

SqlDbx

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# 1. Overview of SqlDbx

## Welcome to SqlDbx

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**SqlDbx** is database administration and SQL development IDE focused on application developers who work in heterogeneous database environments.

### Features at a glance:

- High performance native support for major Database Servers including Microsoft, Sybase, Oracle and IBM DB2/UDB
- Browse / Explore Servers
- Fast, intelligent, extensive and highly customizable Intellisense
- Advanced script Editor with Syntax highlighting, Auto Complete, Speed Typing, Drag/Drop, Undo/Redo, Find/Replace
- Unicode support
- Visual Data Diff
- SQL Scripting
- SQL Formatter / Beautifier
- Generate SELECT, INSERT, UPDATE, DELETE, WHERE IN data modification statements directly from result grid
- SQL templates with replaceable formal parameters
- Import / Export to CSV, XML, Excel
- Schema object browser
- SQL statement history
- Favorite objects
- Search in Database and in Result grid
- Directly edit table data in Result grid
- Display query plan and query statistics
- Simple deployment and removal. No dll's or other dependencies. Just one executable (1.4 meg.)

### Supported DBMS Systems

- Oracle ® 8i - 11g
- Microsoft ® SQL Server 6.5 - 2008
- IBM DB2 LUW ® 7.x - 9.x
- IBM DB2 z/OS ® 7.x - 9.x
- IBM DB2 iSeries ® 5.x - 7.x
- Sybase ASE ® 10.x - 15.x
- Sybase Anywhere ® 9.x - 12.x
- Sybase IQ ® 12.5 - 15.x
- MySQL ® 5.x
- Kdb+ ®
- ODBC 3.0 compliant sources

## 2. Using SqlDbx

SqlDbx window divided into three views: [Object View](#), [Script Editor](#) and [Results View](#)

[Editor Shortcuts](#)

[Grid Shortcuts](#)

[SQL Script Editor](#)

[Intellisense](#)

[Script Variables](#)

[SQL Templates](#)

[Speed Typing](#)

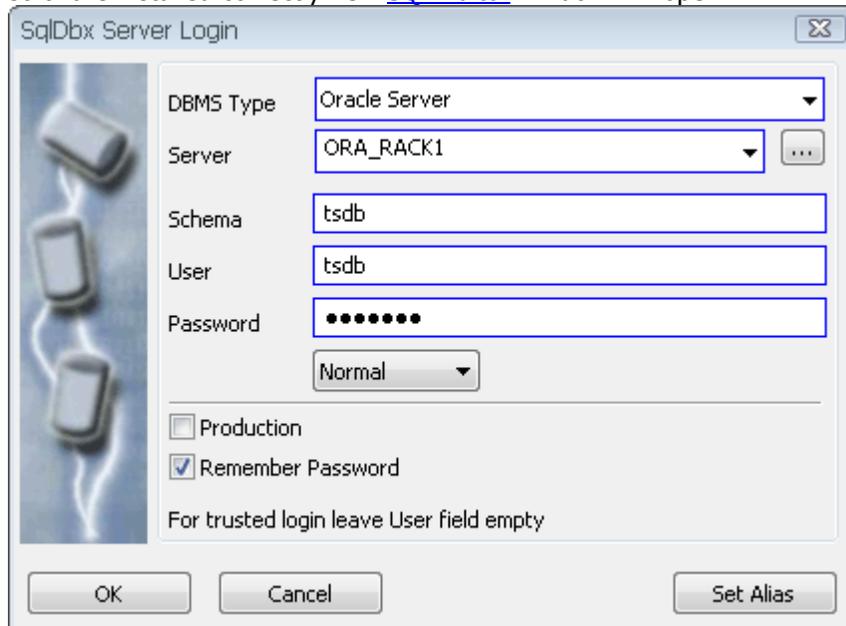
[Visual Diff](#)

[Export / Import](#)

[Generate Scripts](#)  
[Server Explorer](#)  
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[Command Line options](#)

## 2.1 Quick Start

When You start SqlDbx it automatically shows Server Login dialog. Select correct Server type, enter Server name, Database, User and Password and click button Login. If server found and client software installed correctly new [SQL Editor](#) window will open.



Set Alias button can be used to create alternate user friendly name for the Server. Also it is useful when you connect to the same server using different credentials. "Production" check box allows to specify alternate text and background colors. This allows to visually differentiate between production and development Servers. Set Alias button allows to create multiple aliases for the same Server. You can create it by directly typing into Server combo box. Make sure that actual Server name enclosed between "(" and ")"

[Using SqlDbx](#)

### SqlDbx portable

If you wish to use SqlDbx in portable mode create empty SqlDbx.ini file in a same directory where SqlDbx.exe located. After you start SqlDbx it will run in portable mode.

In this mode SqlDbx will not make any changes to registry or create directories / files on a computer.

## 2.2 Editor Keyboard Shortcuts

### Load / Save

<b>Ctrl + N</b>	New Script
<b>Ctrl + O</b>	Open file
<b>Ctrl + S</b>	Save active script
<b>Ctrl + Shift + S</b>	Save active script with different name
<b>Ctrl + W</b>	Close active script tab
<b>Ctrl + Shift + W</b>	Close active Result tab

### Cursor Movement

<b>Left</b>	Move cursor one character left
<b>Right</b>	Move cursor one character right
<b>Up</b>	Move cursor one line up

<b>Down</b>	Move cursor one line down
<b>Ctrl + Up</b>	Scroll screen up
<b>Ctrl + Down</b>	Scroll screen down
<b>Ctrl + Right</b>	Move cursor one word right
<b>Ctrl + Left</b>	Move cursor one word left
<b>End</b>	Move to end of line
<b>Ctrl + End</b>	Move to end of last line in file
<b>Home</b>	Move to beginning of line
<b>Ctrl + Home</b>	Move to beginning of file
<b>Ctrl + G</b>	Go To Line

**Edit**

<b>Ctrl + Y</b>	Delete current line
<b>Ctrl + Shift + Delete</b>	Delete all
<b>Ctrl + Delete</b>	Delete to start of word to the right
<b>Ctrl + Backspace</b>	Delete to start of word to the left
<b>Insert</b>	Switch between overwrite and insert mode
<b>Ctrl + C</b>	Copy to Clipboard
<b>Ctrl + V</b>	Paste from Clipboard formatted as SQL
<b>Ctrl + Shift + V</b>	Paste from Clipboard Excel style
<b>Alt + Shift + V</b>	Paste as column block
<b>Ctrl + Alt + V</b>	Paste as column block (fill)
<b>Ctrl + X</b>	Cut to Clipboard
<b>Ctrl + Z, Alt + Back</b>	Undo
<b>Shift + Tab</b>	Indent to the left
<b>Ctrl + Shift + C</b>	Comment selection out
<b>Ctrl + Shift + R</b>	Un comment selection
<b>Ctrl + Shift + U</b>	Convert selection to upper case
<b>Ctrl + Shift + L</b>	Convert selection to lower case
<b>Ctrl + Shift + M</b>	Replace template parameters
<b>Ctrl + Shift + Up</b>	Move current line up
<b>Ctrl + Shift + Down</b>	Move current line down

**Selection**

<b>Ctrl + A</b>	Select all
<b>Alt + Left Mouse Button</b>	Start column (block) selection

<b>Alt + C</b>	Set block selection on. Use Shift + Arrow keys to extend selection
<b>Shift + Left Mouse Button</b>	Extend selection to click point
<b>Ctrl + B</b>	Select SQL block starting from current position
<b>Ctrl + Shift + B</b>	Select current block delimited by empty lines
<b>Shift + Left</b>	Extend selection to the Left
<b>Shift + Right</b>	Extend selection to the right
<b>Shift + Up</b>	Extend selection one line up
<b>Shift + Down</b>	Extend selection one line down
<b>Shift + Home</b>	Extend selection to the beginning
<b>Shift + End</b>	Extend selection to the end
<b>Shift + Page Down</b>	Extend selection one page down
<b>Shift + Page Up</b>	Extend selection one page up
<b>Ctrl + Shift + Home</b>	Extend selection from current position to the beginning of script
<b>Ctrl + Shift + End</b>	Extend selection from current position to the end of script
<b>Ctrl + Shift + Left</b>	Extend selection to the beginning of current word
<b>Ctrl + Shift + Right</b>	Extend selection to the end of current word
<b>Ctrl + M</b>	Highlight all words like the one under the cursor

### Find / Replace / Diff

<b>Ctrl + F</b>	Show Find dialog
<b>Ctrl + H</b>	Show Replace dialog
<b>F6</b>	Quick Find
<b>F3</b>	Find next
<b>Shift + F3</b>	Find previous
<b>Ctrl + Shift + Q</b>	Quick Diff Script
<b>Ctrl + Shift + D</b>	Quick Diff Result Set

### Query / SQL

<b>Ctrl + E, F5</b>	Execute SQL statement
<b>Ctrl + Shift + E, Shift + F5</b>	Execute SQL statement. Results in new window
<b>Ctrl + Enter</b>	Execute SQL statement on current line
<b>Shift + Enter</b>	Execute currently outlined SQL statement if any
<b>Ctrl + F5</b>	Parse SQL statement
<b>Ctrl + K</b>	Execute last Result Grid SQL statement
<b>Ctrl + J</b>	Format selected SQL

<b>Alt + F1</b>	Object Properties under cursor
<b>Alt + F2</b>	Script object under cursor to new window
<b>Alt + F3</b>	Find object under cursor in Object View
<b>F4</b>	Refresh Object View
<b>F7</b>	List Tables
<b>F8</b>	List User Procedures and Functions
<b>F9</b>	List System Procedures and Functions
<b>F12</b>	Begin Transaction
<b>Ctrl + F12</b>	Commit Transaction
<b>Ctrl + Shift + F12</b>	Rollback Transaction

### Bookmarks

<b>Ctrl + F2</b>	Toggle bookmark
<b>F2</b>	Go to next bookmark
<b>Shift + F2</b>	Go to previous bookmark
<b>Ctrl + Shift + F2</b>	Clear all bookmarks

### Miscellaneous

<b>Ctrl + Page Down</b>	Next Script Window
<b>Ctrl + Page Up</b>	Previous Script Window
<b>Ctrl + Shift + Page Down</b>	Next Connection Window
<b>Ctrl + Shift + Page Up</b>	Previous Connection Window
<b>Ctrl + 1</b>	Switch focus between Editor and Results
<b>Ctrl + 2</b>	Switch focus between Editor and Object List
<b>Ctrl + 3</b>	Set focus to Script Editor
<b>F11</b>	Maximize Editor window
<b>Ctrl + F11</b>	Maximize Results window
<b>Shift + F11</b>	Toggle Object View

## 2.3 Results Grid Keyboard Shortcuts

### Cursor Movement

<b>Up</b>	Move one cell up
<b>Down</b>	Move one cell down
<b>Right</b>	Move one cell right
<b>Left</b>	Move one cell left
<b>Ctrl + Up</b>	Move up to the edge of data region*

<b>Ctrl + Down</b>	Move down to the edge of data region*
<b>Ctrl + Right</b>	Move right to the edge of data region*
<b>Ctrl + Left</b>	Move left to the edge of data region*
<b>End</b>	Enables "End" mode
<b>Ctrl + End</b>	Move to the last grid cell
<b>Home</b>	Move to the first column in current row
<b>Ctrl + Home</b>	Move to the first grid cell

### Selection

<b>Left Mouse Button in top left corner</b>	Select all
<b>Shift + Left Mouse Button on Column Header</b>	Select all column
<b>Shift + Left Mouse Button in grid area</b>	Extend selection from active cell to clicked cell
<b>Left Mouse Button on Row Header</b>	Select all row
<b>Ctrl + Left Mouse Button</b>	Begin new selection without clearing current selection
<b>Shift + Left</b>	Extend selection one cell left
<b>Shift + Right</b>	Extend selection one cell right
<b>Shift + Home</b>	Extend selection to the first grid cell
<b>Shift + End</b>	Extend selection to the last grid cell
<b>Shift + Down</b>	Extend selection one cell down
<b>Shift + Up</b>	Extend selection one cell up
<b>Shift + Page Down</b>	Extend selection one page down
<b>Shift + Page Up</b>	Extend selection one page up
<b>Ctrl + Shift + Home</b>	Extend selection to the first grid cell
<b>Ctrl + Shift + End</b>	Extend selection to the last grid cell
<b>Ctrl + Shift + Left</b>	Extend selection left to the edge of data region*
<b>Ctrl + Shift + Right</b>	Extend selection right to the edge of data region*
<b>Ctrl + Shift + Up</b>	Extend selection up to the edge of data region*
<b>Ctrl + Shift + Down</b>	Extend selection down to the edge of data region*

### Clipboard

<b>Ctrl + C</b>	Copy to Clipboard
<b>Ctrl + Shift + C</b>	Copy to Clipboard with column headers
<b>Ctrl + Alt + C</b>	Copy to Clipboard column headers only

### Find / Diff

<b>Ctrl + F</b>	Show Find dialog
<b>F3</b>	Find next

<b>Ctrl + Shift + F</b>	Find Column
<b>Ctrl + Shift + D</b>	Quick Diff Result Set

### Group Mode

<b>Left Mouse Double Click</b>	Expand / Collapse one level section
<b>Ctrl + Left Mouse Double Click</b>	Expand / Collapse whole level

### Miscellaneous

<b>Ctrl + Shift + N</b>	New Result tab
<b>Ctrl + Shift + W</b>	Close active Result tab
<b>Left Mouse Double Click on column header</b>	Toggle column sort ascending / descending
<b>Ctrl + Left Mouse Double Click on column header</b>	Add column sort
<b>Left mouse button on column header and drag</b>	Rearrange columns

\* - data region: A range of cells that contains data and is bounded by empty cells

## 2.4 SQL Script Editor

SQL Editor window provides broad range of editing capabilities. Look and feel can be configured in Options Dialog on Editor page. You can drag and drop text between different windows. To open a new script window press **Ctrl + N**

[SQL Editor Keyboard Shortcuts](#)

[Editing Scripts](#)

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## 2.5 Intellisense

Intellisense is configured in Options dialog on Editor page.

Intellisense and temporary tables in MS Sql Server and Sybase ASE. For intellisense to work with temporary they have to be created and then "referenced". Referenced means that you have to type something in Editor to cause the information about them loaded. For example if you created temporary table named #tmp then just type #tmp. and after that #tmp table will start to show up in Intellisense list window.

If you drop and recreate temporary table with different definition you have to refresh objects in Object View in order to reset Intellisense information for temporary tables.

### Intellisense Options Description

<b>Enable Intellisense</b>	Enables or completely disables following options
<b>Include System Tables</b>	Display System Tables in Intellisense list
<b>Include System Procedures</b>	Display System Procedures in Intellisense list
<b>Include Schemas/Databases</b>	Display objects from other Schemas (Oracle, DB2) or other Databases (Sybase, MS)
<b>Enable Auto Complete For:</b>	Enables or disable following options
<b>Keywords</b>	Displays and enables autocomplete for Keywords
<b>User Objects</b>	Displays and enables autocomplete for User Objects
<b>System Objects</b>	Displays and enables autocomplete for System objects
<b>Capitalize Keywords</b>	Automatically capitalizes Keywords after you type space or separator character

### Capitalize Procedures/Functions

Automatically capitalizes Procedures/Functions

## 2.6 SQL Templates

Templates are files containing SQL scripts that help you use predefined code templates. Template files should be copied to a directory defined in Options->General->Templates. Files should be copied into one of the subdirectories of path specified in Options. Template files are ordinary text files containing SQL code. The template files can use formal parameters to help you customize the code. Template parameter definitions use following format:

`<parameter_name, data_type, value>`

where

- *parameter\_name* is the name of the parameter in the script
- *data\_type* is the data type of the parameter (optional)
- *value* is the value that is to replace every occurrence of the parameter in the script (optional)

Example:

```
CREATE PROCEDURE <procedure_name>
AS
BEGIN
END <procedure_name>;
```

Use the **Replace Template Parameters** dialog box to insert values into the script.

**Note** You can use the **Replace Template Parameters** dialog box to specify values any time a parameter definition is used in code. For example, when you script execute function from Object View, the function written to the current Script window will contains parameter definitions for any arguments in the function. You can, therefore, use the **Replace Template Parameters** dialog box to specify argument values. Also if you have text selected in Editor and invoke **Replace template Parameters** dialog then only selection will be checked for any template parameters

It is possible to specify cursor position in template. Put symbol "^" anywhere in the template text.

### To use template

- Open a Script window
- If template manager window is not visible press **Manage SQL Templates** button on the toolbar
- Navigate to desired template and select **Insert Template** menu item or double click left mouse button
- When the template is displayed in the Script window, select **Replace Template Parameters** button on the toolbar
- In the **Replace Template Parameters** dialog box, specify values for the parameters
- To insert the specified values into the script in the Editor, click **Replace**

## 2.7 Speed Typing

Speed typing configuration is accessible through menu **Tools->Configure Speed Typing**. Speed type definitions saved in a file whose name and location specified in Options general tab.

Speed typing allows to define strings which automatically expanded when typed. Speed typing is integrated in Intellisense and Auto complete. Speed typing also supports substitution parameters.

### Examples:

1. Simple replacement. If Shortcut column contains **sla** and column Substitution Value contains **SELECT \* FROM** then when you type **sla** in Script Editor and press space it will be replaced by **SELECT \* FROM**
2. Use Speed typing to add Auto Complete strings. Simply enter desired string into Shortcut column and leave Substitution column blank
3. Using formal parameters:  
If Shortcut column contains

sla (var\_date, var\_string)

and Substitution column contains

```
SELECT * FROM TABLE_NAME where date_col = '$(var_date)' and string_col = '$(var_string)'
```

then when in Script Editor you type:

sla (01/01/07, string\_value)

it will be expanded into:

```
SELECT * FROM TABLE_NAME where date_col = '01/01/07' and string_col = 'string_value'
```

To specify cursor position in Editor after expansion put symbol '^' anywhere in substitution column text

## 2.8 Visual Diff

Visual Diff allows to compare files or results from queries, procedures or any other valid SQL statement which can be executed on different servers. To get meaningful results when comparing data You have to consider couple of things. Results should have identical number of columns, do not include volatile columns like timestamp and columns should be sorted in a same order if possible.

Visual Diff offer Quick Diff option. To use this option just do one of the following: select text in Editor or Result grid and drag / drop it to "Quick Diff" toolbar button on the main menu. After you do it twice Visual Diff screen will open automatically displaying difference. Also right click popup menu in Editor and Result grid has an option to execute "Quick Diff"

## 2.9 Export / Import

### Export to File

Select **Export To->File** menu item from table popup menu. Saved file can be later opened as script and executed directly.

### Import from File

You can import previously exported data by selecting **Import From->File** menu item from table popup menu. If table name in the file different from selected table it will be automatically replaced. Also file can be opened as ordinary file in Script Editor.

### Export to Excel

Select **Export To->Excel** menu item from table popup menu to copy all table data to Excel.

### Import from Excel

You can import table data from Excel by first selecting range in Excel which contains table data with table column names in the first row. Order of columns is not important. Some column can be omitted too. To import data from Excel select table into which you want to import data. Right click and select **Import From** menu item. Select menu item with Excel session in which you previously selected data. Data from Excel will appear in a new Script Editor window as a series of INSERT statements. Now you can edit or execute script to insert data into the table.

## 2.10 Generate Scripts

This dialog allows to generate DDL scripts for the current Schema / Database.

You can script to file or to Script window.

When scripting to file you can use following variables in File Name edit box:

\$(SERVER) - Server name  
 \$(SCHEMA) - Schema name  
 \$(OWNER) - Object owner name  
 \$(NAME) - Object name  
 \$(DATE) - Current date in format YYYY-MM-DD

## 2.11 Server Explorer

SqlDbx organizes information about servers in Server Explorer window. The Server Explorer provides fast and efficient way to access database objects. The Server Explorer contains multiple panels for each Server type with a tree control for each type. The tree organizes database objects as tree branches. By expanding or collapsing tree nodes you can easy browse and explore database objects. The Server Explorer includes two panes. Left pane displays database objects of currently selected Server and right pane shows summary for them.

## 2.12 Options

Options Dialog is accessible from toolbar or Main Menu->Tools.

[General Options](#)

[Editor Options](#)

[Colors](#)

[Results Options](#)

[Scripting Options](#)

[Import / Export](#)

[Servers](#)

## 2.13 Command Line Options

Usage: SqlDbx [-t] [-s] [-d] [-u] [-p] [-n] [-l] [[-q script file [-r]] [-w workspace file]

### Arguments

<b>-t server_type</b>	Can be one of the following: microsoft, sybase, oracle, ibm, mysql, odbc
<b>-s server_name</b>	Server to which to connect
<b>-d database_name</b>	Database / Schema name
<b>-u user</b>	User name. If -U and -P not supplied try to login using integrated security
<b>-p password</b>	User password
<b>-n</b>	Start new instance of SqlDbx. If -n not specified then pass arguments to the instance started, none found then start new instance.
<b>-l</b>	Write debug log to SqlDbx.exe.log file
<b>-q script file</b>	open specified script file
<b>-r</b>	if -q option specified then run loaded script
<b>-w workspace file</b>	load previously saved session state
<b>-c</b>	Clear registration information

Command line flags are not case sensitive and space after them is optional

\*Command line options are supported only in SqlDbx Professional Edition

## 2.14 Quick Tips

- 01** Intellisense works better and in more cases when table names use aliases For example: <br> select \*from table\_name1 T1, table\_name1 T2 where T1.column\_name = T2.column\_name ...
- 02** You can enable automatic save / restore of SqlDbx session state by checking Enable Session State check box on
- 03** Speed typing allows to create aliases for often used SQL blocks. For examples you can add string "sla" as alias for SQL Typing
- 04** Generate SELECT/UPDATE/INSERT/DELETE allows quickly to script SQL DML statements.
- 05** If you want to quickly access object properties just click on object it in Editor and press Alt-F1
- 06** You can directly edit table data in Result Grid for tables with unique constraints
- 07** Templates allow to organize snippets of code.
- 08** Results Grid supports sorting and moving columns. Also it supports multiple selections. Hold Ctrl key while selecting
- 09** Quickly select SQL block by placing cursor on first character and then press Ctrl+B

- 10** Quickly export data from table. Execute `select * from <table_name>`, then select everything in Grid Results by Generate->Insert from right click menu
- 11** Filter data in Results Grid by selecting Filter menu item from right click popup menu
- 12** Replace Template parameters works not only for templates but with any text enclosed in angle brackets "<...>"
- 13** You can directly execute procedures and functions from Object View
- 14** You can execute procedures from Editor by right clicking on procedure name
- 15** Results of any query operation will be put in a new Result Tab if you hold Shift key while selecting query action

## 3. Script Editor

SQL Editor window provides broad range of editing capabilities. Look and feel can be configured in Options Dialog on Editor page. You can drag and drop text between different windows.

To open a new script window press **Ctrl + N**

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### 3.1 Editing Scripts

Script Editor supports most common editing functions. For list of keyboard shortcuts see [Editor shortcuts](#).

In addition Editor supports Column or Block mode. Block mode entered by pressing **Alt + C** key or **Alt + left mouse button**.

Also Editor supports multi line cursor mode. To enter this mode hold **Alt + C** key or **Alt + left mouse button** and then move up or down. When you see thin red vertical line it means you are in multi line cursor mode. In this mode everything you type will be replicated on all lines.

Script Editor supports different ways to paste data from clipboard. Data from [Results Grid](#) can be pasted in two different ways. **Ctrl + V** will paste it in a format suitable for use in SQL statements. **Ctrl + Shift + V** will paste it in tab separated form. Some other additional paste options provided on right click popup menu or on Main Menu->Edit under Paste Special.

### 3.2 Executing Scripts

To execute whole script in Script Editor make sure that there's no selection and then use either toolbar button or Editor popup menu item "Execute" or one of the shortcut keys. By default "Execute" assigned to **F5** and **Ctrl+E**. If you want to execute part of the script simple select it and then use the same method as above. To execute text on a current line press **Ctrl+Enter**. You can disable whole script execution in Tools->Options->Editor->Disable Whole Script Execution. If you see outline markers you can press **Shift+Enter** to execute it.

If you want to see results in a new Result Grid hold **Shift** key down while executing query.

Editor supports outline regions. To start outline region type **--#region [Name]**. To end type **--#endregion [Name]**.

Name is optional. Region has to start at the beginning of line.

#### Named Favorite Script Fragments

Named script fragments allow quick access to often used portions of script file. To create script fragment enclose SQL block in special comment section as shown below

```
--{{ Fragment name
SELECT * FROM TABLE_1
go
SELECT * FROM TABLE_2
--}}
```

After you select and execute first comment line the combo box will show up on a toolbar and the "Fragment name" will be added to it

To execute fragment just select it in combo box

Fragments will be loaded automatically when script file loaded

Script Fragments can be used to create a user interface to often executed SQL blocks with the help of script variables. Below is the example of script fragment which asks for parameters

```

$define empname CHAR
--{{ Find Employee
SELECT * FROM SCOTT.EMP WHERE ENAME = $(empname);
$define empname
--}}

```

Now every time you execute Find Employee script fragment from the toolbar it will ask you for empname

In addition any script command can be used inside the fragment, for example cmd=format to format output.

## 3.3 Script Variables

Script Variables provide you with the flexibility of using a single script in multiple scenarios or allows to define common expression used in multiple statements. For example if you need to run single script against multiple databases, instead of modifying the script for each database, you can use a scripting variable for the database name. You define Script Variable by using following syntax:

```

$DEFINE var_name [=:] [var_value] | [CHAR | VARCHAR | NUMBER | INT | INTEGER | NUMERIC | DECIMAL]

```

where:

- = - optional assignment operator. If present assigns default value and on first reference user will be asked for value
- : - optional operator. If present than user will not be asked for value
- var\_name - variable name
- var\_value - optional variable value
- CHAR, VARCHAR, DATE, INT, NUMBER - optional variable type. If present helps to correctly convert var\_value to type

To reference script variable you use following syntax: \$(var\_name).

Script variables can appear anywhere in text. var\_value can spawn multiple lines. In this case last character on the line has to be "\".

Script variables become available either after \$DEFINE statement executed or after script containing \$DEFINE loaded. You do not need to explicitly use \$define to create script variables. If script variable used without definition than user will be asked for the value on first use. In case of Oracle you can use &var\_name syntax in this case.

Script variables maintain values until they are changed by another \$DEFINE command. To reset variable just type \$DEFINE var\_name

You can view and modify Script Variables by choosing menu Connection->Edit Script Variables ...

### Examples of using Script Variables:

#### Simple substitution

```

$DEFINE var_date = 01/01/07
$DEFINE var_string 'String_Value'

SELECT * FROM table_name where date_field = '$(var_date)' and string_field =
$(var_string)

```

The above select statement will be converted to:

```

SELECT * FROM table_name where date_field = '01/01/07' and string_field = 'String_Value'

```

#### Parameterized Query with substitution parameters

```

$DEFINE var_date
$DEFINE var_string

SELECT * FROM table_name where date_field = '$(var_date)' and string_field =
$(var_string)

```

#### Parameterized Query with type safe substitution parameters

```
$DEFINE var_date DATE
$DEFINE var_string VARCHAR

SELECT * FROM table_name where date_field = $(var_date) and string_field =
$(var_string)
```

If you try to execute script above then window will popup asking to supply values for defined variables which do not have values assigned to them. This will be happen every time you execute above script because \$DEFINE statement will reset variable value to nothing. If Script variable contains type declaration then SqlDbx will try to convert specified values to corresponding type. If conversion fails then query will not be executed. For example if you specify string\_value for var\_string then it will be enclosed in single braces automatically or if type declared as DATE and your database is Oracle then it will be replaced by function TO\_DATE(var\_date, 'YYYY-MM-DD'). If no type specified or variable value provided then no conversion will apply.

### Multiple queries using same set of columns

```
$DEFINE common_columns TRADE_DATE, PRICE, SIZE, TRANSACT_TIME \
                        CLIENT_ID, SECURITY_NAME

SELECT $(common_columns) FROM trades_today;
SELECT $(common_columns) FROM trades_yesterday;
```

### Script Variables naming rules

- Variable names must not contain white space characters
- Variable names must not have the same form as a variable expression, like \$(var)
- Scripting variable names are not case-insensitive

### Predefined Variables

SqlDbx defines following global variables:

- \$(USER) - returns Windows login
- \$(TODAY) - returns today's date
- \$(NOW) - returns today's date and time
- \$(CURRENT\_SCHEMA) - returns current schema
- \$(NEW\_UUID) - returns new UUID

## 3.4 Script Commands

Script Commands provide ability to access some of the functionality which is available through different menus

```
cmd command_name [=] command_options
```

where:

- **cmd** required and indicates the start of a command
- **command\_name** one of the supported commands
- **command\_options** command options if any

### Supported Script Commands:

```
cmd results = grid | text           Set results
output destination
cmd results_only = Y | N           Include
results only
cmd result_new = [name]           Add new result
tab and make it current
```

```

cmd result_current = name           Set current
result tab
cmd result_name = name             Set result tab
name
cmd export = excel [format = smart | text] [tab=name]   Export to Excel using
format. Set worksheet tab name to name
cmd export = file filename         Export to file
cmd diff                           Add result to
Quick Diff
cmd print_message ['] message text [']   Add message to
Messages tab
cmd format = transpose | group; [group = column_list]; [total = column_list]
Format results

```

### Remarks

Some script commands has to be placed before SQL statement they affect in SQL batch or the only statement in the batch.

Following commands has to be placed before: results, results\_only, result\_new, result\_current, export

Other command can be placed before or after. They will affect current results in Result Grid.

```

cmd result_new = customers -- Add a tab with the name customers
select * from customer

```

or

```

cmd result_new = customers -- Add a tab with the name customers
go -- database specific batch separator
select * from customer

```

Export script command applies to the next SQL statement. For example to export result of the query to excel

```

cmd export = excel
select * from customer

```

### CMD format

cmd format can be used to format results in Result Grid. format=transpose will transpose current result set. format=group will enable column grouping and should be followed with group=column\_list and optionally total=column\_list. Below is the example of query which uses format script command

```

SELECT JOB, ENAME, SAL FROM SCOTT.EMP;
cmd format=group; group=job, ename; total=sal

```

## 4. Object View

Object View organizes different database objects in different bars on a left side. To activate bar simply click on it. Bar title displays type of the object and number of objects of this type in a current Schema / Database. Filter can be used to limit number of objects displayed in list.

[Working with Object View](#)

### 4.1 Working with Object View

Object View displays different kind of database objects grouped by type. Each bar displays objects of the same type. To find object within the view press **Ctrl+F** and then start typing. Based on a type of object right click will popup menu with actions you can perform. You can drag and drop objects from Object View to Editor window. To set filter for displayed objects click the filter button on the right edge of pane title bar. Objects from the list can be dragged and dropped on to Quik Diff button.

#### Object View popup menu description

<b>SELECT *</b>	For tables and views selects all data
<b>Script Create</b>	Scripts object CREATE statement in current or new editor window
<b>Script Select</b>	For tables and views generates SELECT statement

<b>Script Update</b>	For tables and views generates UPDATE statement
<b>Script Insert</b>	For tables and views generates INSERT statement
<b>Script Execute</b>	For procedures and functions generates execute statement with template parameters <a href="#">Template Parameters</a>
<b>Execute</b>	<a href="#">Executes</a> procedure or function
<b>Script Permissions</b>	Generates object permissions
<b>Drop</b>	Drop selected object
<b>Edit Table Data</b>	Allows to directly edit table data in <a href="#">Results Grid</a> Table has to have PRIMARY KEY or IDENTITY or UNIQUE KEY
<b>Export Data To</b>	See <a href="#">Export / Import</a>
<b>Import Data From</b>	See <a href="#">Export / Import</a>
<b>Add to Favorites</b>	Adds object to Favorites Bar in Object View
<b>Locate in Script</b>	Locate CREATE statement for selected object in the active Editor window
<b>Object Search</b>	Wildcard search for object in Object View
<b>Scripting Options</b>	Displays <a href="#">Scripting Options</a> page
<b>Properties</b>	Displays all properties for selected object

### Object View Keyboard Shortcuts

<b>Shift + E</b>	Favorites
<b>Shift + O</b>	System Objects
<b>Shift + T</b>	Tables
<b>Shift + V</b>	Views
<b>Shift + S</b>	Sequences
<b>Shift + P</b>	Procedures
<b>Shift + F</b>	Functions
<b>Shift + R</b>	Triggers
<b>Shift + K</b>	Packages
<b>Shift + N</b>	Synonyms

## 4.2 Execute Procedures / Functions

To execute procedure or function select "Execute..." menu item from right click popup menu in Object View or right click on a procedure name in script tab and select first menu item.

If procedure requires arguments than you will be presented with dialog box to enter them.

To specify NULL value leave Value column blank.

To specify empty string type " (two single quotes) in Value column.

Red foreground color in Type column indicated required field. Green indicates that column has default value

You can use "Script EXECUTE" menu option if you wish to execute procedure from script tab.

To specify parameters in this case select generated code and use "Replace Template Parameters" menu option to specify initial values

## 5. Results View

Results Grid has two or more tabs. First tab displays results of a query either in Grid or in formatted text form. Last tab displays error and informational messages.

[Results Grid](#) can be used to perform different actions on a data returned from a query.

Results Grid has a status bar which displays following information:

- Completion status and text of a last executed query
- Current schema or database
- Stored procedure result if any. Works for limited number of Servers.
- Query time
- Number of batches executed
- Number of rows affected

### 5.1 Results Grid

Result Grid has two modes: Results Display mode and Table Data Edit mode.

#### Results Display Mode

In Display query mode you can execute actions described below in a table. Generate SELECT/INSERT/DELETE/UPDATE for dates and string uses settings from [Import / Export](#) Result Grid supports two additional modes. You can transpose them by selecting "Transpose" from the popup menu. Results also can be grouped by any number of columns. To accomplish it select "Group / Ungroup" from popup menu

#### Export to Excel

Select **Export To->Excel** menu item from Result Grid popup menu to copy data to Excel To export data to specific Excel file you can define Excel export template in Export/Import options. Excel export template should have form: File\_Name,Range\_Name (C:\Temp\Book1.xls,R\_DATA).

#### Table Edit Mode

Table Data edit is entered when you select "Edit Table Data" from table popup menu in [Object View](#). In this mode you can directly edit data in underlying table. When entering string values you do not need to enclose them in single quotes. To assign NULL value to a column leave content of cell empty. To enter empty string type two single quotes. Dates can be entered in any format which can be converted to date. If conversion to date fails nothing will be changed. Change in underlying table happens when you leave cell. At this point implicit COMMIT executed.

#### Grid popup menu actions

<b>Results in New Window</b>	Display current results in a new window
<b>Generate</b>	
<b>SELECT</b>	Generates select statements for current selection
<b>INSERT</b>	Generates insert statement for current selection
<b>UPDATE</b>	Generates UPDATE statement for current selection. If table has unique constraint then will use it, otherwise will use selected columns in update clause
<b>DELETE</b>	Generates DELETE statement for current selection. If table has unique constraint then will use it, otherwise will use selected columns in delete clause
<b>WHERE IN ()</b>	Generates WHERE IN statement for current selection
<b>ORDER BY ()</b>	Generates ORDER BY statement for current selection
<b>GROUP BY ()</b>	Generates GROUP BY statement for current selection

<b>CREATE TABLE ( )</b>	Generates CREATE TABLE statement based on current selection
<b>Column Format</b>	Allows to quickly change column display format
<b>Filter</b>	Allows to quickly filter rows based on a value in current cell
<b>Get Child / Parent Rows</b>	Allows to quickly retrieve Child / Parent rows based on a FOREIGN KEY constraint defined for selected rows
<b>Find in Results</b>	Find in Results
<b>Copy</b>	Copy selection to Clipboard. Data copied in two different formats
<b>Copy Special</b>	
<b>Copy With Column Name(s)</b>	Includes column names
<b>Copy Column Name(s)</b>	Copy only column names to Clipboard
<b>Copy Column Name(s) and Types</b>	Copy only column names and types
<b>Copy as Text</b>	Copy as aligned formatted text
<b>Copy as Delimited</b>	Copy as CSV
<b>Copy as XML</b>	Copy as XML
<b>Copy as HTML</b>	Copy as HTML
<b>Copy Result Query</b>	Copy result query
<b>Export To</b>	
<b>Excel</b>	Export selection to Excel
<b>Excel (smart)</b>	Export to Excel using options set in <a href="#">Export/Import</a>
<b>Excel (as displayed)</b>	Export to Excel as text displayed in Result Grid
<b>File (csv, xml, html)</b>	Export to File. Type of export will depend on specified file extension. Default is CSV
<b>File (as inserts)</b>	Export to File as INSERT statements
<b>SQL Log</b>	Save selection to log file
<b>Results</b>	
<b>New Result Tab</b>	Add new result tab if option Multiple Results Tabs enabled
<b>Close Result Tab</b>	Delete current result tab
<b>In Grid</b>	Display query results in Grid
<b>In Text</b>	Display query results in Text
<b>Transpose</b>	Switch column and rows
<b>Freeze Columns</b>	Freeze columns to the left of current cell
<b>Show Column Types</b>	Display column type below header in Grid
<b>Show Column Totals</b>	Show totals for numeric columns

**Notes**

Generate feature by default copies generated statement to a current cursor position in Script Editor.

If you hold Ctrl key down when using generate then statement will be copied at the end of current script

## 6. Options

Options Dialog is accessible from toolbar or Main Menu->Tools.

[General Options](#)

[Editor Options](#)

[Colors](#)

[Results Options](#)

[Scripting Options](#)

[Import / Export](#)

[Servers](#)

### 6.1 General

<b>Directories</b>	
<b>Script Files</b>	Default directory where to store script files
<b>Results Files</b>	Default export directory
<b>Backup Files</b>	Default backup directory
<b>File Browser</b>	Default root directory for File Browser and <a href="#">SQL Templates</a>
<b>Speed Typing</b>	Directory and name of <a href="#">Speed Typing</a> file
<b>Config Files</b>	Default directory where Session State and favorite objects files stored
<b>Settings</b>	
<b>Backup Modified Files</b>	Create backup files
<b>Show System Objects</b>	Enables System Objects bar in Object View
<b>Alternate Window Layout</b>	Switches between two predefined windows layouts
<b>Enable Session State</b>	Enables automatic save of SqlDbx state on exit
<b>Open Session connections</b>	Connects to Database during loading of Session State
<b>File Extensions</b>	Specifies extensions and filters for Open and Save dialogs
<b>File Associations</b>	List of extensions in following format: *.sql;*.qry
<b>Language</b>	Set user interface language

### 6.2 Editor

This page contains settings for Script Editor

**Editor Options Description**

<b>Selection Margin</b>	Display selection margin on a left side
<b>Show Line Numbers</b>	If selection margin enables displays line numbers
<b>Outline Margin</b>	Enable outline margins for hide / show rows

<b>Auto Indent</b>	Auto indent next line when "Enter" key pressed
<b>Allow Virtual Spaces</b>	Allow cursor to go beyond line end
<b>Use I - beam Cursor</b>	Use I-beam or underscore cursor
<b>Fonts</b>	
<b>Screen Font</b>	Allows to select Editor font
<b>Printer Font</b>	Allows to select Printer font
<b>Tabs</b>	
<b>Tab Size</b>	Controls number of tabs
<b>Keep Tabs / Insert Spaces</b>	Inserts spaces or keeps tabs when "Tab" key pressed
<b>End of Line Style</b>	Controls how end of line set in file when saved
<b>Intellisense</b>	See <a href="#">Intellisense</a>

## 6.3 Colors

This page allows to assign colors to different types of database objects. Also it allows to assign alternative background and text color for specific connections. Usually it used to differentiate connections to production and development servers. In order to use alternative colors you have to check "Production" on a Login dialog.

## 6.4 Results

<b>Data Format</b>	
<b>Date Format</b>	Allows to select Grid date format
<b>Time Format</b>	Allows to select Grid time format
<b>Max Decimals</b>	Maximum number of decimals to display
<b>Right Align Dates, Timestamps, Numbers</b>	Right align dates in Grid
<b>Do Not Show Time if Not Present</b>	If date does not have a time portion then do not display time
<b>Thousands Separator</b>	Use thousands separator to format numbers
<b>Always Use '.' as Decimal Separator</b>	Force dot as decimal separator
<b>Trim Trailing Zeroes</b>	Trim trailing zeroes
<b>Do Not Use Date Format For Timestamps</b>	Do not use date format to format TIMESTAMP columns
<b>Grid Font</b>	Allows to select Grid font
<b>Results Location</b>	Allows to select where query results displayed
<b>Grid Colors</b>	Allows to assign background color to odd and even rows
<b>Set Focus to Grid After Execute</b>	Set focus to grid after query completes
<b>Multiple Result Tabs</b>	Enable option to add Result Tabs. Applies to new connections

<b>Show Column Types</b>	Display column types under the header in Grid
<b>Rows Limit On</b>	Maximum number of rows to retrieve

## 6.5 Scripting

These settings are used when Objects scripted from [Object View](#)

### Scripting Options Description

<b>Script DROP for tables, views</b>	Script DROP statements for tables, views
<b>Script DROP for procedures</b>	Script DROP statements for procedures, functions
<b>Use ALTER / REPLACE</b>	Use ALTER / REPLACE for procs, functions if available
<b>Script Object Level Permissions</b>	Script object level permissions
<b>Script Object Owner/Schema</b>	Script object Owner / Schema
<b>Script Object Physical Properties</b>	Script object physical properties
<b>Script Collation Clause</b>	Script table collation clause
<b>Script GRANT TO PUBLIC</b>	Script GRANT TO PUBLIC
<b>Script Object in New Window</b>	Script object in new Script Tab

### Log Options Description

<b>Enable SQL Log</b>	Enable SQL logging
<b>Log File per Server</b>	One log file for each server
<b>Monthly / Daily (Checked)</b>	Start new log file every month or every day
<b>Include Results</b>	Include query results in a log file
<b>Log Directory</b>	Directory where to create log files

## 6.6 Import / Export

These options control settings used when generating export files

### Date Format

Date format used when exporting to CSV files and it also used when generating SELECT, INSERT, UPDATE statements

### Delimited File Export Options

<b>Row Delimiter</b>	Row delimiter
<b>Field Delimiter</b>	Field delimiter
<b>Literal Quote</b>	Character to use for string escaping
<b>Date Quote</b>	Character to use for date escaping

### XML File Export Options

**Data as Attributes** - controls if data exported as XML attributes instead of values

### Excel Export Options

**Preserve Leading Zeroes** - applies to character columns which look like numbers with leading zeroes 0000032.

If this option not checked than Excel will convert string to number and leading zeroes will be lost.

If this option checked than value will be exported to Excel with number format set to "@" which will preserve leading zeroes.

Smart Excel export uses this setting regardless of if it checked or not.

**Preserve DECIMAL** and **Preserve BIGINT** exports numbers to Excel as values with number format set to "@".

This preserves number precision and prevents Excel from displaying them in scientific notation.

**Excel Export Templates** allows to specify excel file for export.

Excel template should be specified in format: file\_name,range\_name

(C:\Temp\export.xls,R\_RESULTS\_OUT)

Export templates can be selected from right click menu in Results Grid

## 6.7 Servers

### Servers Options

---

Server Options pages allow to specify settings for different servers.

[Oracle Help](#)

[Sybase Help](#)

[Microsoft Sql Server Help](#)

[IBM DB2 Help](#)

[Informix Help](#)

[Teradata Help](#)

[MySQL Help](#)

[PostgreSQL Help](#)

[Kdb+ Help](#)

## 7. Oracle Help

### Supported versions:

8.1.5

8i

9i

10g - 11g

12c

[Oracle How To](#)

[Oracle Bind Variables](#)

[SQL\\*Plus support](#)

## 7.1 Oracle How To

### Connectivity problems

SqlDbx relies on Oracle client being installed on client computer. SqlDbx dynamically tries to load oci.dll. If this dll not found then you will encounter error message about client software not being properly installed. Check that oci.dll is available and PATH environment variable includes path to it.

### Working with multiple Oracle Homes

When connecting to database you can select which Oracle Home to use when connecting to Server. After first connection established all subsequent connections will use the same Oracle home regardless of what selected in Home combo box in Login dialog. Also you can create your own Oracle Homes in SqlDbx. It can be useful for example when Oracle Instant client used. User defined Oracle Homes can be added in Options dialog on Oracle page. String should consist of two strings separated by comma. First one specifies name for Home and second specifies path to a directory where OCI.DLL located. includes path to it.

### Direct Oracle Connection

To connect to Oracle server directly specify Server on Login screen as:

HOST:PORT,SERVICE\_NAME

### Using Instant Oracle Client

1. Unzip instant client to any directory
2. Add directory to the PATH environment variable or add custome Oracle home to Tools->Options->Servers->Oracle

3. Set TNS\_ADMIN environment variable to the directory where TNSNAMES.ORA file located.

## 7.2 Bind Variables

SqlDbx supports bind variables which similar to SQL\*PLUS Bind Variables.

### Creating and using Bind Variables

You create bind variables with the VARIABLE command. For example

```
VARIABLE varName1 VARCHAR2
VARIABLE varName2 NUMBER
VARIABLE varName3 CLOB
VARIABLE varName4 REFCURSOR
```

You reference bind variables in scripts by typing a colon (:) followed immediately by the name of the variable. For example

```
VARIABLE ret_val NUMBER;
BEGIN
  :ret_val := 2;
END;
```

After executing this block you will see output in grid automatically

### Using REFCURSOR Bind Variables

REFCURSOR bind variables allow to fetch and display results of a SELECT statement contained in PL/SQL block or they can be used to reference PL/SQL cursor variables in stored procedures and functions. Also REFCURSOR bind variable can be returned from a stored procedure.

```
VARIABLE employee_info REFCURSOR
BEGIN
  OPEN :employee_info FOR SELECT EMPNO, SAL FROM SCOTT.EMP;
END;
```

After executing this block results automatically will be displayed in grid.

### Using REFCURSOR Variables in stored procedures

```
CREATE PROCEDURE EmpReport (emp_ref IN OUT REF CURSOR)
AS
BEGIN
  OPEN emp_ref FOR SELECT EMPNO, SAL FROM SCOTT.EMP;
END;

VARIABLE rc REFCURSOR;
BEGIN
  EmpReport (:rc);
END;
```

## 7.3 SQL\*Plus commands

SqlDbx currently does not support SQL\*Plus commands. The only supported commands is VARIABLE and DEFINE, all others ignored. You still can execute SQL\*Plus scripts but it is possible you will get errors in certain situations. For example if scripts prompts for variable value using &&name method. Support for some SQL\*Plus commands is planned for future release of SqlDbx. You can use "/" as a command separator. Typing / will not run the content of the buffer but will serve as batch separator when you execute part or the whole script.

SqlDbx can generate SQL\*Plus compatible scripts. This option can be enabled in Tools->Options->Servers->Oracle->SQL\*Plus Compatible Scripting

### Supported SQL\*Plus functionality:

SqlDbx supports SQL\*Plus substitution variables with some minor differences. For details of how to use substitution variables click here [Script Variables](#)

## 8. Microsoft SQL Server Help

### Supported versions

6.5  
7.0

2000  
2005  
2008  
2012  
Azure

[SQL Server How To](#)

## 8.1 Sql Server How To

### Integrated security

In case of integrated security when you connect to SQL Server do not specify user name and password.

If using SSL encrypted connection please specify Encrypt=yes in Options edit box on Login screen.

## 9. Sybase Help

### Supported versions

Sybase ASE 10.x - 15.x

Sybase IQ 12.5 - 16.x

Sybase Anywhere 9.x - 12.x

[Sybase How To](#)

## 9.1 Sybase How To

### Sybase ASE

SqlDbx relies on Sybase Open Client installed on local computer. If while trying to connect to Sybase Server you encounter message stating that database handler cannot be created for this type of Server it usually means that Sybase Open Client dll ctlib.dll or libsybct.dll cannot be found. SqlDbx always tries to first load libsybct.dll which is distributed with Open Client version 15 and if it fails then it tries to load ctlib.dll.

When connecting to Sybase ASE you can specify following additional options in Options edit box:

HOSTNAME = hostname

APPNAME = appname

ENCRYPT = yes

To connect to Sybase ASE directly without using interface file or LDAP specify server on Login dialog as: SERVER:PORT

### Sybase IQ, Sybase Anywhere

Two different connections types supported for Sybase IQ and Sybase Anywhere: Open client and Sybase IQ ODBC driver.

Both methods offer same features and functionality.

## 10. IBM DB2 Help

### Supported versions

DB2 UDB 7.0 - 7.5 Limited support

DB2 UDB 8.x - 9.x

DB2 z/OS 7.x - 10.x

DB2 iSeries 5.x - 7.x

[DB2 How To](#)

### Connecting to un cataloged DB2 databases

By default SqlDbx treats value in Server combo box as cataloged database alias.

To connect to un cataloged DB2 databases please follow steps below.

1. Specify Server as HOSTNAME:PORT or HOSTNAME
2. In Options add the name of the database: DATABASE=dbname
3. Specify port if it was not specified in Server combo box.

Example:

Server: db2server

Options: PORT=5023;DATABASE=dbname

\* Make sure that option values separated by semicolon ";"

### How to check database client software setup in case SqlDbx unable to connect

1. Start command prompt
2. Type db2cmd and press enter
3. Type db2 in a new window
4. Connect to database by issuing following command: CONNECT TO <database\_name> USER <user\_name> USING <password>

### Additional connection option

In Options edit box on Login Dialog you can specify driver options supported by the driver. Options should be separated by ';'.  
Lists of all options and their description can be found in IBM CLI driver documentation.

Below is the list of most common options.

CMT=[0 | 1 | 2 | 3 | 4] - Specifies the default transaction isolation level

TRANSLATE=[0 | 1] - Specifies whether or not to convert binary data (CCSID 65535) to text

CCSID=<codepage> - Specifies a codepage to override the default client codepage setting with

## 10.1 DB2 How To

### DB2 Batch separator

DB2 does not have fixed batch delimiter. IBM DB2 command line processor (CLP) and DB2BATCH utility have a command to set a delimiter. For example --# SET DELIMITER !. SqlDbx does recognize CLP SET delimiter command but even without it present still can process most of the batches because it parses SQL statements and able to recognize end of statement, compound SQL or procedure. Following SQL statement will be successfully recognized by SqlDbx without need to explicitly set delimiter.

```
CREATE PROCEDURE (FUNCTION, TRIGGER) name
```

```
...
```

```
BEGIN
```

```
--Compound SQL statements
```

```
END
```

Default delimiter is ";". If SQL script sets delimiter to something else it will be reset to ";" after all statements in the batch processed.

### Executing Stored Procedures

Below is the example of how to call stored procedure on DB2 z/OS which has input and output parameters. The below code fragment was generated by selecting "Script Execute..." menu item. Leading underscore indicates that output parameter value should not be part of returned results.

```
VARIABLE COMMANDS '-DISPLAY THREAD(*) TYPE(*)' VARCHAR
```

```
VARIABLE LEN_COMMANDS 200 INTEGER
```

```
VARIABLE PARSE_TYPE 'THD' VARCHAR
```

```
VARIABLE _COMMANDS_EX INTEGER OUT
```

```
VARIABLE _IFCA_RET INTEGER OUT
```

```
VARIABLE _IFCA_RES INTEGER OUT
```

```
VARIABLE _XS_BYTES INTEGER OUT
```

```
VARIABLE ERROR_MSG VARCHAR OUT
```

```
CALL SYSPROC.DSNACCMD (?_COMMANDS, ?_LEN_COMMANDS, ?_PARSE_TYPE,  
?COMMANDS_EX, ?IFCA_RET, ?IFCA_RES, ?XS_BYTES, ?ERROR_MSG);
```

Parameters also can be specified inline. Below is modified version of the code above.

```
VARIABLE COMMANDS '-DISPLAY THREAD(*) TYPE(*)' VARCHAR
```

```
VARIABLE PARSE_TYPE 'THD' VARCHAR
```

```
CALL SYSPROC.DSNACCMD (?COMMANDS, ?LEN_COMMANDS$int$in$100, ?PARSE_TYPE,  
?_COMMANDS_EX$int$out, ?_IFCA_RET$int$out, ?_IFCA_RES$int$out, ?_XS_BYTES$int$out,  
?_ERROR_MSG$int$out);
```

Parameter format: NAME \$ TYPE \$ [IN | INOUT | OUT] \$ VALUE.

In case of DB2 LUW or DB2 iSeries there's no need to have VARIABLE statement or specify types for IN parameters.

```
CALL SYSPROC.DSNACCMD ('-DISPLAY THREAD(*) TYPE(*)', 100, 'THD',
?_COMMANDS_EX$int$out, ?_IFCA_RET$int$out, ?_IFCA_RES$int$out, ?_XS_BYTES$int$out,
?_ERROR_MSG$int$out);
```

## 11. Informix Help

### Supported versions

Informix 9.x - 11.x

### Informix How To

Before you can connect to Informix server you will need to download Informix ODBC drivers. You can install them but it is optional. The only requirement is that Informix ODBC drivers located somewhere where SqlDbx can find driver, for example in a same directory where SqlDbx.exe or in Drivers subdirectory.

## 12. Teradata Help

### Supported versions

Teradata 12.x - 14.x

### Teradata How To

Before you can connect to Teradata Server you will need to download and install Teradata ODBC drivers.

## 13. MySQL Help

### Supported versions

MySQL 5.x

### MySQL How To

Before you can connect to MySQL server you will need to download MySQL ODBC driver. You can install it but it is optional. The only requirement is that MySQL ODBC driver (**myodbc5.dll**) is located somewhere where SqlDbx can find it, for example in a same directory where SqlDbx.exe or Driver folder under directory where SqlDbx.exe located. Driver can be download from:

#### [MySQL ODBC Connector](#)

Download ZIP version with no install. Open it and extract file myodbc5.dll to SqlDbx or \Drivers directory. This will allow you to connect to MySQL by selecting it from "DBMS Type" combo box on the login screen There's two ways to specify port number if it is different from default (3306).

1. Specify Server name as SERVER:PORT
2. Add line PORT=port\_number to Options edit box.

## 14. PostgreSQL Help

### Supported versions

PostgreSQL 8.2.x - 9.x.x

### PostgreSQL How To

Before you can connect to PostgreSQL server you will need to download PostgreSQL ODBC driver. You can install it but it is optional. The only requirement is that PostgreSQL ODBC driver is located somewhere where SqlDbx can find it, for example in a same directory where SqlDbx.exe. Driver can be download from:

#### [PostgreSQL ODBC Driver](#)

Download ZIP version with no install. Open it and extract all \*.dll files to SqlDbx or \Drivers directory. This will allow you to connect to PostgreSQL by selecting it from "DBMS Type" combo box on the login screen There's two ways to specify port number if it is different from default (5432).

1. Specify Server name as SERVER:PORT
2. Add line PORT=port\_number to Options edit box.

# 15. Kdb+ Help

## Supported versions

Kdb+ 2.x

### Kdb+ How To

Before you can connect to Kdb+ server it is necessary to download and install Kdb+ ODBC driver from: [Kdb+ ODBC driver download](#)

After you install ODBC driver there's two different way to configure access.

1. You can created DSN using using ODBC Manager (Access it from SqlDbx main menu: Tools->ODBC Administrator) and then use "ODBC" DBMS Type to connect to it
2. In Login dialog select DBMS Type "Kdb+" and in Server combo box enter server and port for KDb+ server, for example: SERVER1:5001. You can omit port number in Server combo box and specify it in Options edit box using following format: PORT=5001

It is also possible to configure SqlDbx to use Kdb+ ODBC driver directly without installing it. In this instance you need to copy **qodbc.dll** file to the same directory where SqlDbx.exe located or to a subdirectory named "Drivers" and then use the second method described above to connect.

# 16. ODBC Help

SqlDbx requires ODBC 3.0 or later in order to operate correctly. Functionality is limited when you connect through ODBC even to the Servers with native support. SqlDbx does not try to figure out what kind of Database Server it connected to and uses only features provided by ODBC. SqlDbx does not alter any ODBC settings. Connecting through ODBC is useful when you try to solve issues with your applications which use ODBC connectivity.

It has to be noted that a lot of features like accurate table scripting, stored procedure definitions are not available with ODBC

[ODBC How To](#)

## 16.1 ODBC How To

### Direct ODBC connection without DSN

To connect without defining ODBC DSN you need to specify DRIVER=dll\_name in Options edit control on a Login screen

dll\_name should refer to actual driver dll. In this case DSN combo box should specify actual database server name

### Available ODBC API commands:

It is possible to execute set of predefined commands when using ODBC Connectivity. These commands directly map to ODBC API functions. See ODBC documentation for parameter description. This feature mainly used to help us to debug ODBC connections for underlying databases to which we do not have access.

```
=SQLTables (Catalog, Schema, ObjectType)
=SQLColumns (Catalog, Schema, Table)
=SQLSpecialColumns (Catalog, Schema, Table)
=SQLPrimaryKeys (Catalog, Schema, Table)
=SQLForeignKeys (Catalog, Schema, Table)
=SQLProcedures (Catalog, Schema, ObjectType)
=SQLProceduresColumns (Catalog, Schema, Procedure)
```

# 17. Change Log

## Version 4.12 (25 Dec, 2015)

### New and changed features

- Added Excel export option for Timestamp columns
- Updated catalog queries (Sybase IQ, Sybase ASA)
- Chinese translation

### Fixes

- Object filters not saved correctly
- Several internal queries do not free locks

- Certain error message ignored and not displayed
- Inconsistent and missing shortcuts
- Generate Scripts includes incorrect objects (Sybase IQ, Sybase ASE)
- Generate Scripts ignores some scripting options
- Some schemas missing in Schema combo box (Sybase IQ, Sybase ASE)

### **Version 4.11 (04 Oct, 2015)**

#### **New and changed features**

- Added login options for IBM DB2 iSeries connection
- Show number of rows in a group view in Result Grid
- Preserve comment headers (SQL Server, Sybase ASE)
- Minor scripting improvements (Oracle, Sybase IQ)
- Improved error reporting (Sybase IQ, Sybase ASE)
- Minimize locking in internal queries (SQL Server, Sybase ASE)
- New Admin queries (Sybase IQ)

#### **Fixes**

- Unhandled exception when using ODBC drivers
- Rare x64 version crash
- Drag / Drop from internal file browser
- Unable to cancel scripting if database error
- Incorrect copy / paste of date fields when modifying data in Result Grid
- Scripting when using Oracle DBMS\_METADATA package

### **Version 4.10 (02 Aug, 2015)**

#### **New and changed features**

- Enhanced Find Dialog (search all tabs, search global, search all in results)
- Improved import from CSV
- Better detection and load of ODBC drivers
- Minor GUI tweaks

#### **Fixes**

- Fixed SQL Formatter
- Some settings not saved correctly in Portable Mode
- Binary column display shows extra characters

### **Version 4.9 (05 July, 2015)**

#### **New and changed features**

- Updated and new Admin queries (PostgreSQL)
- Added new script variable \$(user)

#### **Fixes**

- Intermittent crash when executing Named Regions
- Rollback transaction on disconnect (IBM DB2)
- Errors not handled correctly inside batch (SQL Server, Sybase ASE)
- Error saving Unicode files
- \$define causes an error in Named Script Fragments (Oracle)
- \$define data types not handled correctly
- Corrupted Recent Files menu

### **Version 4.8 (29 March, 2015)**

#### **New and changed features**

- Added option to reset connection after script execute (Sybase ASE)
- New option to set transaction isolation level (IBM DB2)

#### **Fixes**

- Connection fails when hostname:port/service specified (Oracle)

- Unable set value to null when modifying table data
- Fixed incorrect handling of Unicode files in ANSI version

### **Version 4.7 (27 January, 2015)**

#### **New and changed features**

- Option to specify PLAN\_TABLE (Oracle)
- Option to set cursor position after object scripting
- Improved support for Sqlite, PostgreSQL

#### **Fixes**

- Incomplete table scripting (ODBC)
- Incorrect sort in Server Explorer
- Server Explorer shows wrong objects (PostgreSQL)
- Multiple database files displayed for Access ODBC sources
- Editor cursor position is incorrect in some rare instances

### **Version 4.6 (28 December, 2014)**

#### **Fixes**

- Crash in Undo / Redo
- Export to csv, html, xml missing second fractions for Date and Timestamp columns
- DROP object does not work in some instances (SQL Server)
- Changes to numeric or decimal values in Result Grid not updated correctly
- Permissions scripting does not work or incorrect (IBM DB2)

### **Version 4.5 (2 November, 2014)**

#### **New and changed features**

- Additional columns (Rows, Time) in History view
- User name removed from AppName
- Minor GUI changes

#### **Fixes**

- Crash when rearranging editor tabs
- Incorrect scripting of objects names in some rare instances (Oracle)
- Incomplete object scripting (Oracle)
- Generate Insert not working when statement ends with ";" (Sql Server)
- Fixed create type and create view (Oracle)
- Console output missing (Unicode)
- Search / Replace in Block Mode
- Incorrect time zone conversion when option Convert TIMESTAMP\_TZ to local time enabled (Oracle)
- Mac end of line not handled correctly

### **Version 4.4 (1 September, 2014)**

#### **New and changed features**

- New options for cmd export=excel
- Scripting improvements (SQL Server)
- Intellisense improvements

#### **Fixes**

- Copy from Visual Diff window
- Missing characters and incorrect scripting in Unicode version
- Incorrect scripting (Oracle)
- Synonyms do not show in Intellisense (Oracle)
- Potential crash when adding and deleting tabs

### **Version 4.3 (13 July, 2014)**

#### **New and changed features**

- Option to select text or graphical query plan

- Remove unimplemented menus in Server Explorer

#### **Fixes**

- Crash when option "Include Errors in Grid" is set
- Potential crash when opening recent files
- Search does not work in Messages tab
- Setting Speedword completion keys has no effect
- Relative directories in Portable mode
- Only first statement executed in multi statement batch (Teradata)
- Fixed some admin queries (Sybase ASE)
- Wrong schema name in Visual Diff title
- Minor GUI changes

### **Version 4.2 (8 June, 2014)**

#### **New and changed features**

- Full support for Teradata
- Improved Informix support
- Improved PostgreSQL support
- Improved MySQL support
- Server Explorer now supports MySQL, PostgreSQL and Informix
- Added ability to connect using ODBC configured DSN's
- Improved Intellisense
- Separate configuration pages for all supported databases

#### **Fixes**

- TIMESTAMP columns not detected correctly in some cases
- BIGINT values truncated to INT
- Potential crash when retrieving data
- Incorrect case conversion in some rare cases
- Relative directories not handled correctly
- Backup files not overwritten anymore
- Mac formatted files displayed incorrectly
- System objects loaded from wrong database (SQL Server)

### **Version 4.1 (11 May, 2014)**

#### **New and changed features**

- Graphical Query Execution Plan (Oracle, Microsoft SQL Server, Sybase ASE, Sybase IQ, DB2 LUW)
- Support for Sybase ASE 16.0

#### **Fixes**

- Corrupted text returned in Unicode version
- Error parsing nested function (Oracle)
- Fails to load old Oracle Client version
- Crash when expanding table columns (Oracle 8i)
- Some warnings reported as errors (Sybase ASE)
- Visual Compare Schema loads objects from wrong schema
- Objects not sorted in Object Explorer
- In some rare instances Grid Results shows extra outputs (DB2)

### **Version 4.0 (13 Apr, 2014)**

#### **New and changed features**

- Oracle 12c support
- Named favorite script fragments
- Group / subtotal result columns
- New script commands to format results
- Minor user interface updates

**Fixes**

- x64 version crash when retrieving binary data
- Text is missing when printing results
- Index scripting incomplete (SQL Server)
- Password not updated after change
- Errors not displayed if password change failed
- Toolbar buttons disappear or in wrong position
- Unique index not used in Generate Update / Delete (Oracle)

**Version 3.66 (16 Mar, 2014)****New and changed features**

- UTF-8 load / save support

**Fixes**

- Unable to connect to Microsoft LocalDB default autoconnect instance
- Generate Scripts skips some objects in rare cases
- Wrong or missing keyword colors in editor (Informix)
- Unable to use alternative Oracle Home
- Recent file list shows files in wrong order
- Minor GUI changes and enhancements
- Unable to select encoding when saving files
- Server Explorer displays misleading error messages

**Version 3.65 (09 Feb, 2014)****New and changed features**

- Separate options page for Sybase IQ / Anywhere
- Option to set auto or manual commit (Sybase IQ)
- New script command: cmd diff

**Fixes**

- Missing terminator when scripting views (Oracle)
- Mark all words not working correctly
- Wrong text inserted when using Copy / Paste block
- Incorrect scripting of DEFAULT clause (Sybase IQ)
- Table names missing in Intellisense (Sybase IQ)
- Custom object filter does not work correctly when owner name present
- \$define variables not loaded for temp scripts

**Version 3.64 (08 Dec, 2013)****New and changed features**

- Option to view Application Log
- Change to how Script Variables work. DEFINE replaced with \$DEFINE. \$(var\_name) syntax available in Oracle. &var\_name deprecated
- Shortcut to switch between connections. Ctrl + Shift + Page Down and Ctrl + Shift + Page Up

**Fixes**

- Old SQL Server client connecting to new version of SQL Server (Text truncation)
- Incorrect sorting in Unicode version
- Issues with cmd result\_current and cmd result\_new
- Incorrect options enabled in Quick Diff window
- Missing owner in some instances (Oracle)

**Version 3.63 (29 Sep, 2013)****New and changed features**

- Additional connection options (SQL Server)

**Fixes**

- Single line comment requires carriage return (Teradata)
- Field length is incorrect when Results in Text
- SQL log fails if server name contains certain characters
- Favorites not saved if server name contains certain characters
- Incorrect drop statement for functions with default arguments (Informix)
- Script object does not work from Favorites tab
- In some cases scripted objects missing characters

### **Version 3.62 (1 Sep, 2013)**

#### **New and changed features**

- Outline SQL blocks. Shortcut to execute Shift + Enter
- Support for collapsible regions --#region [Name] --#endregion [Name]
- Display invalid objects in different color (Oracle)
- Updated Admin queries (Oracle)
- Italian translation
- Minor GUI updates

#### **Fixes**

- x64 version crash with result sets > 2GB
- Execute/Script for overloaded functions (Oracle)
- Focus not set correctly when add new result tab option checked
- Incorrect fixed pitch font detection on Windows 7
- Printer font not saved / set correctly
- Backup file fails when using Save As...
- Inconsistent source scripting for stored procedures (SQL Server)

### **Version 3.61 (12 May, 2013)**

#### **New and changed features**

- Sybase IQ 16 support
- Option to see only difference in Visual Diff
- Excel export options and Excel export templates
- Option to include all columns in Generate INSERT
- Export table data to current script window
- Connect to Sybase ASE directly
- Improved connection errors reporting
- Editor and result grid option to change tabs location

#### **Fixes**

- Escape key does not close Visual Diff window
- Errors connecting to SQL Server 7 and 2000
- Incorrect generated DELETE or UPDATE when not all table constraints included in result set
- Enable Table Edit option has no effect in Production mode
- Registration dialog appears on every restart
- Scripted NUMERIC columns do not include precision and scale (Sybase IQ)
- Errors retrieving values from UNSIGNED INT and UNSIGNED BIGINT columns (ODBC drivers)

### **Version 3.60 (10 Mar, 2013)**

#### **New and changed features**

- New languages: Deutsche, French, Turkish
- Removed restriction on modifying table unique constraint in Edit mode
- Improved import from Excel
- Option to display TIMESTAMP's with TIMEZONE in local time (Oracle)
- Additional options in Generate Scripts
- New licensing scheme

### Fixes

- Excel Export fails when string starts with '='
- SqlDbx becomes unresponsive when script contains SQL\*PLUS commands (Oracle)
- Whole word replace sometimes does not work correctly
- Current database not restored on restart (Sybase ASE)
- Incomplete index scripting (Sybase IQ)
- Long queries truncated in Data Diff window
- Erroneous license violation dialog
- File save fails in Unicode version
- File can not be opened if it is already opened in another application

### Version 3.59 (06 Jan, 2013)

#### New and changed features

- Sybase IQ 15.4 support
- Improved generate scripts feature
- Ability to set HOSTNAME, APPNAME (Sybase ASE)
- Enhanced limit returned rows feature
- Improved usability

### Fixes

- Connection information not saved correctly (Sybase ASE/IQ)
- Connect to default SERVICE\_NAME does not work (Oracle)
- Column total formatting does not match column format
- Incorrect create index with INCLUDE (column) (DB2 LUW)
- Error saving files when SqlDbx folder is read only
- Painting issue in the object pane
- Incorrect insert row for graphic and vargraphic columns (DB2)
- Incorrect sorting of decimal values
- Help not launching from Unicode and x64 version
- Inconsistent handling of script commands

### Version 3.58 (03 Sep, 2012)

#### New and changed features

- Ability to directly define ODBC connections without creating DSN
- Changes to Sybase admin queries

### Fixes

- Fix exception when retrieving long char columns using Access or Excel ODBC driver
- Incorrect saving of login info (Sybase IQ, iAnywhere)
- Error scripting physical table properties (Oracle)
- Sybase IQ 12.4 scripting errors
- Permissions scripting not working in some instances (SQL Server)
- Resolved issue with ocs.cfg (Sybase ASE)

### Version 3.57 (06 May, 2012)

#### New and changed features

- Support for DB2 z/OS and LUW Version 10.x
- Ability to run both x86 and x64 version from the same directory with drivers in Drivers and Drivers64 directories

### Fixes

- Script variables do not work with ODBC connections
- Table checks not scripted correctly (Sybase ASE)
- Table constraints not scripted correctly in some instances (Microsoft SQL Server 2005/2008)
- Search in Object view does not work in x64 version
- Fix for IBM CLI x64 driver reporting incorrect length for variable length columns

### **Version 3.55 (08 Apr, 2012)**

#### **New and changed features**

- Support for SQL Server 2012 and Azure
- Improved permissions scripting (Sybase, SQL Server, DB2, Oracle)
- Added option to executes SQL statements on connect

#### **Fixes**

- Wrong driver loaded for ODBC connections
- SqlDbx becomes unresponsive when searching in Object View
- Generate INSERT does not work on filtered results
- Non system tables owned by user informix not displayed (PostgreSQL)
- "Unknown exception" error when exporting to Excel
- Table properties not scripted for Sybase ASE 15.5

### **Version 3.54(04 March, 2012)**

#### **New and changed features**

- Support for Sybase 15.7
- Improved scripting (Sybase, SQL Server, DB2, Oracle)
- New global variable (NEW\_UUID)
- Export as HTML
- Copy as HTML, XML, CSV
- Close Other Tabs option (Scripts, Results)
- French and Russian translations

#### **Fixes**

- Intermittent crash when selecting very long text data
- No output for MESSAGE statement (Sybase IQ, iAnywhere)
- Script truncated for very large tables
- Last exported row to Excel has wrong formatting
- Script variables do not use defined color
- DBMS metadata scripting missing indexes and constraints (Oracle)
- IDENTITY column not scripted (Sybase ASE)
- Long identifiers option not available for Sybase version < 15.x

### **Version 3.53(12 Feb, 12)**

#### **New and changed features**

- Improved error reporting (Oracle)
- New Shortcut keys ALT+1, ALT+F3
- Multi sheet export to Excel
- Performance improvements (Excel export. Data compare)

#### **Fixes**

- Database combo box empty (Sybase 11)
- Error connecting using ODBC
- Horizontal scrolling using mouse
- Main menu not displayed correctly in SqlDbx x64
- Arithmetic overflow in Databases admin query (Sybase)
- Intellisense drop down shows columns from unrelated table

### **Version 3.52(04 Dec, 11)**

#### **New and changed features**

- Support for DB2 iSeries version 7.x
- Direct Oracle connection
- Informix synonyms
- Filter option to hide rows in Result Grid
- New and updated Admin queries (Sybase, Sql Server, DB2)

- Copy as text in Result Grid option
- Display count in Search Database dialog

#### Fixes

- XML type columns not displayed (Oracle)
- Closing Results window exits SqlDbx
- Unable to move Grid columns
- Intellisense fix for table aliases
- Single quote not escaped in Generate SELECT / DELETE / UPDATE
- String quoting in SqlDbx Unicode
- Do not display IN parameters when executing stored procedures (DB2)
- TRUNCATE TABLE menu does not work (DB2)
- Missing stored procedure properties (DB2 z/OS)
- Do not display auxiliary tables (DB2)
- Execute and Script Execute stored procedures fails (DB2 z/OS)
- Incorrect scripting of DROP for materialized views (Oracle)
- Incorrect scripting of GRANT for functions returning table

### Version 3.51(25 Sep, 11)

#### New and changed features

- Informix support (Pro Edition)
- Improved support for PostgreSQL
- New script commands (Pro Edition)
- Simplified scripting for stored procedures execution (DB2, Oracle)
- Import table data from CSV file (Pro Edition)
- Option to disable / enable whole script execution
- Option to display results in a new grid
- Extended password security support (Sybase ASE)

#### Fixes

- Truncation of long character columns (DB2, SQL Server, ODBC)
- Unicode version uses too much memory
- Intellisense fixes
- Incorrect lower/upper keyword case in some instances
- Unhandled exception in editor when moving line up / down
- Incorrect Intellisense parameters for stored procedures (MySQL)
- References loaded for wrong schema
- Export to CSV with no delimiters right trims VARCHAR columns

### Version 3.50(24 Jul, 11)

#### New and changed features

- SqlDbx portable version
- Schema compare (Pro Edition)
- PostgreSQL support
- Improved MySQL support
- Scripting improvements (DB2)
- Connection to uncataloged databases (DB2)
- Better connection error reporting

#### Fixes

- Fixed issue with Oracle parser
- Disable ODBC escape sequences
- Disable not implemented menus and toolbar icons
- Results in Grid / Text option not handled correctly
- Blank DATE or TIME columns
- Incorrect scale displayed for MONEY columns (Sybase ASE)

- "Rerun Query" executes wrong query

### **Version 3.49(03 Apr, 11)**

#### **New and changed features**

- Svn integration (requires TortoiseSVN)
- Quick Diff for Objects
- Improved scripting (DB2)
- Support for IN and INOUT stored procedure parameters (DB2)
- Additional functions in Result Grid: AVG, COUNT
- Option to set color of active line
- Move current line up / down (CTRL+SHIFT+UP / CTRL+SHIFT+DOWN)

#### **Fixes**

- Intellisense displays incorrect table columns for tables with the same name in different schemas (SQL Server)
- Compilation errors not displayed (Oracle)
- Handle invalid dates (Oracle)
- "Scripting Options" dialog displayed multiple times
- Multiple fixes for x64 version
- Procedure source not shown correctly (Sybase IQ, iAnywhere)
- Missing precision for DATETIME2 and TIME columns (SQL Server)
- Exception when exiting with results windows open
- Fixed incorrect display of UNIVARCHAR and UNICHAR columns (Sybase ASE)
- Exception when pasting text from other applications
- Incorrect system views used for some catalog queries (Oracle)

### **Version 3.48(27 Jan, 11)**

#### **New and changed features**

- Added Production and Non Production mode
- Option to set restrictions for production mode (Options->Servers)
- Added predefined variables \$(TODAY), \$(NOW), \$(CURRENT\_SCHEMA)
- Script to Clipboard
- Added option to truncate tables
- Significantly improved Workspace / Session management
- Minor UI changes

#### **Fixes**

- Object list empty for case sensitive server installations (Microsoft Sql Server)
- Generated permission statements missing separator (IBM DB2)
- Generated SELECT / UPDATE / DELETE missing second fractions for some Date types
- Some UI elements not updated correctly when switching between connections
- Diff view displays identical lines as changed
- Line numbers missing in Messages Tab
- CLR functions not displayed in function list (Microsoft SQL Server)
- Line numbers missing in Messages Tab
- Erroneous scripting of permissions for triggers
- SqlDbx window not visible when performing Alt+TAB

### **Version 3.47 (17 Oct, 10)**

#### **New and changed features**

- Schema / Database filter
- Script commands
- Changed log options and log format
- Added option to script USE dbname (Sybase, MS SqlServer)
- Editor option to untabify selection in Editor
- Changed how new script tab names generated

- Changed behavior of some shortcuts keys in Editor and Results Grid (HOME, END, PgUp, PgDown, Ctrl+D)
- Some minor usability improvements

#### Fixes

- Exception when loading session state from unavailable network share
- Drop menu in Object View not working correctly when selecting multiple items
- Unable to connect to Sybase ASE when certain database administration tasks running
- Temp tables column not showing in Intellisense (Sybase, MS SqlServer)
- Incorrect scripting of GRANT TO PUBLIC
- Result Grid mode reset after each query
- Editor is not responsive in certain situations

### Version 3.46 (18 July, 10)

#### New and changed features

- MySQL and Kdb+ support
- Improved Intellisense
- Added support for ALTER table statements
- Scripting to new tab when SHIFT key is pressed
- ODBC improvements (Indexes, primary / foreign keys)
- Added ability to use ODBC drivers for some database systems without creating DSN entries
- SQL Forms
- Scripting to new tab when SHIFT key is pressed

#### Fixes

- Long table constraints truncated (Sybase)
- Incorrect number of affected rows by stored procedure (Sybase)
- Inconsistent Editor behavior for some shortcut keys
- Incorrect lower/upper keyword case in some instances
- sp\_procxmode not scripted for stored procedures (Sybase)
- Search in Results not working for some locales
- Couple small scripting errors
- Exception when closing ODBC connections

### Version 3.45 (09 May, 10)

#### New and changed features

- Generate SELECT / INSERT / ... uses SQL formatter settings (SqlDbx Pro only)
- Additional color options
- Ability to "Mark" up to three different words
- Export Results grid selection to CSV, XML
- Additional date formats

#### Fixes

- Table columns not sorted in Intellisense window
- Table names missing owner (Sybase Anywhere / IQ)
- Incorrect table scripting (IBM DB2 for z/OS)
- Timeout connecting to DB2 on iSeries
- x64 version access violation when pasting from clipboard
- Spaces not handled correctly when using substitution variables

### Version 3.44 (04 Apr, 10)

#### Fixes

- Keyboard menu accelerators not working for languages other than English
- Errors when performing operations on multiple selected objects in Object list
- Unicode version does not connect to DB2 in Windows 7
- Open multiple files sometimes does not open all files
- No results when truncating text columns for Sybase

- Incorrect behavior when selecting multiple objects in Object list
- Incorrect scripting of constraint columns for Sql Server
- Incorrect case for user types in Sybase and Sql Server
- UNICODE files not loaded correctly

### **Version 3.43 (28 Feb, 10)**

#### **New and changed features**

- Support for multiple languages (Pro version only)
- Updated system queries for DB2
- Intellisense improvements
- Enhanced Object list view
- Info tips in Object list view
- Two new scripting options
- Floating windows layout saved / restored
- Small changes and improvements

#### **Fixes**

- Error connecting to Oracle 8.1.x
- BEGIN / END blocks not matched correctly
- Toolbar combo boxes not working on Windows 2000
- Inconsistent menu items and shortcuts
- Exception for ODBC connections
- Reduced windows resources usage
- Exception in Editor

### **Version 3.42 (11 Jan, 10)**

#### **New and changed features**

- SQL Log
- Upper / Lower case scripting
- Support for script / execute functions (Sybase Anywhere / IQ)
- Enhanced scripting formatting
- Improved handling of script variables
- Keyboard shortcuts to switch focus between different windows (Ctrl+1, Ctrl+2, Ctrl+3)
- Improved keyboard navigation
- Multiple small improvements in Editor

#### **Fixes**

- Incorrect cursor position after search
- OUT parameters for SQL Server not scripted correctly
- Crash during restoring saved session
- Editor crashes when using bookmarks
- Inconsistent keyboard shortcuts

### **Version 3.41 (06 Dec, 09)**

#### **New and changed features**

- Hide / Show lines in Editor
- Template manager replaced by File browser
- Initial support for Sybase IQ 15
- Associate files with SqlDbx
- Added date and time to SQL statement history
- Added option to only generate update statement when editing table data
- ANSI version can read UNICODE files
- Small changes and improvements in different areas

#### **Fixes**

- Intermittent x64 version crashes

- Computed table columns were not scripted correctly for Sybase and SQL Server
- Long passwords truncated
- Oracle XMLType limited to 2K
- Session state not restored correctly in some instances
- File save dialog missing ANSI / UNICODE combo box on Windows 7
- SqlDbx Unicode version not connecting to SQL Server on Windows 7

### **Version 3.40 (18 Oct, 09)**

- Native x64 version of SqlDbx
- Added multi column Results grid sort (Ctrl + double click)
- Added support for Oracle XMLType columns
- Improved support for multiple Oracle Homes
- Improved Table Export to file
- Improved Insert New Row feature. Better handling of identity and timestamp columns
- Fixed scripting of defaults and check constraints for Sybase and Microsoft SQL Server
- Fixed painting issues on Windows 7
- Small improvements and enhancements in couple different areas

### **Version 3.33 (13 Sep, 09)**

- Added ability to modify table data and generate UPDATE/INSERT for ODBC Connections
- Improved support for Aliases / Synonyms for DB2 and Oracle
- Improved Intellisense: display primary / foreign constraints for JOIN statement
- Multiple improvements for DB2 scripting. Better support for DB2 iSeries
- Displays execution time for each individual batch
- Added data modify update statements to SQL History
- Added option to toggle Editor column mode (ALT+C)
- Added some missing menu items
- Fixed Modify Table Data generating incorrect update statement
- Fixed exception when generating UPDATE statement for Sybase
- Fixed Cascade / Tile not working
- Fixed Find All causes SqlDbx to hang
- Fixed incorrect catalog /schema display for ODBC Connections
- Fixed Intellisense missing some keywords and object names
- Fixed SQL History not saved / restored correctly.
- Small changes and improvements in different areas

### **Version 3.32 (17 Aug, 09)**

- Added ability to select multiple objects in Object View using SHIFT key.
- Added ability to select multiple items in Intellisense popup window.
- Added option to specify order of table columns in Intellisense popup window
- Added option to enable number of returned rows by default
- Added option to modify query results directly in Result Grid
- Added ability to modify table data for tables with no unique constraints
- Added new option to float and dock Object View, Edit and Result tabs
- New Editor features. Go to Line (Ctrl+G) and Mark all occurrences of a word (Ctrl+M)
- New Editor feature. Automatically highlight matching parenthesis
- New Editor feature. Automatically highlight matching BEGIN/END IF/END IF, CASE/END, ... SQL blocks
- Improved generate SELECT/INSERT/UPDATE
- Added new option to generate SQL Plus compatible scripts for Oracle
- Changed XML export format. Corrected date format
- Fixed out of memory error when exporting table data to file
- Fixed generation of execute script for Oracle package procedures
- Fixed custom object filter not working
- Fixed Shift key operation in Result Grid

- Fixed exception when copying from Result Grid
- Fixed exception when canceling Oracle queries
- Fixed error when executing Oracle stored procedures with multiple output cursors
- Fixed slow Intellisense for Oracle and DB2
- Fixed couple system catalog queries for DB2 z/OS

### **Version 3.31 (14 Jun, 09)**

- Custom object filters
- Support for integrated BCP for Sql Server and Sybase
- Added support for password expiration policies for Oracle, Sybase and Microsoft SQL Server
- Added ability to change password
- Added support for Run / Script Execute stored procedures with output parameters
- Scripting improvements for DB2
- Added option to script one object per file
- Changed all DB2 catalog queries for to include WITH UR clause
- Fixed exception when importing large Excel files
- Fixed inconsistent behavior for CHAR columns between ANSI and UNICODE versions
- Fixed intellisense for Oracle
- Fixed incorrect painting on Vista and Server 2008
- Improved compatibility with some ODBC drivers
- Small changes and improvements in different areas

### **Version 3.30 (26 Apr, 09)**

- Added support for DB2 iSeries/AS400
- Added option to reconnect with different credentials
- Reload list of schemas / databases on reconnect
- Fixed import from Excel ignoring values for some fields
- Fixed issue with Speed Typing settings not being saved correctly
- Server explorer enhancements
- Fixed couple scripting errors for DB2 z/OS
- Improved handling of script variables
- Small changes and improvements in multiple areas

### **Version 3.29 (01 Mar, 09)**

- Added Microsoft and Sybase user types to Intellisense
- Added "Insert New Data Row" option for tables
- Added option to connect to Sybase IQ / Anywhere through Open Client or ODBC
- Added shortcut keys to Show/Hide Results (F11) and Show/Hide Objects (Ctrl+F11)
- Added option to output informational and error messages into Result Grid
- Fixed access violation when opening workspace referencing non existent files
- Fixed access violation for Oracle when entering SQL Plus commands
- Fixed error displaying functions in Server Explorer for Sybase ASE 15.x
- Fixed IDENTITY and COLLATION clause scripting for Microsoft SQL Server
- Fixed Excel export for some locales
- Fixed issue with Favorites not being saved in correct location
- Objects with names containing "." characters were not handled correctly
- ESC key was not closing some dialogs
- Visual data compare was not correctly ignoring trailing right whitespaces
- Improved usability and couple small improvements in different areas

### **Version 3.28 (06 Feb, 09)**

- Added support for Sybase SQL Anywhere and Sybase IQ
- Added new feature: Quick filter in Object View
- Added parameterized queries and substitution variables

- Added ability to define completion keys for Intellisense
- Added two new Excel export options: text, as displayed
- Added "Edit Mode" for procedures / functions / packages
- Added option to force "." as decimal separator
- Fixed Intellisense not showing other Databases / Schemas
- Fixed issue with Replace dialog hanging
- Fixed scripting of user defined types for Sql Server and Sybase
- Fixed incorrect number display for some locales
- Intellisense enhancements
- Scripting improvements
- Usability improvements

### **Version 3.27 (07 Dec, 08)**

- Added SQL formatter / Beautifier (Professional version only)
- Added supports for proportional and Asian fonts. Better IME support
- Added ability to retrieve parent / child rows from Result Grid
- Intellisense improvements
- Improved SQL templates support
- Improved compatibility with some ODBC drivers. Added batch separator (;) for ODBC sources
- Oracle RAW and LONG RAW columns were not displayed correctly
- Fixed speed typing not working correctly
- Fixed error when changing server types in login dialog
- Fixed issue with maximized window covering task bar
- Fixed issue with not being able to edit data in Sybase tables

### **Version 3.26 (05 Oct, 08)**

- Changed how DECIMAL and NUMERIC columns handled.
- Added back display of table row count. Now it's an option
- Intellisense support for multiple temp tables in Sybase
- Added ability to execute stored procedures and functions from Editor popup menu
- New and changed Admin queries
- ODBC connection improvements
- Small GUI changes

### **Version 3.25 (07 Sep, 08)**

- Added option to not open connections when loading Session State
- Added option to automatically disconnect from Server after user specified time period
- Added option to commit or rollback when closing Oracle connections
- Added support for SQL User Defined Functions for Sybase 15
- Improved handling of temp tables for Sybase and Microsoft Sql Server
- Couple improvements for ODBC connections
- Fixed slow database change for Sybase ASE
- Fixed issue with not releasing DB2 locks in some rare circumstances
- Fixed issue with error lines not being indicated correctly for Sql Server
- Fixed issue with number formats for some locales when generating INSERT/SELECT/UPDATE
- Fixed issue with automatically committing changes when editing table data for Oracle when AUTO COMMIT is off
- Enhancements and improvements in GUI, Editor and Results Grid

### **Version 3.24 (29 Jul, 08)**

- Some Results Grid shortcuts were not working
- Fixed generate table script. Order of defaults, identity and constraints was wrong
- Fixed identifiers not being quoted correctly sometime

- Added diff options (case sensitive, ignore white space)
- Added menus for Quick diff
- Added ability to Edit / Delete Data Sources from Quick Connect
- More color options (variable and command colors)
- Intellisense list now shows table columns in create table order
- SQL execution history now persist between restarts
- Added option to copy column names with types and generate create table statement in Result Grid
- Fixed Shift+Tab working inconsistently

### **Version 3.23 (09 Jun, 08)**

- Added support for Microsoft SQL Server 2008
- Added support for Oracle 11g
- Fixed error when using Oracle Client version prior to 8.1.xx
- Fixed Intellisense for Oracle stored procedures broken in previous release
- Enable multi line substitution values in Speed typing
- Improved Visual Diff interface. Faster diff algorithm
- New Quick Diff feature. Drag and drop text, script tab or result tab on a Quick Diff toolbar button to run diff between two items
- Minor GUI changes

### **Version 3.22 (22 May, 08)**

- Fixed and added more options for multi selection in Object View
- DBMS\_OUTPUT was not working correctly in unicode version
- Remember current script directory for each server connection
- Fixed Replace Dialog hanging when doing replace all
- Fixed couple issues with Intellisense for DB2. Missing procedures, showing of system views
- BIGINT values now exported to Excel as text
- Fixed incorrect number formatting
- Some other minor changes and fixes

### **Version 3.21 (11 May, 08)**

- Object View now allows multiple selections. Enabled copying from Object View by using keyboard
- Added ability to add results of every query to a new Result Tab (hold Shift key while executing query)
- Added ability to toggle ON/OFF limit for number of query result rows
- Fixed query results going to a wrong Result Grid
- Keyboard shortcut menu key now works correctly
- Fixed "Out of memory" error when selecting binary columns
- Generate SELECT includes only columns visible in Result Grid
- Long diagnostic messages not truncated anymore. Improved formatting
- Fixed keyboard shortcuts conflicting with some keys on international keyboards
- Some other minor changes and additions

### **Version 3.20 (27 Apr, 08)**

- Find, Replace and Object Properties dialogs are not modal anymore
- Added ability to have multiple Result Tabs
- New option to display column types in Result Grid
- Locale aware number formatting and new number formatting options
- Added option to script Oracle objects using DBMS\_METADATA package
- Server Explorer was not correctly displaying DB2 and Oracle procedures
- Added missing Editor shortcuts for Ctrl+Backspace and Ctrl+Delete

### **Version 3.19 (06 Apr, 08)**

- Unicode version of SqlDbx Pro

- Removed option to connect to Sql Server through DB-Library
- Small fixes and changes

### **Version 3.18 (02 Mar, 08)**

- Fixed issue with intermittent locking of DB2 catalog views
- Fixed incorrect scripting of DEFAULT values and GENERATED BY columns for DB2
- Added ability to view BLOB's
- Added display of return values for Sybase stored procedures
- Fixed small scripting errors for Sql Server and Oracle
- Fixed display of unsigned values for Sybase Version 15
- Small GUI and Editor improvements

### **Version 3.17 ( 17 Feb, 08)**

- Added multi line cursor insert/delete/type to Script Editor. Added shortcut key to set block selection on (Alt + C)
- Performance improvements in multiple areas (Export, Generate statements, Editor)
- Changed how table import/export works
- Small improvements and fixes in Editor, Excel export, Grid Results
- Fixed access violation when retrieving Oracle NCLOB columns
- Updated help file

### **Version 3.16 (05 Feb, 08)**

- Added extensive column (block) select/copy/cut/paste/drag/drop support to Script Editor
- Changed behavior for option "Results in Script Window". Now output goes to separate window in a Results Tab
- Added option to set capitalization for procedures/functions
- BIGINT columns where not correctly exported to Excel
- Some other small GUI changes

### **Version 3.15 (15 Jan, 08)**

- Added ability to directly execute Oracle package procedures and functions from Object View
- Added two new items to Editor popup menu: Script Object to new Window and Sync Object View
- Implemented explain plan for IBM DB2/UDB
- Fixed issue with favorite objects not being refreshed
- Couple scripting fixes for DB2 and Oracle
- Small changes in different areas: Editor, Results Grid, Quick Connect
- Added new shortcut key to switch between Editor and Results Grid (Ctrl + D)

### **Version 3.14 (06 Jan, 08)**

- New feature: Quick connect
- Added more options to copy data from Results Grid and paste to Script Editor
- Fixed copy / paste to Excel
- Improved ODBC compatibility for some data sources
- Intellisense extended to work with temporary tables in MS Sql Server and Sybase ASE
- Added new command line options: -q, -r, -w

### **Version 3.13 (16 Dec, 07)**

- New features
  - Sync Object View with Script Editor
  - Added menu and shortcut keys for BEGIN, COMMIT and ROLLBACK TRANSACTION statements
  - Added ability to switch AUTO COMMIT ON/OFF for DB2 and Oracle
- IBM DB2/UDB improvements
  - Added support for DB2 UDB version 9.x
  - Improved support for zOS and DB2 V7
  - SQL parser now better handles DDL an DML batches and recognizes --#SET DELIMITER

command. See help for more details  
 Admin queries added for versions 8.x and 9.x  
 Intellisense recognizes DB2 Aliases

- Improved IntelliSense
- Editor now correctly applies color to multi line literal strings
- Fixed issue with Sql Server and DB2 reporting an error when delete, update or insert did not affect any rows
- Some minor GUI improvements and usability enhancements. Slight changes to menu structure
- Fixed Results Grid print preview

### **Version 3.12 (15 Nov, 07)**

- New feature: Transpose data in Results Grid
- Added configuration options for delimited file data exports
- Intellisense was not working correctly for DELETE statement
- Fixed handling of NULL values in Filter Grid Results
- Do not truncate trailing blanks for VARCHAR columns when copying from Results Grid
- Script variables values with spaces do not require quotes anymore

### **Version 3.11 (28 Oct, 07)**

- New feature: Script variables. See help for details
- Significantly enhanced Speed Typing. Integrated with Intellisense. Now supports formal arguments
- Option to parse scripts for syntax errors without execution implemented for Sybase ACE and Sql Server
- Some other minor GUI enhancements and improvements

### **Version 3.10 (14 Oct, 07)**

- Intellisense and Auto Complete now work across databases, schemas and owners. Enable it in Options->Editor->Intellisense
- Improved Intellisense. Now works in more cases
- Added ability to execute procedures and functions directly from Object View.
- Scripting for procedure and function execute now uses template parameters
- Added command line options. SqlDbx Pro only. See help for details
- Removed option to pre load packages for Intellisense for Oracle (not needed anymore). Fixed couple of bugs in Oracle SQL Parser
- Fixed issue with mixed case object names and names with embedded spaces for Oracle and DB2
- Generate INSERT/DELETE/SELECT now correctly handles string with embedded single quotes, binary columns and columns with NULL values
- Editor performance significantly improved for very long lines
- Fixed loading of incorrect system tables and views for SQL Server 2005
- Added shortcut to select SQL block (Ctrl+B). Shortcut for selecting text block changed to Ctrl+Shift+B
- Some other minor GUI enhancements and improvements

### **Version 3.00 (03 Sep, 07)**

- Added ability import / export table data to files and Excel
- Improved support for international date formats in Generate SELECT/INSERT/UPDATE/DELETE
- Fixed issue with output messages sometimes not displaying correctly for SQL Server
- Fixed occasional freezing or termination of application while copying data from Result Grid
- Export to Excel of date and numeric columns does not depends on formats selected in Options anymore
- Some other minor GUI enhancements and improvements

### **Version 2.99 (21 Aug, 07)**

- Added ability to create connection aliases

- Improved data diff
- Enhanced template management
- Fixed loading session state when using integrated security
- Some other minor improvements

#### **Version 2.98 (06 Aug, 07)**

- Fixed exception when accessing table properties in Sybase
- Fixed capitalize keywords option being always on
- Added option to manage file extensions

#### **Version 2.97 (30 Jul, 07)**

- Fixed saving / restoring of session state if using multiple computers on a network
- Fixed errors when creating Oracle triggers
- Improved Search in database
- Handle Oracle interval types
- Better handling of timestamp columns for Oracle and DB2
- Detect and reload files modified outside SqlDbx
- Added ability to use wildcards in Find and Replace dialogs
- Minor fixes and improvements. Some shortcut keys were not working. Missing keywords

#### **Version 2.96 (03 Jun, 07)**

- Enhanced Find and Replace dialogs
- Fixed couple small issues with Sybase and Oracle.

#### **Version 2.95 (20 May, 07)**

- Now each script tab has it's own associated set of results
- Redesigned results window.

#### **Version 2.94 (12 May, 07)**

- Fixed incorrect display of BIGINT values
- Significantly improved diff algorithm. Added ability to compare files
- Improved support for DB2 7.1 on z/OS. Fixed incorrect scripting of FOREIGN KEY constraints for DB2
- Fixed issue with expanding table columns for ODBC sources.
- Minor GUI enhancements. Improved Intellisense keyboard interface

#### **Version 2.93 (29 Apr, 07)**

- Added ability to save and restore user session state
- Display number of rows affected by INSERT, UPDATE or DELETE statements
- Intellisense improvements. Enhanced keyboard interface in results grid
- Improved Visual diff
- Fixed issue with inability to edit data in results grid for Sybase and SQL Server

#### **Version 2.92 (05 Apr, 07)**

- Added new Favorite Objects feature
- Improved support for Oracle and Microsoft servers
- GUI improvements

#### **Version 2.91 (29 Mar, 07)**

- Fixed date format bug introduced in previous release
- Some other minor fixes

#### **Version 2.90 (18 Mar, 07)**

- Microsoft SQL Server 2005 support
- Added ability to apply filter in results grid
- Added support for quoted Identifiers

- Generate SELECT statement from results grid. Show table constraints in Object View
- Some other minor fixes

### **Version 2.89 (04 Mar, 07)**

- Significantly improved support for ODBC sources
- Added support for Sybase Version 15
- New Auto Complete feature implemented. It can be configured in Editor Options
- Multiple Oracle homes support

### **Version 2.88 (18 Feb, 07)**

- Intellisense changes
  - System tables, views and procedures can be added to Intellisense. Options->Editor->Intellisense
  - New auto suggest feature. Default shortcut key Ctrl+SPACE. Very basic at this time
  - No popup lists and keyword capitalization inside comments
- SQL History feature completely redone
- New Quick search in script feature added
- More DBA related queries
- Fixed some menu and keyboard shortcuts
- Some minor GUI changes.

### **Version 2.87 (07 Feb, 07)**

- Added handling for even more data types for SQL Server and DB2
- Intellisense now works with procedures and functions in Oracle packages. You can add packages to be included in Intellisense
- Fixed some accelerators keys not working in certain conditions
- It's now possible to set values to NULL when editing table data
- Some other minor enhancements and performance improvements in various areas

### **Version 2.86 (15 Jan, 07)**

- Added handling for more data types (SQL Server : BIGINT, BINARY, VARBINARY. DB2 : BINARY, VARBINARY)
- Added option to select alternative background and text color for database connections
- Copy to clipboard now works in Messages tab
- Locale specific default date and time formats
- Added ability to set column formats directly in Results Grid
- Some other minor enhancements and performance improvements

### **Version 2.85 (11 Dec, 06)**

- Intellisense and UI improvements
- Added option to print selection in results grid
- Minor fixes and enhancements

### **Version 2.84 (29 Oct, 06)**

- Intellisense improvements. Table aliases recognized. DELETE and UPDATE statements supported. List of columns shows after WHERE and SET clauses
- Display query plan and query statistics for Sybase, Oracle and SQL Server
- Alternative window layout option added
- Improved search in Object View of script editor
- Fixed file saving to CSV and XML
- Fixed connect / disconnect without closing script editor
- Minor fixes and improvements in script editor

### **Version 2.83 (14 Aug, 06)**

- Allow to directly modify table data in result grid for tables with unique constraints
- Option to limit number of returned rows. Option to see totals for numeric columns
- Fixed scripting of Sybase triggers

- Enable multiple selection in result grid. Copy and Generate statements use multiple selections.
- Generate WHERE IN (...) expression from result grid
- Minor improvements in editor, drag and drop, file handling

#### **Version 2.82 (04 Jun, 06)**

- More accurate indication of compile error lines for all Servers
- Fixed incorrect scripting of unique constraints for Sybase and Microsoft Servers
- Fixed issue with object dependencies not being displayed correctly
- Fixed incorrect parsing of CASE and OPEN PL/SQL statements for Oracle
- Automatically display compile errors for Oracle

#### **Version 2.81 (29 May, 06)**

- Improvements to DB2, Sybase and Oracle scripting
- Added ability to dynamically connect / disconnect from Server

#### **Version 2.80 (4 Apr, 06)**

- Support for code templates
- Generate INSERT, UPDATE, DELETE from Results grid
- Support for new data types in Oracle 10g
- Improvements to IBM DB2 support

#### **Version 2.70 (3 Feb, 06)**

- SQL Editor improvements.
- Speed Typing
- Initial support for Microsoft SQL Server 2005

#### **Version 2.60 (16 Nov, 05)**

- Object scripting improvements
- Discovery of available Servers

#### **Version 2.50 (15 Jul, 05)**

- Initial support for IBM DB2
- DBA style queries added

#### **Version 2.00 (8 Jan, 05)**

- First public release of SqlDbx