SQL Management Studio for InterBase/Firebird
User's Manual

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This manual documents EMS SQL Management Studio for Interbase/Firebird

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Part I

1   Welcome to EMS SQL Studio!

SQL Management Studio for InterBase/Firebird is a complete solution for database administration and development. Whether you are a database or application developer, DBA or business analyst, **SQL Studio** offers all essential tools to make you more productive than ever before. **SQL Studio** unites these tools in one powerful and easy-to-use work environment.

SQL Studio provides the must-have tools for administering databases and managing database objects as well as for database migration, comparison and extraction, data import, export and comparison.

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

Documentation in other languages can be found at: https://www.sqlmanager.net/products/studio/ibfb/downloads

Key features
- Handy launch of utilities and services
- Storing all templates in a single repository
- Common data source list for all services and utilities
- Creating of complicated branched scripts
- Ability to run external applications from scripts
- Storing of all script execution logs in one database
- Scheduled script execution
- Creating of customized notifications; various ways to send them out
- Fast access to Technical Support Service
- One way to customize the appearance for all apps

and more...

Benefits
- All database tasks take little time to launch, leaving you to focus on the result
- With single template repository your work with utilities is as simple as it gets
- Flexible scripts result in massive time savings, doing all routine jobs for you
- Script scheduling will automate routine tasks
- Notification e-mails will let you stay up-to-date and react fast
- All logs are stored in one place, putting you totally in charge of all operations
- Visual interface style is set uniquely for all products for your convenience

and more...

Product information

Homepage:	https://www.sqlmanager.net/products/studio/ibfb
Support Ticket System:	https://www.sqlmanager.net/support
Register on-line at:	https://www.sqlmanager.net/products/studio/ibfb/buy

1.1   What's new

Version
SQL Management Studio for InterBase/Firebird 1.3

What's new in SQL Management Studio for InterBase/Firebird?
- There was an issue concerning installation on disks having more than 2Tb of free space. Fixed now.
- The default folder for logs now points to the user's profile.
- The network notifications (NetSend) did not work on Windows Vista and newer. Fixed now.
- SQL Studio Agent utilized 100% of CPU when the task generated a large log. Fixed now.
- The running processes are now stopped correctly when updating.
- Wrong encoding of logs with enabled localization has been fixed.
- Lots of other improvements and bug-fixes.

1.2 System requirements

System requirements for SQL Management Studio for InterBase/Firebird
- Microsoft Windows XP, Microsoft Windows Server 2003, Microsoft Windows Server 2008, Microsoft Windows Server 2008 R2, Microsoft Windows Server 2012, Microsoft Windows Server 2012 R2, Microsoft Windows Server 2016, Microsoft Windows Server 2019, Microsoft Windows Vista, Microsoft Windows 7, Microsoft Windows 8/8.1, Microsoft Windows 10, Microsoft Windows 11
- 140MB of available HD space for program installation
- Microsoft Data Access Components (MDAC) or SQL Server Native Client
- Interbase/Firebird client
- Possibility to connect to any local or remote Interbase/Firebird server

1.3 Installation

If you are **installing SQL Studio for the first time** on your PC:
- download the SQL Studio distribution package from the [download page](#) available at our site;
- unzip the downloaded file to any local directory, e.g. *C:\unzipped*;
- run *ibstudio.msi* from the local directory and follow the instructions of the installation wizard;
- after the installation process is completed, find the SQL Studio shortcut in the corresponding group of Windows Start menu.

If you want to **upgrade an installed copy of SQL Studio** to the latest version:
- download the SQL Studio distribution package from the [download page](#) available at our site;
- unzip the downloaded file to any local directory, e.g. *C:\unzipped*;
- close SQL Studio application if it is running;
- run *ibstudio.msi* from the local directory and follow the instructions of the installation wizard.

During the installation process you will be offered to select either to run SQL Studio as an application or a service.

Installed as a service, SQL Studio will run independently of the user account currently logged in and will use the Windows user account *User name* and *Password* specified during the installation process.
Note: Use *DOMAIN_NAME\USER_NAME* format to specify a domain user account.

Please note that the service should be run under the Windows user account the SQL Management Studio for InterBase/Firebird application will be used.
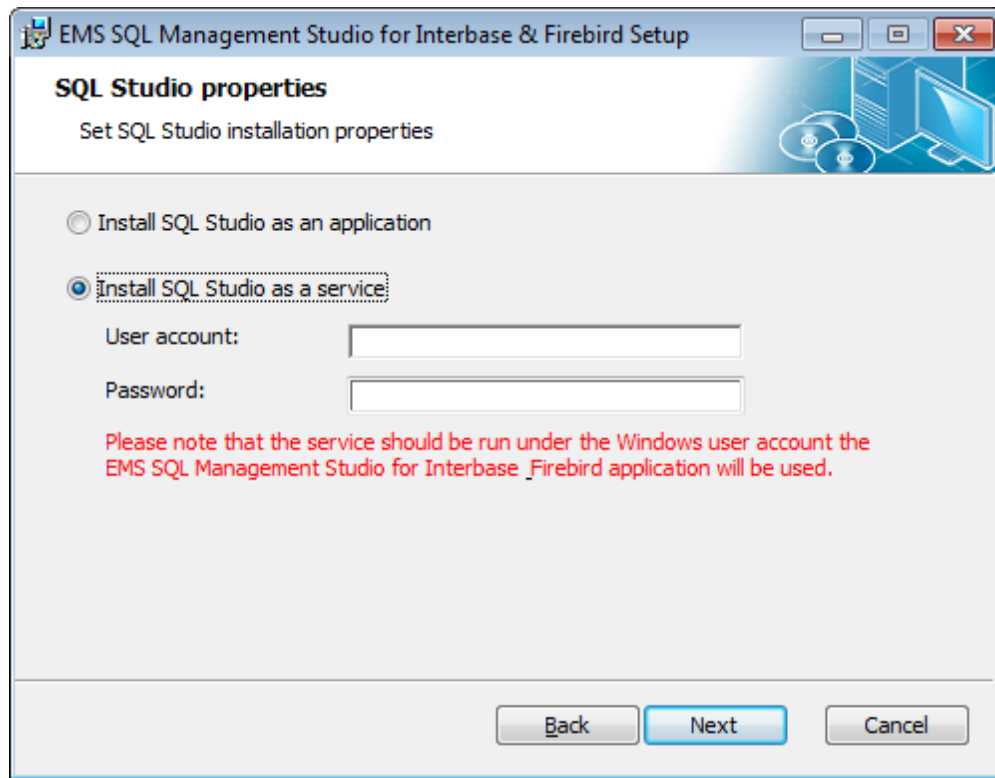
In order to install the program in the silent mode as an application you should execute the following command:

```
msiexec.exe /i /quiet xxstudio.msi
```

In order to install the program in the silent mode as a service execute the following command:

```
msiexec.exe /i /quiet xxstudio.msi SERVICE_INSTALL=1 SERVICE_USERNAME="computer_name\u
```

Please remember that the *User account* must be defined with the domain name or the computer name, as it is shown in the example above. You can use the ".\user_name" format as well.

See also:
System requirements

1.4   Registration

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

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

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

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

Product distribution	PayPro Global
SQL Management Studio for InterBase/Firebird (Business license) + 1-Year Maintenance*	Buy Now!
SQL Management Studio for InterBase/Firebird (Business license) + 2-Year Maintenance*	
SQL Management Studio for InterBase/Firebird (Business license) + 3-Year Maintenance*	
SQL Management Studio for InterBase/Firebird (Non-commercial license) + 1-Year Maintenance*	
SQL Management Studio for InterBase/Firebird (Non-commercial license) + 2-Year Maintenance*	
SQL Management Studio for InterBase/Firebird (Non-commercial license) + 3-Year Maintenance*	
SQL Management Studio 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

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 on-line, 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 SQL Studio

1.5 How to register SQL Studio

Having installed SQL Management Studio for InterBase/Firebird you will be offered a 30 days evaluation period. The trial version of the software stays fully functional with some minor functional limitations. During all trial period the dialog like displayed below will appear.
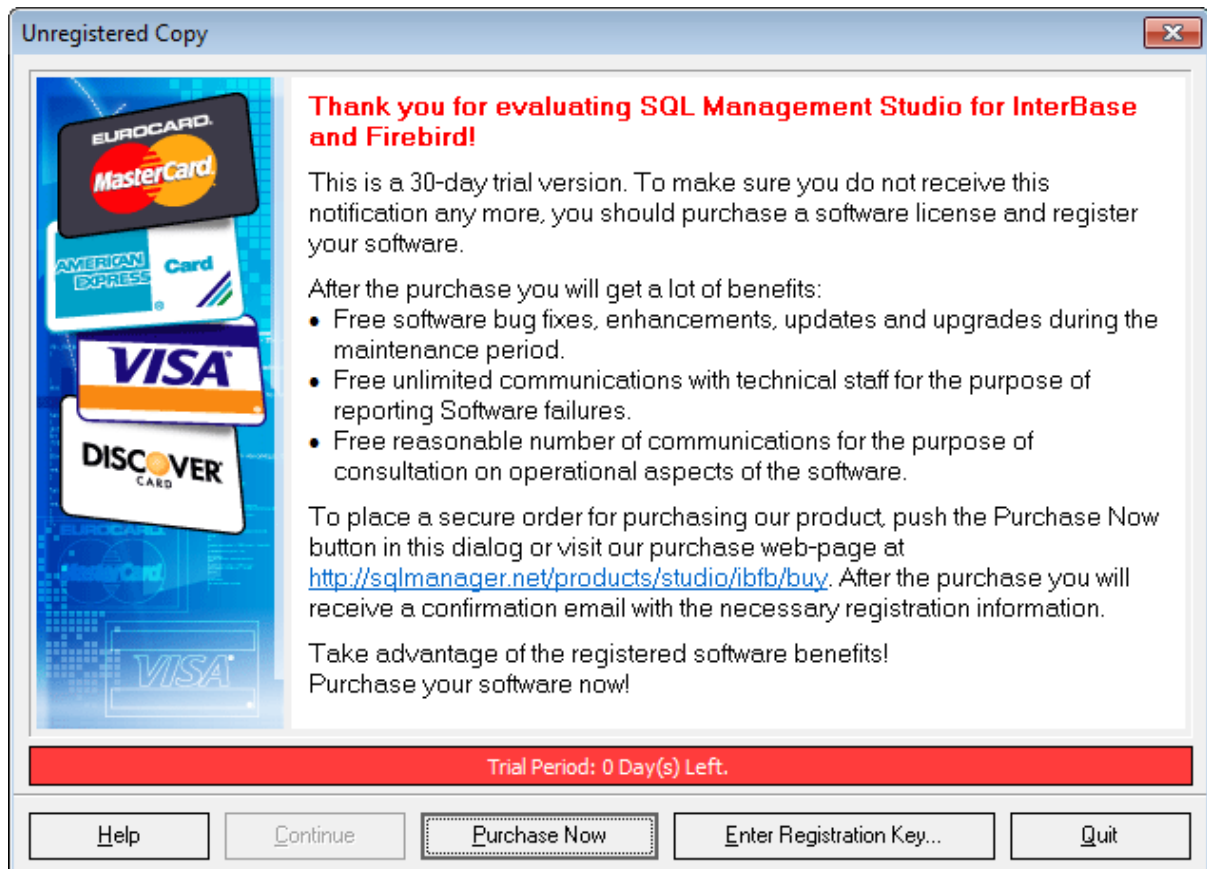
After the trial period is expired, you will not be able to evaluate the software. Further usage of your SQL Management Studio for InterBase/Firebird copy is only available after purchase and registration.

You can register your copy of SQL Management Studio for InterBase/Firebird do it by selecting the **Help | Register SQL Studio** main menu item or by selecting the **Help | About** main menu item and pressing the **Register Now** button to call the **Register SQL Management Studio for InterBase/Firebird** dialog.
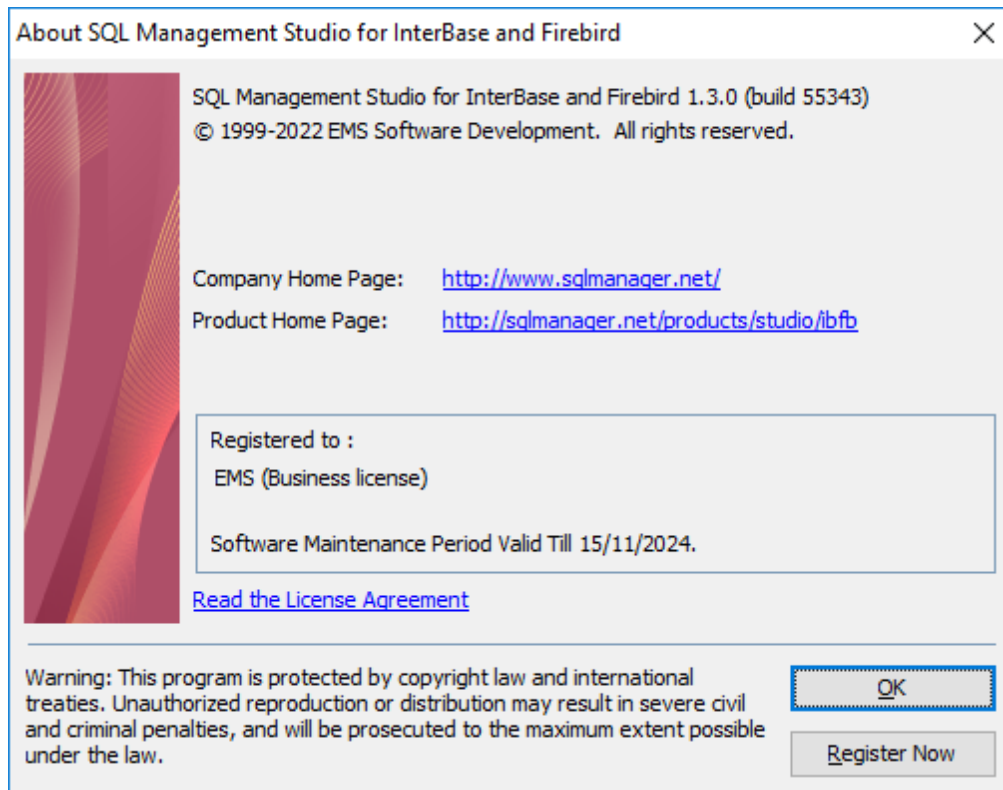
To register your newly purchased copy of EMS SQL Management Studio for InterBase/
Firebird, perform the following steps:
- receive the notification letter from **PayPro Global** with the registration info;
- enter the **Registration Name** and the **Registration Key** from this letter;
- make sure that the registration process has been completed successfully – check the
  registration information in the **About SQL Management Studio for InterBase/
  Firebird** dialog (use the **Help | About** main menu item to open this dialog).
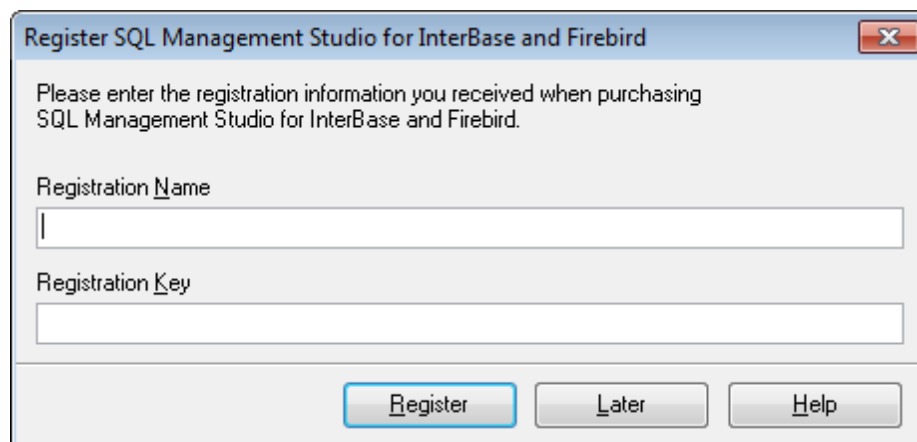
The **Registration Key** you receive includes **Maintenance license** which is valid during a
definite period. After your maintenance expires you will not be able to update your
software or get technical support. To protect your investments and have your software
up-to-date, you need to renew your maintenance.

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

1.6 EMS SQL Studio FAQ

Please read this page attentively if you have questions about **EMS SQL Management Studio for InterBase/Firebird**.

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- I've registered the DB, but on attempt to open it the "client library was not found" message appears.

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- I have over a million records in the table, yet the data grid displays only 1,000 of them. What is the problem?
- How can I speed up my work with large tables?
- Which operations can I perform over database objects?
- When creating a table like 'TestTable', it will get stored as 'TESTTABLE'. How can I get objects stored as I create them using SQL Manager?
- How can I customize data formats in a grid?
- My database uses a "Greek" codepage. In data grid view all information is displayed at "??????". What is wrong?
- I can't modify DDL. Why?

Query
- I'm new to SQL, and I can hardly compose the SQL statements by hand. Does SQL Studio have a visual query builder like in MS Access?
- Can I use the visual query builder in STUDIO to build the complex queries with unions and subqueries?
- Can I save a created query for future use?
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- I have a database in MS Access. I want to migrate to the remote InterBase database. How can I do it with the help of SQL Studio?
- I have a ODBC data source. Can I migrate from it to InterBase?
- From which databases can I migrate to my database server with the help of SQL Studio?
- I am working on an application. The database structure is already created. How can SQL Studio help me to fill the database with test data?
- My database contains many relations between tables and other constraints. Will SQL Studio consider them while generating test data?

Data analysis
- I need to find the differences in the metadata of two databases and then synchronize them. How can SQL Studio help me with this task?
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- What are the templates used, for example, in export/import? What are they for?
- Where are SQL Studio templates located?
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Scheduler
- I need to perform certain operations on my database (export from one database, import of those data to another one, backup of both databases) outside business hours (at night). Does SQL Studio provide any solution for this?
- How do I configure a task so that I receive an e-mail notification at the defined address in case of the task failure?
- Can the task process be changed depending on the results of the task steps?
- How can I view the information on the performed tasks?

- What will happen if during a task execution the running application cannot terminate (critical error, does not respond)? Will the task execution stop?
- What do I need to work with Task Scheduler?
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Logs management
- It is important for me to get the information from log files of applications executed by the Task Scheduler? Does SQL Studio save these log files?
- The external application that is executed in one of the tasks does not have a log file, but only a screen log. How can I save the data from the screen?
- How long are log files stored in SQL Studio?

Localization
- What interface localizations are available in SQL Studio?

Question/answer list

Product questions

Q: What is EMS SQL Management Studio?
A: EMS SQL Management Studio is a complete solution for database administration and development. SQL Studio is an integrated suite of powerful database management tools united in one easy-to-use work environment. Developers will appreciate its ability to create/edit/drop any database objects and will find metadata and data comparison, data export/import and test data generation tools extremely helpful. Database migration, backup and restore tools will be of great help to DBAs. The Scheduler will automate a sizeable part of DBA's work.

Q: SQL Studio embraces a variety of capabilities, but will I need them all? Is there a simpler product?
A: This question naturally comes if you are new to database administration and development. It might not be immediately obvious why you would need so many different tools. We would like to point out that your experience will build up day in and day out, you will face new, more complicated tasks and you will need more tools to solve them. SQL Studio embraces ALL must-have tools for DBAs and developers. And it will be in line with your growing expertise! Besides, once you familiarize yourself with SQL Studio tools, you will be able to find the simplest, most suitable and reliable solutions to your tasks! We do realize that our product is used not only by experts, that is why we included plenty of Wizards that will make the job easy and enjoyable even for a newbie. The Studio interface is designed so that the component tools are called only when needed, not to hinder your work. Our experience shows that the majority of our customers get used to our products really fast, and we have never received any downgrade requests.

Q: What do I need to start working with SQL Studio?
A: In order to start working with SQL Studio, you need to download the installation package from the download page available at our site. Then run the installation file on a MS Windows workstation (see System requirements for details). When the installation is finished, the program is ready to be used in the trial mode. You can evaluate the trial version for 30 days. This is the time for you to make a purchasing decision. You can purchase the Studio here. After the payment is complete, your will

receive your registration information via e-mail (see How to register SQL Studio for details)

Q: Many utilities that are included in SQL Studio are also offered as stand-alone products. What are the advantages of purchasing them within the Studio?
A: Indeed, in order to perform some simple task, you can purchase a separate EMS utility or a few of them. Yet, if you purchase these utilities within the Studio, you receive additional functionalities. First of all, you will be able to launch the Studio components from Task Scheduler. That is, you can set the order to run the tools in, set the parameters to be used, the time and/or time intervals for the task to be performed and go to play a bowling game :) Task Scheduler will fulfill all your tasks, save the logs for the performed operations and will notify you by e-mail about the successful/ unsuccessful task completion. Task Scheduler will help you to really automate the majority of your DB service tasks. Secondly, you will be able to store all registered Databases in one repository. Thus, you will need to register your data source once and will be able to use it in all Studio tools. This will save your time and reduce an error chance to the minimum. The third equally important benefit is the pricing. When purchasing the tools within SQL Studio, you pay a lot less, compared to purchasing them as separate products. You will receive up to 40% off the original price!

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DB registration and connection

Q: Can I work with several databases simultaneously?
A: Yes, SQL Studio allows you to work with an unlimited number of databases at the same time. You can also operate any number of databases via SSH tunneling. Once the database is registered at the database source repository correctly, you are ready to use it.

Q: I use Windows OS, but my remote Interbase/Firebird server is running on Linux OS. Will I be able to use SQL Studio to work with this server?
A: Yes, that is possible. It does not matter what OS the database server is running under, SQL Studio works only in the Windows environment (see System requirements for details).

Q: Why does SQL Studio use a single registered database repository?
A: The single registered database repository allows one database to be accessed with all SQL Studio tools. If you purchased our product suites (bundles) previously, you had to enter the database information in each tool you used. That eventually led to massive time wasting and typing errors. Now the problem is solved in the Studio with the help of the single registered database repository.

Q: What is SSH tunneling?
A: SSH (Secure Shell Host) protocol is used to heighten the computer security when working with Unix systems in Internet. SSH uses several encryption algorithms of different reliability. The spread of SSH is also concerned with the fact that a number of Linux-like OS's (for example, FreeBSD) include SSH server in their standard integration. To get more information about this issue, please, visit https://www. openssh.org.
SSH tunneling feature of SQL Manager is a means for 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. Connection over SSH

tunnel works in the following way. First, a connection is established, and authentication between SSH client built in SQL Manager and the remote Interbase/ Firebird server is performed. Then all in- and outgoing information between the program and Interbase/Firebird server is transmitted through SSH server with the help of the communication port (usually it is 22), and SSH server transfers this information directly to Interbase/Firebird server.

To register a database to which one connects through SSH tunnel, you should set the following parameters in Register Database Wizard of SQL Manager for InterBase/ Firebird:

'Host' is a host where Interbase/Firebird server is located from the point of view of SSH server. If SSH and Interbase/Firebirdserver are on the same machine, it is equal to SSH Host, or may be 'localhost'.

'Port' is a port of Interbase/Firebird server on the remote host.

'User name' is a Interbase/Firebird user name.

'Password' is the password of the Interbase/Firebird user. Please note that Interbase/ Firebird host name should be set relatively to the SSH server in this case. For example, if both Interbase/Firebird and SSH server are located on the same computer, you should specify 'localhost' as Host name instead of the server's external host name or IP address.

Check "Use tunneling" and "SSH tunneling".

'SSH host name' is the host where SSH server is activated.

'SSH port' is the port where SSH server is activated.

'SSH user name' is a user on the Linux/Windows machine (it is a Linux/Windows user, not a user of Interbase/Firebird server)

'SSH password' is the Linux/Windows user password.

If necessary, check 'Use Private Key for authentication'.

Q: I work behind a firewall (router). Can I use SQL Studio to manage 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 Interbase/Firebird server directly through TCP/IP (for example, a firewall prevents this), you can use SSH tunneling feature of SQL Manager to fulfill your task.

Q: I cannot connect to the local Interbase/Firebird server. Why?

A: There are several reasons why you cannot connect to the local database. If during connection you get 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 whether the 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 using the Start item available 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: I cannot connect to a remote Interbase/Firebird server. Why?
A: There could be several possible reasons that prevent you from successful connection to the 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 have entered and also if the remote server is running. It often happens that the port through which the connection is set with InterBase/Firebird server (normally, it is 3050) is closed for security reasons by a 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 tunneling.

Q: I can't configure the connection to Interbase/Firebird server by SSH. Which values do I need to input on the SSH page of the Database Registration Info dialog?
A: To setup SSH connection correctly, input the following values into the corresponding fields within the SSH Tunneling section of the Database Registration Info dialog of SQL Manager for InterBase/Firebird:
'SSH host name' is the host where SSH server is activated.
'SSH port' is the port where SSH server is activated.
'SSH user name' is a user on the Linux/Windows machine (it is a Linux/Windows user, not a user of Interbase/Firebird server)
'SSH password' is the Linux/Windows user password.
If necessary, check 'Use Private Key for authentication'.

Q: When I try to register a database, I get the following message: "Your user name and password are not defined". Why does it happen?
A: This is caused by the fact that the registration data you enter are absent in the security database of your server. You should register the user with the proper login and password on your server.

Q: I receive the following message: "Database ... shutdown". What am I doing wrong?
A: This message indicates that your database is used in a single-user mode and it cannot be accessed only by the creator and SYSDBA. To switch to the multi-user mode, you need to publish your database.

Q: I've registered the DB, but on attempt to open it the "client library was not found" message appears.
A: You receive this error message because the program can not find the client library which is essential to work with the server. You should check if the paths you defined in the server registration information are correct, and whether the client library file is available. If this file is missing, please, install the client software from the server distribution kit.

Objects manipulation

Q: Which database objects will be accessible through SQL Studio?
A: You can work with any objects in Interbase/Firebird databases such as tables, fields, indices, views, stored procedures, functions, triggers, etc.

Q: I have over a million records in the table, yet the data grid displays only 1,000 of them. What is the problem?
A: Please select the "Select all records from a table" option within the Grid section of

Environment Options dialog in SQL Manager for InterBase/Firebird. Note that fetching all records from a table may require considerable time.

Q: How can I speed up my work with large tables?
A: For your convenience and to speed up your work, the Data Grid allows customizing a number of data display parameters. Here are the most important of them (accessible through the Grid | Data Options section of the Environment Options dialog):
- *Limit options in table and view editors*. The 'Select all records of a table' option will enable you to see all table records without extra references to the server, yet in case of large tables or low speed connection channel the data may be fetched with huge delays and the incoming traffic might grow considerably. This mode is recommended when working with local databases or in a private network. The 'Select only' mode restricts the maximum number of records returned after the query. A man cannot process a massive amount of information at once. Hence, we came up with this mode. This mode speeds up table data viewing considerably, prevents hanging and connection timeout. It is recommended to work with large tables, in case of low speed connection channels and when the traffic volume is of importance. This is the default mode. When in this mode, enabling the 'Use SQL sorting in data view' and 'Use SQL filter in data view' options comes really helpful.
- *Default Grid Mode*. This option defines whether the requested rows will be loaded in the Grid all at once ('Load all rows'), or in parts ('Load visible rows') as the user scrolls down table data. The first mode increases the query opening time, but speeds up scrolling. In the second mode the query opens very fast, but there might be delays when navigating the grid.
- *Use SQL sorting in data view*. With this option enabled, when the user sets data sorting, a new request is sent to the server, and the result is shown anew in the Grid. Enabling this option is very helpful with the 'Select only' mode enabled, but it increases the traffic. When this option is disabled, sorting is made on the client computer without any references to the server but only loaded data are sorted. That is, if you set 'Select only 1,000 records', then only these records will be sorted.
- *Use SQL filter in data view*. With this option enabled, the data will be sorted on the server to which a new request is sent, and the result will be shown anew in the Grid. Enabling this option is also helpful when the 'Select only' mode is on, but it increases the traffic. When this option is disabled, the filtering is made on the client computer without any references to the server but only loaded data are filtered. That is, if you set 'Select only 1,000 records', then only these records will be filtered.
We recommend that you set the following option values to achieve maximum efficiency when working with large tables:
- *Select only* – ON
- *Load visible rows* – ON
- *Use SQL sorting in data view* – ON
- *Use SQL filter in data view* – ON

Q: Which operations can I perform over database objects?
A: You can create new objects, drop and edit the existing ones. You can also copy the objects from/to databases located on one or different hosts.

Q: When creating a table like 'TestTable', it will get stored as 'TESTTABLE'. How can I get objects stored as I create them using SQL Manager?
A: Please try to deselect the "Always capitalize database objects names" option within the Options section of the Database Registration Info dialog.

Q: How can I customize data formats in a grid?

A: You can customize all display formats: integer, float, date, time and datetime using the Color & Formats page of the Environment Options dialog in SQL Manager for InterBase/ Firebird.

Q: My database uses a "Greek" codepage. In data grid view all information is displayed at "??????". What is wrong?
A: You need to set up the "Client charset" parameters to make the server return the information to the client (our program) in the needed code page. Please, open the Database Registration Info window and specify the "Client Charset" option to '"greek (ISO 8859-7 Greek)".

Q: I can't modify DDL. Why?
A: The DDL tabs of the SQL Studio editors are read-only. To modify an object, you can copy the text to the clipboard and modify it using SQL Editor or SQL Script.

<div align="right">Scroll to top</div>

Query

Q: I'm new to SQL, and I can hardly compose the SQL statements by hand. Does SQL Studio have a visual query builder like in MS Access?
A: Yes, SQL Studio offers a powerful Query Builder that allows newbies to build complex queries visually, and drastically saves time for advanced users. All you need to do is to specify the tables that will be used in the query, their relations and the query conditions for the data you want to get. Visual Query Builder will generate the text of the query for you. You will only need to run it. You can see the result of your query and make corrections if necessary. The changes can be made from the visual builder or from the text editor. As changes made in visual query builder, the text editor will display them too and vice versa.

Q: Can I use the visual query builder in STUDIO to build the complex queries with unions and subqueries?
A: Yes, visual Query Builder can build complex queries including UNION operator and subqueries.

Q: Can I save a created query for future use?
A: Yes, of course. SQL Studio can save the needed query in the following ways:
1. ALL executed queries are automatically saved in the History. You can view the History and execute or edit any query you need.
2. You can add the frequently used queries to the list of Favorite queries.
3. You can save any query as an SQL-script into a file on your hard drive and load it when needed, or execute it with a command line SQL script tool.
4. You can save your query as a chart. In this case after the query is loaded into SQL Studio, the the chart will be displayed the way it has been created. SQL Studio allows you to save the query chart as a bitmap image.

Q: Can I run a query from the command line?
A: Yes, SQL Studio offers SQL Script tool for this purpose. It can also run a script from a file saved on your hard drive. This feature allows you to create queries and schedule their execution using Task Scheduler. Task Scheduler allows you to run your query when you need it and notifies you when done.

Q: Can I save a query result into a CSV or an XLS file?
A: Yes, SQL Studio has a powerful tool for exporting your data (including the query

results). You can export the result dataset to MS Access, MS Word, CVS, XLS, HTML, RTF, DBF, XML and other formats. To ease the exporting procedure, Export Data tools are implemented.

Reports management

Q: How can I create a report?
A: To create a report, you can use the Create Report Wizard or the Report Designer tool in SQL Manager for InterBase/Firebird. To create a report based on a query, see Q. How can I create a report based on a query?

Q: How can I create a report based on a query?
A: To create a report based on a query, you can use the Create Report Wizard in SQL Manager for InterBase/Firebird. You need to choose Master Data band on the second step of the wizard, double-click on it or click the Edit button and specify the query for your report. After that you need to set options in other steps of the wizard and press Finish.

Q: Can I save my report as HTML, Excel or Word?
A: Yes, open the report by double-clicking on it in the DB Explorer of SQL Manager and select the 'Save report as' item in the Navigation bar or toolbar, and specify the format you want to save to in the "Save as type" field.

Data manipulation

Q: What is the difference between the Export/Import functions in SQL Studio and stand-alone SQL Manager?
A: The Data Export/Import tools of SQL Studio include some additional features which are not available in SQL Manager for InterBase/Firebird, such as:
- export/import data from/to several tables simultaneously;
- export/import data from/to tables selected from different databases on one host;
- a command-line utility to export/import data using the configuration file with all the export/import options;
- a single registered database repository.

Q: I need to import data from a CSV file. How can I do it with the help of SQL Studio?
A: You can use Import Data Wizard for this purpose. It will help you to set all the necessary import parameters. Moreover, you can save these settings as a template and use them in the future. Besides, you can also import from MS Excel, MS Access, DBF, XML, TXT and other formats.

Q: How can I change the default directory where exported data will be saved?
A: Follow the steps below to change the default directory:
1. Right-click the database alias in DB Explorer and select the 'Database Registration Info...' context menu item (you can also find this item in the 'Database' main menu) to open the Database Registration Info dialog.
2. Proceed to the Directories section within the dialog.
3. Set the 'Default directory for Export Data'.

Q: For which purpose are the console versions of the utilities for manipulating data included in SQL Studio?

A: The main function of the console versions of SQL Studio tools is execution of some service operations with the database without a user involved. All console tools support configuration files (templates) that are created in the corresponding GUI versions. The template file contains all information necessary for working with the console version. With the help of the console version and a template file you can create a task in the Task Planner and set the necessary time and/or period for execution. Of course, you can use the console versions of SQL Studio tools in your own automatic applications.

Q: I have a database in MS Access. I want to migrate to the remote Interbase/Firebird database. How can I do it with the help of SQL Studio?
A: You can use Data Pump for InterBase/Firebird for this purpose. To launch Data Pump from SQL Studio, select the Data Manipulation tab and click on Data Pump for InterBase/Firebird, or select Start -> Programs -> EMS -> SQL Studio for Interbase/ Firebird -> Data Pump for InterBase/Firebird. We recommend that you use Microsoft Jet 4.0 OLE DB Provider to connect to your MS Access database.

Q: I have a ODBC data source. Can I migrate from it to Interbase/Firebird?
A: ODBC (Open Database Connectivity) is an open standard interface to access databases developed by Microsoft. Most database management systems have their own ODBC driver or the one produced by other software developers.
To migrate from a ODBC data source, you need to use Data Pump for InterBase/Firebird. To launch Data Pump from SQL Studio, select the Data Manipulation tab and click on Data Pump for InterBase/Firebird, or select Start -> Programs -> EMS -> SQL Studio for Interbase/Firebird -> Data Pump for InterBase/Firebird. When working with the utility, you should use OLE DB Provider for ODBC Drivers to connect to your ODBC data source.

Q: From which databases can I migrate to my database server with the help of SQL Studio?
A: With the help of Data Pump for InterBase/Firebird you can migrate from any databases to which you can connect using OLE DB Provider (for example SQL Server, Oracle, MS Access, DB2, etc.) and ODBC Driver (MySQL, PostgreSQL, InterBase, Firebird, dBase files, etc.)

Q: I am working on an application. The database structure is already created. How can SQL Studio help me to fill the database with test data?
A: SQL Studio has a powerful instrument for generating test data - Data Generator for InterBase/Firebird. The wizard will help you to set such parameters as the amount of records to be generated, range value for each field, the quantity of lines with NULL value and others. Data Generator performs various algorithms including random or increment data generation as well as the one according to the given list of values and many others. And of course, it is possible to save all these settings as a template for future use.

Q: My database contains many relations between tables and other constraints. Will SQL Studio consider them while generating test data?
A: Yes, of course. When generating test data, the Data Generator module of SQL Studio takes into consideration all relations and restrictions that already exist in your database.

Data analysis

Q: I need to find the differences in the metadata of two databases and then synchronize them. How can SQL Studio help me with this task?

A: There is a tool specially designed for this purpose - DB Comparer for InterBase/Firebird available in the Data Analysis group of SQL Studio. Its interface is simple and user-friendly, but the results of its work are quite impressive! You only need to choose two databases to compare metadata and set some additional parameters, such as database objects to compare, direction of synchronization and others. The result of DB Comparer's work will be a list of differences in the metadata of these two databases and a script, with the help of which you can synchronize the databases. Besides, you can synchronize each difference separately, using only the needed changes in the required order. Do you remember how much time you spent searching for the single field added to the table two months ago? :)

Q: I need to find the differences in the data between the existing database and its yesterday's backup. What should I do?

A: There is a tool specially designed for this purpose - Data Comparer for InterBase/Firebird available in the Data Analysis group of SQL Studio. You should specify the existing working database as a source database. Then specify the database of the yesterday's backup as a target database (you should first restore it on any available Interbase/Firebird server). Now choose data in which tables you would like to compare and follow the other steps of the wizard. Mind, that Data Comparer allows comparing data in tables with non-identical metadata. After the comparison is complete you will see the list of differences between your databases and will be asked if you would like to synchronize data from source to target or from target to source. You can save SQL script that performs synchronization in a separate file and run it later with the help of SQL Script tool (probably using the Task Planer).

Q: Can I start synchronization of metadata or data from the command line?

A: Yes, for this purpose you can use the console versions of our utilities - DB Comparer Console Application and Data Comparer Console Application. All console tools support configuration files (templates) that are created in GUI versions of the programs. The template file contains all the information necessary for working with the console tool. With the help of the console version and the template file you can easily perform synchronization from a command line without setting a great number of parameters manually.

Q: Can SQL Studio synchronize my database with a database of another DBMS?

A: This feature is not supported by our utilities as they allow synchronizing data and metadata only between one database engine, that is between Interbase/Firebird and Interbase/Firebird.

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Backup/Restore

Q: What Backup capabilities does SQL Studio provide?

A: SQL Studio offers several methods of creating database backups.

- Using Backup Database service

This method is very fast and reliable. On its application you do not need to shutdown your database, i.e. other users can continue working with it. Besides, this method allows you to receive database backup files in a portable format, which enables you to restore these databases on the servers with different ODS (on-disk-structure), and this is crucial to perform database migration between servers. It should be noted that

this backup method allows one to change the database owner, which is important when changing the server security structure. While using the Backup Database Service table indices are recomputed and database garbage is collected, which regulates database size and improves its overall performance. The disadvantages of the method are that you cannot choose database objects that need to be backed up; and the back up file is not saved on the local workstation when copying a database located on remote server.

To call this service, open the Database Management tab in SQL Studio and select the Backup Database item of the [Services](#) group.

To call this service from SQL Manager for InterBase/Firebird, use the Services | Backup Database... main menu item.

In order to restore the databases from the backup file created with this method, use the Restore Database service. This service enables you to restore your database to the file of the existing database or create a new database on the basis of the existing backup copy. If the database is restored in an already existing database, the structure of the backup copy may be restored partially; as a result, the existing database structure will be lost, that is why we do not recommend to use this option.

To call this service, open the Database Management tab in SQL Studio and select the Restore Database item of the [Services](#) group.

To call this service from SQL Manager for InterBase/Firebird, use the Services | Restore Database... main menu item.

- Using DB Extract for InterBase/Firebird or Extract Database Wizard of SQL Manager for InterBase/Firebird

Both tools create backup copies of the whole database or of user-specified objects in the form of SQL script. The generated script contains Data Definition Statements and Insert Data commands. The main advantages of this method are the complete or partial backup of the database structure and data and flexible customization possibility. However, with this method creating back up copies of large databases is time and traffic consuming.

To call DB Extract, open the Data Analysis tab in SQL Studio and select DB Extract for InterBase/Firebird.

To call Extract Database Wizard, open SQL Manager for InterBase/Firebird and select the Tools | Extract Database main menu item.

In order to restore the database from the script, you need to run this script on the Interbase/Firebird server. Please use [SQL Script](#) available in SQL Studio or SQL Script tool of SQL Manager for InterBase/Firebird.

- Using Data Export for InterBase/Firebird

This method can be used to back up data from any tables. Please use it if you need to save only data but not the database structure. We would recommend to use CSV format to back up data.

To call Data Export, open the Data Manipulation tab in SQL Studio and select Data Export for InterBase/Firebird.

To call Data Export Wizard from SQL Manager for InterBase/Firebird, open your table in Table Editor, proceed to the Data tab and select 'Export Data'.

In order to restore data from the file created with this method, you can use Data Import for InterBase/Firebird or Data Import Wizard of SQL Manager for InterBase/Firebird.

To learn about the differences between Data Import for InterBase/Firebird and Data Import Wizard of SQL Manager for InterBase/Firebird, see Q. [What is the difference between...](#)

Q: Is it possible to restore the backup on one server while it was created on another one?

A: Please observe the following cases:

- The backup file created with Backup Database service can be restored on another server if its version is the same or higher compared to the server version that performed the backup. Besides, the server type matters when restoring the backup copy – it is not recommended to restore a Firebird backup file on InterBase server and vice versa. These restrictions are related to possible differences in SQL syntax used to create database objects (DDL) and to work with data (DML) in different servers and also to the absence/presence of certain types of data in different type servers and different server versions. These restrictions are not stringent and it is possible that the backup copy will be restored even if you neglect them, yet we can not guarantee that such database will be fully operational.
- The restoration of the backup copy created with DB Extract for InterBase/Firebird or Extract Database Wizard of SQL Manager for InterBase/Firebird is subject to the same restrictions stated in point 1.
- The Data backed up with Data Export for InterBase/Firebird or Export Data Wizard of SQL Manager for InterBase/Firebird can be restored to a table on any version of Interbase/Firebird server.

Q: Where can the backup file be located?
A: A backup created by Backup Database Service can be placed only in the local directory on the server.

Q: What is the difference between Extract and Backup functions in SQL Studio?
A: Backup Database [service](#) creates backups of all objects of the selected database, as well as table data, according to the defined path that can be only a local directory on the server.
DB Extract for InterBase/Firebird or Extract Database Wizard of SQL Manager for InterBase/Firebird creates backups of databases or user-defined objects in a form of SQL script. Thus, Backup Database service uses Interbase/Firebird capabilities to create database backups, it is highly reliable, but it cannot place backup files in any client directory. It is recommended to use this method for backing up a whole database. The main advantages of creating backups with the help of DB Extract for InterBase/Firebird are that you can save structure and data of some specific database objects or schemes and that backup copy is created on the client side. The weak point of this method is much time and traffic that are required for creating backups of large databases.

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Templates management

Q: What are the templates used, for example, in export/import? What are they for?
A: [Templates](#) in SQL Studio are intended for storage of the parameters required for running SQL Studio tools. Using the templates you will be able to repeatedly perform one and the same operation without a need to enter 10-20 wizard parameters each time. The parameters stored in a template can be easily modified, or you can [create a new template](#) based on the existing one.

Q: Where are SQL Studio templates located?
A: A [template](#) is a file that can store necessary parameters in certain format. Template files can be located anywhere on your PC. To simplify the task of template storage and search, SQL Studio provides [Template Manager](#). The Manager allows you to register the necessary templates in SQL Studio and not to worry anymore about the place where you saved them to. When you create a new template in SQL Studio the Template Manager automatically remembers its location on the disk. All the registered

templates are grouped by the tools they are intended for and will be at your disposal any time. To run a tool with the selected template, you will just need to double-click the template.

Q: If I delete a template from the list in SQL Studio, will it be deleted from the hard disk?
A: Template Manager allows you to perform both operations: you can either delete a template from the registered template list only, or delete it also from the hard disk.

Q: How can I create a new template for Import?
A: To create a template for the Import tool, you should run the Import tool (Run | Data Import for InterBase/Firebird). Then you will need to fill in all the necessary import parameters using the Next button. At the last wizard step you should define the name and location of the newly created template using the Tools | Save Template menu item. See Using templates for more information.

Scheduler

Q: I need to perform certain operations on my database (export from one database, import of those data to another one, backup of both databases) outside business hours (at night). Does SQL Studio provide any solution for this?
A: Yes, sure. The Studio Scheduler is intended for such situations. The Scheduler can run for execution of the previously created tasks. You can set the time and periodicity for the task execution. Each Task can include an unlimited number of Steps (elementary operations). A Task must include at least one step. In your case you should perform the following:
1. Create new Task
2. Create steps in the Task (Export, Import, etc.). When creating these steps, you will need to indicate in what template files the necessary tool parameters are saved.
3. Create a Scheduled Task in the Scheduler that will use the Task you have just created (1).

Q: How do I configure a task so that I receive an e-mail notification at the defined address in case of the task failure?
A: In the Task editor there is a tab called Alerts. By switching to this Tab you will be able to define the most suitable notification method to be informed of successful task execution and/or of the task failure. The current version of SQL Studio supports the following notification types: Net Send, System App Log (WIN), e-mail.

Q: Can the task process be changed depending on the results of the task steps?
A: Yes. When creating/editing each Task Step, you can define which step should go next. Moreover, for each of the three processed events (successful step termination, erroneous step termination, step termination by time-out) you can indicate a separate variant of the next Task operations.

Q: How can I view the information on the performed tasks?
A: All the information on the Task execution is fixed in the log. In the log you can find not only the information on the Task, but also on the Steps it includes. Moreover, you can view the log file of the attachment executed at a certain step. It is very convenient while analyzing the reasons of the Task/Step failure. The powerful log filters will allow you to display only selected records.

Q: What will happen if during a task execution the running application cannot terminate

(critical error, does not respond)? Will the task execution stop?
A: To resolve such conflicts, in every Task Step you can define its time-out. If a Step is being executed longer than it is defined in the time-out, the Step will terminate with the "by time-out" event, and the Task execution goes on according to the algorithm you set.

Q: What do I need to work with Task Scheduler?
A: To work with Task Scheduler, you need to run the Studio Agent (a shortcut in the task bar). Also, your computer should be running during all the time while the tasks will be run.

Q: What will happen if, after running the computer, Task Scheduler finds the tasks that should have been executed in the past, but it has not happened?
A: Those tasks will not be performed.

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Logs management

Q: It is important for me to get the information from log files of applications executed by the Task Scheduler? Does SQL Studio save these log files?
A: Yes, SQL Studio has a convenient tool to work with log files. While creating a Step in the Task, you can specify the location of the log file of the application to be executed. When choosing the tools from SQL Studio, the location of the log file is filled automatically. Log files of the performed steps are saved in the internal SQL Studio database and are available within the Tasks | Logs menu.

Q: The external application that is executed in one of the tasks does not have a log file, but only a screen log. How can I save the data from the screen?
A: If a utility does not have a log file, and the log information is only displayed on the screen (in text mode), then SQL Studio can save these data as a log. To do so, please check the "Save screen to log" box when creating a task.

Q: How long are log files stored in SQL Studio?
A: Log files are stored in SQL Studio during an unlimited period. You can delete the unnecessary log files manually in SQL Studio (within the Logs tab).

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Localization

Q: What interface localizations are available in SQL Studio?
A: The current version of SQL Studio supports the following interface localizations: English, German, French and Russian.

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

Part II
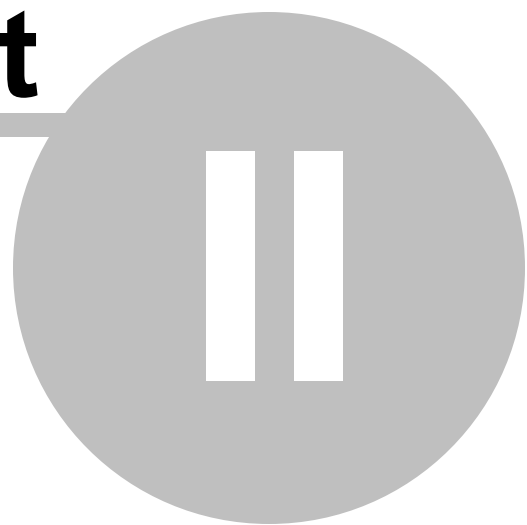
2 Getting Started

SQL Management Studio for InterBase/Firebird provides you with an ability to contribute to efficient Interbase/Firebird administration and development using a variety of available tools easily and quickly.

The succeeding chapters of this document are intended to inform you about the tools implemented in SQL Management Studio for InterBase/Firebird. Please see the instructions below to learn how to perform various operations in the easiest way.

- Using Studio Agent
- Selecting application language
- First time started
- Working with main menu
- Working with toolbars
- Using Desktop Panel
- Using Navigation bar
- Using DB Explorer

Enjoy your work with SQL Management Studio for InterBase/Firebird!
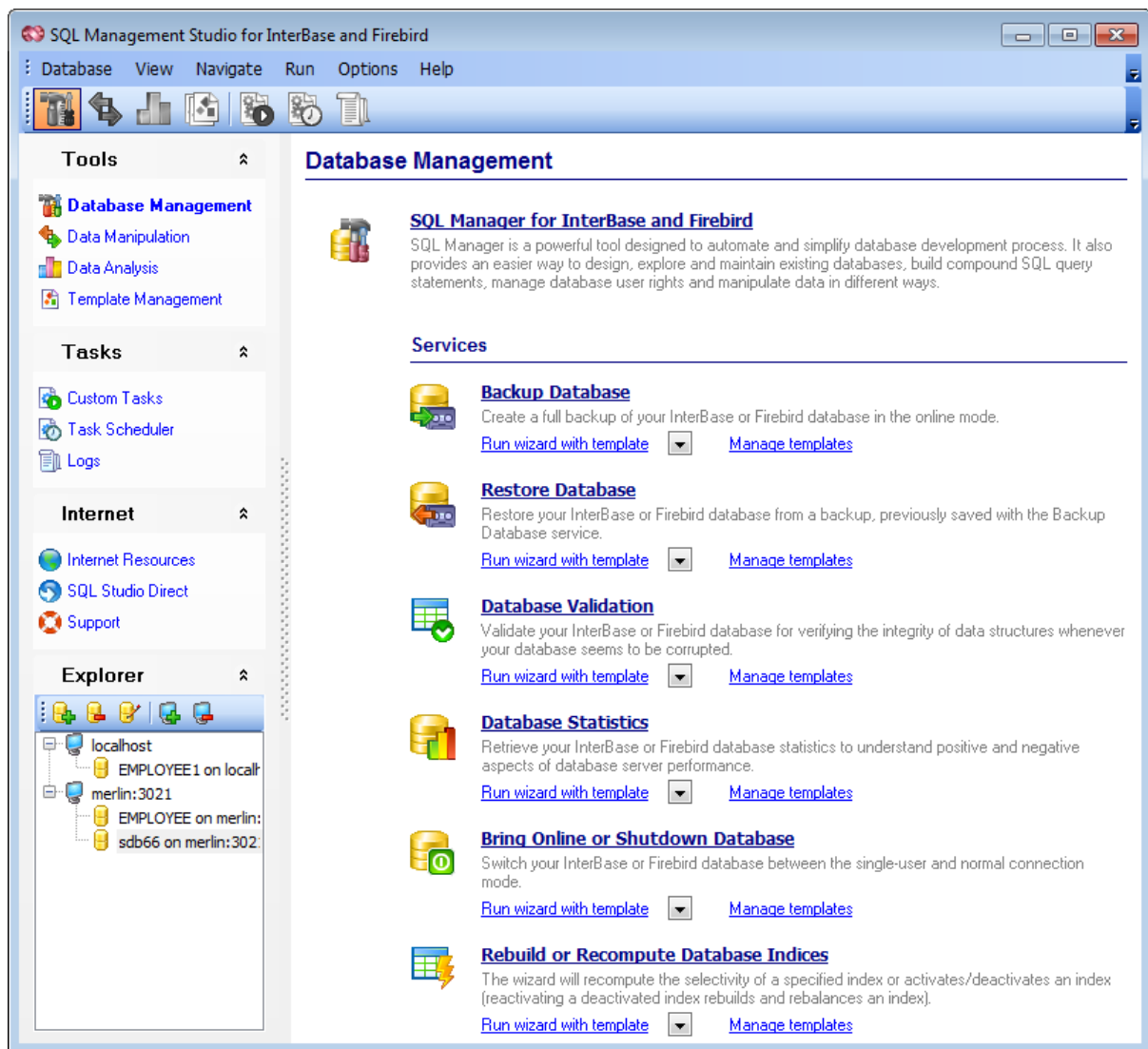
See also:

2.1 Using Studio Agent

SQL Studio Agent is a resident program located in the system tray area which allows you to perform basic SQL Studio operations.
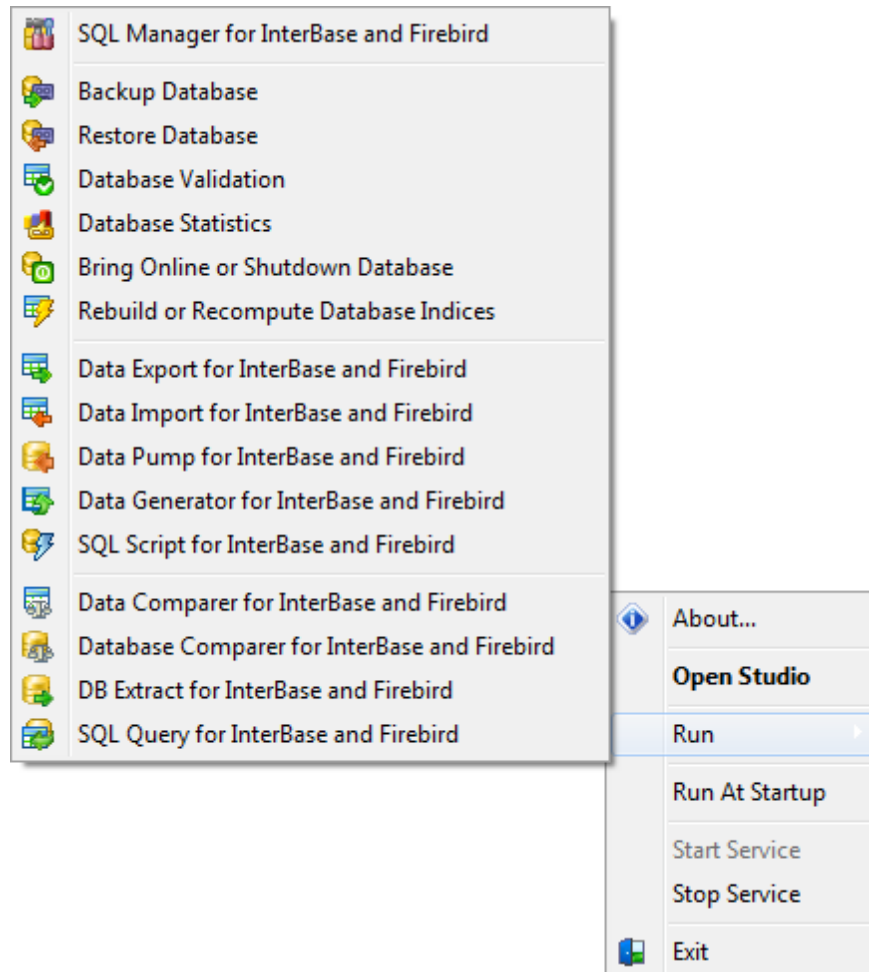
To start SQL Management Studio for InterBase/Firebird, you can simply double-click the Agent's icon in the system tray.

Right-click the Agent's icon in the system tray to call the menu allowing you to:
- open the About window to get information about the program version and registration status;
- run SQL Studio application or any of its components;
- execute a custom task;
- suspend a scheduled Task;
- set agent options.
- start/stop Task Scheduler service;

See also:
Selecting application language

First time started
Working with main menu
Working with toolbars
Using Desktop Panel
Using Navigation bar
Using DB Explorer

2.2 Selecting application language

Before you start SQL Studio for the first time, you have to choose the interface language. You can change the program language any time using the Localization tab of the **Options** dialog (**Options | Localization**).
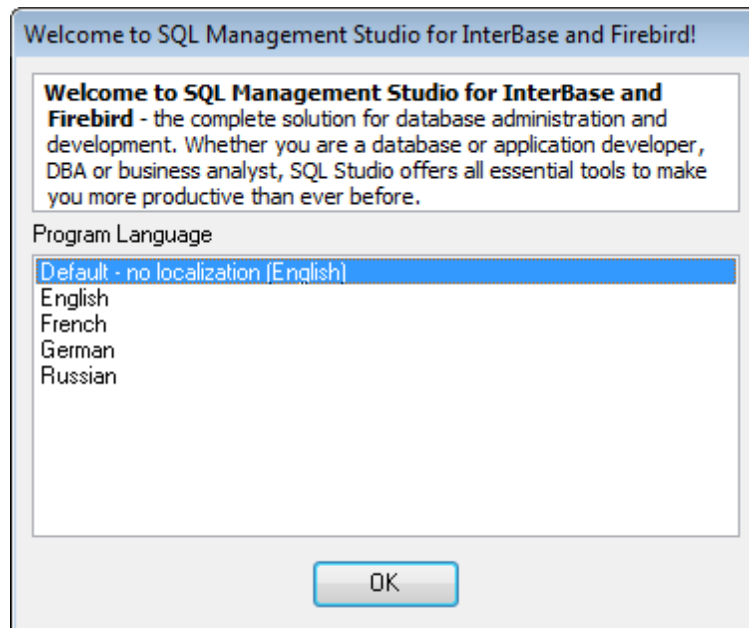
Program Language
Select the interface language from the list of available languages.

See also:

Using Studio Agent

First time started

Working with main menu

Working with toolbars

Using Desktop Panel

Using Navigation bar

Using DB Explorer

2.3   First time started

This is how SQL Management Studio for InterBase/Firebird looks when you start it for the first time. Use the Desktop panel to fulfill any database management task, or start a utility.

The main menu allows you to perform various **Database** operations, activate/deactivate toolbars, Navigation bar panes and tool descriptions within the **View** menu, access SQL Studio tools in groups using items of the **Navigate** menu, run any Studio tool using the **Run** menu, customize the application using the **Options** menu, access Registration information and product documentation using the corresponding items available within the **Help** menu.

The Navigation bar on the left allows you to switch between the activities in groups:
- *Tools*
- *Tasks*
- *Internet*

The main toolbar duplicates items of the **Navigation bar** and is implemented for quick access to SQL Studio activities.

To start working with your Interbase/Firebird, you should first register the host using **Register Host wizard**. After that you need to register one or several databases using **Register Database Wizard**.

By default the corresponding **Register /** **Unregister Host**, **Register /** **Unregister Database**, **Database Registration Info** buttons are available on the toolbar of DB Explorer and within the **Database** menu.

DB Explorer which is located below the **Navigation bar** displays all registered hosts and databases; you can add and remove items to/from the Explorer tree, browse registration information on hosts and databases and start Interbase/Firebird services for selected databases. You can also use this database registration information in utilities integrated in SQL Management Studio for InterBase/Firebird.
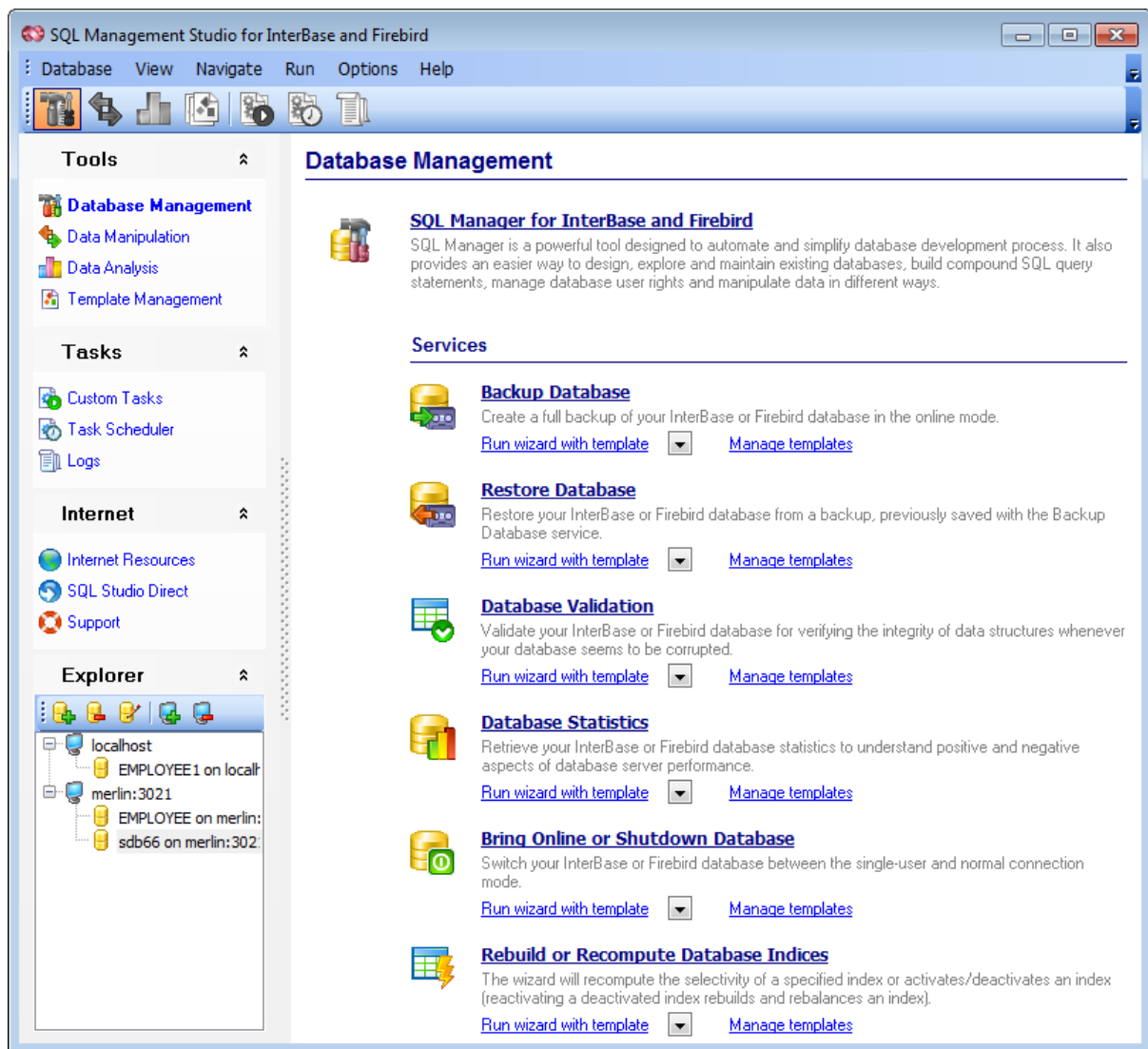
When the database connection settings are specified, you can set connection to your database and proceed to Database Management & Manipulation, Scheduling & Performing tasks, and other tools of SQL Studio.

See also:

Using Studio Agent

Selecting application language

Working with main menu

Working with toolbars

Using Desktop Panel

Using Navigation bar

Using DB Explorer

2.4 Working with main menu

The main menu of SQL Management Studio for InterBase/Firebird allows you to perform common operations pertaining to database registration, switch between Interbase/Firebird management and scheduling activities, start integrated tools, customize SQL Studio, get product help and misc.

The main menu allows you to perform various **Database** operations, activate/deactivate toolbars, Navigation bar panes and tool descriptions within the **View** menu, access SQL Studio tools in groups using items of the **Navigate** menu, run any Studio tool using the **Run** menu, customize the application using the **Options** menu, access Registration information and product documentation using the corresponding items available within the **Help** menu.
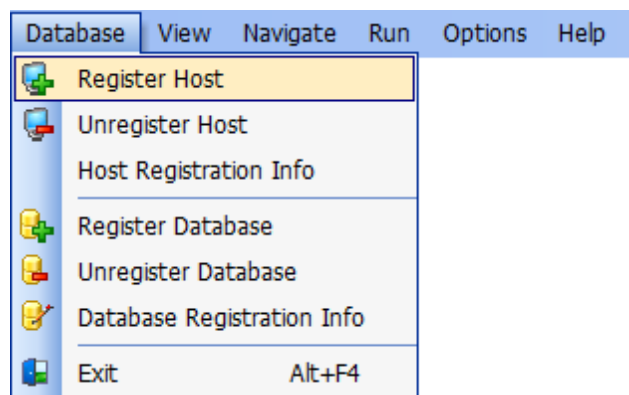
Database

Register Database
Starts **Register Database Wizard** which guides you through the entire process of Interbase/Firebird database registration.

Unregister Database
Unregister the selected database and removes its alias from the DB Explorer tree.

Database Registration Info
Opens the **Database Registration Info** dialog.

Register Host
Starts **Register Host Wizard** which guides you through the entire process of Interbase/Firebird host registration.

Unregister Host
Unregisters the selected host (including all its databases) and removes its alias from the DB Explorer tree.

Exit
Exits SQL Management Studio for InterBase/Firebird.

View
Allows you to toggle toolbars (*main toolbar*, *DB Explorer toolbar*), panes of the Navigation

bar (*Tools*, *Tasks*, *Internet*, *Explorer*) and tool descriptions.

Navigate
Use this menu to switch quickly between the activities concerned with Interbase/Firebird and data management, tasks, scheduling, logs and online resources. These items are duplicated in the Navigation bar and the main toolbar.

Run
This menu allows you to launch any of SQL Studio integrant tools.

Options
Allows you to personalize SQL Studio interface settings and select program language.

Help
Use this menu to browse SQL Studio help system, open user manual, visit the official SQL Studio Home Page and register the program.

If necessary, you can customize the menu according to your preferences.

See also:

Using Studio Agent

Selecting application language

First time started

Working with toolbars

Using Desktop Panel

Using Navigation bar

Using DB Explorer

2.5 Working with toolbars

The **Main toolbar** can be found above the scratch of <u>Desktop Panel</u>. By selecting its corresponding bars you switch between the activities concerned with Interbase/Firebird and data management.

By default the main toolbar items represent the following Interbase/Firebird and data management activities:

Database management
Data Manipulation
Data Analysis
Template Management

Custom Tasks
Task Scheduler
Logs

The **toolbar of DB Explorer** contains items for the Interbase/Firebird database registration repository management:

Register Host
Unregister Host
Register Database
Unregister Database
Database Registration Info

If necessary, you can be <u>customize</u> the program toolbars according to your preferences.

See also:
<u>Using Studio Agent</u>
<u>Selecting application language</u>
<u>First time started</u>
<u>Working with main menu</u>
<u>Using Desktop Panel</u>
<u>Using Navigation bar</u>
<u>Using DB Explorer</u>

2.6   Using Desktop Panel

Desktop Panel is the main working area of SQL Management Studio for InterBase/
Firebird. The content of the Desktop Panel scratch changes dynamically according to the
current selection in the Navigation bar of the main toolbar.

Using the **Desktop Panel** items you can:

launch the all-in Database management program (*SQL Manager for InterBase/Firebird*)
and run basic Interbase/Firebird services:
- *Backup Database* (with or without a template);
- *Restore Database* (with or without a template);
- *Database Statistics* (with or without a template);
- *Database Validation* (with or without a template);
- *Bring Online or Shutdown Database* (with or without a template);

launch integrated Data manipulation utilities:
- *Data Export for InterBase/Firebird* (with or without a template, GUI or console
  version);
- *Data Import for InterBase/Firebird* (with or without a template, GUI or console
  version);
- *Data Pump for InterBase/Firebird* (with or without a template, GUI or console
  version);
- *Data Generator for InterBase/Firebird* (with or without a template, GUI or console
  version);

- *SQL Script for Interbase/Firebird* (with or without a template, GUI or console version);

launch utilities implemented for [Data analysis](#):
- *Data Comparer for InterBase/Firebird* (with or without a template, GUI or console version);
- *DB Comparer for InterBase/Firebird* (with or without a project file, GUI or console version);
- *DB Extract for InterBase/Firebird* (with or without a template, GUI or console version);
- *SQL Query for InterBase/Firebird*;

manage [templates](#) for each of the integrated tools and services;

manage miscellaneous [tasks](#);

manage [scheduled tasks](#);

manage task [logs](#);

use available [Internet resources](#):
- visit SQL Studio Home Page;
- browse SQL Studio pages dedicated to [Frequently Asked Questions](#);
- browse online documentation concerning SQL Studio components;
- visit Interbase/Firebird related resources;

use the [SQL Studio Direct](#) feature;

get [technical support](#) online.

Hint: To activate/deactivate brief descriptions displayed for each tool on the **Desktop Panel**, you can use the **View | Show Tool Descriptions** item of the [main menu](#).

See also:
[Using Studio Agent](#)
[Selecting application language](#)
[First time started](#)
[Working with main menu](#)
[Working with toolbars](#)
[Using Navigation bar](#)
[Using DB Explorer](#)

2.7   Using Navigation bar

Navigation bar is located on the left side of SQL Studio window. It is a convenient tool for quick navigation within SQL Studio activities.
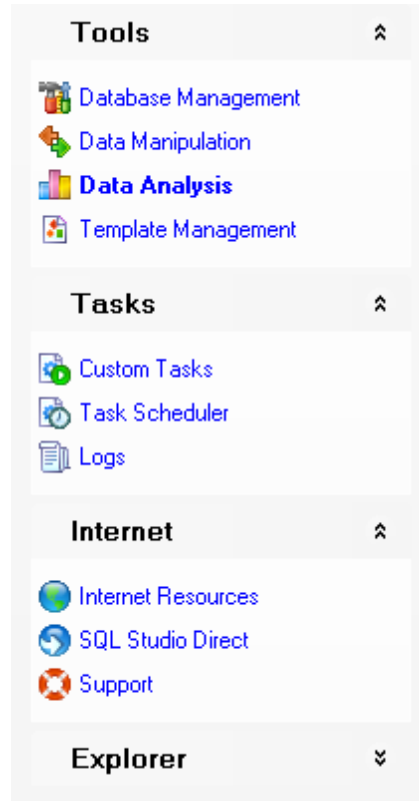
Items available within the **Navigation bar** panes represent the following SQL Studio tools:

Tools:
- Database management
- Data Manipulation
- Data Analysis
- Template Management

Tasks:
- Custom Tasks
- Task Scheduler
- Logs

Internet:
- Internet Resources
- SQL Studio Direct
- Support

To activate/deactivate **Navigation bar** and its panes, you can use the **View | Navigation bar** main menu items.

See also:

Using Studio Agent
Selecting application language
First time started
Working with main menu
Working with toolbars
Using Desktop Panel
Using DB Explorer

2.8   Using DB Explorer

Database Explorer (or **DB Explorer**) is the basic window of SQL Studio for navigation within registered hosts and databases. The tree-like structure of DB Explorer allows you to manage the hosts and databases and perform everyday operations quickly and easily.

To activate/deactivate **DB Explorer**, you can use the corresponding **View | Navigation bar | Explorer** item of the main menu.

By default, **DB Explorer** is located below the Navigation bar in the lower-left area of SQL Studio window. DB Explorer displays all registered hosts and databases; with its help you can add and remove items to/from the Explorer tree, browse registration information of hosts and databases and start Interbase/Firebird services for selected databases. Single registered database repository allows you to use database registration information in all utilities integrated in SQL Management Studio for InterBase/Firebird.
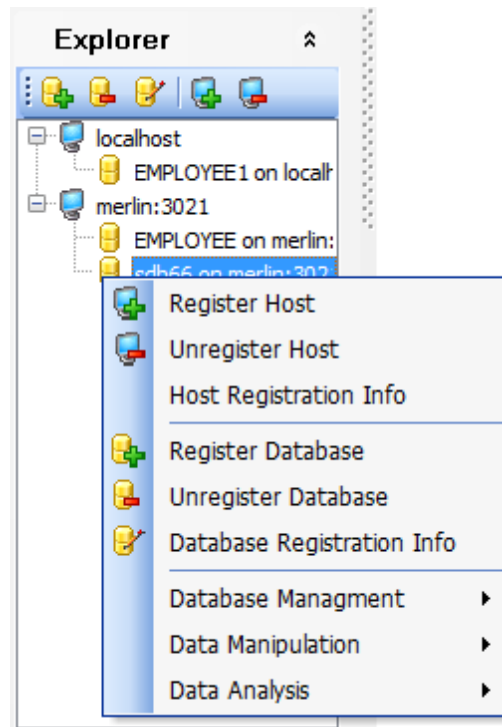
To add a host/database to the **DB Explorer** tree, select the **Database | Register Database** / **Database | Register Host** items of the main menu or use the corresponding items of the context menu. If more convenient, you can use the **Register Database** / **Register Host** toolbar buttons.

To remove a host/database from the **DB Explorer** tree, select the **Database | Unregister Database** / **Database | Unregister Host** items of the main menu or use the corresponding items of the context menu. If more convenient, you can use the **Unregister Database** / **Unregister Host** toolbar buttons.

To view database registration info, select the **Database | Database Registration Info** item of the main menu or use the corresponding item of the context menu. If more

convenient, you can use the **Database Registration Info** toolbar button.

See also:

Using Studio Agent

Selecting application language

First time started

Working with main menu

Working with toolbars

Using Desktop Panel

Using Navigation bar

Part III
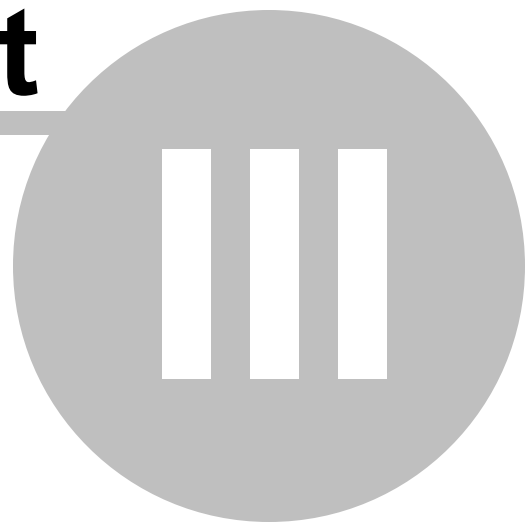
3   Database Management & Manipulation

All the **Database Management & Manipulation** abilities provided by SQL Management Studio for InterBase/Firebird are classified and divided into several sections. They are:

Database Management
This group allows you to administrate and develop databases with the help of SQL Manager for InterBase/Firebird and run Interbase/Firebird services.

Data Manipulation
This group represents a variety of utilities for exporting and importing data to/from most popular formats, migrating to Interbase/Firebird databases, generating test data and scripting the databases.

Data Analysis
The wide range of abilities provided by this group of tools includes the abilities to compare and synchronize the contents and structure of your databases, create database backups in the form of SQL scripts, as well as analyze and retrieve your data and build queries visually.

Template Management
For your convenience the ability to create new templates and manage existing ones is provided by SQL Management Studio for InterBase/Firebird.

These sections can be toggled by clicking the appropriate items of the Navigation bar.

See also:
Getting Started
Scheduling & Performing tasks
Using On-line Resources
Setting program options

3.1   Database Management

The **Database Management** section allows you to administrate and develop databases with the help of SQL Manager for InterBase/Firebird and run Interbase/Firebird services.

- Running SQL Manager
- Using services

Database Management

SQL Manager for InterBase and Firebird

SQL Manager is a powerful tool designed to automate and simplify database development process. It also provides an easier way to design, explore and maintain existing databases, build compound SQL query statements, manage database user rights and manipulate data in different ways.

Services

Backup Database

Create a full backup of your InterBase or Firebird database in the online mode.

Run wizard with template   Manage templates

Restore Database

Restore your InterBase or Firebird database from a backup, previously saved with the Backup Database service.

Run wizard with template   Manage templates

Database Validation

Validate your InterBase or Firebird database for verifying the integrity of data structures whenever your database seems to be corrupted.

Run wizard with template   Manage templates

Database Statistics

Retrieve your InterBase or Firebird database statistics to understand positive and negative aspects of database server performance.

Run wizard with template   Manage templates

Bring Online or Shutdown Database

Switch your InterBase or Firebird database between the single-user and normal connection mode.

Run wizard with template   Manage templates

Rebuild or Recompute Database Indices

The wizard will recompute the selectivity of a specified index or activates/deactivates an index (reactivating a deactivated index rebuilds and rebalances an index).

Run wizard with template   Manage templates

See also:

Data Manipulation

Data Analysis

Template Management

3.1.1 Running SQL Manager

EMS SQL Manager for InterBase/Firebird is a powerful tool for Interbase/Firebird administration and development. SQL Manager works with Interbase/Firebird versions up to XE7/4.0 respectively and supports most of the latest Interbase/Firebird features. It offers plenty of powerful tools for experienced users to satisfy all their needs. SQL Manager for InterBase/Firebird has a new convenient graphical user interface with well-described wizard system, so clear in use that even a newbie will not be confused with it.

To run SQL Manager for InterBase/Firebird, click its icon or caption on the Desktop Panel.

SQL Manager for InterBase and Firebird
SQL Manager is a powerful tool designed to automate and simplify database development process. It also provides an easier way to design, explore and maintain existing databases, build compound SQL query statements, manage database user rights and manipulate data in different ways.

See also:
Using services

3.1.2 Using services

SQL Studio integrated features provide easy way to run all native Interbase/Firebird services which are intended for database maintenance. The following services and server tools are available:

To run a service, click its icon or caption on the Desktop Panel and follow the steps of the Wizard. If necessary, you can click the Arrow-down button to open the menu allowing you to specify a template, and *run the wizard with this template*.

To manage configuration files (templates), use the corresponding **Manage templates** link. In this case you will be redirected to the Template Management section of SQL Studio.

Backup Database
Creates backup copies of your Interbase/Firebird databases.

Restore Database
Restores Interbase/Firebird databases from previously created backups.

Database Validation
Validates the database for verifying the integrity of data structures.

Database Statistics
Collects various statistics as an aid to improve the performance.

Bring Online or Shutdown Database
Allows you to shutdown (sometimes you may need to switch to the one-user database connection mode) and to bring database online back again.

Rebuild or Recompute Database Indices
Allows you to recompute or rebuild indices. Highly fragmented indices may considerably decrease query performance. Index fragmentation is remedied by either reorganizing or by

rebuilding an index.

See also:
Running SQL Manager

3.2 Data Manipulation

Data Manipulation represents a variety of tools used for exporting and importing data to/from most popular formats, migrating between Interbase/Firebird databases and generating test data for the databases.

- Running Data Export utility
- Running Data Import utility
- Running Data Pump utility
- Running Data Generator utility
- Running SQL Script utility

Data Manipulation

Data Export for InterBase and Firebird
Export your data to any of 20 most popular data formats, including MS Access, MS Excel, MS Word, PDF, HTML and more.
Run wizard with template ▼ Run console with template ▼ Manage templates

Data Import for InterBase and Firebird
Import your data from MS Access, MS Excel and other popular formats to database tables via user-friendly wizard interface.
Run wizard with template ▼ Run console with template ▼ Manage templates

Data Pump for InterBase and Firebird
Migrate from any ADO-compatible sources to InterBase and Firebird databases.
Run wizard with template ▼ Run console with template ▼ Manage templates

Data Generator for InterBase and Firebird
Generate test data for database testing purposes in a simple and direct way. Wide range of data generation parameters.
Run wizard with template ▼ Run console with template ▼ Manage templates

SQL Script for InterBase and Firebird
Execute your SQL scripts fast and easy.
Run wizard with template ▼ Run console with template ▼ Manage templates

See also:
Database Management
Data Analysis
Template Management

3.2.1 Running Data Export

EMS Data Export for InterBase/Firebird is a powerful utility to export your data quickly from Interbase/Firebird databases to any of 20 available formats, including MS Access, MS Excel, MS Word (RTF), HTML, XML, PDF, TXT, CSV, DBF and more.

Data Export for InterBase/Firebird provides you with an easy-to-use Wizard which guides you through all the steps of data export process: you can set export options for each

table visually (destination filename, exported fields, data formats, and many others). Additionally to **the GUI version** which is implemented in the form of a Wizard application, Data Export for InterBase/Firebird includes **the console version** which is intended for running from Windows command line with a template file name used as the execution parameter.

To run Data Export for InterBase/Firebird, click its icon or caption on the Desktop Panel and follow the steps of the Wizard. If necessary, you can click the Arrow-down button to open the menu allowing you to specify a template, and *run the wizard/console with the template*.

To manage configuration files (templates), use the corresponding **Manage templates** link. In this case you will be redirected to the Template Management section of SQL Studio.

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

Run wizard with template ▼   Run console with template ▼   Manage templates

---

See also:
Running Data Import
Running Data Pump
Running Data Generator
Running SQL Script

3.2.2   Running Data Import

EMS Data Import for InterBase/Firebird is a powerful program to import your data quickly from MS Excel, MS Access, DBF, TXT and CSV files to Interbase/Firebird tables.

Data Import for InterBase/Firebird provides you with an easy-to-use Wizard which guides you through all the steps of data import process: you can set 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, import mode, etc. Additionally to **the GUI version** which is implemented in the form of a Wizard application, Data Import for InterBase/Firebird includes **the console version** which is intended for running from Windows command line with a template file name used as the execution parameter.

To run Data Import for InterBase/Firebird, click its icon or caption on the Desktop Panel and follow the steps of the Wizard. If necessary, you can click the Arrow-down button to open the menu allowing you to specify a template, and *run the wizard/console with the template*.

To manage configuration files (templates), use the corresponding **Manage templates** link. In this case you will be redirected to the Template Management section of SQL Studio.

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

Run wizard with template ▼   Run console with template ▼   Manage templates

See also:
Running Data Export
Running Data Pump
Running Data Generator
Running SQL Script

3.2.3   Running Data Pump

EMS Data Pump for InterBase/Firebird is an excellent utility for converting databases and importing table data from an ADO-compatible source (e.g. MS Access or any other database with ADO support) to Interbase/Firebird databases. Database conversion becomes as easy as it possible with Data Pump for InterBase/Firebird!

Data Pump for InterBase/Firebird provides you with an easy-to-use Wizard which guides you through all the steps of migration process: you can build the connection string, select tables, fields and indices for converting, view and edit SQL script for generating the target Interbase/Firebird database structure and select tables for data import. Additionally to **the GUI version** which is implemented in the form of a Wizard application, Data Pump for InterBase/Firebird includes **the console version** which is intended for running from Windows command line with a template file name used as the execution parameter.

To run Data Pump for InterBase/Firebird, click its icon or caption on the Desktop Panel and follow the steps of the Wizard. If necessary, you can click the Arrow-down button to open the menu allowing you to specify a template, and *run the wizard/console with the template*.

To manage configuration files (templates), use the corresponding **Manage templates** link. In this case you will be redirected to the Template Management section of SQL Studio.

Data Pump for InterBase and Firebird
Migrate from any ADO-compatible sources to InterBase and Firebird databases.

Run wizard with template ▼   Run console with template ▼   Manage templates

See also:
Running Data Export
Running Data Import

Running Data Generator
Running SQL Script

3.2.4 Running Data Generator

EMS Data Generator for InterBase/Firebird is a powerful utility for generating test data to several Interbase/Firebird database tables at once. The application provides a lot of features to generate test data in a simple and direct way.

Data Generator for InterBase/Firebird provides you with an easy-to-use Wizard which guides you through all the steps of data generation process: you can define tables and fields for generating data, set value ranges, generate char fields by mask, load values for BLOB fields from files, get lists of values from SQL queries and more.
Additionally to **the GUI version** which is implemented in the form of a Wizard application, Data Generator for InterBase/Firebird includes **the console version** which is intended for running from Windows command line with a template file name used as the execution parameter.

To run Data Generator for InterBase/Firebird, click its icon or caption on the Desktop Panel and follow the steps of the Wizard. If necessary, you can click the Arrow-down button to open the menu allowing you to specify a template, and *run the wizard/console with the template*.

To manage configuration files (templates), use the corresponding **Manage templates** link. In this case you will be redirected to the Template Management section of SQL Studio.

Data Generator for InterBase and Firebird
Generate test data for database testing purposes in a simple and direct way. Wide range of data generation parameters.
Run wizard with template   ▼   Run console with template   ▼   Manage templates

See also:
Running Data Export
Running Data Import
Running Data Pump
Running SQL Script

3.2.5 Running SQL Script

SQL Script utility is an easy-to-use tool allowing you to execute your SQL scripts efficiently.

SQL Script for Interbase/Firebird provides you with an editor window which allows you to manage your scripts easily.
Additionally to **the GUI version**, SQL Script for Interbase/Firebird includes **the console version** which is intended for running from Windows command line with a template file

name used as the execution parameter.

To run SQL Script for Interbase/Firebird, click its icon or caption on the Desktop Panel and follow the steps of the Wizard. If necessary, you can click the Arrow-down button to open the menu allowing you to specify a template, and *run the wizard/console with the template*.

To manage configuration files (templates), use the corresponding **Manage templates** link. In this case you will be redirected to the Template Management section of SQL Studio.

SQL Script for InterBase and Firebird
Execute your SQL scripts fast and easy.
Run wizard with template   Run console with template   Manage templates

See also:
Running Data Export
Running Data Import
Running Data Pump
Running Data Generator

3.3   Data Analysis

The wide range of abilities provided by the **Data Analysis** section includes the abilities to compare and synchronize the metadata and data of your databases, create database backups in the form of SQL scripts as well as analyze and retrieve your data and build your queries visually.

- Running Data Comparer utility
- Running Database Comparer utility
- Running DB Extract utility
- Running SQL Query utility

Data Analysis

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

Run wizard with template   ▾   Run console with template   ▾   Manage templates

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

Run application with project   ▾   Run console with project   ▾   Manage projects

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

Run wizard with template   ▾   Run console with template   ▾   Manage templates

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

See also:

Database Management

Data Manipulation

Template Management

3.3.1   Running Data Comparer

EMS Data Comparer for InterBase/Firebird is a powerful and easy-to-use utility for data comparison and synchronization. With flexible customization of the comparison and synchronization process you can select tables and fields for comparison and tune many other options.

Data Comparer for InterBase/Firebird provides you with a Wizard which guides you through all the steps of data comparison and synchronization process: you can view all the differences in tables being compared and execute an automatically generated script to eliminate these differences.

Additionally to **the GUI version** which is implemented in the form of a Wizard application,

Data Comparer for InterBase/Firebird includes **the console version** which is intended for running from Windows command line with a template file name used as the execution parameter.

To run Data Comparer for InterBase/Firebird, click its icon or caption on the Desktop Panel and follow the steps of the Wizard. If necessary, you can click the Arrow-down button to open the menu allowing you to specify a template, and *run the wizard/console with the template*.

To manage configuration files (templates), use the corresponding **Manage templates** link. In this case you will be redirected to the Template Management section of SQL Studio.

See also:
Running DB Comparer
Running DB Extract
Running SQL Query

3.3.2 Running Database Comparer

EMS DB Comparer for InterBase/Firebird is an excellent tool for comparing Interbase/ Firebird databases and discovering differences in their structure. A simple and intuitive GUI allows you to work with several projects at once, define comparison parameters, and alter modification scripts. Many other features make your work with our tool easy and fast.

DB Comparer for InterBase/Firebird provides you with an easy-to-use GUI environment: you can view all the differences in compared database objects and execute an automatically generated script to eliminate all or selected differences.
Additionally to **the GUI version** which is implemented in the form of a Wizard application, DB Comparer for InterBase/Firebird includes **the console version** which is intended for running from Windows command line with a template file name used as the execution parameter.

To run DB Comparer for InterBase/Firebird, click its icon or caption on the Desktop Panel and follow the steps of the Wizard. If necessary, you can click the Arrow-down button to open the menu allowing you to specify a template, and *run the wizard/console with the template*.

To manage configuration files (templates), use the corresponding **Manage templates** link. In this case you will be redirected to the Template Management section of SQL Studio.

Database Comparer for InterBase and Firebird

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

Run application with project [▼]   Run console with project [▼]   Manage projects

See also:
Running Data Comparer
Running DB Extract
Running SQL Query

3.3.3 Running DB Extract

EMS DB Extract for InterBase/Firebird is a powerful and easy-to-use utility for creating database backups in a form of SQL scripts. It allows you to save metadata of all database objects as well as table data.

DB Extract for InterBase/Firebird provides you with a Wizard which guides you through all the steps of metadata and data extraction process: you can select objects and data tables for extraction and tune a number of other extract options.
Additionally to **the GUI version** which is implemented in the form of a Wizard application, DB Extract for InterBase/Firebird includes **the console version** which is intended for running from Windows command line with a template file name used as the execution parameter.

To run DB Extract for InterBase/Firebird, click its icon or caption on the Desktop Panel and follow the steps of the Wizard. If necessary, you can click the Arrow-down button to open the menu allowing you to specify a template, and *run the wizard/console with the template.*

To manage configuration files (templates), use the corresponding **Manage templates** link. In this case you will be redirected to the Template Management section of SQL Studio.

DB Extract for InterBase and Firebird

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

Run wizard with template [▼]   Run console with template [▼]   Manage templates

See also:
Running Data Comparer
Running DB Comparer
Running SQL Query

3.3.4 Running SQL Query

EMS SQL Query for InterBase/Firebird is a utility that lets you quickly and simply build SQL queries to Interbase/Firebird databases. Visual building as well as direct editing of a query text is available. User-friendly graphical interface allows you to connect to databases, select tables and fields for a query, set the selection criteria and much more. You can work with several queries at once, edit queries and view the execution results in several modes and perform any other operations you may need in your work with database queries.

SQL Query utility can be run by clicking its icon or caption on the Desktop Panel.

To run SQL Query for InterBase/Firebird, click its icon or caption on the Desktop Panel and follow the steps of the Wizard.

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

See also:
Running Data Comparer
Running DB Comparer
Running DB Extract

3.4 Template Management

For your convenience the ability to create new templates and manage existing ones is implemented. All these operations can be performed with the help of the **Template Management** section.

- Managing existing templates
- Creating new templates
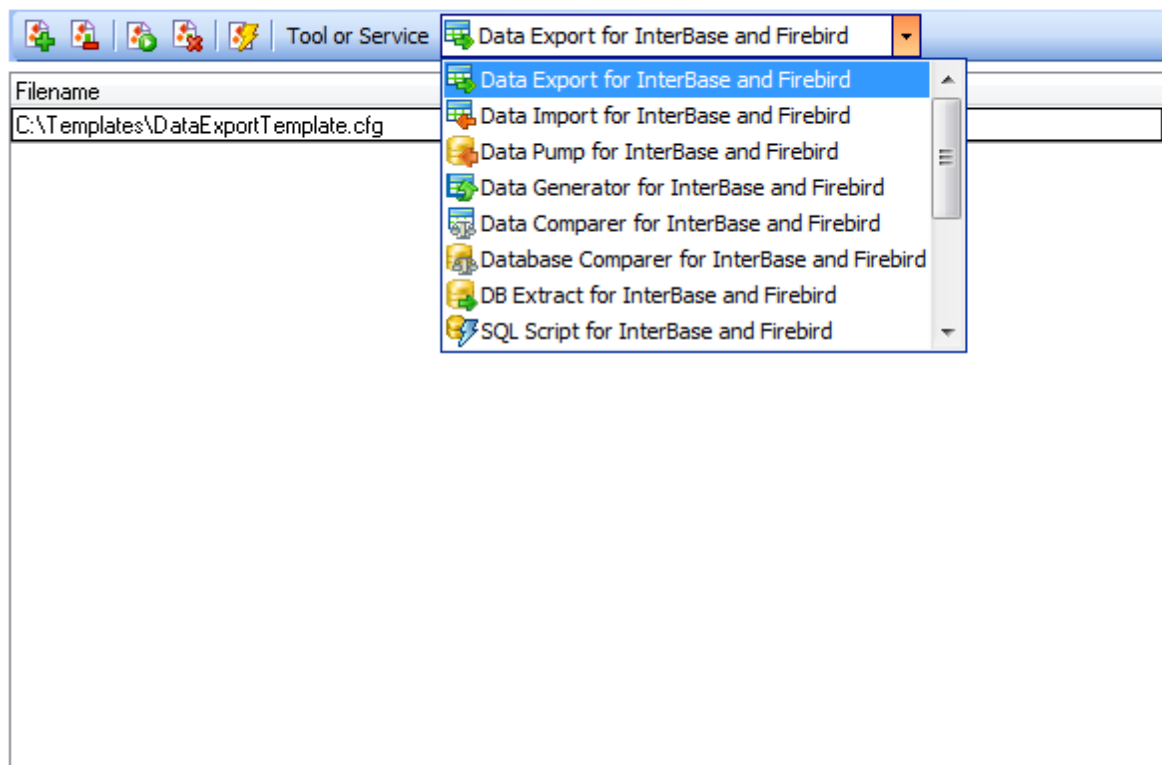
See also:

Database Management

Data Manipulation

Data Analysis

3.4.1 Managing existing templates

The **Template Management** section allows you to add/remove templates to/from the list, create new templates or delete existing ones. You can select and start the selected tool with a desirable template in a single click as well. The same operations can be performed by using the corresponding items of the context menu.

The **Tool or Service** drop-down list allows you to filter templates according to the selected SQL Studio tool/service.

Template Management
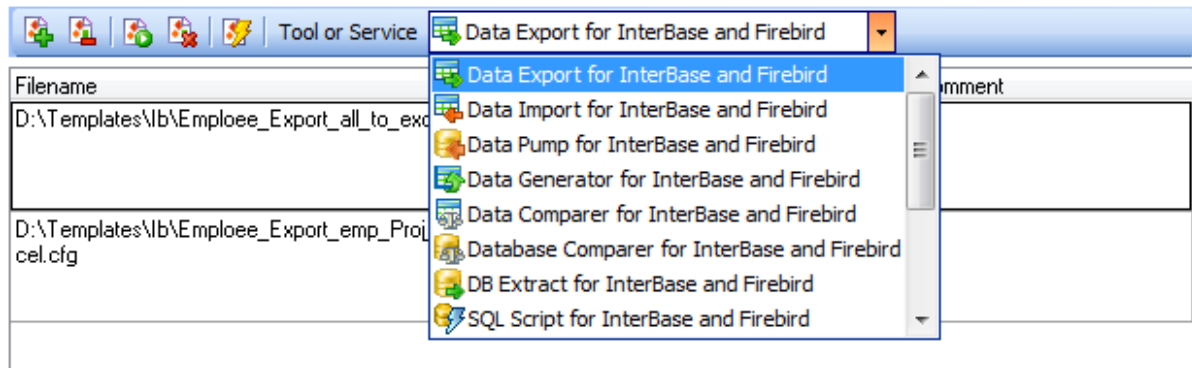
See also:
Creating new templates

3.4.2 Creating new templates

This operation can be started by selecting corresponding context menu item or clicking the appropriate button on the **Templates** toolbar. Depending on the utility or service for which the template should be created, SQL Management Studio for InterBase/Firebird will run the appropriate tool or service dialogs themselves. While working with the steps of wizard, you will be able to enter all settings and save them as a template on the last step.

See also:
Managing existing templates

Part IV

4   Scheduling & Performing tasks

All the **Scheduling & Performing Tasks** abilities provided by SQL Management Studio for InterBase/Firebird are classified and divided into several sections. They are:

Customizing tasks
The section provides creating, editing, deleting and immediate launching tasks. Save your time and physical efforts by using batch-like tasks. Create your task easily with the built-in Task Editor. Choose from a number of notifications for your task to monitor its execution.

Scheduling tasks
Need a delayed or regular task execution? This section allows you to set schedules for launching your tasks.

Managing logs
For you to control the task execution process or just browse its results, the **Managing logs** section is provided. Use the log preview to save your time, apply the powerful filter and sorting options available for the grid.

These sections can be toggled by clicking the appropriate items of the Navigation bar.

See also:

Getting Started

Database Management & Manipulation

Using On-line Resources

Setting program options

4.1 Customizing tasks

This section provides **creating**, **editing**, **deleting** and immediate **launching tasks**. Save your time and physical efforts by using batch-like tasks. Create your task easily in the built-in **Task Editor**. Choose from a number of notifications for your task to confirm its execution.

To get more information, use the following links:
- Managing tasks
- Using Task Editor

When a custom task is launched, the Task Output window displaying the task execution log appears.
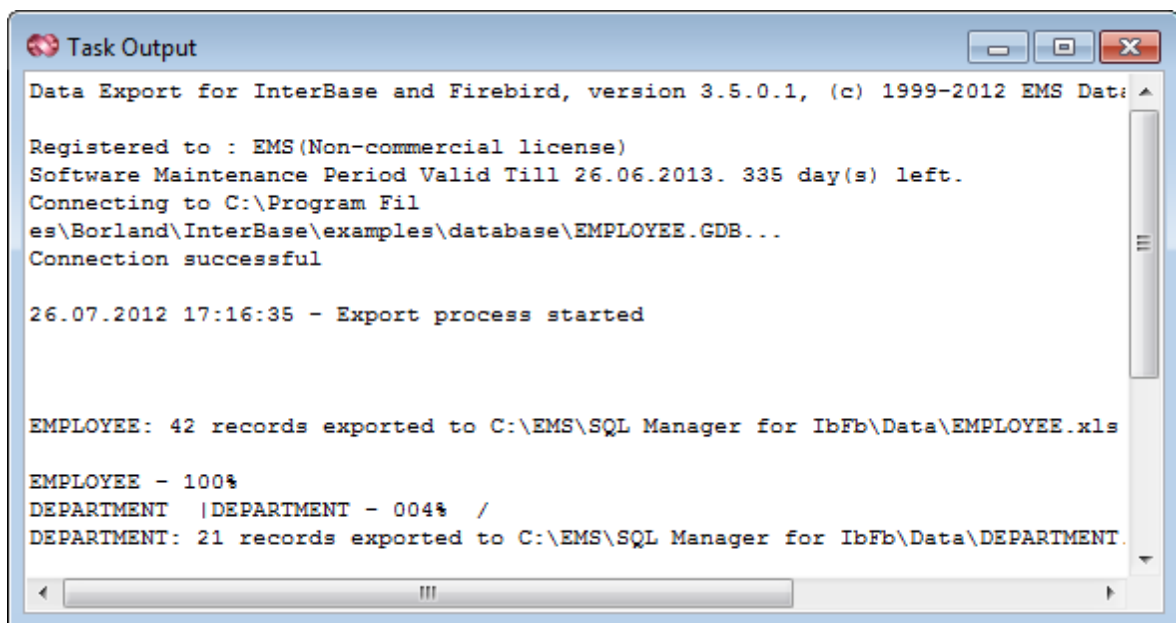
See also:
Scheduling tasks
Managing logs

4.1.1 Managing tasks and task steps

The **Custom Tasks** section allows you to manage your tasks and task steps efficiently.

Custom Tasks
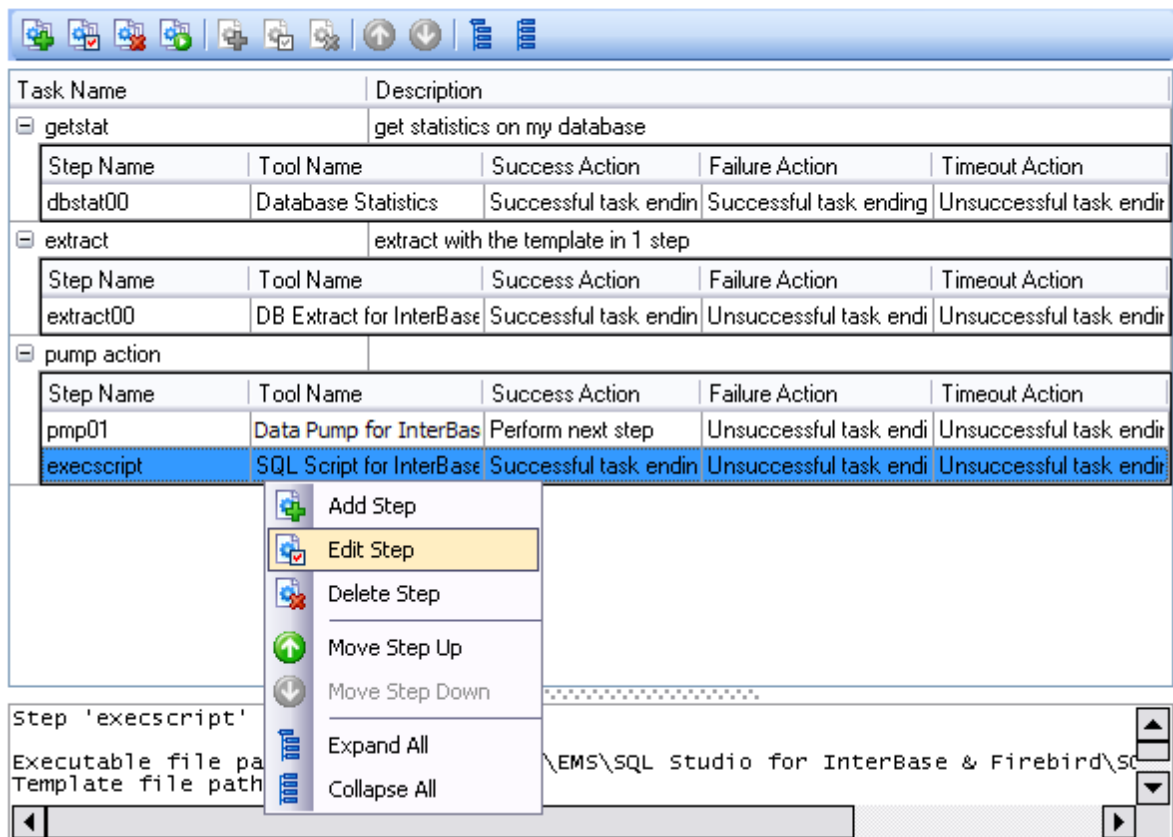
The list displays the existing tasks as a grid with the following columns: *Task Name*, *Description*.

Right-click an item within the list to call the **context menu** allowing you to *add* a new task and specify its properties using the Task Editor dialog, *edit* the selected task, *delete* a task or *launch* a custom task.

A custom task can be scheduled or executed directly. To perform an immediate launch of a task, you should select it and click the corresponding button on the toolbar (or use the corresponding context menu item).

If necessary, you can expand and collapse the list of task steps quickly. Use the *Expand All* / *Collapse All* context menu items for this purpose.

You can also use the toolbar buttons to add /edit / delete a task or task step, move step up / down, launch a task, expand / collapse all task steps.

In the **Status** area at the bottom of the **Custom Tasks** window you can find brief information pertaining to the currently selected task. It includes the list of task steps, tools involved, further actions on successful task execution and other useful remarks.

If more convenient, you can use SQL Studio Agent to launch tasks. Right-click its icon in the system tray area, then select the **Execute Custom Task** submenu and tick off the

task you need.

4.1.2 Using Task Editor

Task Editor is opened automatically on creating a new task and is available on editing an existing one.
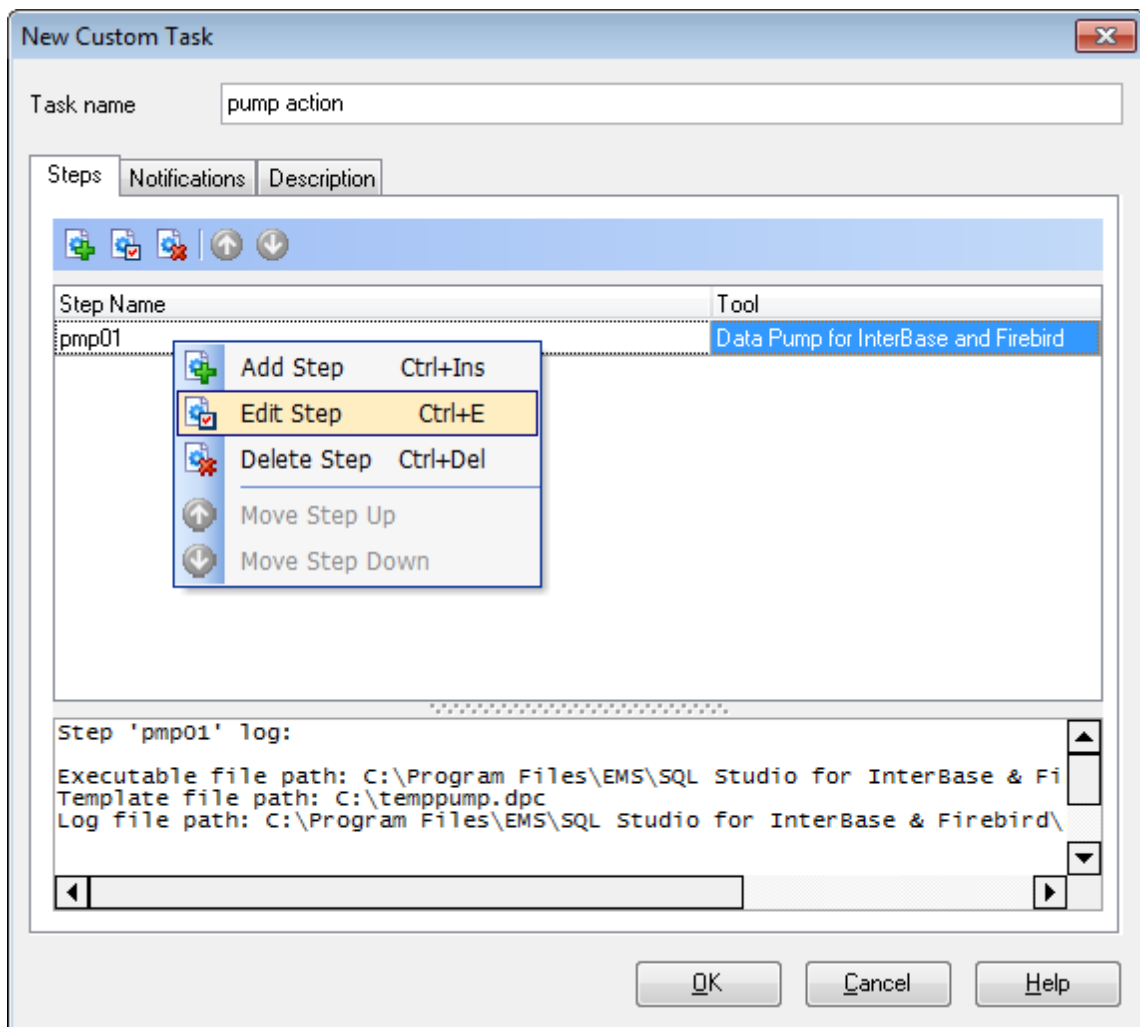
First of all, you need to set a **name** for the new task, or you can modify the name if the task is being edited.

Task properties provided by **Task Editor** are available within the following tabs:
- *Steps*
- *Notifications*
- *Description*

The **Steps** tab allows you to specify the steps you need for the task (every task consists of several steps which must be executed in turn).

You can create a new step, edit or delete an existing one with the help of the corresponding **context menu** items or using the **toolbar** buttons.

Besides, you can change step execution order by using the **Move Step Up** and **Move Step Down** buttons on the toolbar. The same ability is provided by the context menu of **Task Editor**.

For more details see Using Step Editor.

In the **Status** area at the bottom of the **Task Editor** window you can find brief information pertaining to the currently selected task step. It includes the path to the executable file, used template name, log file path, further actions on successful step execution and misc.

The **Notifications** tab allows you to be informed about the results of task execution (in addition to SQL Studio Logs): you can set an optional notification.

For more details see Setting notifications.

Any optional text can be set as description for your task. If necessary, you can make your remarks at the **Description** tab of **Task Editor**.

See also:

Managing tasks and task steps

4.1.2.1   Setting notifications

The **Notifications** tab of **Task Editor** allows you to set an optional notification of successful and failed task execution. This ability allows you to be informed about each task execution. You can choose between *net send*, *system application log* and *e-mail* notifications.

Use net send operator
Allows you to send notifications via net send. Input the message to be sent to a remote computer in the corresponding editor field.

Note that you must have **Messenger** service running in order to use this type of notifications. (**Windows Control Panel | Administrative Tools | Services | Messenger**).

Use system application log
Allows you to write notifications directly into system log. Input the message to be written to the system application log in the corresponding editor field.

Note that in order to view system application log you should open **Windows Control Panel | Administrative Tools | Event Viewer | Application**.

Use e-mail
Provides sending notifications via e-mail. Input the message to be sent via e-mail in the corresponding editor. Also, you must fill all the necessary fields - **Host** (the address of the *smtp* server), **port** (*25* by default) and the destination e-mail address.

Note: You can also use macronames (#START, #STOP, #RESULT) in the text of e-mail notification:
#START is the actual time when task started;
#STOP stands for the time of task finish;
#RESULT reports task result.

Two options for sending notification are available: ☑ **When task succeeds** and ☑ **When task fails**.

The **Test** button allows you to check the service by sending a notification message immediately.

4.1.2.2 Using Step Editor

Step Editor is opened automatically on creating a new task step and is available on editing an existing one.

Step information
First of all, you need to set a **name** for the new task step, or you can modify the name if the step is being edited.

Tool settings
Use the drop-down list to select a tool, point out its path, set optional template for the utility and select the location of the log file using the corresponding boxes.

Log settings
Here you can specify the ways of forming SQL Studio log file.

☑ **Save screen to log**
Enables saving all data from the utility screen to SQL Studio log file.

☑ **Get log from file**
Enables usage of the utility log file; all the data contained there will be saved to SQL Studio log file.

Finish actions
Set successful and unsuccessful finish actions. You can choose to proceed to the next step or to a specified one, end task with the report of its successful or unsuccessful ending. **Step Editor** also provides handling on timeout. You can set desirable timeout time and the action after its expiration.
To perform any of the actions listed above, use the appropriate boxes of **Step Editor**.

Other
☑ **Failure only for serious errors**
This option enables reporting successful task ending if minor errors (e.g. extract script was executed with some errors) occurred during the utility running.

☑ **Log size limitation**
Check this option to limit the log file size for the current step and set a preferred value in the edit-box.

4.2 Scheduling tasks

Need a delayed or regular task execution? The **Scheduling tasks** section allows you to configure the schedules for launching your tasks.

- Managing scheduled tasks
- Using schedule Editor
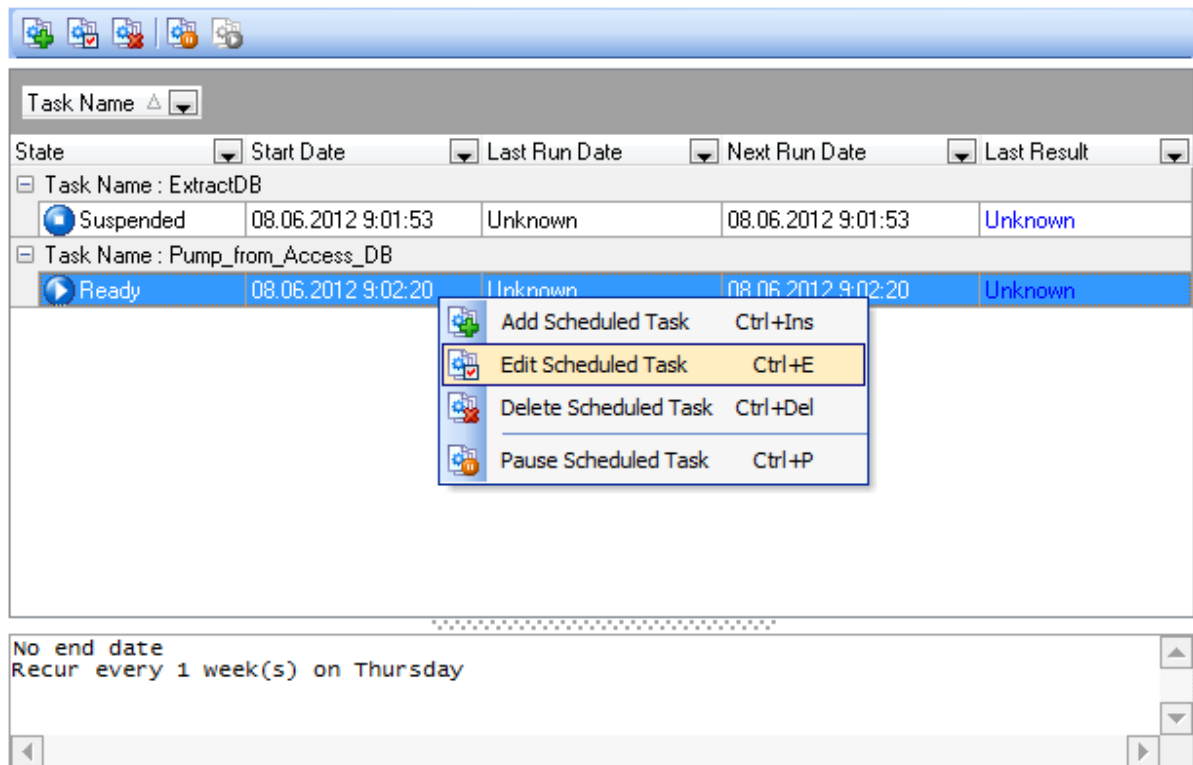
See also:
Customizing tasks
Managing logs

4.2.1 Managing scheduled tasks

Task Scheduler allows you to manage your custom tasks configured for scheduled execution.

Task Scheduler
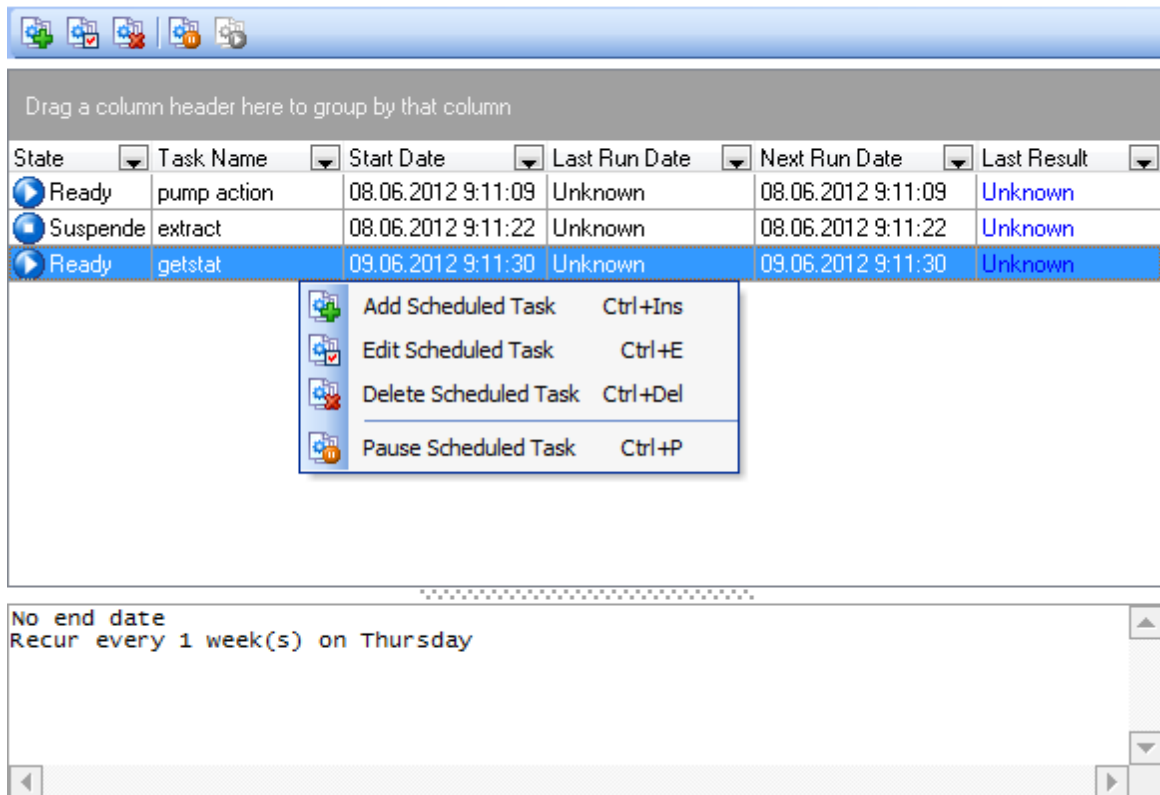
The list displays the existing scheduled tasks as a grid with the following columns: *State*, *Task Name*, *Start Date*, *Last Run Date*, *Next Run Date*, *Last Result*.

If necessary, you can **filter** and **group the data in grid** by any of the columns. The grouping operation is performed by dragging the column header to the gray **"Group by" box** area at the top. When grouping by a column is applied to the grid, all the rows are displayed as subnodes to the grouping row value. To reverse grouping, just drag the column header back.

Right-click an item within the list to call the **context menu** allowing you to *add* a new scheduled task and specify its properties using the Schedule Editor dialog, *edit* the selected task, *delete* a task or *pause/resume* a task that is currently ready/suspended.

You can also use the toolbar buttons to add /edit , pause /resume , or delete an existing scheduled task.

In the **Status** area at the bottom of the **Task Scheduler** window you can find brief information pertaining to the currently selected task.

If more convenient, you can use SQL Studio Agent to suspend/launch tasks. Right-click its icon in the system tray area, then select the **Suspend Scheduled Task** submenu and tick off the task you need. The reverse action is performed in the same way.

Hint: Ready/suspended/launched tasks are differentiated in the **Task Scheduler** list by their icons in the **State** column.

4.2.2 Using Schedule Editor

Schedule Editor is opened automatically on adding a new scheduled task and is available on editing an existing one.

To create a task for delayed execution, please select the task to schedule. If you edit an existing task, you may need to change the task itself for the current schedule. You can do it using the **Task name** field of the **Schedule Editor** dialog.

Afterwards you should define the **recurrence pattern** for the task execution:
◉ *Daily*
◉ *Weekly*
◉ *Monthly*
◉ *Yearly*

Daily
You can set the task to run ◉ **Every X day(s)** or ◉ **Every weekday** (i.e. except

weekend days).

Weekly
The recurrence pattern allows you to schedule the task for running on a specified day of the week (Monday, Tuesday, Wednesday, etc. - check the corresponding box) every X week.

For example, you selected to run the task 'Every 3 weeks on Tuesday'. It means that task will be executed exactly on Tuesday once per three weeks.

Monthly
You can set to execute your task on the certain day of the X month; another way is to run the task on the certain day of the week of the definite week of every X month.

Yearly
You can select to run the task on a certain day of the definite month (e.g., on June, 14). Another ability allows to make the task run on the first/second/.../last day of the week of a certain month (e.g., on the second Wednesday of April).

Range of recurrence
Here you should specify the starting and ending points of the task execution period. Set **Start date** and **Start time** and then proceed to the ending bound of the range recurrence.

◉ **No end date**
If this option is selected, the task will be executed perpetually, unless it is deleted/
modified.
◉ **End after...**
This option specifies that the task will be run only X times.
◉ **End by ...**
This option specifies the exact date which is the right bound of the recurrence range.

Daily launches
Use the **Add Launch** and the **Delete Launch** buttons to add/remove one or several
daytime points for the task execution.

See also:

Managing scheduled tasks

4.3   Managing logs

To make it easier to control the task execution process or browse its results, the **Logs** section is provided. Use the log preview to save your time, apply the powerful filter and sorting options provided by the grid.
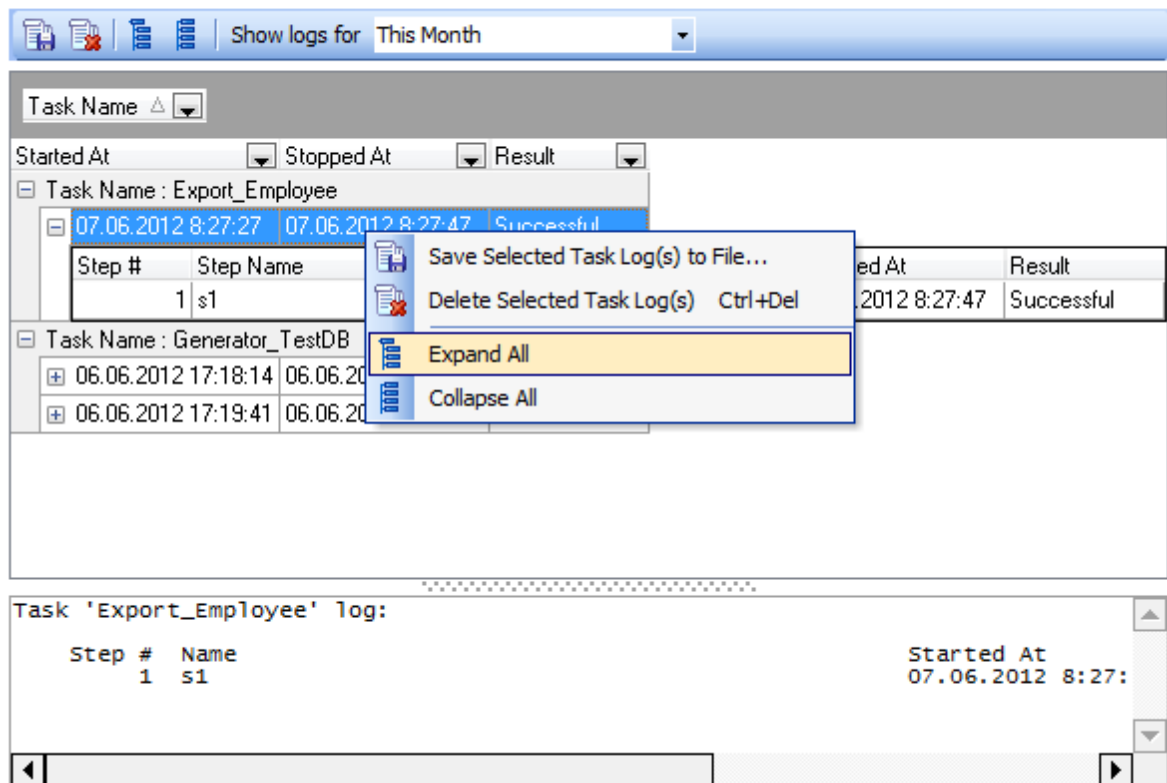
The **Show logs for** drop-down list allows you to filter task logs according to the selected period (*All sessions*, *Today*, *This week*, *This month*, *Last week*, *Last month*, *Last 10 days*, *Last 30 days*).

The list displays the task logs as a grid with the following columns: *Task Name*, *Started at*, *Stopped at*, *Result*.

If necessary, you can **filter** and **group the data in grid** by any of the columns. The grouping operation is performed by dragging the column header to the gray **"Group by" box** area at the top. When grouping by a column is applied to the grid, all the rows are displayed as subnodes to the grouping row value. To reverse grouping, just drag the column header back.

Right-click an item within the list to call the **context menu** allowing you to *save* or *delete* the selected task log, expand/collapse step logs.

You can also use the toolbar buttons to save 📄/delete 📄 a task log, expand 📋 /

collapse items in the list.

In the **Status** area at the bottom of the **Log Viewer** window you can find brief information pertaining to the currently selected task log. Depending on the log options set it may contain all data from the utility screen and data from utility log file or both. The verbose options are set during step creation process (see Using Step Editor).
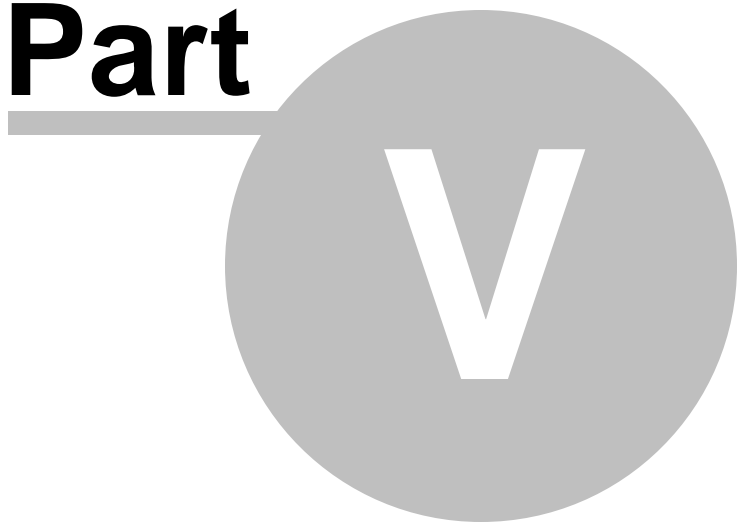

See also:

Customizing tasks
Scheduling tasks

Part V

5   Using On-line Resources

All the **On-line Resources** provided by SQL Management Studio for InterBase/Firebird are classified and divided into several sections.

Internet Resources
Offers a number of links concerning SQL Studio and integrant utilities, links to FAQs and online documentation.

SQL Studio Direct
Takes you straight to the latest EMS news section: you are provided with links to the latest sqlmanager.net news, as well as to product information and downloads.

Contacting Support Center
Takes you directly to EMS Support Center. After logging in you can get the answers to your questions. If you are a registered user of EMS software, you are guaranteed to receive a reply from the Support team within 24 hours.

These sections can be toggled by clicking the appropriate items of the Navigation bar.

See also:
Getting Started
Database Management & Manipulation
Scheduling & Performing tasks
Setting program options

5.1 Browsing Internet Resources

The **Internet Resources** section offers a number of links concerning SQL Studio and integrant utilities, links to FAQs and online documentation.

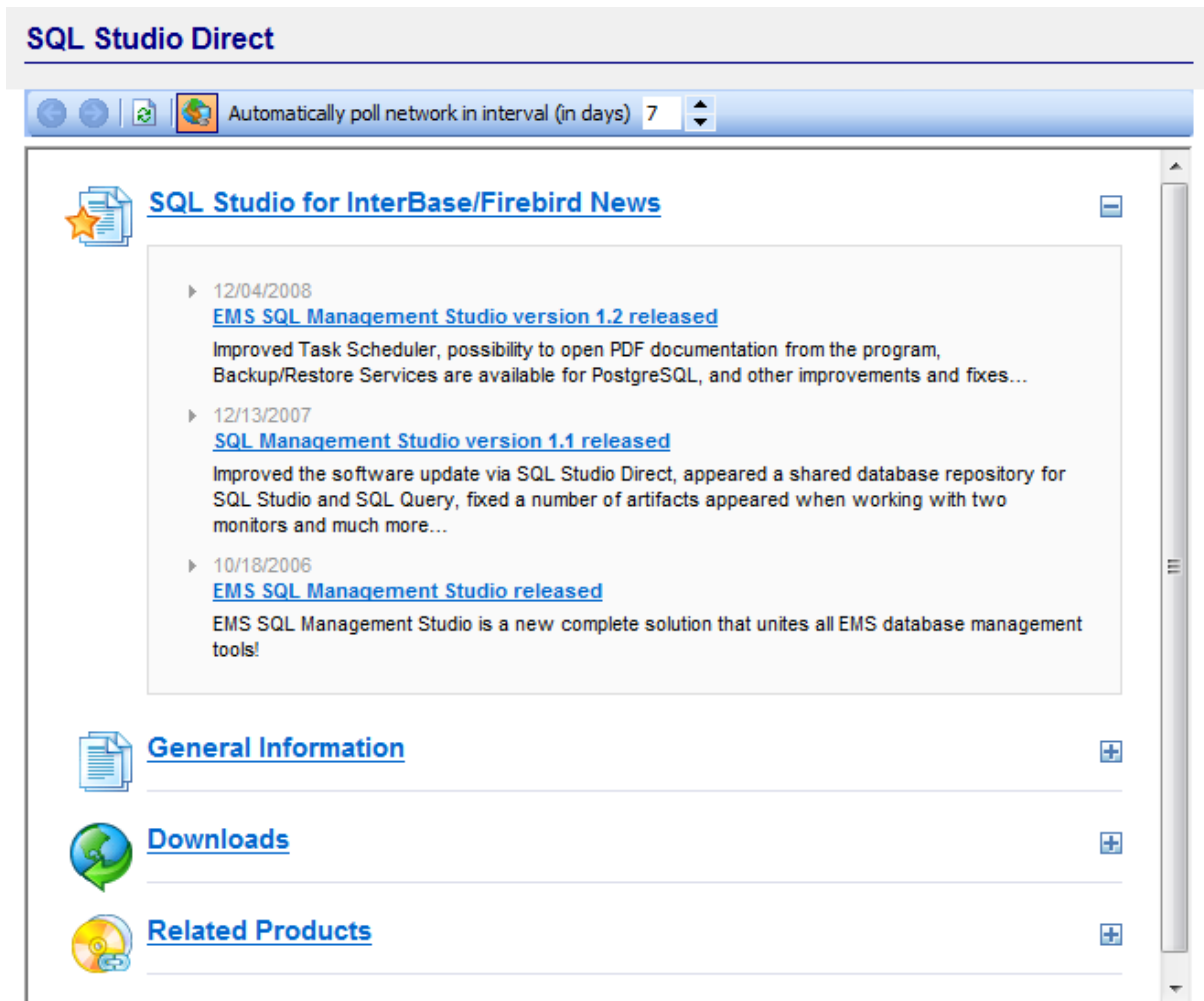Upon a link selection you will be immediately forwarded to the corresponding resource.

See also:
SQL Studio Direct
Support

5.2   SQL Studio Direct

The **SQL Studio Direct** section takes you directly to the latest EMS news column. Using the links, you can get up-to-date news, product information and downloads from sqlmanager.net.

In the **Status** area at the bottom of the **SQL Studio Direct** window you can find the direct link to the page at sqlmanager.net.

See also:

Internet Resources
Support
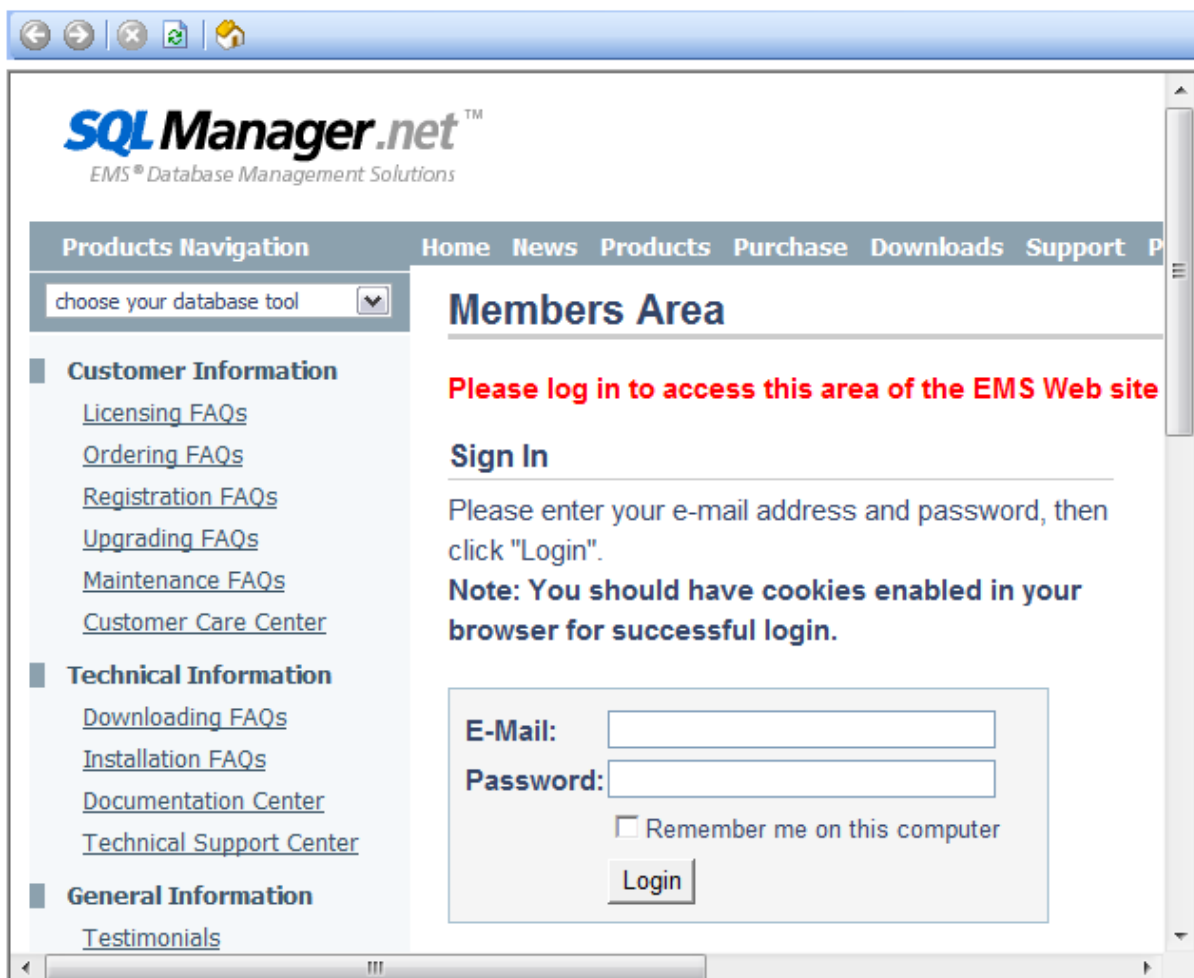
5.3   Contacting Support Center

This section opens EMS Support Center in the built-in browser. After logging in you can get official technical support directly in SQL Management Studio for InterBase/Firebird environment.

Note that if you are a registered user of EMS software, you will get a guaranteed reply within 24 hours.

See also:
Internet Resources
SQL Studio Direct

Part VI

6   Setting program options

This section is intended to show you how you can customize SQL Management Studio for InterBase/Firebird. Follow the links below to obtain the information on:

- Selecting language
- Customizing interface
- Customizing menus and toolbars
- Setting agent options

See also:

Getting Started

Database Management & Manipulation

Scheduling & Performing tasks

Using On-line Resources

6.1   Selecting language

If you did not select the program interface language when you started SQL Management Studio for InterBase/Firebird for the first time, or you have decided to change the language settings, use the **Options | Localization** main menu item.
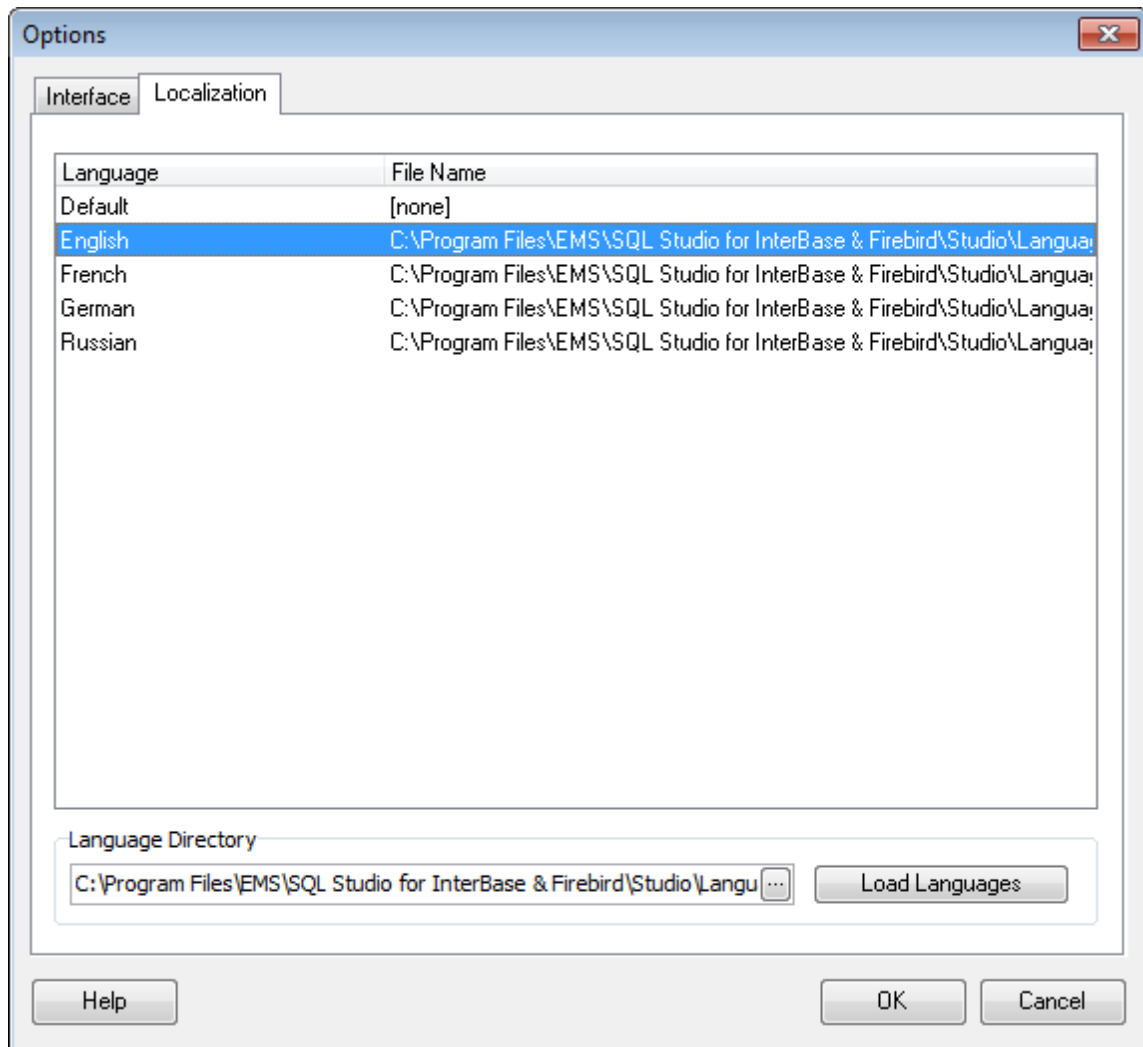
The **Localization** section of the **Options** dialog is provided for managing the localization files of SQL Management Studio for InterBase/Firebird.

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

Available Languages
Lists all the languages available for localization and the corresponding *.lng files.

Language Directory
Specify the directory where the *.lng files are stored by default.

Load Languages
This button is used for searching for *.lng* files in the **Language Directory** and adds all of them to the list.
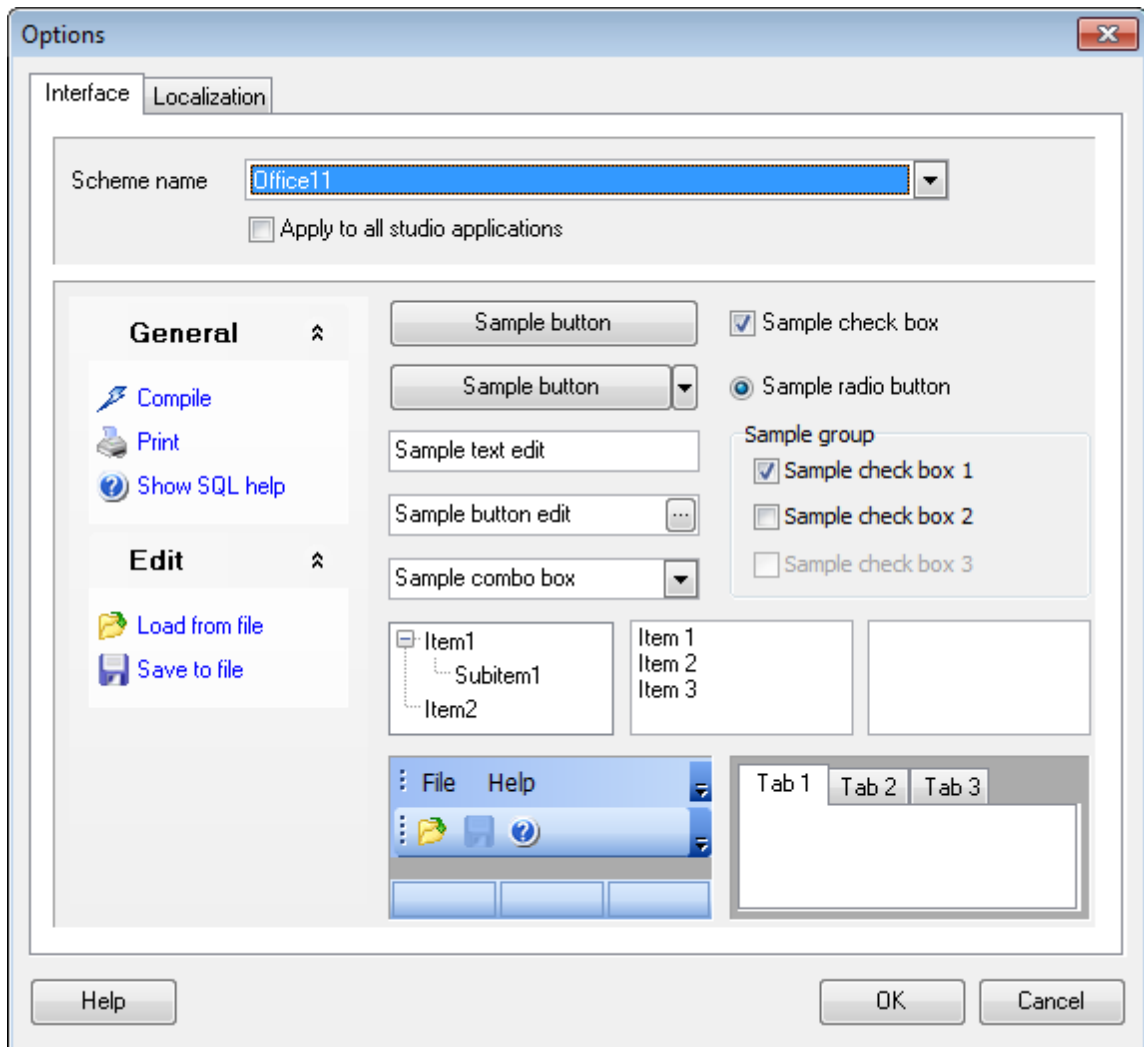

See also:

Customizing interface

Customizing menus and toolbars

Setting agent options

6.2 Customizing interface

In order to reach maximum comfort when working with the application, you can change SQL Management Studio for InterBase/Firebird look and environment style. The program interface can be easily customized by selecting the **Options | Interface** main menu item.

Note: you can apply SQL Studio visual options to all studio applications with the help of the corresponding option.


See also:

Selecting language

Customizing menus and toolbars

Setting agent options

6.3 Customizing menus and toolbars

The **Customize Toolbars** window allows you to select the buttons displayed on the SQL Management Studio for InterBase/Firebird toolbars and change their positions.

To call this window, click the down-arrow button at the right-side of any toolbar, then click **Add or Remove Buttons** and select **Customize**.
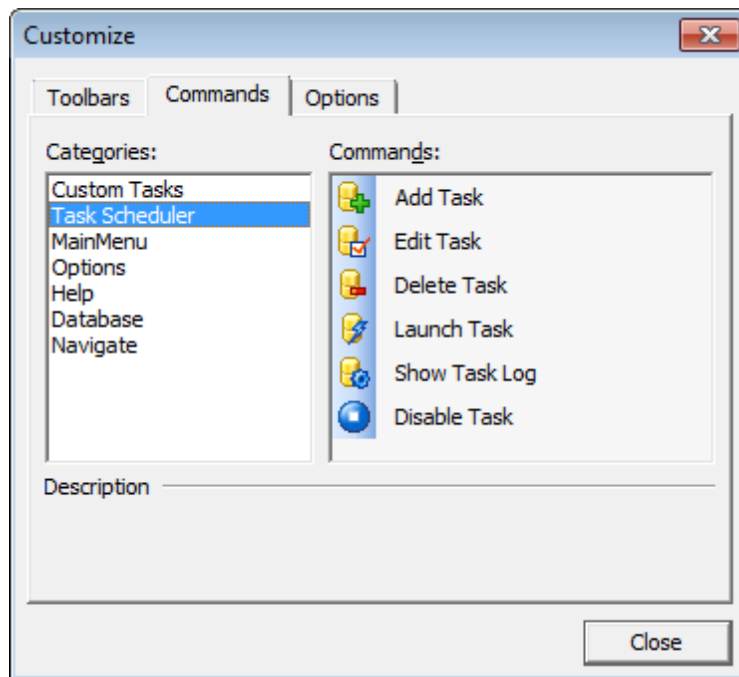
Toolbars

Toolbars
The toolbars of the window from which the **Customize** was called. Click a box near the toolbar name to show or hide the toolbar.

New
Adds a new toolbar to the toolbar list and to the parent window.

Rename
Renames a user-created toolbar.

Delete
Deletes a user-created toolbar.

Note that any toolbar can be moved and docked to any side of SQL Studio window which is convenient for you.

Commands

This tab allows you to view the list of all the commands available within toolbars of the parent window. Selecting categories in the **Categories** list box displays commands of the

selected category (e.g. 'Register Database' or 'Unregister Database') in the **Commands** list box. You can pick a command and drag it onto any parent window toolbar to create a button for this command.

Options

Menus show recently used commands first
With this option on the parent window menus drop-down containing only several items available, which have been used recently. To display full menus unselect this option.

Show full menus after a short delay
This option is available only if **Menus show recently used commands first** is on. It displays full menus after a few seconds of showing only recent items.

Reset my usage data
Resets the lists of recently used commands in the toolbars and menus.

Large Icons
Displays larger icons on the parent window toolbars.

Show ToolTips on toolbars
Shows tips on navigating to the toolbar button.

Show shortcut keys in ToolTips
Shows shortcuts for faster activating the corresponding commands in the button tips.

Menu animations
Select how menus appear in the parent window (*None*, *Random*, *Unfold*, *Slide*, *Fade*).

See also:
Selecting language
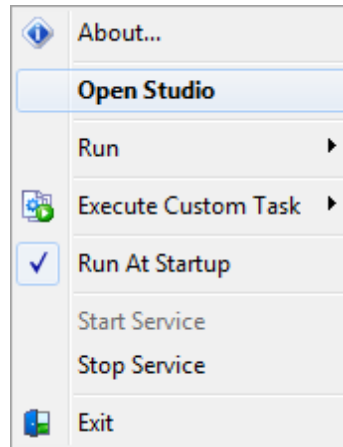Customizing interface
Setting agent options

6.4   Setting agent options

The **Agent options** menu allows you to perform various tasks available in SQL Management Studio for InterBase/Firebird and specify SQL Studio Agent options.

To call the menu, right-click the **Agent** icon in the system tray area.

Using the **Agent options** menu and its submenus you can call the About dialog, open the main window of SQL Management Studio for InterBase/Firebird, run a utility for database management and data manipulation, execute a custom task, suspend a scheduled task, or specify running the Agent at Windows startup. You can also start/stop Task Scheduler service.

See also:

Selecting language

Customizing interface

Customizing menus and toolbars

Part VII

7 Appendix

7.1 Using templates

For your convenience the ability to use templates is provided by SQL Management Studio for InterBase/Firebird.

Instead of performing a long chain of routine steps all the time you can save all the options of the wizard for future use as a template file. Select the **Templates | Save Template** drop-down menu item, specify the template file name and set an optional comment for the template file.
When starting the wizard next time, you can load the template by selecting the **Templates | Load Template** drop-down menu item.

7.2 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.

⦿ **MS Word 97-2003**
One of the most popular text processing formats used by Microsoft® Word (*.doc*). The result files are fully compatible with Microsoft® Word versions 97-2000, 2003 and XP.

⦿ **RTF**
Rich Text Format (*.rtf*) supported by many text processing programs (e.g. WordPad).

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

⦿ **PDF**
A standard format in electronic publishing (*.pdf*).

⦿ **Text file**
Plain text file format (*.txt*).

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

⦿ **DIF file**
Data Interchange File (*.dif*) format.

⦿ **SYLK**
Symbolic Links (*.slk*) file format.

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

⦿ **LaTeX**
A specific file format (*.tex*) which is a popular (especially among mathematicians and physicists) macroextension of *TeX* pack developed by D.Knut.

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

⦿ **DBF**
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.

7.3 Sorting, Grouping, Filtering

Sorting

To perform sorting click the column header to perform ascending or descending sorting of this column values. When sorting is applied for a column, an arrow icon appears to the right of its title;

Grouping

When grouping by a column is applied, all records are displayed as subnodes to the grouping row value as displayed on the screenshot below. If necessary, you can group data by two or more columns. In this case column headers are displayed hierarchically.

To apply grouping drag the column header to the gray area at the top.

If necessary, you can group data by two or more columns. In this case column headers are displayed hierarchically, and data are grouped by these columns in the order the column headers appear in the **Group by** area.
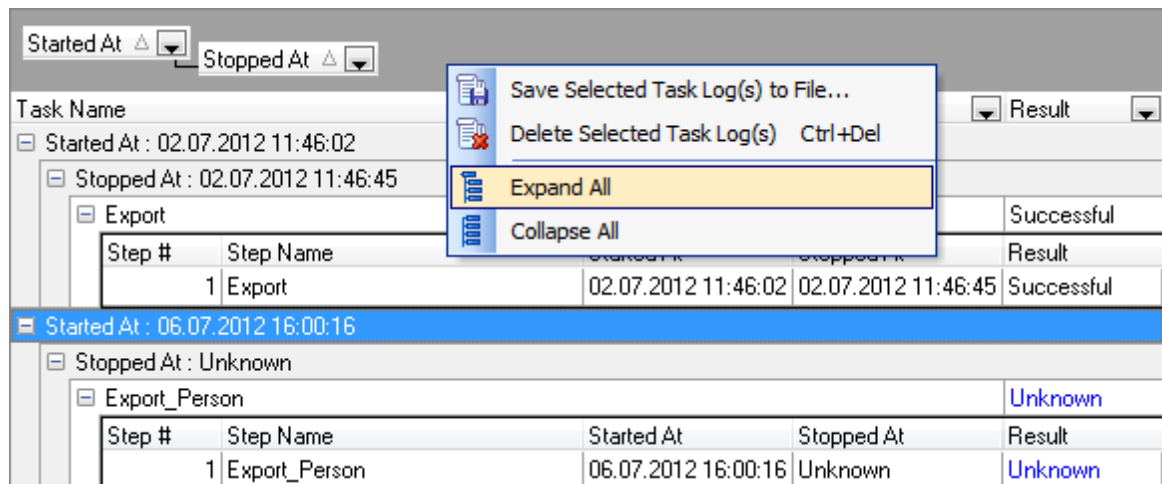

To reverse grouping drag the column header back.

The **Group by** area popup menu allows you to perform: **Full Expand** and **Full Collapse**.

Filtering

It is possible to make quick filtering by a specific value, or by *blank/non blank* field criteria. To activate quick filter press the button in the upper-right corner of the column header.

To apply manually defined conditions use the *Custom* item of the drop-down list.
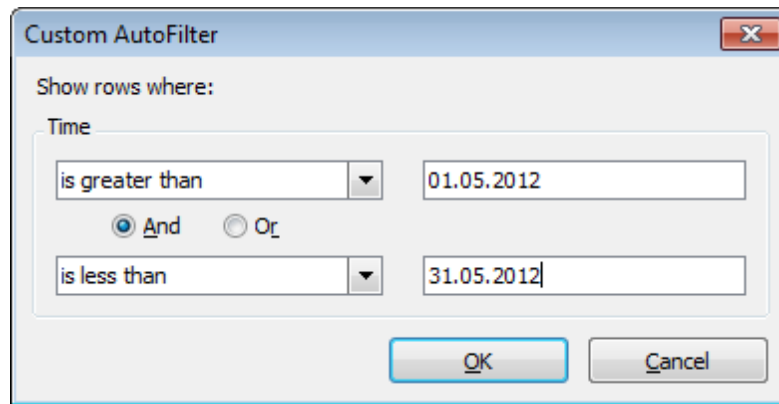
Pick the logical expression from the lists on the left and define values in the fields on the right. Use the '_' character to represent any single symbol, and use the '%' character to represent any series of symbols in the condition string. Relation between these conditions is defined with ◉ *And*/◉ *Or* options.

Credits

Software Developers:

Alexey Butalov

Alex Paclin

Alexander Zhiltsov

Dmitry Goldobin

Dmitry Schastlivtsev

Technical Writers:

Semyon Slobodenyuk

Dmitry Doni

Olga Ryabova

Cover Designer:

Tatyana Makurova

Translators:

Anna Shulkina

Serge Fominikh

Team Coordinators:

Alexey Butalov

Alexander Chelyadin

Roman Tkachenko