docx				Right quotation	
		:		Quotation action	None 💌
				Char case	As Is 💌
				Char set	As Is 🔻
		:			
			Replac	ements	
		Те	xt to Find Replace With	Ignore C	ase 🔒
Database: D	IOMED				
Table Ti	ESTER.EMPLOYE		Skip this step		

Function

Use the drop-down list to select one of the function return values that can be set in the field: Date, Time, Date&Time, Long File Name, Short File Name.

Script

Press the 🔤 button to add/edit the script in the **Script Editor**.

写 S	cript Editor				_		×
Fiel	d Value For Test	ing					
%сі	urrency_id%	Piotr Tchaikovsky					
5	//to the	value of the l	last variable.				~
6	//The exa	mple shows how	v you can get				
7	//field v	value, convert	it to a numbe	er			
8	//increme	nted by the nu	umber value of	5			
9	//the cur	rent month.					
10	//To run	the example in	nput " Field V	Value For Testi	ing " in		
11	//text ed	litor and uncor	mment the foll	lowing three li	nes.		
12	//R = %cu	rrency_id%;					
13	//var D =	new Date();					
14	//k = par	seInt(R) + D.g	getMonth() + 1	L;			
15	var re_pa	ttern = /(\w+)	\s(\w+)/;				
16	var input	_string = %cur	rrency_id%;				
17	result =	input_string.	replace (re_pat	tern, "\$2, \$1;	');		
							\sim
<						>	
	53: 17	Modified	Insert	Highlighting	Unicode (UC	CS-2)	
	Test Run			Ok		Cancel	

Use the **Script Editor** window to enter the script for the field processing. Here you can use all features of the MS JScript.

The picture above shows the example of the Jscript use for the field *Name* processing. The entered code converts the '*XXXX* YYYY' string to the 'YYYY, *XXXX*' one, for example 'Piotr Tchaikovsky' -> 'Tchaikovsky, Piotr'.

If you want to test your code and see the result of its execution then enter the test field value in the **Field Value For Testing** box and click the **Test Run** button.

If the execution fails you see the message box with the description of an occurred mistake.

If the execution succeeds you see the message box with the result as it is shown on the picture below.

Informati	on 💌
1	Test run succeeded (Result - Tchaikovsky, Piotr)
	OK

Quotation

Left quotation

Set a character or a number of characters to denote quoting in the imported string.

Right quotation

Set a character or a number of characters to denote unquoting in the imported string.

Quotation action

You can select the *Add* item to add quotation marks to the imported string, the *Remove* item to remove all the quotation marks from the imported string, or the *None* item to save the original quotation marks.

String conversion

Char case

Set the case of the imported string. As Is keeps the original string unchanged, Upper sets the whole string to the upper case, Lower sets the whole string to the lower case, UpperFirst sets the first character of the string to the upper case, UpperFirstWord sets the first character of each word to the upper case.

Char set

Set the char set of the imported string to ANSI or OEM. As Is saves the original character set of the string.

The Replacements area allows you to set the text you need to be replaced during data

import into the selected field. Press the **Add Replacement...** button to specify a new replacement options using the **Add Replacement** dialog.

Define the text to replace and the value to replace with in the appeared dialog window. Check the **Ignore Case** option to make replacement case-insensitive.

Replacement	
Text to find ITman	
Replace with IT_Manager	
Ignore Case	OK Cancel

To remove a replacement, select it in the list and click the **Delete Replacement...** button.

Skip this step

Check this option to skip the current step in the future. To edit the list of skipped steps, use the **Skipped Steps** group available in the <u>General</u> [70] section of the <u>Preferences</u> [69] dialog.

When you are done, press the **Next** button to proceed to the <u>next step</u> [60].

2.1.8 Step 7 - Specifying import mode

This step of the wizard allows you to define **the records processing mode** as *Insert All, Insert New, Update, Update or Insert, Delete, Delete or Insert* mode.

Import Mode

- **Insert all**: all records from the source file are inserted into the tables irrespective of whether any records exist in the destination table or not
- **Insert new**: already existing records are skipped, and new records are inserted into the destination table
- Update: all existing records are updated from the source file
- **Update or insert**: already existing records are updated and new records are inserted into the destination table
- Delete: already existing records are deleted
- **Delete or insert**: existing records are deleted and new records are inserted into the destination table

Here is an **example** of some import modes offered by Data Import utility:

DB Table	Source file		file
🗄 ID 💽 DATA 💽		А	В
	1	1	с
2 b	2	2	d
4 f	3	3	e

All import modes (except for the **Insert All** mode) are based on primary key values information. In order to perform import operations with these modes used you need to have matches between the source file primary key column(s) and the destination table primary key column(s).

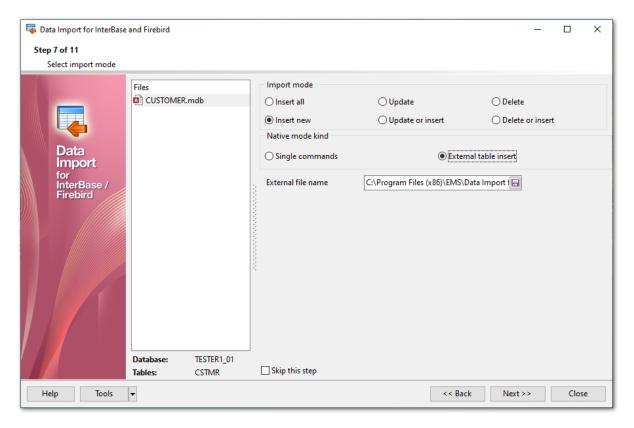
Insert mode	Insert all	Insert new	Update
Result		🗄 ID 💌 DATA 💌	🗄 ID 🔍 DATA 💌
	▶ 1 c	} 1 a	▶ 1 c
	1 a	2 b	2 d
	2 b	3 e	4 f
	2 d	4 f	
	3 e	<u> </u>	
	4 f		

61 Data Import for Interbase/Firebird - User's Manual

Insert mode	Update	e or insert	Delete	Delete or insert
Result	∃ ID [▼ DATA ▼	ID V DATA V	ID 🔽 DATA 🖵
	>	1 c	▶ 4 f	≥ <u>3</u> e
		2 d		4 t
		3 e		
		4 f		

It is applied to all other import modes, except for the **Insert all** mode. For all these modes (except for the **Insert all** mode) it is obligatory to select the primary key fields. This field (or fields) is used as key field to identify specific data in the target database.

The key columns for these operations are defined at the <u>Selecting key columns</u> [62] step of the wizard.



If the *Update* value is selected for Import Mode, then you need to specify the Primary Key field(s) that will serve for data identification of your source file with the data of the target table. The source file must contain the column(s) that will correspond to the Primary Key field of the target table. If the target table contains a record in which the value of the primary key field coincides with the value of the corresponding column of the source table, the data stored in this table record will be updated. You can specify the field(s) which will be used for identification at Step 7 [62] of the wizard. This field(s) will only serve for identification and will not be imported.

Native mode kind

The *Native* mode uses the *Single Commands* method or the *External table insert* method. First method serves to generate and execute single SQL commands on the server. The second mode should be used if the server is installed on your local machine. In this case the defined in the **External file name** field file is created with the necessary data and then this data is copied to the created table be means of the server.

Skip this step

Check this option to skip the current step in the future. To edit the list of skipped steps, use the **Skipped Steps** group available in the <u>General</u> [70] section of the <u>Preferences</u> [69] dialog.

When you are done, press the **Next** button to proceed to the <u>next step</u> 62.

2.1.9 Step 8 - Selecting key columns

This step of the wizard allows you to select the fields of the table to be used as the **key fields** for the import process.

This step is not available if the \bigcirc *Insert* all option has been selected on the previous step $\boxed{60}$.

To select a field, you need to move it from the Available Columns list to the Selected

Columns list. Use the 22 22 22 buttons or drag-and-drop operations to move the fields from one list to another.

Files	Available columns		Selected columns
🕙 COUNTRY.xls	FIRST_NAME		EMP_NO
CUSTOMER.mdb	LAST_NAME		
L DEPARTMENT.ods	PHONE_EXT		
E DISCOUNTS.odt	HIRE_DATE		
EMPLOYEE.xlsx	DEPT_NO		
19 EMPLOYEE.xlsx 19 JOB.csv	JOB_CODE	>>	
🛯 🕮 PAYMENT.xml	JOB_GRADE		
PROJECT.dbf	JOB_COUNTRY	>	
	SALARY		
TORES.txt	BALARY	<	
CITY.xml FILM.docx			
EILM.docx		<<	
Database: DIOMED	, 🔲 Skip this step		
Table TESTER.EMPLOY	, SNP this step		

Skip this step

Check this option to skip the current step in the future. To edit the list of skipped steps, use the **Skipped Steps** group available in the <u>General</u> 70° section of the <u>Preferences</u> 69° dialog.

When you are done, press the **Next** button to proceed to the <u>next step</u> [63].

2.1.10 Step 9 - Setting common options

Using this step of the wizard you can set **final import options**.

Commit

Commit when done

Check this option to commit the transaction after all records are imported.

Commit after each ... records

These control allows you to define the number of records in each block to be supplemented with the COMMIT statement.

Rollback on error

Check this option to rollback the transaction if an error occurred.

Record Count

Import all records

Specifies that all records of the source file will be imported.

Import only ... record(s)

Specifies the number of records to be imported.

Import empty rows

If this option is checked then empty records are imported.

Auto trim values

Check this function to remove all leading and trailing white-space characters from all imported records.

Save Result SQL Script to File

This option allows you to save the result SQL script of the import operation to an external *.sql file on your disk drive.

Specify the script file name and select its location using the button which calls the **Save As...** dialog.

Files COUNTRY.xls CUSTOMER.mdb DEPARTMENT.ods DISCOUNTS.odt EMPLOYEE.xlsx JOB.csv		Commit Commit when done Commit after each 1000 records
PAYMENT.xm PROJECT.dbf SALES.html STORES.txt CITY.xml FILM.docx		Record Count Import all records Import only Import empty rows Auto trim values Save result SQL script to file
		C:\EMS\docs\COUNTRY.sql
Database: Table	DIOMED TESTER.COUNTR	Skip this step

Skip this step

Check this option to skip the current step in the future. To edit the list of skipped steps, use the **Skipped Steps** group available in the <u>General</u> [70] section of the <u>Preferences</u> [69] dialog.

When you are done, press the **Next** button to proceed to the <u>next step</u> 64.

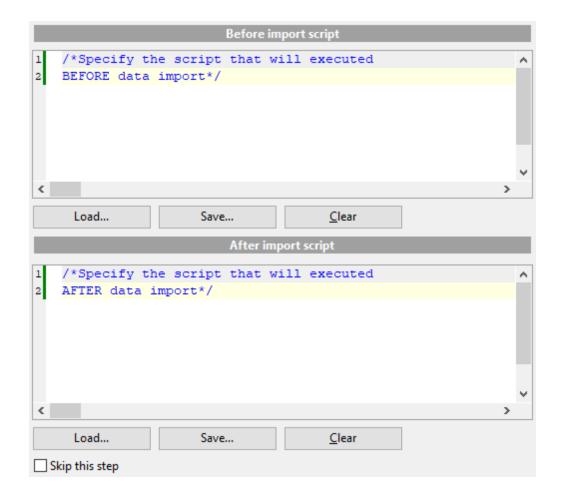
2.1.11 Step 10 - Defining scripts

This step of the wizard allows you to define scripts to be **executed before and after import process** for each database.

Select a database to define the script for. Type the text of the script to be executed before the import operation in the **Before Import Script** area, the script to be executed after the import operation in the **After Import Script** area. Select another database and add scripts for it, if necessary. By default, the After Import

Script is not executed if import fails. If you need to execute it anyway, use the **Execute** after import script on import fail option at Step 11 [65].

You can also save and load *Before Import* and *After Import* scripts using the corresponding **Save...** and **Load...** buttons.



Skip this step

Check this option to skip the current step in the future. To edit the list of skipped steps, use the **Skipped Steps** group available in the <u>General</u> [70] section of the <u>Preferences</u> [69] dialog.

When you are done, press the **Next** button to proceed to the last step [65].

2.1.12 Step 11 - Start of data import process

This step of the wizard is intended to inform you that all import options have been set, and you can start the import process. If everything is correct, press the **Import** button to start the process. If you want to change something, you can return to any of the wizard steps using the **Back** button.

Continue if <u>before import</u> 64 script is executed with errors

Check this option to ignore errors in *Before Script* execution during import.

Execute after import script on import fail

Check this option to execute After import script, specified at $\frac{10}{64}$, not depending on import result. Otherwise the script is not executed if import fails.

Max import threads

Set the value from 0 to 64 to adjust import performance.

🐺 Data Import for InterBase	and Firebird	-		×
Step 11 of 11				
Click the 'Import' butto	on to start data import process			
	✓ Continue if before import script is executed with errors ✓ Execute after import script on import fail Max import threads			
Data	29.04.2022 15:44:37 - Import process started 29.04.2022 15:44:37 - C:\Program Files\Firebird\Firebird_4_0\examples\empbuild\EMPLOYEE.FDB.DEPARTMENT_1: ir C:\EMS\Standart_data_files\DEPARTMENT.xls			n
for InterBase /	29.04.2022 15:44:38 - C:\Program Files\Firebird\Firebird_4_0\examples\empbuild\EMPLOYEE.FDB.DEPARTMENT_1: ir successfully 29.04.2022 15:44:38 - Import process finished successfully	nport fir	nished	
Firebird	Details 21 rows processed from C:\EMS\Standart_data_files\DEPARTMENT.xls			
	21 rows inserted Save log to file			
		_		
Help Tools	< Back Impor	t	Close	2

Save log to file

This button calls the **Save file** dialog which allows you to save the on-screen log to a file.

Clear log

Pressing this button clears the on-screen log area, removing all messages.

If necessary, you can <u>save a template</u> [67] for future use.

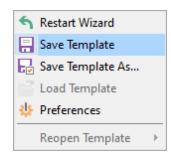
Click the **Import** button to start the import process.

2.2 Using data import configuration files

Data Import for Interbase/Firebird allows you to store its configuration settings in external *.itm template files if you need to perform the data import process repeatedly.

You can load previously saved configuration settings to the application <u>wizard</u>^[23] if you need to make some changes before data comparison, or you can run it with the <u>console</u> <u>application</u>^[77] for quicker data import.

Data Import templates are saved/loaded within the **Save template options/Load template** dialog. To open this dialog, press the **Tools** button and select the **Save template/Load template** popup menu item.



File name

67

When saving template, specify the template file name and select its location using the \blacksquare button which calls the **Save Template As...** dialog.

Comment

The comment field of the template description.

🐺 Save Template Options	×
<u>F</u> ile name	
C:\EMS\docs\TestTemplate.itm	8
<u>C</u> omment	
1	^
	~
Save Cancel <u>H</u> elp	

If you need to repeat data importing process with the same or similar settings later, it is reasonable to save all the settings you entered on the <u>Start of data import process</u> [65] step of the Wizard.

To quickly return to Step 1, use the **Restart Wizard** button, which is only available at the last step.

Please note that loading a template is only available at the <u>Getting started</u>^[24] and the

Setting connection properties 25 steps of the Wizard.

If necessary, you can **Save template** at any step of the wizard using the corresponding popup menu item of the **Tools** menu.

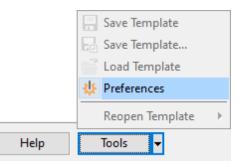
Save Template	
🕞 Save Template As	
葿 Load Template	
Preferences	
Reopen Template	C:\EMS\docs\TestTemplate.itm
	C:\EMS\docs\DEMO.itm

See also: <u>Working with wizard application</u>²⁴ <u>Setting program preferences</u>

2.3 Setting program preferences

69

Data Import for Interbase/Firebird 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 all these options.



Setting general options 70

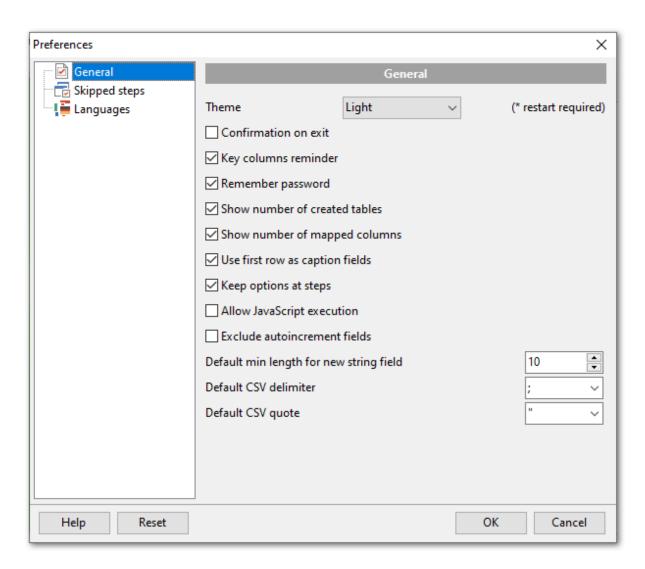
These options define general behavior of Data Import for Interbase/Firebird.

Skipped steps 72

Selecting steps to skip by default.

Selecting program language 74

This page allows you to select a language to be applied for your copy of Data Import for Interbase/Firebird.



Reset

Click this button to set all the program settings to default.

See also: <u>Working with wizard application</u>^[24] <u>Using data import configuration files</u> [67]

2.3.1 General

General

Theme

Select the main color theme for the application: Light or Dark.

Confirmation on exit

Enables/disables confirmation upon exiting the program.

Key columns reminder

Use this option to enable/disable prompts to define key columns.

Preferences				×
General	General			
Skipped steps	Therese	1 h.		(*
🛄 🖣 Languages	Theme	Light	~	(* restart required)
	Confirmation on exit			
	Key columns reminder	,		
	Remember password			
	Show number of creat	ed tables		
	Show number of map	oed columns		
	Use first row as caption	n fields		
	Keep options at steps			
	Allow JavaScript execu	tion		
	Exclude autoincremen	t fields		
	Default min length for ne	w string field		10
	Default CSV delimiter			; ~
	Default CSV quote			" ~
Help Reset			OK	Cancel

Remember password

Setting this option allows you to save passwords used for access to the databases 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).

Show number of created tables

Use this option to allow/disallow appearance of the correspondent information window.

Show number of mapped columns

Displays the number of mapped fields on proceeding to $\frac{\text{Step 4}}{32}$.

Use first row as caption fields

Enable this option to use first rows as captions when mapping fields.

Keep options at steps

If this option is checked all your import settings will remain the same the next time the program is started.

Allow JavaScript execution

If this option is checked then the script entered on the Step 6 is always executed.

Exclude autoincrement fields

If this option is checked then autoincrement fields will not be mapped on <u>auto mapping</u> [32].

Default min length for new string field

Specify the default length of the new field in case you are importing data into a new table.

Default CSV delimiter

Specify the default delimiter for CSV files format.

Default CSV quote

Specify the default quottas for CSV files format.

See also:

Selecting program language [74] Skipped steps [72]

2.3.2 Skipped steps

Use this option group to define the Wizard application steps to be skipped.

Preferences		×
🐨 🖻 General	Skipped steps	
🐨 🔂 Skipped steps		
🛄 🏣 Languages	Skip intermediate steps	
	Base Formats	
	Data Formats	
	🗹 Import Mode	
	Key Columns	
	Commit Options	
	Scripts	
Help Reset	OK Ca	ncel

Skip intermediate steps

This option determines the behavior of the *Next* and *Back* buttons. When this option is disabled, clicking the *Next* button leads to sequential passing through the list of imported objects. When this option is enabled, the steps checked in the **Skipped steps** group will be skipped.

 Base Formats

 Setting base data formats

☑ Data Formats Settings data formats for each field 56

✓ Import Mode <u>Specifying import mode</u> [60[↑]]

Very Columns Selecting key columns

Commit Options

Setting common options

Scripts Defining scripts

See also:

<u>Setting general options</u> 70 <u>Languages</u> 7िभी

2.3.3 Languages

The **Languages** page is provided for managing Data Import localization files.

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

The table lists all the languages available for localization and the corresponding *. Ing files.

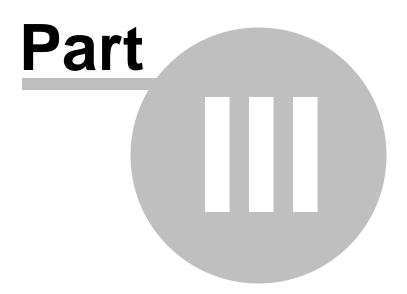
un Cananal				
General		Languages		
Skipped steps		ET N		
Languages	Language	File Name		
	Default	[None]		
	None	C:\Program Files (x86)\EMS\Data Import for InterBase & Fir		
	French	C:\Program Files (x86)\EMS\Data Import for InterBase & Fir		
	German	C:\Program Files (x86)\EMS\Data Import for InterBase & Fir		
	Russian	C:\Program Files (x86)\EMS\Data Import for InterBase & Fir		
		irectory		
	Language D	-		
		lirectory n Files (x86)\EMS\Data Import for InterBase & Firebird\Lang		

Language Directory

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

See also:

Setting general options 70 Skipped steps 72



3 Console application

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

C:\Program Files\EMS\Data Import for InterBase>IbImportC.exe_

Data Import for Interbase/Firebird command line utility is intended for quick and powerful data import to Interbase/Firebird tables.

Working with console application 78 Configuration file format 80

See also: Wizard Application 23

3.1 Working with console application

All the import options are set in **template** (*.*itm*) files. A template can be also used in the **Console version** of Data Import for Interbase/Firebird.

To create a template file, follow the instructions below:

- start Data Import <u>Application wizard</u> [23];
- set all the required options in all steps of the wizard;
- test the import process at the last step;
- save all import options in the template of.

The easiest way to start Data Import for Interbase/Firebird console application is to double-click the generated *.*itm* template. The other way is to enter the command line and type the appropriate command.

<u>Usage:</u>

78

<path to Data Import for Interbase/Firebird console application>\IbImportC.exe
TemplateFile [-datafile=<source file name>] [-B] [-LOG]

datafile=<filename1>;<filename2>;<filename3>

Indicates the source file(s) for data import. The values you specify replace the names of the files in the template. The number of files should strongly correspond to the number of files in the template. Multiple files are separated with a semicolon.

TemplateFile

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

[-B]

Use this parameter in the command line to run the console version of Data Import for Interbase/Firebird in the background mode.

Example:

"C:\Program Files\EMS\Data Import for InterBase & Firebird\IbImportC.exe" "C: \EMS\DataImport\Template1.itm" -B -datafile=test150283.xls

[-LOG]

Console application also generates the **.log* file that contains information about the import operation completion.

Example:

"C:\Program Files\EMS\Data Import for InterBase & Firebird\IbImportC.exe" "C: \EMS\DataImport\Template1.itm" -LOG="C:\EMS\DataImport\logfile.log"

Note: The following exit codes can be returned by Data Import for Interbase/Firebird 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:

Working with wizard application 24 Configuration file format 80

3.2 Configuration file format

The configuration file is divided into several sections.

[Connection]

80

This section contains parameters for connecting to the server: *Host*, *Port*, *tunneling settings*, *Login*, *Password* (encrypted). These parameters are obligatory.

[PREFERENCES]

This section contains the general settings of the utility.

ImportToViews 1 - enabled, 0 - disabled

The following sections are unique for each imported file and contain the appropriate postfix (*FILE_00, FILE_01, FILE_02,* etc.) In these sections the import options for each particular file are stored.

[FILE_00]

In the main file section the following parameters are used: *Database* (destination database name), *Table* (destination table), *FileName* (the source file name)

ImportType

Indicates the format of the source file: 0 stands for MS Excel, 1 for MS Access, 2 - DBF, 3 - TXT, 4 - CSV, 5 - XML, 6 - MS Excel 2007, 7 - MS Word 2007, 8 - HTML, 9 - XML Document, 10 - ODS, 11 - ODT

The next section is specific to the file format and is named correspondingly, e.g. $[FILE_00_XLS]$. In this section the following specific file type options are set:

[FILE_00_XLS]

SkipRows, *SkipCols* - the number of rows and columns in the source file to be skipped on import.

[FILE_00_Access]

SourceType

This option indicates the Access source type - Table or query, 0 stands for table, and 1 for query.

TableName and query - these options set the source Access table name to import from if source type is 0 and the source query text if the source type is 1.

[FILE_00_TXT]

SkipRows - the number of rows in the source file to be skipped on import.

[FILE_00_CSV]

SkipRows - the number of rows in the source file to be skipped on import. *CSVDelimiter*, *CSVRightQuot*, *CSVLeftQuot* - these options are used on reading the source CSV file, they store options for delimiting columns and the quotation marks.

The next section is [FILE_XX_MAP].

It is also specific to the file type, but is obligatory for all file types. In this section correspondence between the source file columns and the destination table fields is set.

If the source file is an *Excel* file, then the map is set in the following format: <DB_FieldName>=CellIndex.

Use semicolon to separate multiple cells. You can define an Excel row or column as a range of cells, e.g.

Field1=A1;A4;A6-A9;B1-F1.

If the source file is an *Access* or *DBF* file, then the mapping is set in the following format: <DB_FieldName>=<Source_Field_Name>.

If the source file is a *TXT* file, the mapping looks in the following way: <DB_FieldName>=<Position>;<Size>.

This means that you should provide the starting position and the size of the source file column for each destination field.

To set mapping for a *CSV* file, provide a column number for each destination field, e.g. Field1=1 Field2=4 etc.

The properties that are set in sections [FILE_XX_BASE_FORMATS] and [FILE_XX_IMPORT_OPTIONS] correspond to those set on the 'Base Formats' and the 'Options' tabs.

The values that stand for *BOOLEAN TRUE* and *BOOLEAN FALSE* values are set in sections [FILE_XX_BOOLEAN_TRUE] and [FILE_XX_BOOLEAN_FALSE].

The NULL values are set in section [FILE_XX_NULL_VALUES]

Data formats that are set for each destination field separately are stored in sections named in the following way:

[FILE_XX_DATA_FORMATS_<FIELD_NAME>],

e.g. FILE_00_DATA_FORMATS_FIELD1.

The properties within these sections also correspond to the properties set on the 'Data Formats' tab of the <u>Settings data formats</u> [56] step for each field.

[FILE_00_IMPORT_OPTIONS]

This section contains parameters that define import options specified on Steps 6-9 of the wizard.

CommitAfterDone 1 - enabled, 0 - disabled

CommitRecCount The number of records in each block to be supplemented with the COMMIT statement.

ImportRecCount 1 - enabled, 0 - disabled

ImportAllRows 1 - enabled, 0 - disabled

SaveResultSQL

1 - enabled, 0 - disabled ResultSQLFile The path to the result **.sql* file. ImportKind 0 - Universal Mode, 1 - Native Mode TruncateLongString 1 - enabled, 0 - disabled RollbackIfError 1 - enabled, 0 - disabled ImportMode 0 - Insert All, 1 - Insert New, 2 - Update, 3 - Update or Insert, 4 - Delete, 5 - Delete or Insert ImportAddType 1 - enabled, 0 - disabled *Allow Duplicates* 1 - enabled, 0 - disabled

NativeModeKind 0 - Single Commands, 1 - Batch insert

[#General#]

This section stores information about the product name and its major version.

See also:

Working with console application 78



4 Appendix

4.1 Supported file formats

MS Excel 97-2003

The most popular e-table format used by Microsoft® Excel (*.*xls*). The result files are fully compatible with Microsoft® Excel versions 97-2000, 2003 and XP.

MS Access

File of Microsoft® Access format (*.*mdb*, *.*accdb*) with an ADO connection used.

ITML

Hyper Text Markup Language file format (*.*html*, *.*htm*), complete compatibility with HTML 4.0 specification.

Text file

Plain text file format (*.txt).

CSV file

Comma-Separated Value file format (*.csv).

Note: all the text formats including *Text file*, *CSV* are usually used as working or interchange formats.

🖲 XML

A markup language for documents containing structured information (*.xml).

OBF

Database file format (*.*dbf*)used by dBASE and a number of xBASE applications.

MS Excel

The contemporary e-table format used by Microsoft Excel (*.*xlsx*). The result files are fully compatible with Microsoft Excel 2007.

MS Word

The contemporary text processing format used by Microsoft Word (*.*docx*). The result files are fully compatible with Microsoft Word 2007.

ODF Spreadsheets

OASIS Open Document Format for Office Applications - open document file format for spreadsheets (*.ods) used by a number of applications including OpenOffice.org and KOffice.

ODF Text

OASIS Open Document Format for Office Applications - open document file format for word processing (*.odt) documents used by a number of applications including OpenOffice.org and KOffice.

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84

4.2 SSH tunneling options

85

SSH (Secure Shell Host) protocol is used to heighten computer security when working with Unix systems on the Internet. SSH uses several encryption algorithms of different reliability. The spread of SSH is also connected with the fact that a number of Linux-like OS's (for example FreeBSD) include SSH server in their standard integration. To learn more information on this issue, please, visit <u>https://www.openssh.com</u>. SSH tunneling feature of SQL Manager is a means of ensuring secure connection to Interbase/Firebird servers when working over insecure connection channels. You can also use SSH tunnel to get access to the remote Interbase/Firebird servers when the default port is closed for external connections due to some reasons. The connection over SSH tunnel works in the following way. First, a connection is established and the process of authentication between SSH client built in SQL Manager and remote Interbase/Firebird server is performed. Then all incoming and outgoing information between the program and Interbase/Firebird server is transmitted through SSH server with the help of a communication port (usually it is 22), and SSH server transfers this information directly to Interbase/Firebird server.

4.3 Add/Edit field

86

When you import data with destination table creation, you can manage this table's fields.

Use the context menu to New/Edit/Drop a colimn.

I	New column
	Edit column
I ≩	Drop column(s)

Selecting **New column** or **Edit column** context menu item opens the field editor that allows you to view/edit the properties of the destination table fields.

噚 Edit Field	X
Column	NAME
Туре	VARCHAR
Size	50
Scale	0
Default value	
Character set	▼
Collation	•
Field flags	
	OK Cancel

Use the **Column** edit box to set the field name. Note that the name of the field must be unique among all the field names in the table.

The **Type** tab defines the type of the field data.

Size

Defines the size of the field value.

Scale

For *numeric* and *decimal* types you need to define the number of decimal to the right of the decimal point.

Default value

Define this option value if you need inserted records to get specified value.

Define *character set* and *collation* at the appropriate fields.

🗹 Not NULL

Check this option to prevent the entry of NULL or unknown values in column.

4.4 Add/Edit Range

88

To set a range of data to be imported from the file, use the **Add range** button. To remove a range, use the **Delete range** button.

To edit an existing range, double-click it in the **Ranges** list. The **Range** dialog allows you to set a number of options for the range being edited.

Range	×				
Range Type Col	∽ Col A ∽				
Start From Data Starting Start Row 1	Finish While Data Exists Finish Row 				
Sheet O Default Sheet					
Custom Sheet					
O Sheet Number	\sim				
Sheet Name	heet 1 v				
OK Cancel					

Select **Range Type** from the corresponding drop-down list. Then specify the *column*, *row* or *cell* number whose range is to be defined.

Start and **Finish** section allows you to set the range of the values to be imported from the specified row or column.

Use the **I** From Data Starting and **I** While Data Exist options to automatically define the range of the values.

Use **Sheet** section to define the location of the row/column for which the row was specified.

You can select either **Operault sheet**, or **Operation Sheet**.

For custom sheet you need to select **Sheet Number** or **Sheet Name** from the appropriate drop-down list.

Note: If Cell was set as Range Type, the only thing you can specify at this dialog is its number.

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89