About the data comparison tool

DTM Data Comparer is a visual tool for data comparison and synchronization.
There are five comparison and synchronization modes:

- Table to table.
- Query to table.
- Query to query.
- File to table.
- Excel to table.
- Database.

In the first block of modes, the user can compare two tables, query results with table, results of two queries execution, text file and Excel spreadsheet with the table. There are more flexible and allow users to:

- Specify custom unique key columns instead of the primary key.
- Define column mapping.
- Compare or synchronize only part of the table by WHERE clause specification.

In the last (database) mode, the program compares more than one pair of tables per project. Only default settings can be used in this case: native primary keys, no mapping, etc.

The user can select comparison mode clicking the related tab at the main window of the comparison tool. The program creates a new projects in the table to table mode by default. Please refer to setting window to change this behavior.

DTM Data Comparer is a Windows application, known to be compatible with the following operating systems: Windows XP, Windows 2003 and newer Server family and Windows Vista, 7, 8/10 (desktop). The 64-bit edition is also available.

See also

- How does the tool compare data?
- How does the tool synchronize data?
- Product limitations.

Database Connection

Quick Start: how to connect?

There are five ways to connect to a database:

1. Direct connection
2. Connection to desktop files
3. Data source with ODBC, IDAPI or Oracle Call Interface (OCI)
4. DSN File connection
5. OLE DB connection

In all modes the "Test" and "Information" buttons, as well as tools for working with connection profiles are available. "Test" button allows you to check information you entered and/or data source (or alias) configuration.

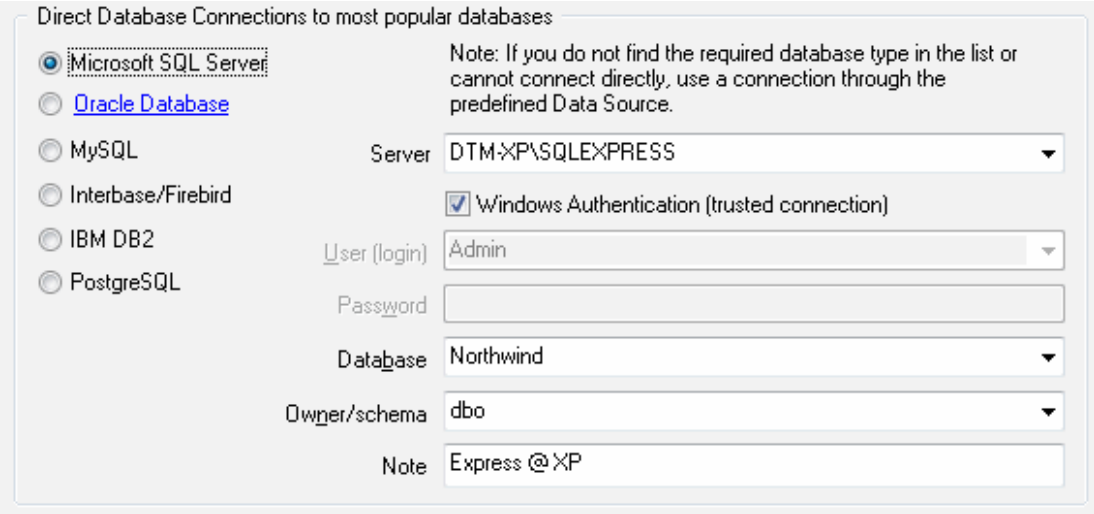
See also:

- Troubleshooting guide
- Connection information
- Connection profiles

Database	How to connect
MS SQL Server	Enter or select server name at the direct connection panel
Local SQL Server Express	Enter .\SQLEXPRESS as server name at the direct connection panel
Oracle	1) Switch to data sources mode 2) select OCI as "Interface" 3) select your service name from data source drop-down menu
DB2	Use direct connection panel or Use predefined ODBC DSN for custom connection settings
MySQL	**Install ODBC driver for MySQL from www.mysql.org** Use direct connection panel or Use predefined ODBC DSN for custom connection settings
PostgreSQL	Use direct connection panel or Use predefined ODBC DSN for custom connection settings
Interbase/Firebird	**Install ODBC driver** Use direct connection panel or Use predefined ODBC DSN for custom connection settings
Microsoft Access	1) Switch to "Desktop File" panel 2) Select "Access" as file type, enter or select file name
Microsoft Excel	1) Switch to "Desktop File" panel 2) Select "Excel" as file type, enter or select file name
Another database	1) Install ODBC driver for your database system 2) Create ODBC data source name using Windows ODBC Administrator 3) Switch to data sources mode 4) select your data source from drop down menu

Direct Connection

The direct connection method allows you to connect to most popular databases (MS SQL Server, Oracle, Interbase/Firebird, MySQL, PostgreSQL and DB2).
Enter the server name and the database name, if required. The user name and password are optional. Their necessity depends on the settings of your database. The owner name (schema) is optional too. The list of visible database objects depends on the choice of the owner. If the owner is empty, you will access all objects. There is important that schema/owner name is case sensitive.
If you do not find the required database type in the list or cannot connect directly, use a connection through the predefined data source. If DBMS is in the list, but unavailable, it means that either the required ODBC driver is not installed or it is not configured properly.
During its use, the program stores the entered values of server names, users and owners. You can select a value from the stored list using the corresponding combo box. For some DBMS types (MS SQL, for example), the program can fill the list of available databases. Use the button with two arrows for this purpose.



DBMS-specific connection options

Microsoft SQL Server

- "(local)", empty or "." server name means local server
- use <server name>\<instance name> syntax to identify instance. Example: .\SQLEXPRESS means SQL Express at the local system

Oracle

Use connect string for the Oracle Server that you want to access as a Server name.

Important: it is strongly recommended to use native Oracle Call Interface (OCI) instead of direct connection.

Interbase and Firebird

Examples:

- Server: **localhost** and Database **c:\interbase\myDb.fdb** - connect to specified DB on local system.
- Server: **172.17.2.10/3051** and Database **/usr/local/db/myDb.fdb** - connect to specified server with alternate port 3051 on remote system 172.17.2.10

MySQL

- Use **localhost** for local MySQL
- example.com;port=3306 means MySQL at example.com on 3306 port

DB2

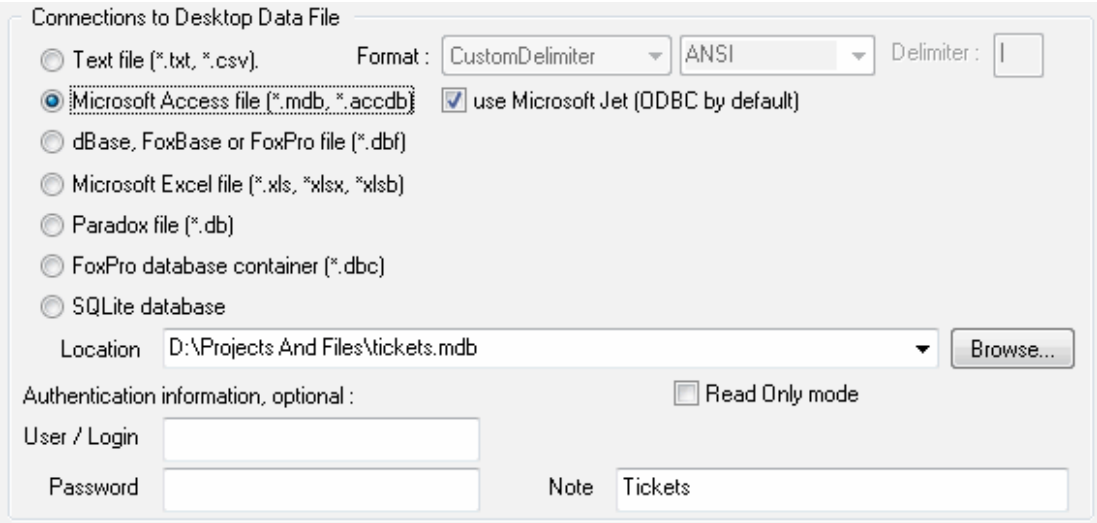
ServerName;port=5000;protocol=TCPIP as a server name means connect to ServerName, use 5000 port and TCP/IP protocol.

PostgreSQL

ServerName as a server name means connect to ServerName, use 5432 port and TCP/IP protocol. Database name is required. localhost as a server name is acceptable. To specify custom port you should add ";port=NNNN" string to server name.
server_name_or_ip-address;port=5432;DATABASE=dbname

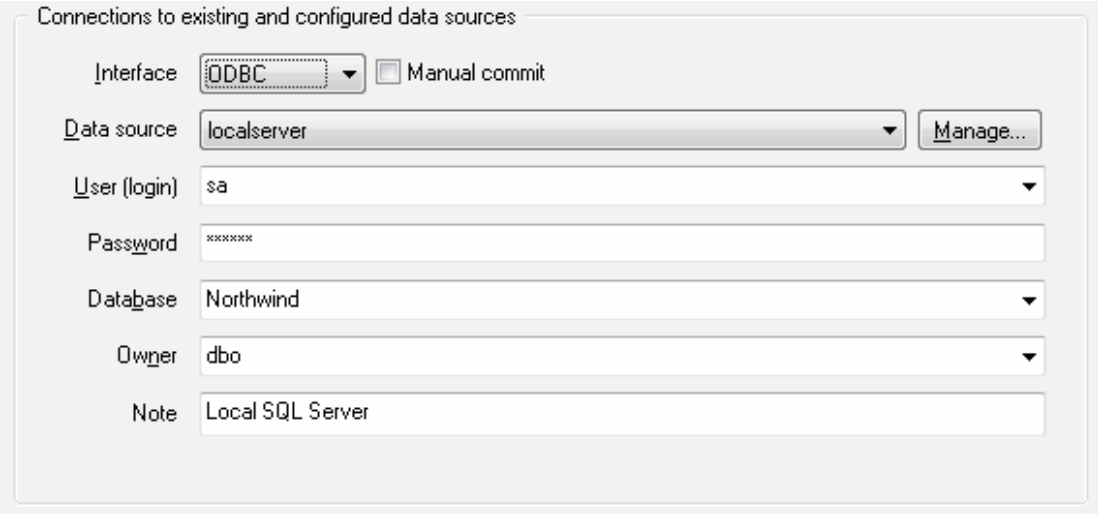
Desktop Files

The second way is designed for connecting to desktop data files. Select the required format and specify the file name or the directory where the data is located. Other parameters are optional.



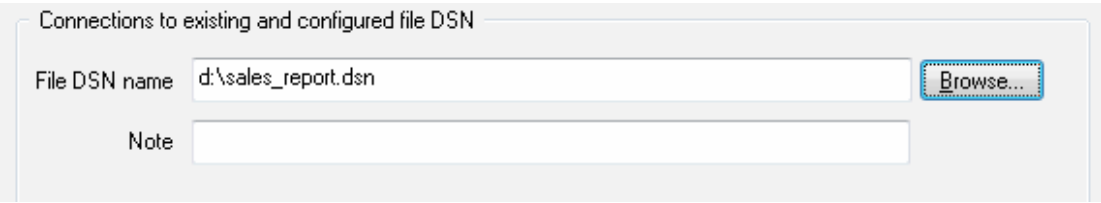
Predefined data sources: ODBC, IDAPI, Oracle Call Interface

A connection with the use of a data source is the most universal. You can select ODBC, IDAPI or OCI (if installed) interface and the preconfigured data source name. In this case, other options are similar to those of a direct connection. The "Manage" button allows you to get access to the external configuration utility if it is available. When you want to access the tables belonging to the single database schema (or owner), you should fill the "owner" entry; otherwise, all tables will be accessed.



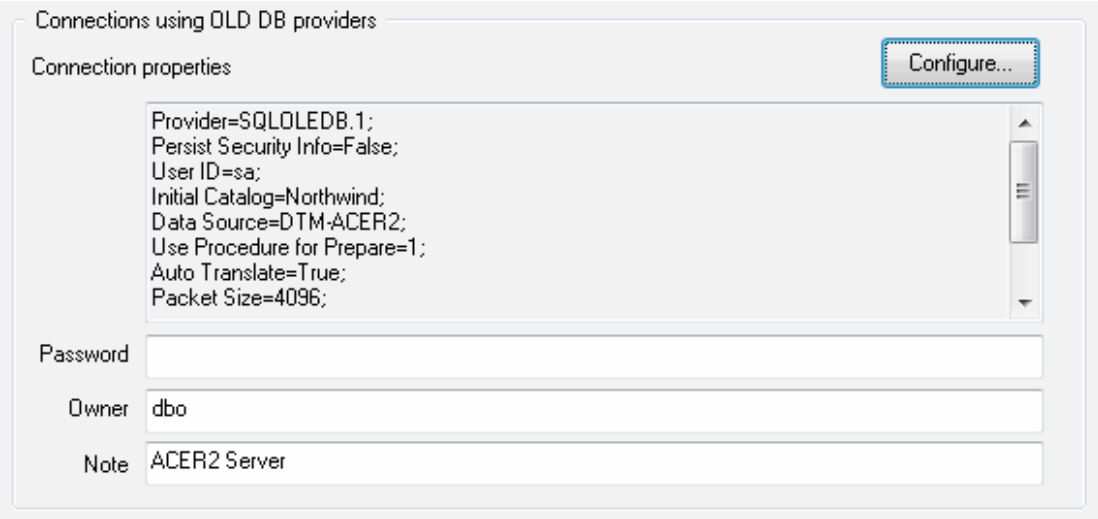
DSN File

The fourth way is using a DSN file. For this case, just select the file name with DSN definition.



OLE DB connection

Use 'Configure' button to specify connection information. Password and owner fields are optional.



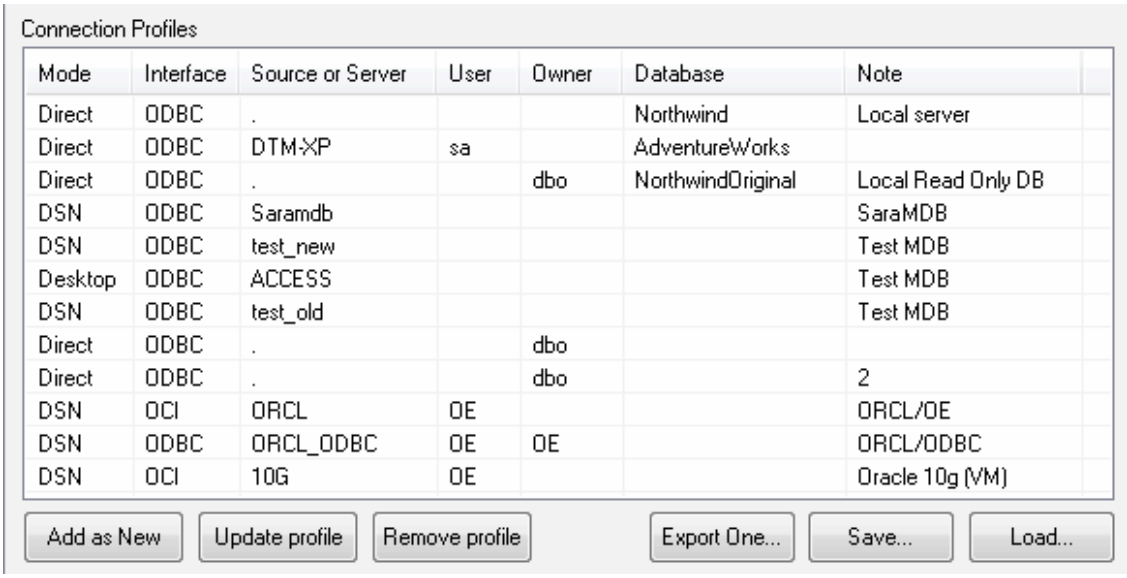
Connection Profiles

Connection profile helps you to save information about your connection (interface, data source or alias name, user name (login), password and database name, etc) and get access it by the one click.

Please fill connection properties and press "Add as new" to add a new profile. To modify the profile you should select it from the list at the top of the window, modify properties and press "Update". "Delete" button works when you select the profile to be deleted in the list.

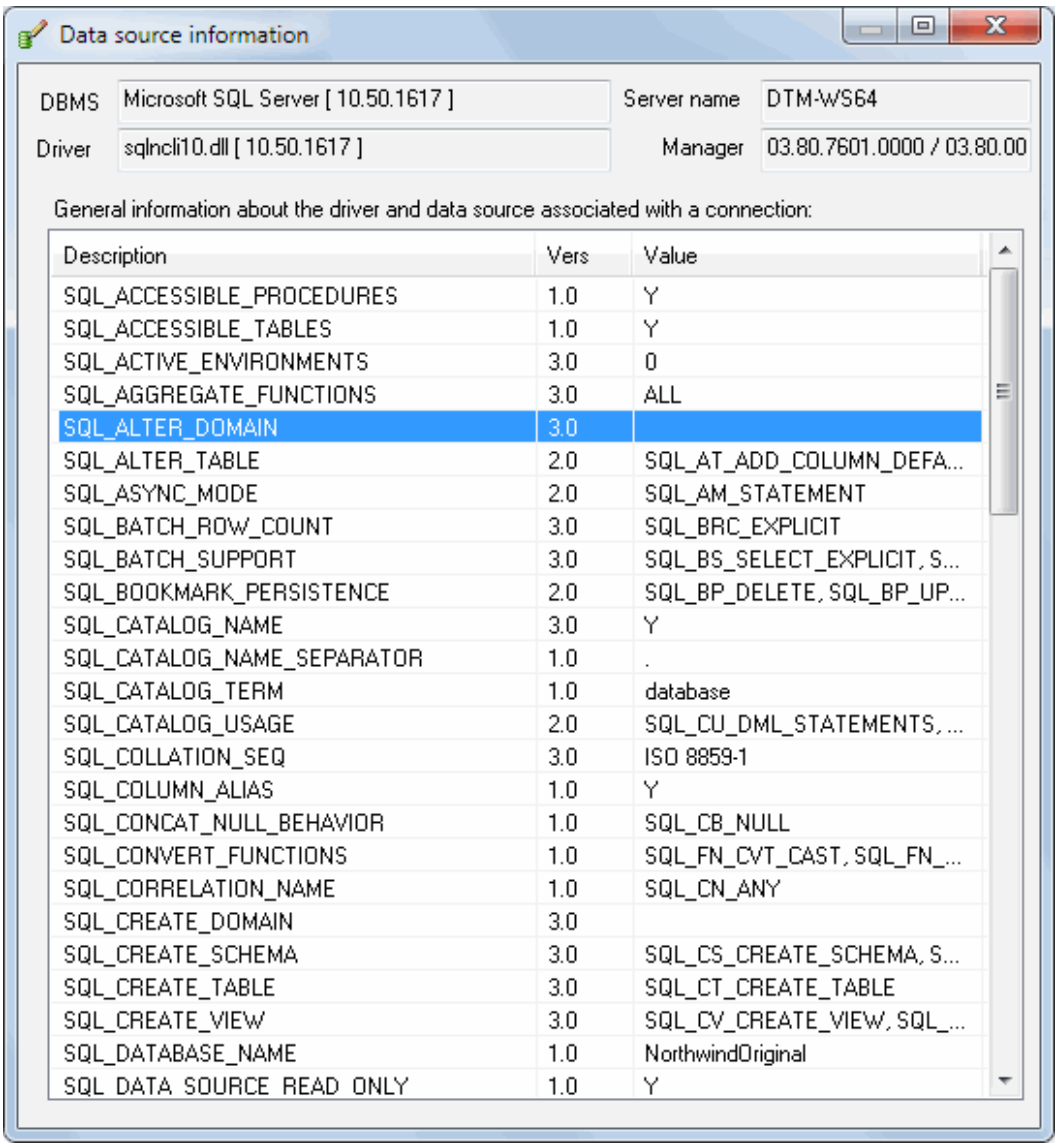
"Save" and "Load" buttons allow you to save profiles to the disk file or load them. The "Export one" button helps to save single currently selected profile.

Important: all profiles are shared between all installed DTM soft products. That means once created profile can be used with any tool. At the other side if you remove the profile from the list you can't use it with DTM soft's products anymore.



Connection Information

The program provides detailed database, connection and driver information and properties. The "Information" button at the connect window allows you to view it.



Troubleshooting Guide

Problem description	Possible reason	Solutions
Required database type not present in the list at Direct Connection and Desktop Connection pages		Switch to "data source" connection mode and select data source from the list or configure new one with "Manage" button.
Required format is in the direct connection list, but not available (disabled).	ODBC driver for your database does not installed or not configured properly.	Install required driver. If it is already present in the system, please contact our support staff.
Errors during direct connection.	Compatibility problems.	Try to create data source for your database connection.
Login error for correct user name and password.	Read-only desktop data file.	Try to change file mode to 'read and write'.
I can't see relationships, defaults, etc in my Access Database.	Access interface.	Try to switch on "Use Microsoft Jet" check box at the "Desktop File" page of the Connect Window.

How the tool compare two database tables?

The program successively scans the contents of both tables basing on the order of ascending of primary key values*. It uses primary key retrieved from the table definition or manually assigned unique key.

* - the program uses key columns in the same order as them located in the original table. The mapping feature has no influence to key column order.

- If the program cannot find two records with the same key value, it places the records to different lines and highlights in **yellow**. The row with less key value will be located upper than another row. This kind of row will be marked by yellow icon near the row number.
- If values of the keys coincide, the program places them to the same lines and highlights equal fields in **green** and not equal fields in **red**. The row will be marked by the green icon for all identical fields or by red if different fields found.
- When you use mapping, the program leaves background for columns that don't take part in comparison **white**. Please note that you can hide mentioned columns using related option.

Example:

	ID	LastName	FirstName	Title	BirthDate	HireDate
7	7	King	Robert	Mr.	1960-05-29	1994-01-02
8	8	Callahan	Laura	Ms.	1959-01-09	1994-03-05
9						
10	10	Cochis	Milo	Dr.	1973-10-13	1987-02-28

	ID	LastName	FirstName	Title	Title	BirthDate
7	7	King	Robert		Mr.	1960-05-29
8	8	Callahan	Laura		Ms.	1958-01-09
9	9	Dodsworth	Anne	Sales Representative	Ms.	1966-01-27
10						

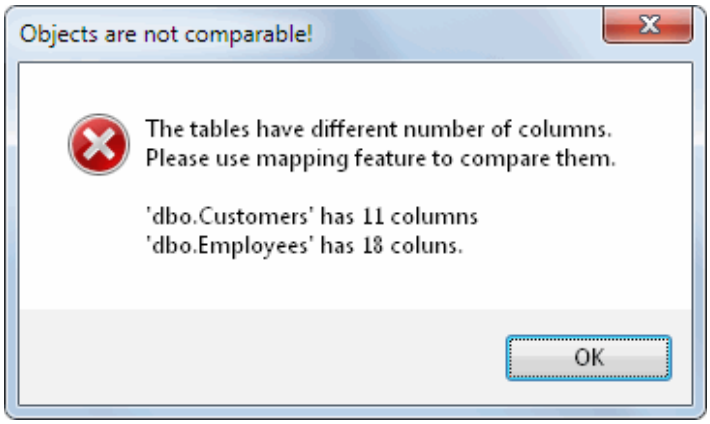
- Rows #7 have same key value (ID=7) and all fields are equal.
- Rows #8 have same key value (ID=8) but "BirthDate" field values are different.
- Row #9 has no row with same key value (ID=9) in the primary table.
- Row #10 has no row with same key value (ID=10) in the secondary table.
- Column "Title" does not exist in the primary table and not included in the mapping.

See also:

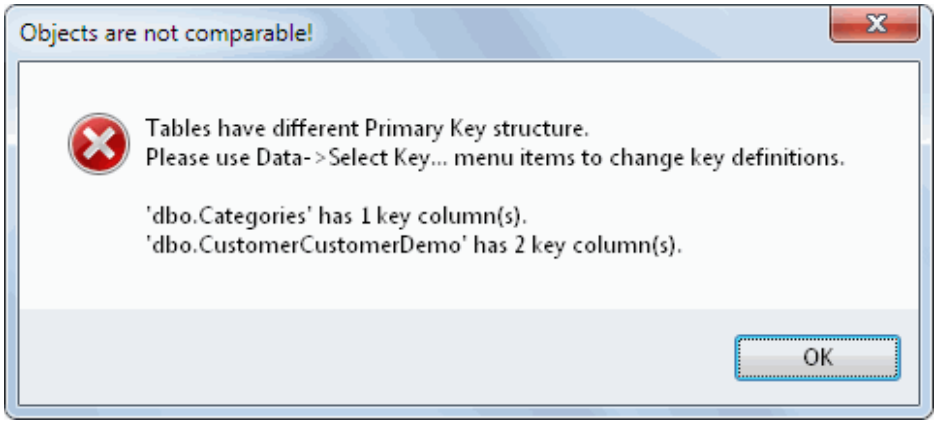
- How to compare tables with different structure or column order?
- How to compare or find the diff between database tables without a primary key?

Data Comparison Warnings and Errors

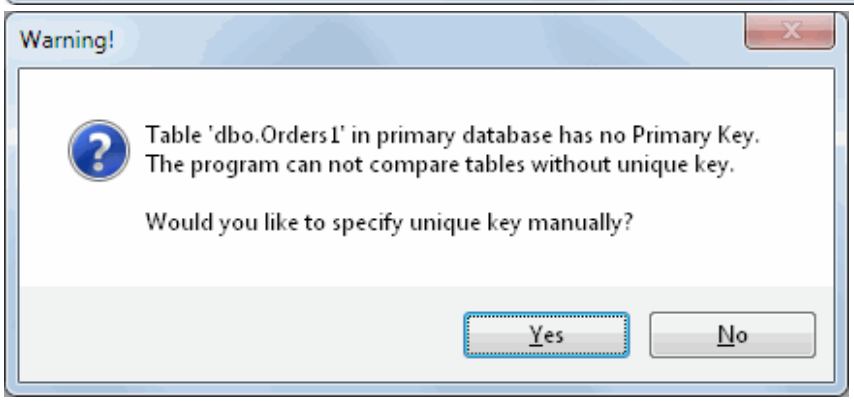
The program shows a few messages about database structure compatibility issues. There are:



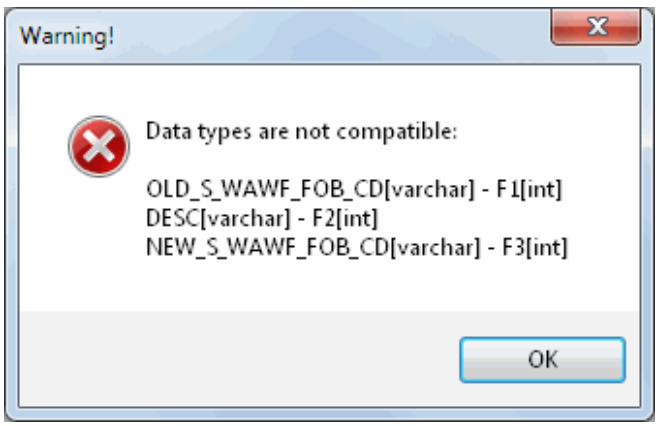
The program shows this message if tables to be compared have a different number of columns and right mapping not specified.



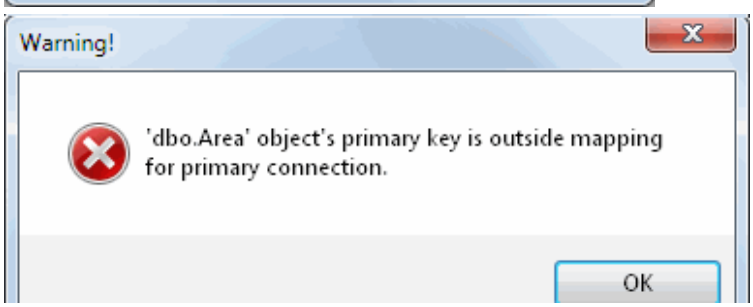
The program shows this message if tables to be compared have a different number of columns in the primary key and alternate key structure not specified*.



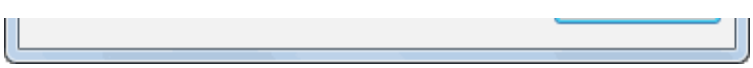
The program shows this message if some table has no organic primary key and no alternate key column was specified.



The program shows this message if tables have at least one incompatible column pair and correct mapping not specified. This message can be ignored by the user if necessary.



The program shows this message if the table has a mapping but at least one primary key column not included in. The comparison is impossible in this



case.

* - the program can use the unique key definition from another side if both objects (table and table, query and table, etc) have same columns.

See also: Collate and Sort Order warning.

How the tool synchronize two database tables?

During synchronization, the data comparer makes the contents of the secondary table equal to the contents of the primary one. There are three steps:

1. Data comparison.
2. Synchronization script generation.
3. Synchronization script execution.

It is **important** to understand that data synchronization based on primary/unique key values. Please be careful when selecting a custom key. The incorrect custom key definition is the most possible reason of unexpected synchronization issues.

In this process records **absent** in the primary table will be deleted from the secondary one, records that **differ** will be updated, while records **absent** in the secondary table will be inserted from the primary one.
The user can change this behavior using the following options:

1. Delete from secondary - disabling this option will block deleting a record from the secondary table even if there is no such record in the primary table.
2. Insert by primary - disabling this option will block adding records from the primary table even if there are no such records in the secondary table.
3. Update secondary - disabling this option will block secondary rows modifications (updates).

The user can prevent script execution using related option. In this case, the script will be produced without actual database modification.

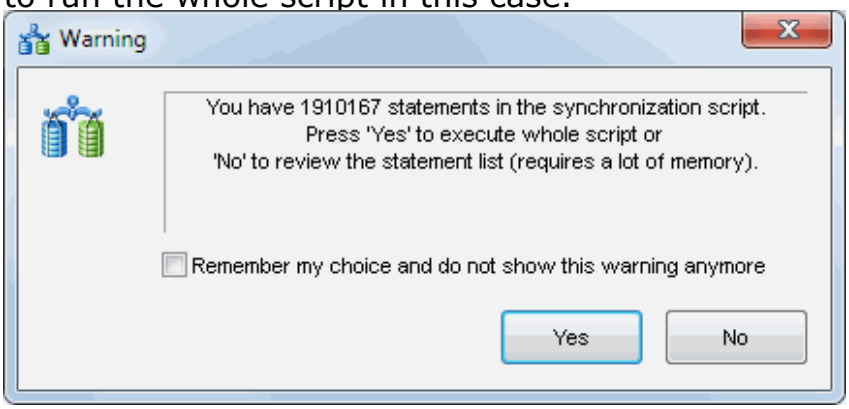
There are two places for output SQL script location definition: project level and product level. In the first case, different projects will use different output files. In the second common file will be used. If necessary we recommend using $DATE$ and $TIME$ macros in the script file name to generate unique output files.

The program stops at the first error happen during synchronization script execution. This option can be switched off. Moreover, the program can rollback changes already made if the error happen. Please be sure that specified transaction size is enough to cover all changes.

DTM Data Comparer can add optional COMMIT statements to the synchronization script. Also, the user can specify custom SQL statement delimiter like 'go' or ';'.

The "Date Conversion Function" feature is useful when you synchronize date and time values with the different format: different databases, locations, culture, etc.

The program shows following message for large synchronization scripts. It is recommended to run the whole script in this case.



Note for Microsoft SQL Server users: there two modes for IDENTITY columns. By default, the database comparison tool ignores identity column i.e. generates no code to synchronize. In the second case, the program will synchronize these values as well.

synchronize. In the second case, the program will synchronize these values as well.

See also: data synchronization settings.

Table to Table comparison mode

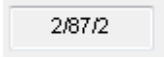
In this mode program's window has two zones: primary and secondary. In each zone, the user can specify the table and WHERE* clause, if necessary.
Also, each zone has the data grid that shows table content or comparison results.

The information line is located at the bottom of the window. It allows the user to view:

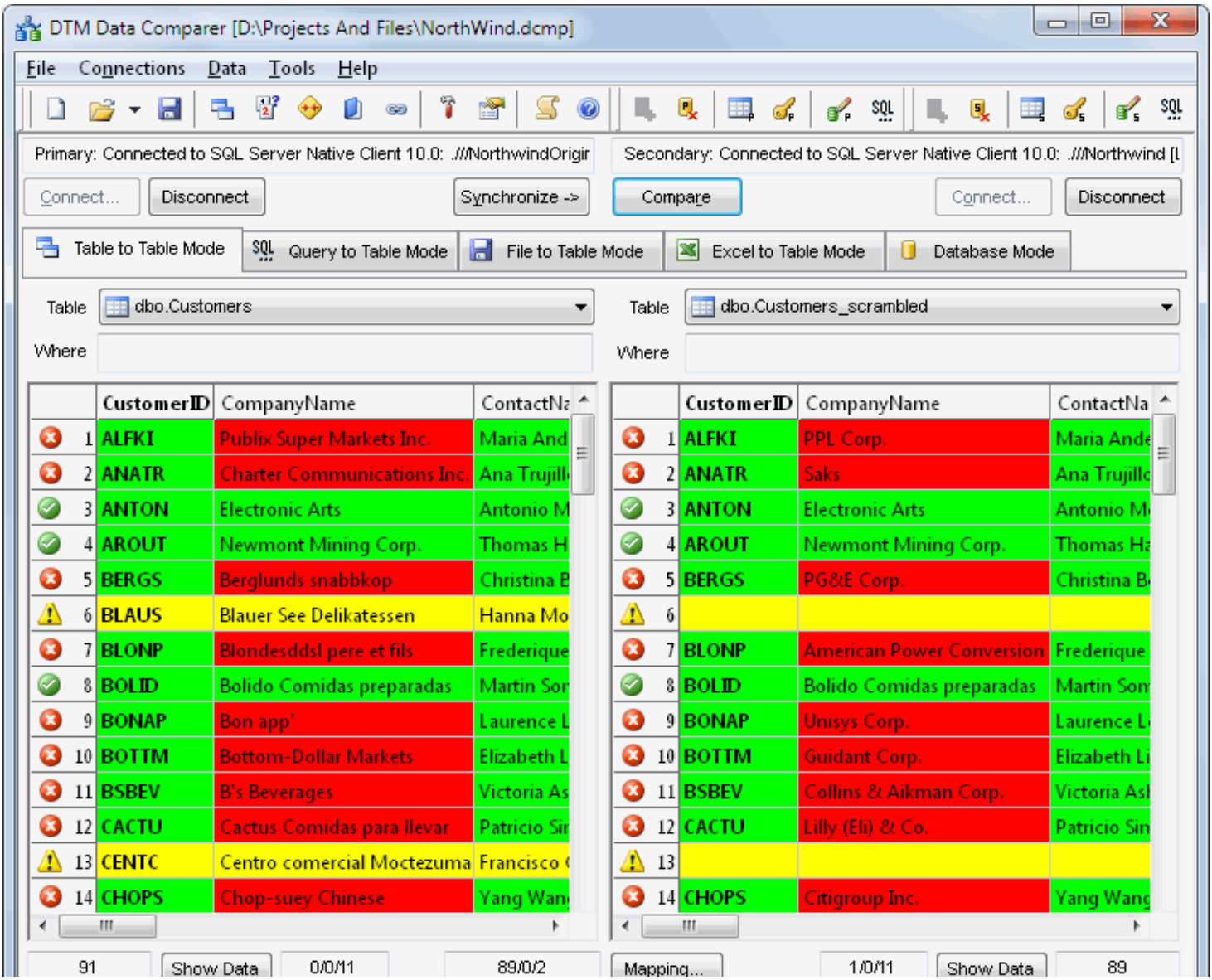
- A number of rows in the table, when data grid is populated by data rows.
- Primary key size (number of columns in the key).
- A number of mapped columns.
- A number of columns in the table.

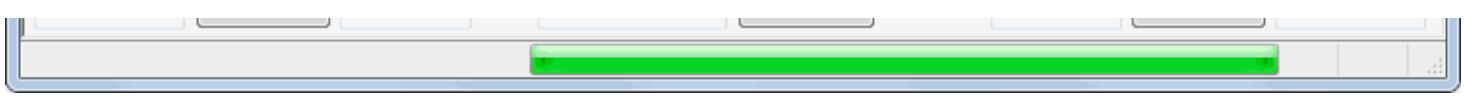
Last three values united to one information panel like 5/40/50.

*) "Where" option allows the user to limit rows to be compared or synchronized.
The clause should be entered without "where" keyword, example: ID <1000
The $DATE$ and $TIME$ macros can be user as a part of the clause, for example:
OrderDate = '$DATE$'

The comparison indicator between data grids shows number of equal, different and orphaned rows: 

"Show data" option is a fast way to review table content. The small box near "show data" button contains a number of rows in the table with specified WHERE clause consideration.





If a field is marked as **bold**, it is a part of the table primary key or assigned unique key.

See also:

- Table list Context Menu.
- Query to Table comparison mode.
- Query to Query comparison mode
- File to Table comparison mode.
- Excel to Table comparison mode.
- Database comparison mode.

Query to Table comparison mode

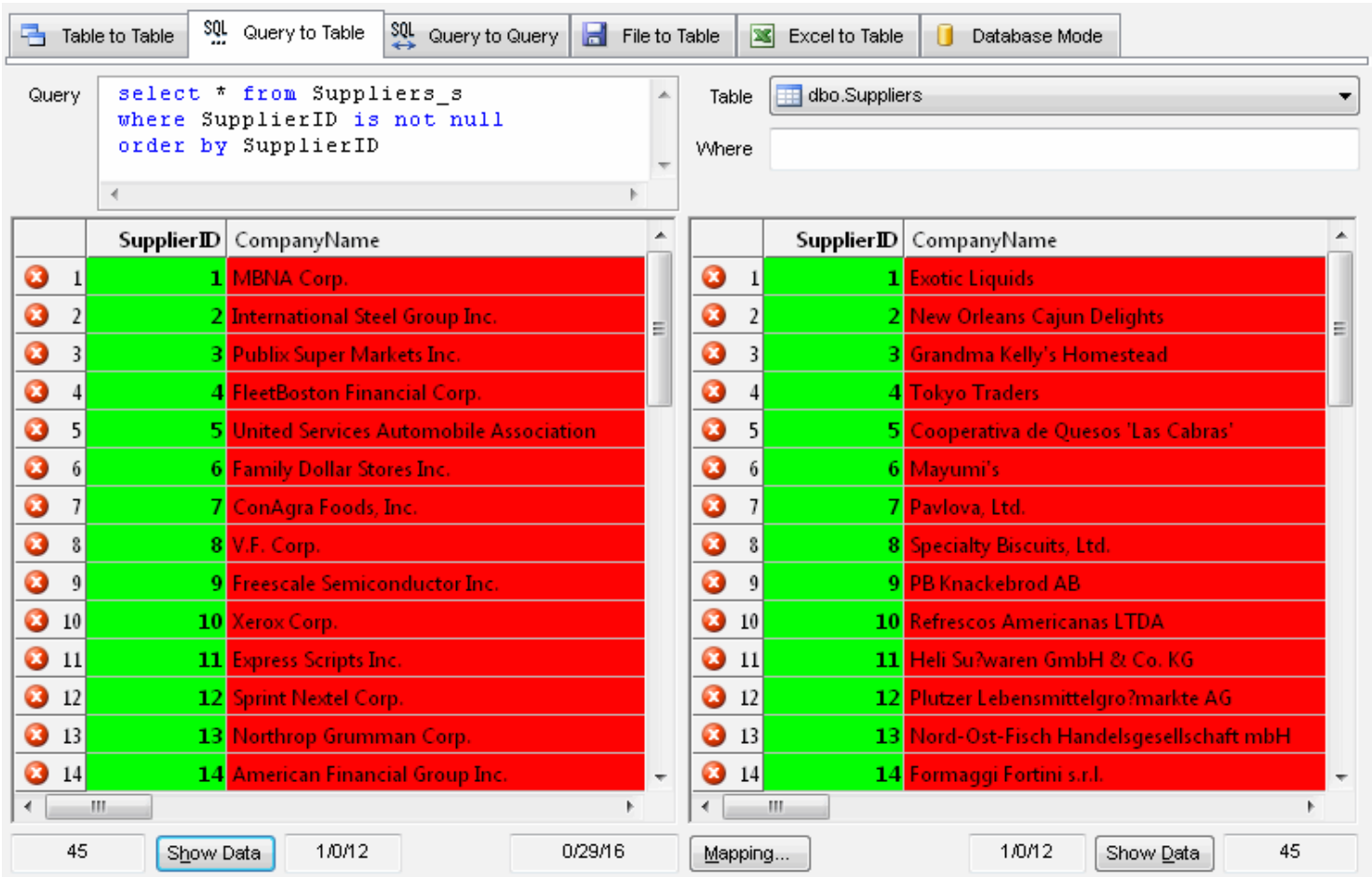
This mode allows users to compare results or the query execution or procedure call with the database table or view content.

In the synchronization process, the table (at right side) will be modified to query result state.

DTM Data Comparer saves the query associated with the right side table to project file. When the user selects the table with stored query the program restores it.

Important notes

- Unique key for query must be entered manually by the user. Otherwise, the program will try to take it from the secondary table.
- In most cases, the user has to enter ORDER BY clause manually for compatible sort order. We recommend using the unique key as order columns.



See also:

- Table to Table comparison mode.
- Query to Query comparison mode
- File to Table comparison mode.
- Excel to Table comparison mode.
- Database comparison mode.

Query to Query comparison mode

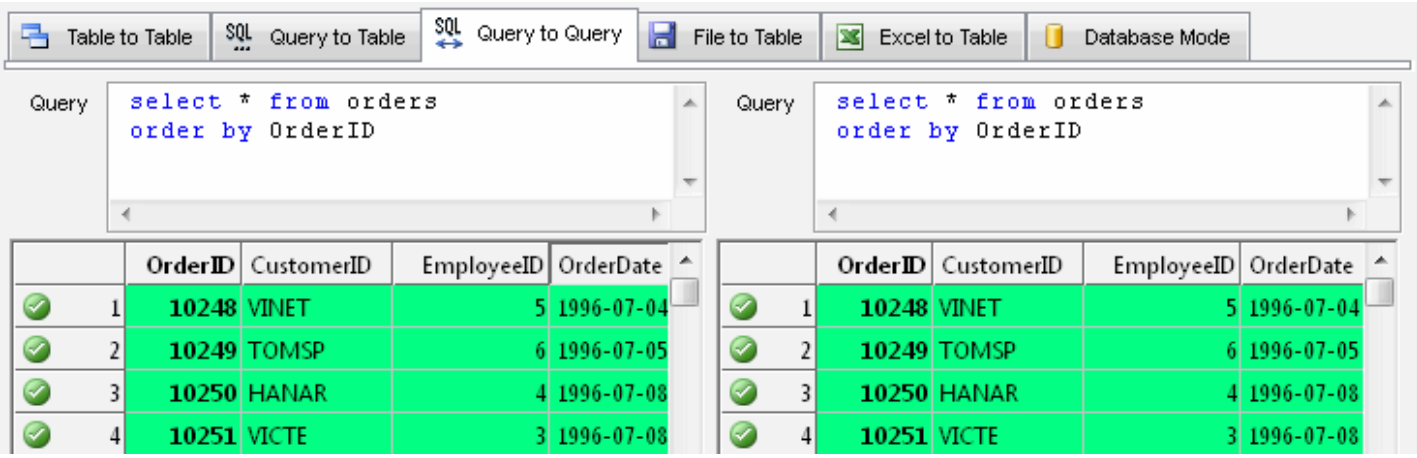
This mode allows users to compare results or the query execution or procedure call with results of another SQL statement execution.

This mode does not support synchronization, the comparison process is only available.

DTM Data Comparer saves both queries to project file.

Important notes

- Unique key for query must be entered manually by the user. Otherwise, the program will try to take it from the secondary table.
- In most cases, the user has to enter ORDER BY clause manually for compatible sort order. We recommend using the unique key as order columns.



	OrderID	CustomerID	EmployeeID	OrderDate
1	10248	VINET	5	1996-07-04
2	10249	TOMSP	6	1996-07-05
3	10250	HANAR	4	1996-07-08
4	10251	VICTE	3	1996-07-08

	OrderID	CustomerID	EmployeeID	OrderDate
1	10248	VINET	5	1996-07-04
2	10249	TOMSP	6	1996-07-05
3	10250	HANAR	4	1996-07-08
4	10251	VICTE	3	1996-07-08

See also:

- Table to Table comparison mode.
- Query to Table comparison mode.
- File to Table comparison mode.
- Excel to Table comparison mode.
- Database comparison mode.

File to Table comparison mode

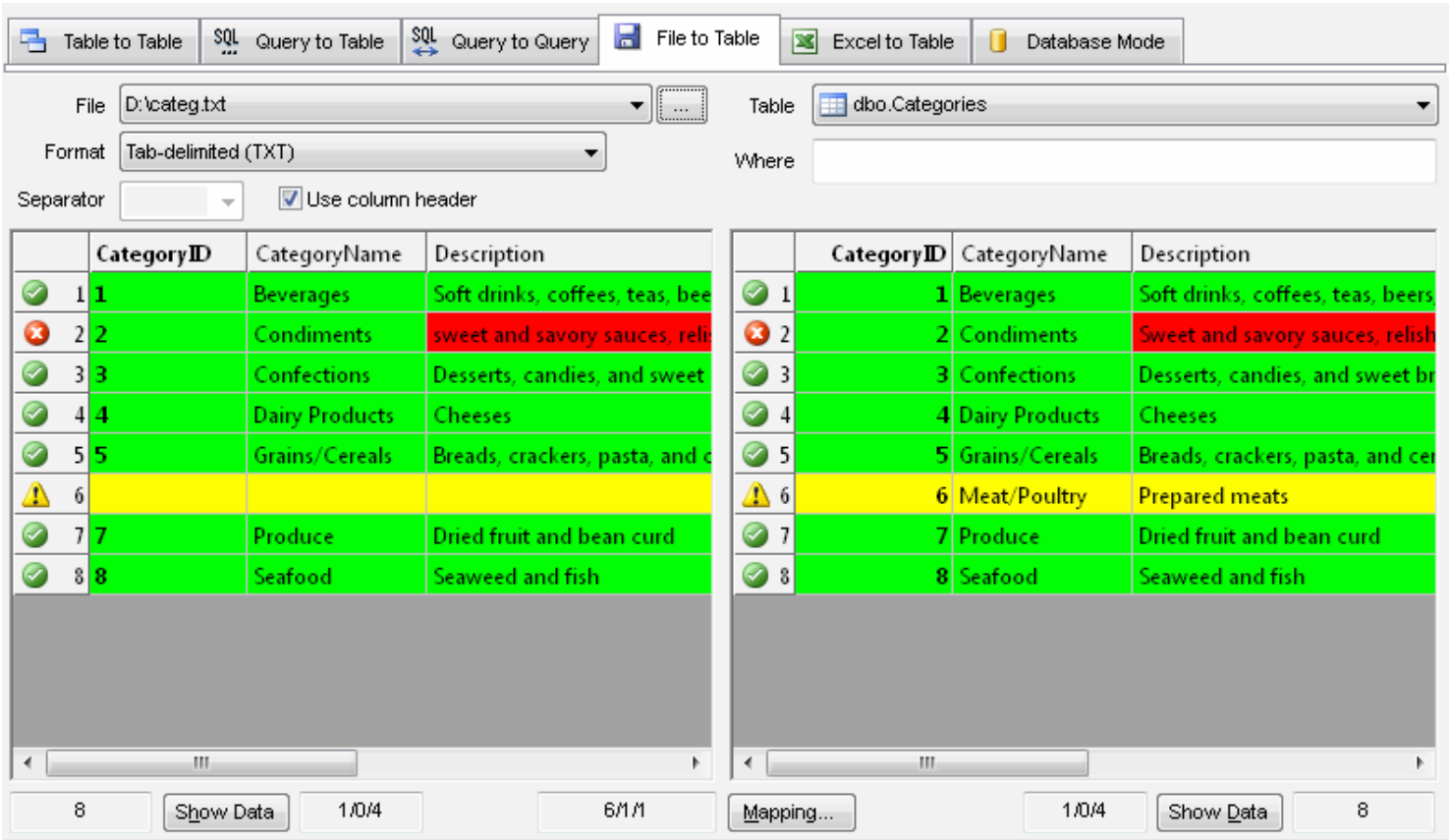
This mode allows users to compare text file (tab-delimited, CSV file or custom delimited) with the database table or view content.
Currently, the program supports following file formats: tab-delimited, CSV, custom-delimited and fixed width files. The file can contain or not contain a row with column names. In the second case, the program will name columns as F1, F2, ... Fn.

DTM Data Comparer saves the file name associated with the right side table to project file. When the user selects the table with stored file name the program restores it.

In the synchronization process, the right side table will be modified to the file content state.

Important notes:

- Unique key for the file must be entered manually by the user in any case.
- The program requires "Write" and "Create file" access rights for the folder with the text file to manage SCHEMA.INI file. You may ignore this requirement in case create own SCHEMA.INI file manually together with the related option.



See also:

- How to compare fixed width file using DTM Data Comparer?
- Table to Table comparison mode
- Query to Table comparison mode
- Query to Query comparison mode
- Excel to Table comparison mode.
- Database comparison mode.

Compare fixed width files with database table

This page describes how to compare fixed width text files with database tables using DTM Data Comparer.

- Create custom SCHEMA.INI file in the folder with your text files. Look at an example below.
- Switch **off** automatic SCHEMA.INI creation at the Settings->Comparison page
- Select file to be compared. The program will ignore "format" and "Use header" options if you provide custom SCHEMA.INI file.
- Run the comparison process

Sample schema.ini file section

```
[fixed.txt]
MaxScanRows=0
CharacterSet=ANSI
DecimalSymbol=.
Format=FixedLength
Col1=Year  Short  Width  4
Col2=Month  Short  Width  3
Col3=Day  Short  Width  3
```

The sample file "fixed.txt" has 3 columns (Year, Month and Day), the data type is "Short" for all. Column widths are 4, 3 and 3.

Excel to Table comparison mode

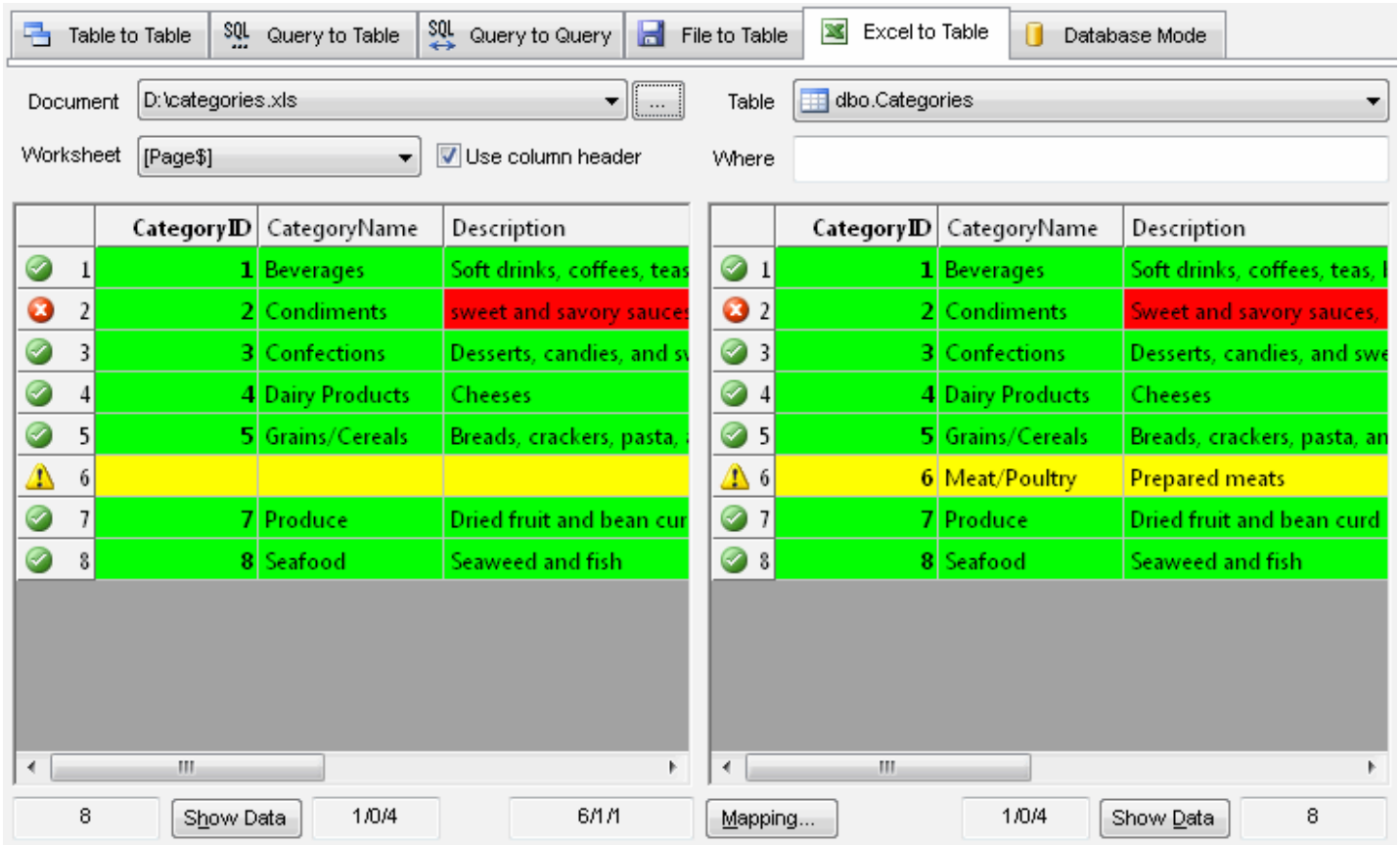
This mode allows users to compare Excel worksheet with the database table or view content.

In the synchronization process the table (at right side) will be modified to the Excel spreadsheet content.

DTM Data Comparer saves Excel file name associated with the right side table to the project file. When the user selects the table with stored spreadsheet name the program restores it.

Important notes

- Unique key for Excel worksheet must be entered manually by the user in any case.
- Installed "Microsoft.ACE.OLEDB.12.0" provider is required to work with Excel 2007 or newer. Typically Microsoft Office installs it, otherwise please download and install "Microsoft Access Database Engine Redistributable" for free from www.microsoft.com. Be sure that you have the same version as your copy of DTM Data Comparer. If you have 32-bit comparer, you have to install 32-bit provider as well.



See also:

- Table to Table comparison mode.
- Query to Table comparison mode
- Query to Query comparison mode
- File to Table comparison mode.
- Database comparison mode.

Database Mode User Interface

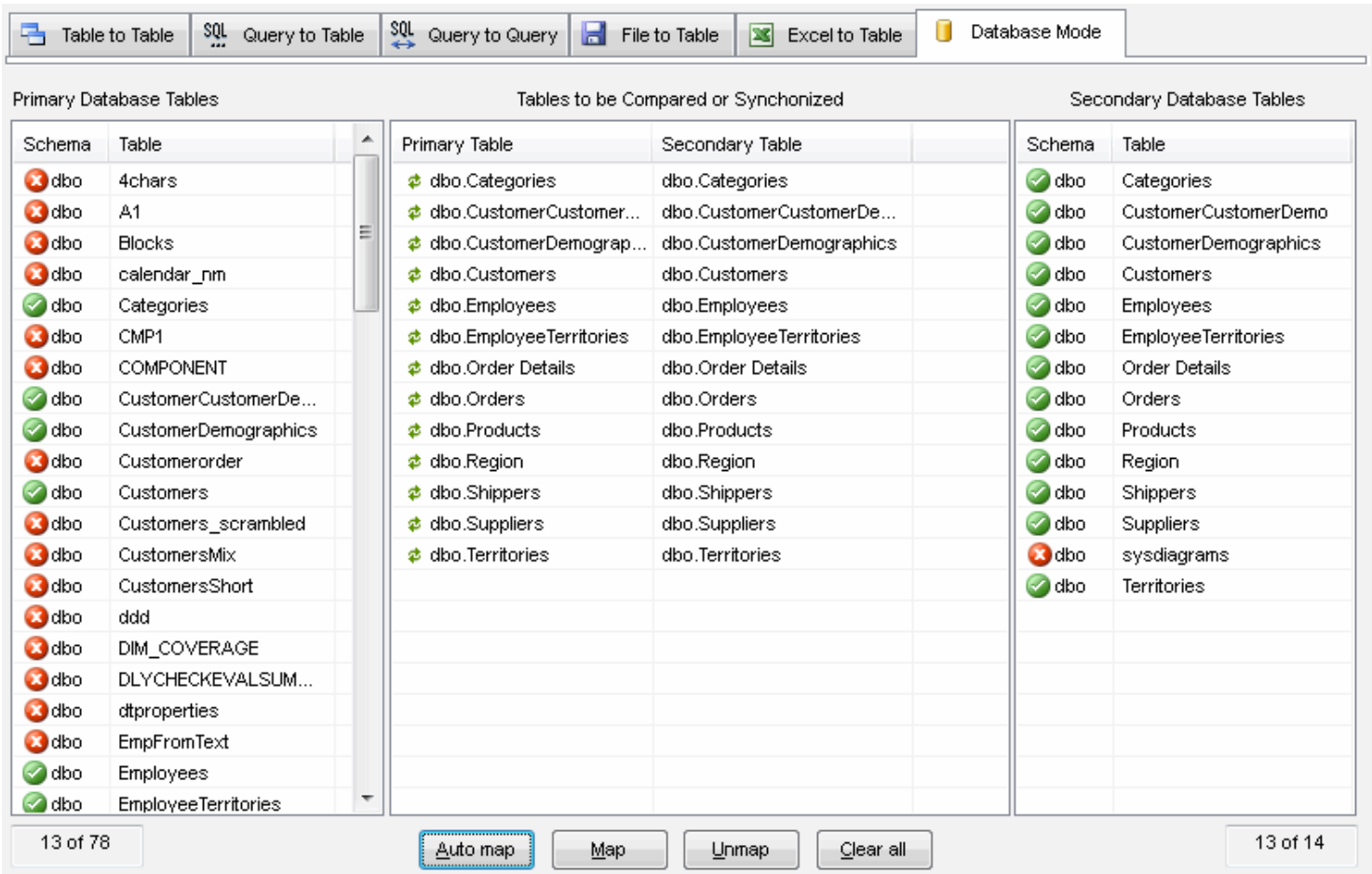
This mode allows the user to select a few database tables to be compared at one project execution.
The database mode user interface contains three panels with table lists and a few buttons. The list at the left side contains primary connection's tables. The list in the middle describes table associations. The right list contains secondary connection's tables. The program will compare associated tables only. It will iterate the middle list and compare or synchronize tables. The indicators under left and right list show number of associated tables and all tables in the connected database schema.

There are four buttons to operate with table associations. They are:

1. "Auto map" - it links tables from the left and right list by exact name matching.
2. "Map" associates two selected tables from left and right lists.
3. "Unmap" removes selected association from the middle list.
4. "Clear All" removes all present associations.

The program uses four icons to show each associated table pair status. The "refresh" icon ( ) means comparison not executed yet.
The green icon ( ) corresponds to equal tables, red ( ) to different and yellow ( ) means orphaned rows found.

Note: the associated tables are marked by the green icon ( ) when not associated marked by the red ( ) one.



See also:

- Table to Table comparison mode.
- Query to Table comparison mode.
- Query to Query comparison mode
- File to Table comparison mode.
- Excel to Table comparison mode.

Synchronous Grid Navigation Feature

When this option is switched on, the database comparison utility automatically changes data grid scroll position for the second data grid when the user changes it in the first.

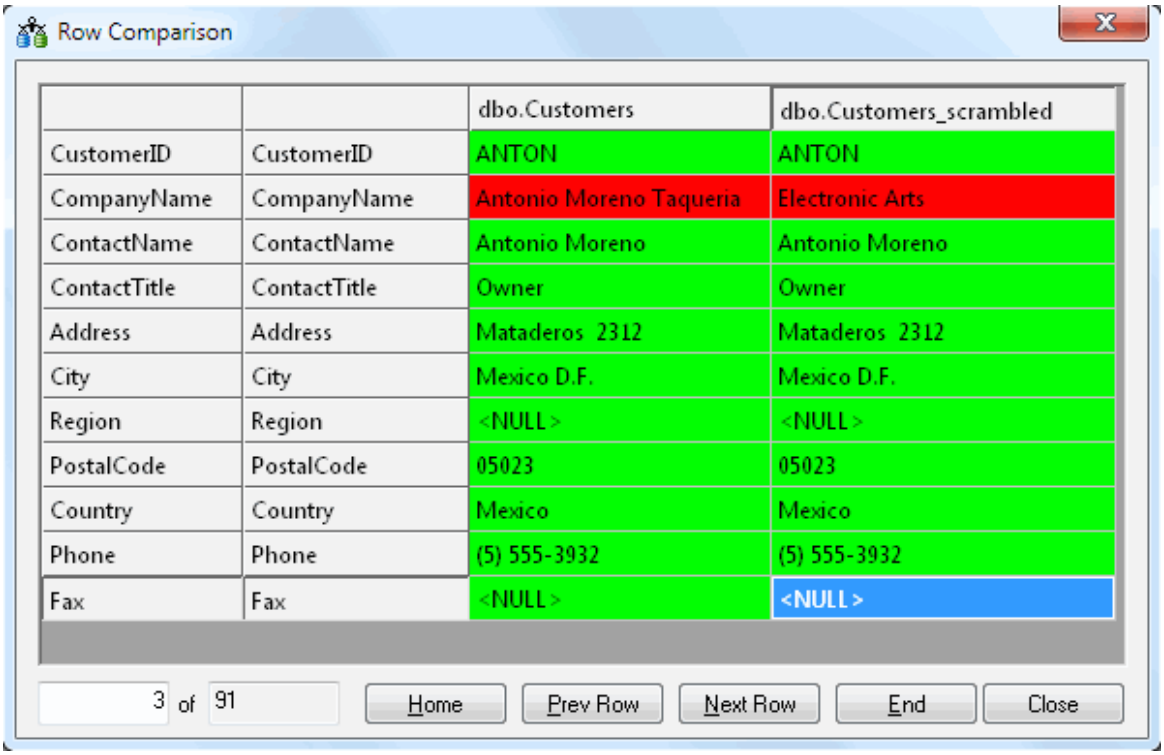
It allows viewing the same table's parts for both connections easy.

You can switch on or off this option for horizontal or vertical scrolling independently.

Face to Face Row Comparison

This window is a perfect way to compare corresponding rows in the primary and secondary database tables. It places them in two columns by database structure or mapping options.

Use navigation buttons or direct row number entering to find required data row.



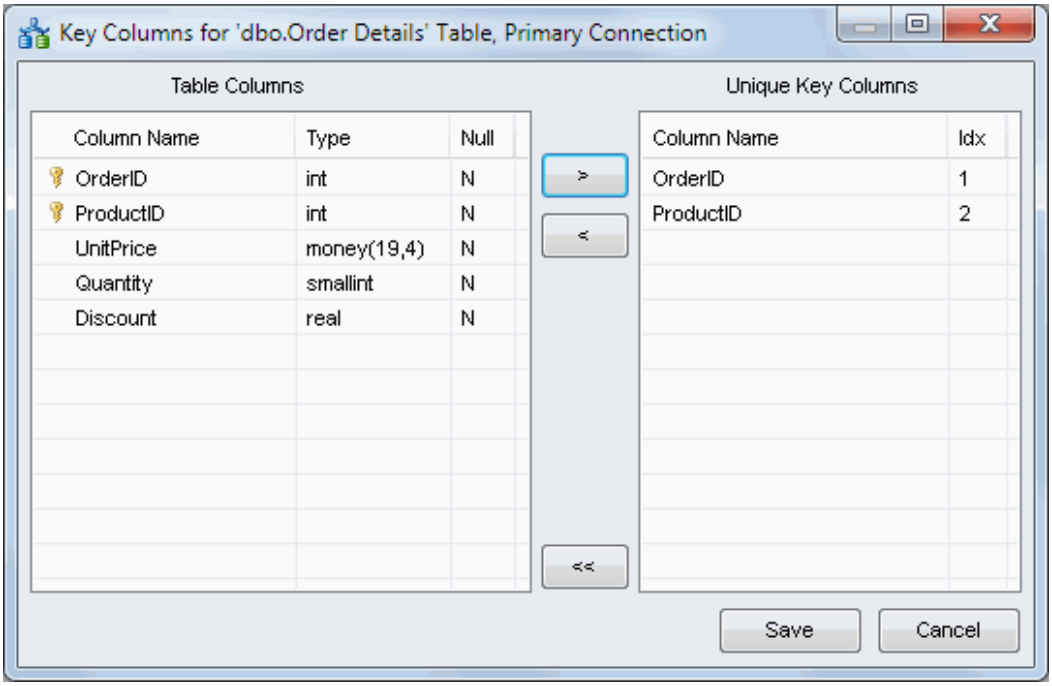
Note: this window never shows not mapped columns.

Unique Key Selection

Q: My table has no primary key but the unique index is present. Can I use this table in the comparison process?
A: Yes, use unique key selection feature is described at this page.

This window allows you to select the column(s) for the records search. You can use it if the table has no Primary Key or if you want to search and compare records by another column (s). If the primary key is absent and the key is not specified, the comparison tool will not be able to perform the comparison or synchronization.

Remember that primary keys or unique keys of both tables have to contain the same number of fields.



Notes

- The program does not save any key definition changes into the database. It uses the unique key in the comparison project only.
- The data sync utility shows the related toolbar button pressed if you have custom key definition:
- The software shows the toolbar button pressed with red 'P' (primary) or 'S' (secondary) sign if the unique key has been assigned automatically*:
- Be attentive when you select set of fields that correspond to the unique key. A non-unique key can cause data contamination during synchronization.

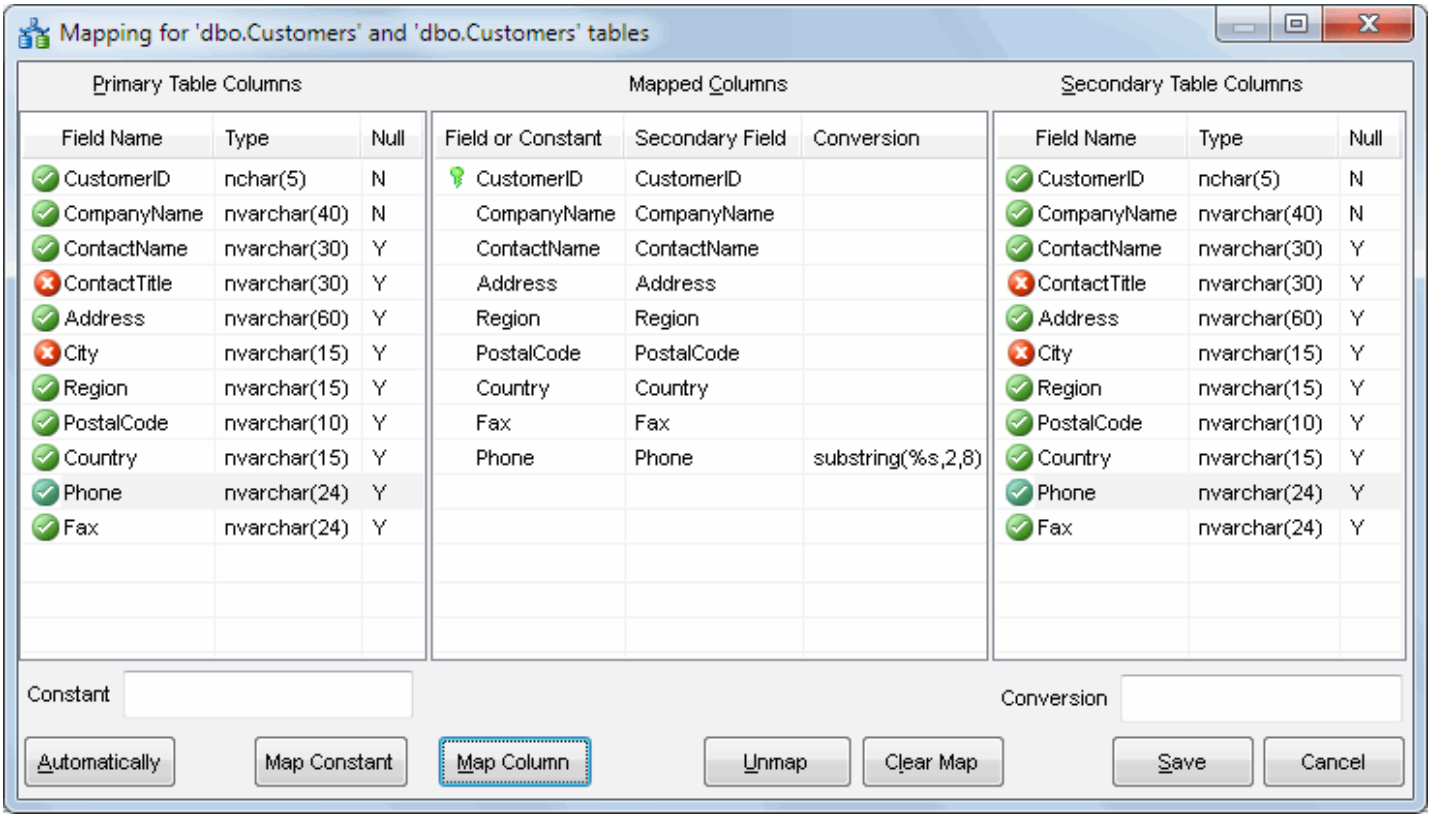
* - the program will try to take the primary key column from another side. It will use column or columns with same names.

Column mapping feature

The mapping feature allows comparing two tables that have different structure (number and name of fields).

You should select fields of the primary and secondary table in the dialog box and click "Map column". To delete column association you don't need, you should select them in the mapping list and click "Unmap". Using control or shift keyboard buttons you can select and remove a few associations at once. "Clear Map" removes all column maps.

Please be sure that you cave correct primary key correspondence. If the primary key column mapped to the primary key column that program shows green key ( ). Otherwise, i.e. key mapped to the non-key column it shows yellow key ( ).



The map **constant value** feature allows the user to fill secondary table by predefined value during synchronization or to compare the secondary column with a constant value. In this case, the program compares the secondary value with predefined constant instead of column's value from the primary table. Please enter a constant value, select secondary column name and press "map constant" button to create this type of map. It is important to quote entered value if necessary (strings, dates, etc). For NULL value you should use <NULL> string.

"**Automatically**" map feature creates the mapping for columns with the same name automatically.

Conversion Feature

The program allows the user to apply built-in database function of the target database for some columns. It is most useful for custom format conversion like date, time, etc.
To apply conversion function please:

- Select source and target fields
- Enter conversion expression into "Conversion" field. You should use '%s' instead of actual field name, for example CAST(%s AS decimal(10,5))
- Click "Map column" button.

Notes:

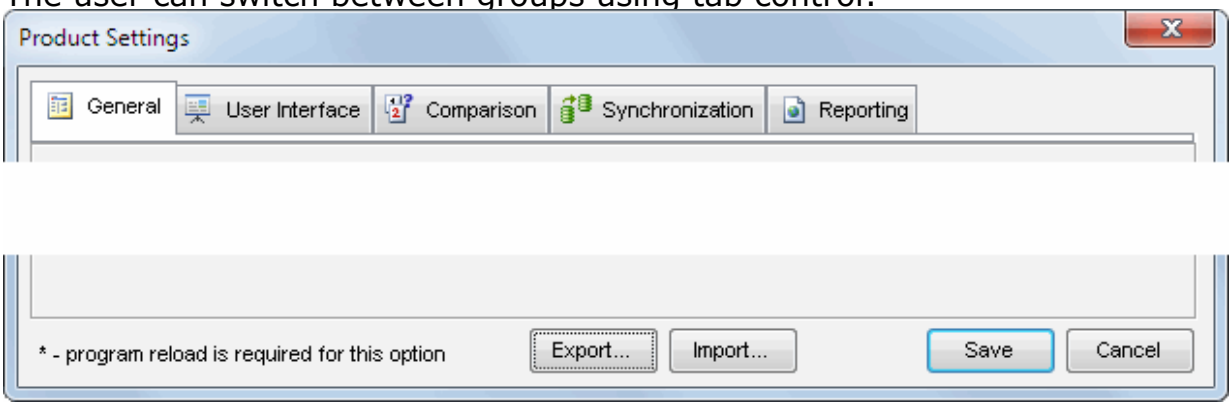
- The program shows mapping button at the toolbar pressed if mapping specified for current pair of tables: 
- The mapped columns are marked by the green icon when not mapped by the red one.
- You may map a column more than once for the complex table to table relationships.

Product Settings

The program has some settings and options aided to make your work more comfortable. There are five settings group:

1. General
2. User interface
3. Comparison
4. Synchronization
5. Reporting

The user can switch between groups using tab control:



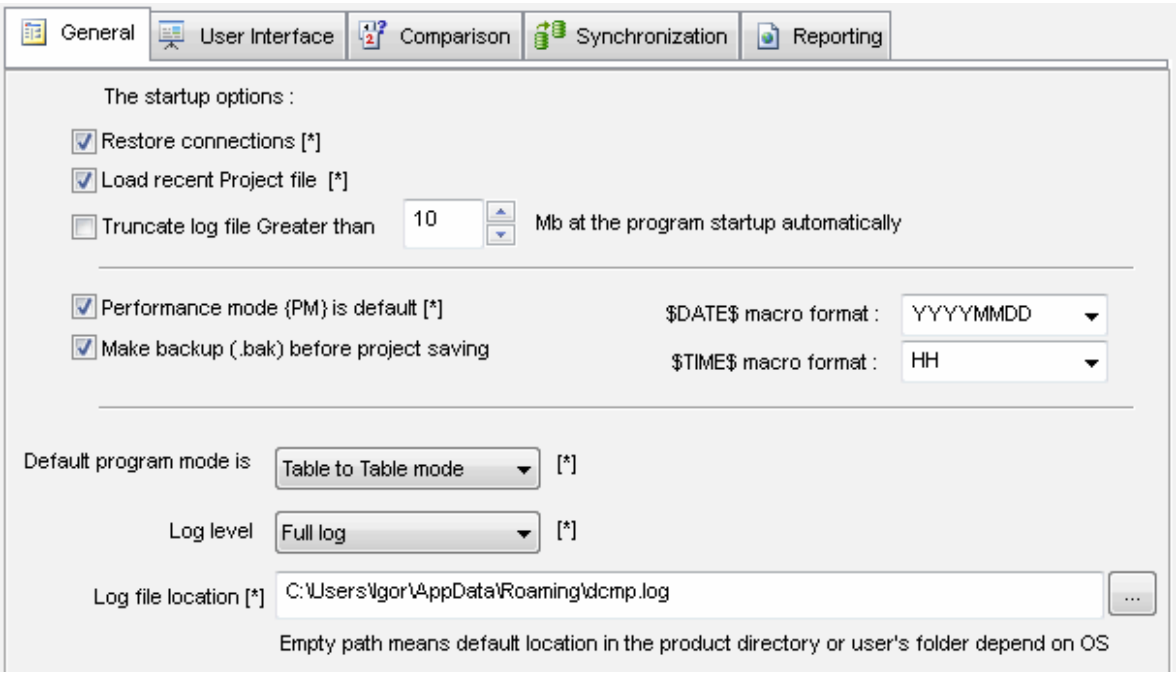
Notes

- The options marked by [*] require the program stop and reload to take effect.
- "Export" and "Import" buttons help the user to backup settings or even copy them to another PC.

See also: Project Properties.

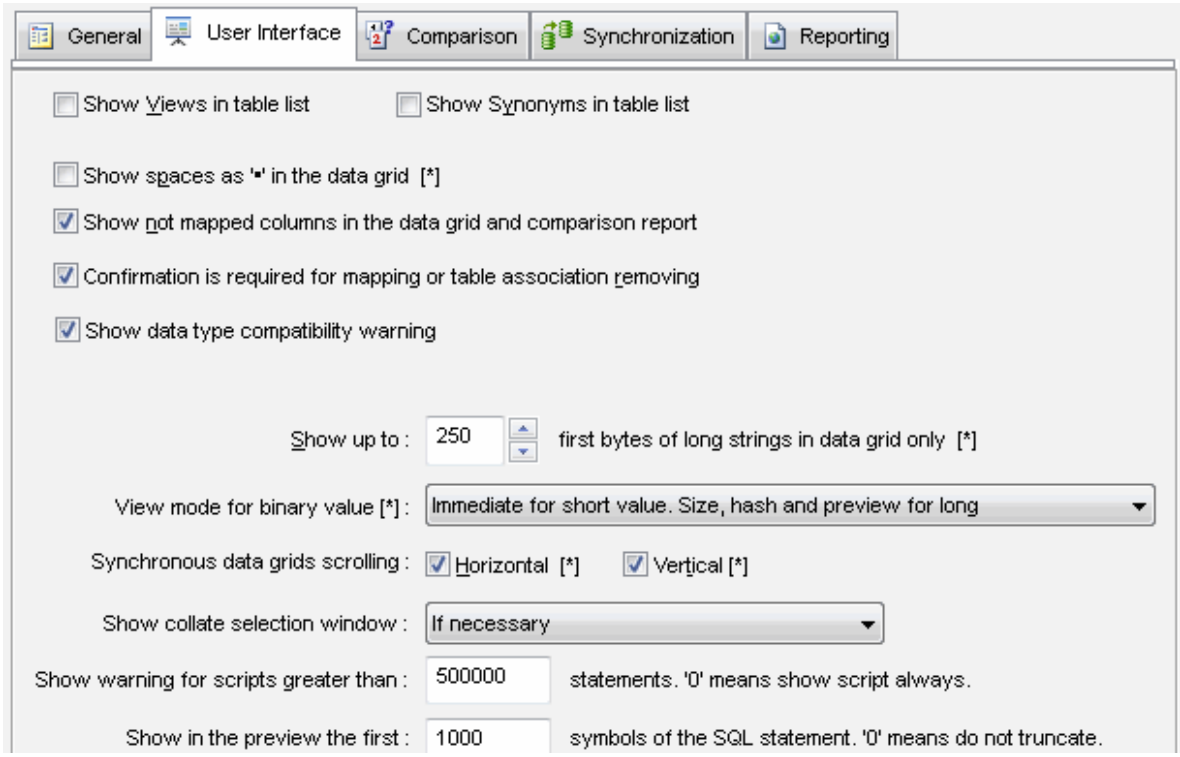
General Settings

Option	Description	Default
Restore connection	Disabling this option will block restoring recent connections at the DB comparison program startup.	Yes
Performance mode is default	Switching performance mode 'on' or 'off' by default.	No (Off)
Load recent project	The indication that the program must load the last opened project when it is started.	Yes
Macros format	Format for $DATE$ and $TIME$ macros.	Empty, system default
Make backup	Should or no the program copy existing project file to .bak before overwriting it.	Yes
Default program mode	Mode that will be used after the program startup. Please note that project's settings (if present) overwrite this option.	Table to Table
Log level	Default, full or disabled	Default
Log file truncate automatically	Should the program truncate log greater the specified size or no.	No
Log truncation size	Size of file (Mbytes) for automatically truncation	10 Mb
Log file location	Shows alternate log location or empty for default location (program directory). The user can enter or select another file.	Empty



User Interface Settings

Option	Description	Default
Show views in table list	Allows the user to select view to compare	No
Show synonyms in table list	Allows the user to select synonym to compare	No
Show spaces as 'dot sign'	This option makes string presentation more visible	No
Show not mapped columns	If this option is switched off the program will hide columns not included in the mapping in the data grid, report and face-to-face view	Yes
Show data type compatibility warning	Should or no the comparer show warning for incompatible data types comparison. For example "integer" and "date".	Yes
Mapping remove confirmation	The program will show warning before column mapping or table association removing	Yes
Show N bytes of long strings	The program will truncate strings longer this value in the data grid and comparison report. Actual string size to be compared is defined by "Field Size..." option.	250 bytes
Horizontal Sync Scrolling	Switches synchronous navigation	No
Vertical Sync Scrolling	Switches synchronous navigation	Yes
Show collate selection window	Selects mode of "collate window".	"If necessary" mode
Script size for warning	The program will show the warning for scripts larger than the specified number.	500 000 statements
SQL statement visualization size	The program will truncate view for statements at the script preview window.	1000 symbols

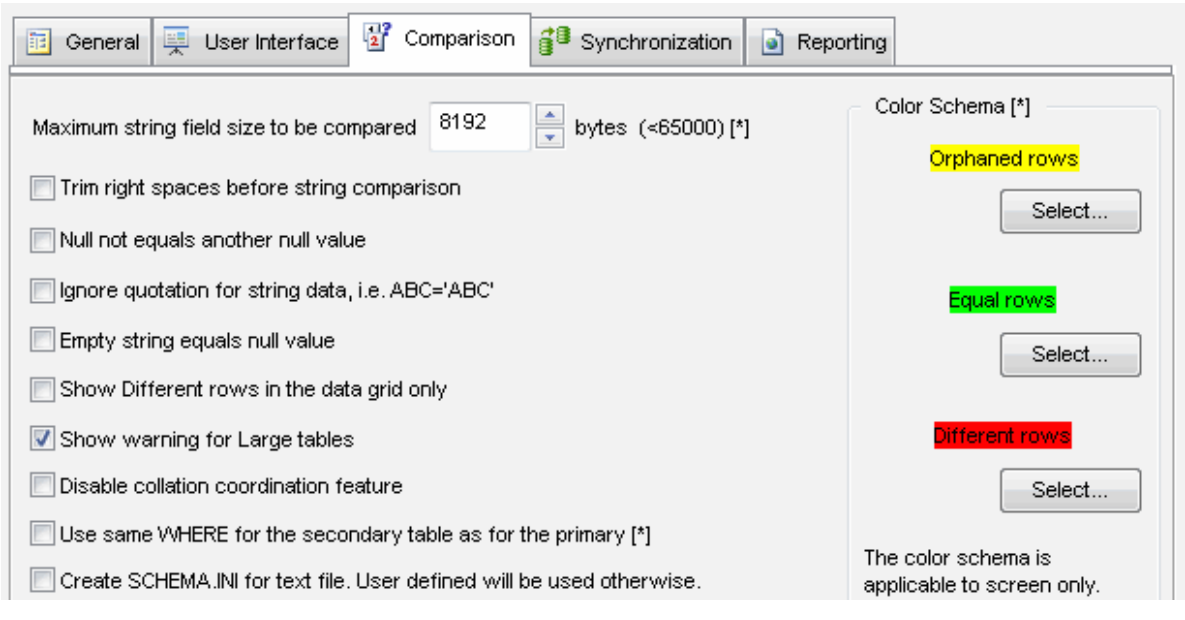


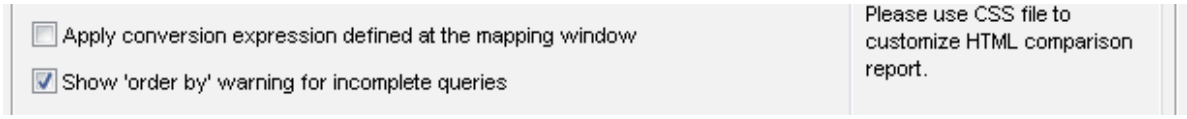
Comparison Settings

Option	Description	Default
Field size to be compared*	The program compares only first N specified bytes of long string and text objects	8192
Trim right spaces	The program considers values like "1 " and "1" as equal if this option is switched on	No
Ignore quotation	If this option is switched on the program considers 'abc' and abc strings as the same value.	No
Null values are not identical	If this option is turned on the program consider any NULL as unique value that not equals another NULL value	No
Empty string equals NULL	The program considers empty string equals NULL if this option is switched on	No
Show different rows only	It allows you to see only different records during compare or synchronization. This option can save a bit of memory for large tables compare.	No
Show warning for large table	The program recommends changing visualization mode if the option is switched on for large tables	On
Disable collation coordination	The program disables collation and sort mode coordination feature if this option is switched on	Off
Use same Where for secondary*	If the option is switched on the program applies WHERE clause from the left side to right side automatically	No
Create SCHEMA.INI	The user have to switch this option off for fixed width files only.	On
Apply conversion expression	The program will apply conversion expression from mapping if this option is switched on. Otherwise, conversion will be used for synchronization only.	Off
Show 'order by' warning	The data comparison software will show warning id query contains no 'order by' clause that required for correct comparison.	Yes
Color schema	This option allows the user to change data** grid background colors for equal, different and orphaned rows*	Red, Green and Yellow

* - option requires the program reload.

** - to change color for HTML report the user have to modify CSS in "head.html" file.

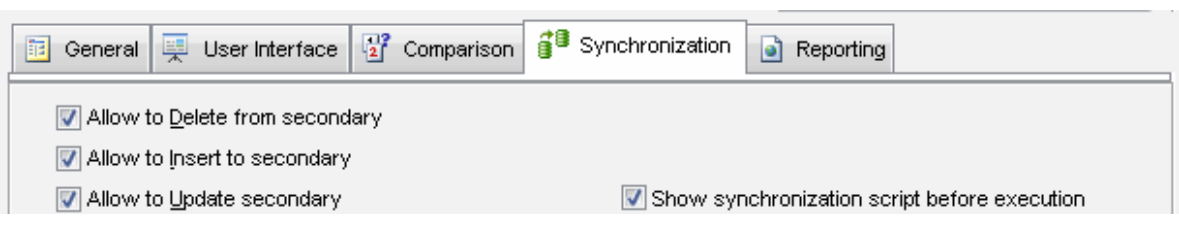


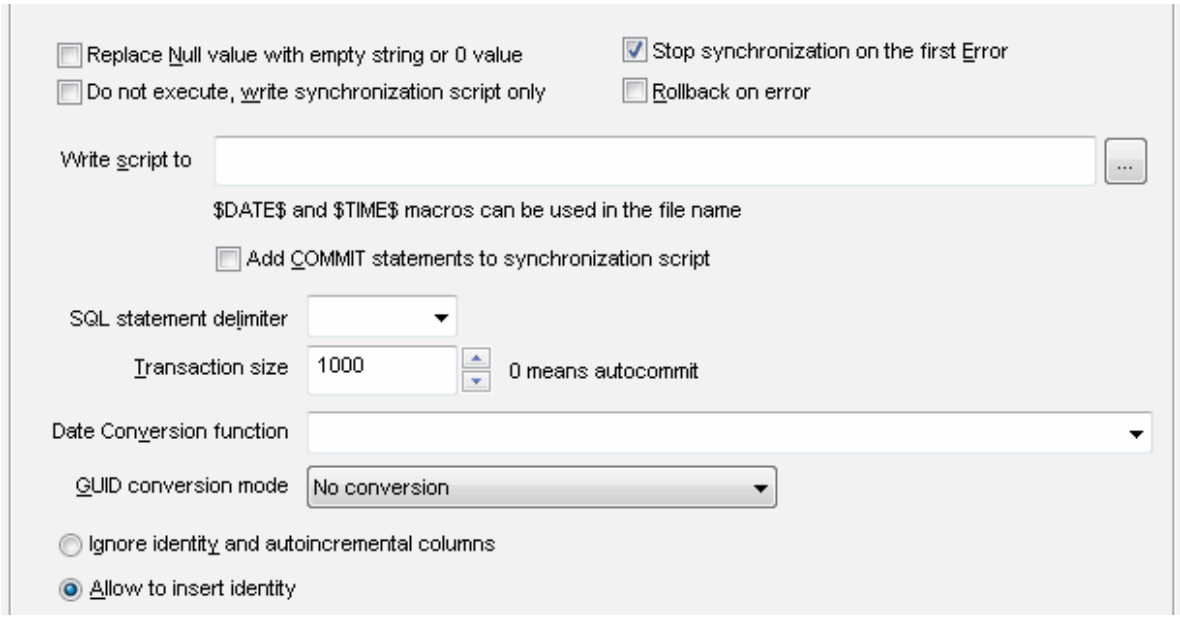


Synchronization Settings

Option	Description	Default
Delete from secondary	Disabling this option will block deleting a record from the secondary table even if there is no such record in the primary table. See also -d command line switch.	Yes
Insert by primary	Disabling this option will block adding records from the primary table even if there are no such records in the secondary table. See also -a command line switch.	Yes
Update secondary	Disabling this option will block updating existing records in the secondary table. See also -u command line switch.	Yes
Do not execute script	When this option is switched on, the program will create synchronization script without execution	No
Show synchronization scripts	The option helps to enable or disable SQL preview window.	Yes
Stop on error	Stops script execution when the first error occurs	Yes
Rollback on error	Rollback script execution if the error occurs. **Important**: stop on error option must be switched on. It is not compatible with "auto-commit" mode.	Yes
Replace empty strings by NULL	The program generates NULL value for empty string if this option is switched on	No
Add COMMIT statement	The program will add COMMIT statement to output script if this option is turned on and transaction size is specified.	No
Transaction size	0 for auto-commit mode, i.e. one statement per transaction	0
Default synchronization script location	Product level output file name* for synchronization script. $DATE$ and $TIME$** macros can be used as a part of the synchronization script file name.	No script
IDENTITY modes (Microsoft SQL Server only)	The program can skip identity columns or insert/modify them for the target (secondary) table.	Ignore identity
SQL statements delimiter	The program will add this string after each produced SQL statement. You can select it from the list or enter manually.	No delimiter
Date Conversion function	Date conversion function helps to compare databases with different date/time format.	No conversion
GUID Conversion mode	The conversion is required for some database pair.	No conversion

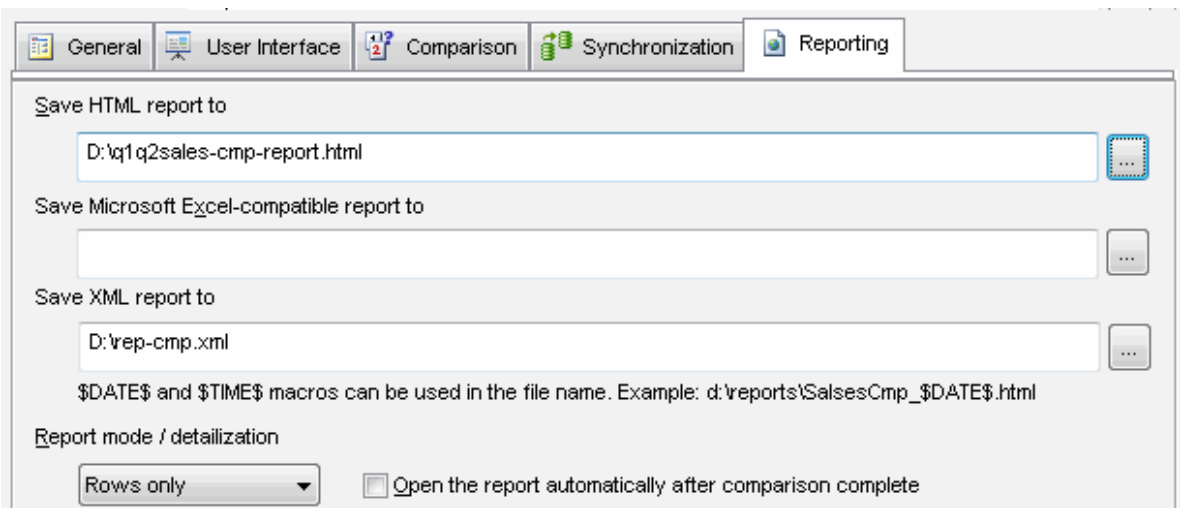
* - file name without a path will be created in the current user's personal folder.
** - in most cases, the new script will be created for each execution for $TIME$ macro in the file name.

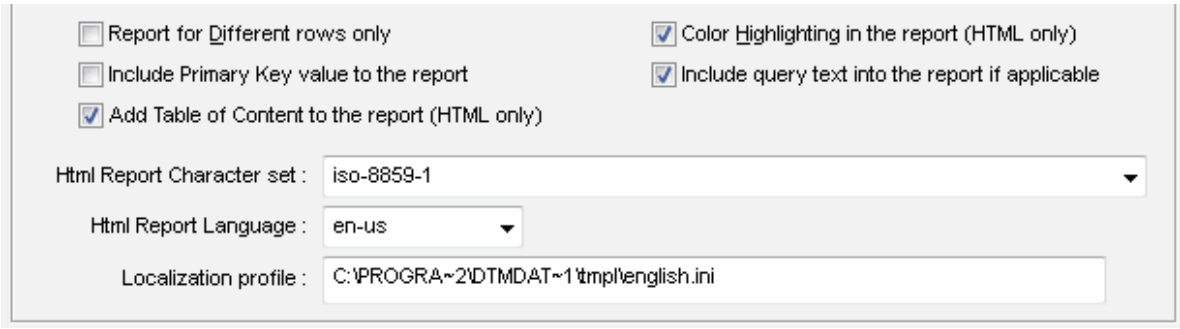




Option	Description	Default
HTML Report file	The product level report file* $TableLeft$, $TableRight$, $DATE$ and $TIME$** macros can be user in the file name.	Empty (no report)
Excel-compatible report file	The product level report file that can be opened by Microsoft Excel. $TableLeft$, $TableRight$, $DATE$ and $TIME$** macros can be user in the file name.	Empty (no report)
XML report file	The product level report file int XML format. $TableLeft$, $TableRight$, $DATE$ and $TIME$** macros can be user in the file name.	Empty (no report)
Report Mode***	"Rows and totals" shows comparison results and statistics "Rows only" shows results without statistics "Totals only" does not include rows into report and shows statistics only	Rows and Totals
Open report automatically	If the option is switched on generated report will be opened in the default web browser	Yes
Report for differences only	If this option is switched on, only different rows will be added to the report.	No
Color highlighting	The program will use the same color schema as data grid to show data values. Black and white report will be created otherwise.	Yes
Include Primary Key into the report	The program will add two columns with PK for primary and secondary tables if the option is switched on.	No
Add TOC to the report	The program will add the table of content to the report if the option is switched on.	Yes for database mode
Character set	Change it for non-Latin symbols in data.	iso-8859-1
Language	Change it for non-Latin symbols in data.	en-en
Report profile	path and file name for report localization profile	No value

* - file name without a path will be created in the current user's personal folder.
** - in most cases, the new report file will be created for each execution for $TIME$ macro in the file name.
*** - for Excel-compatible report the mode is always "Rows only". There are no header and statistics.





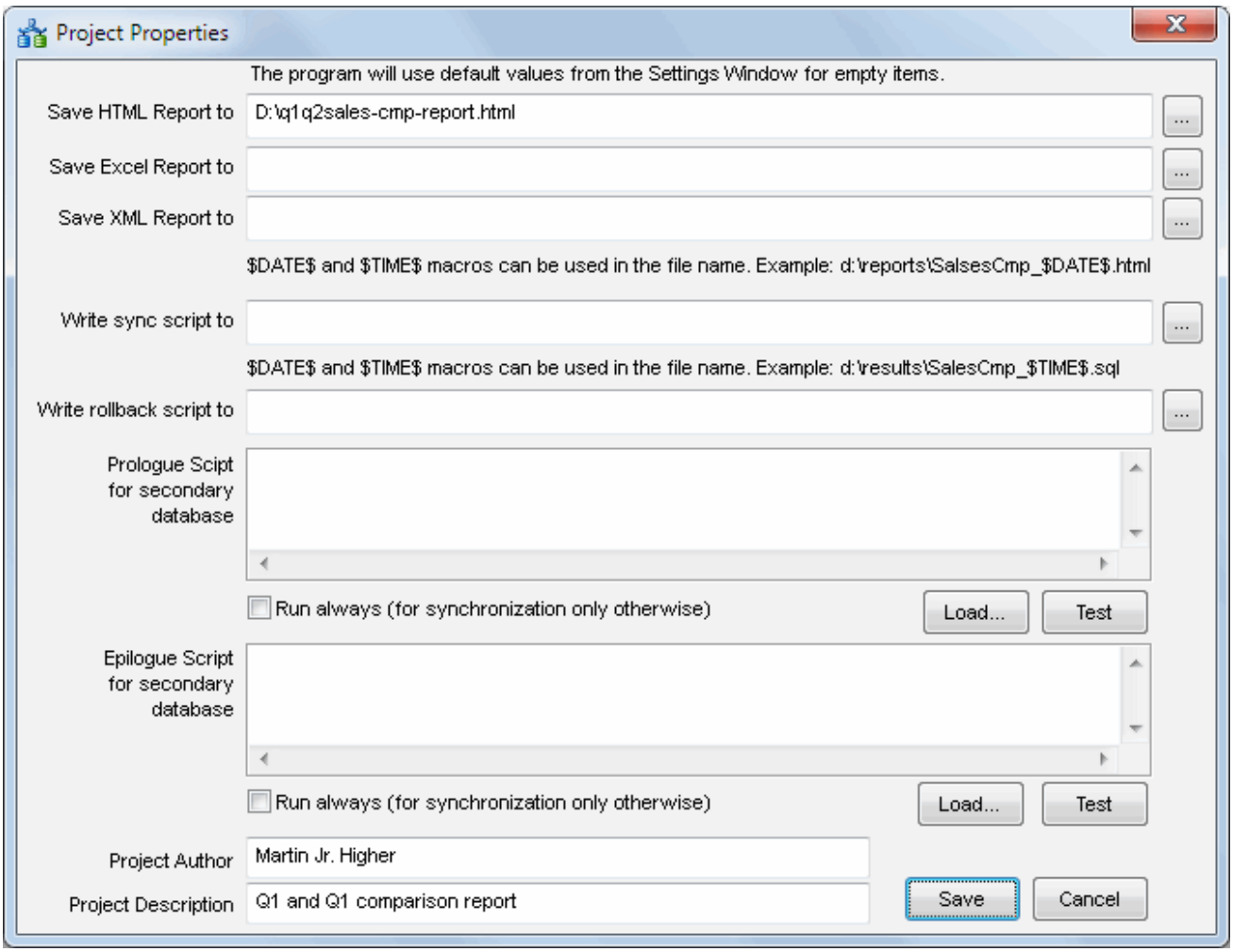
All options will be applied to new reports only and not for the already generated report that available by "Open report" button pressing.

Comparison Project Properties

This window helps the user to define custom comparison report file, Excel report file, and custom synchronization script file. If the values not specified the DB sync tool uses corresponding options from the Settings Window. That means project properties have higher priority than values specified at Settings window. It allows the user to have a few projects with the different report and/or script files.
Also, you can define optional project's author and description.

To create rollback SQL script the user should specify related file name. The rollback script allows users to remove synchronization results and back table to the original state.

Also, this windows helps the user to define SQL optional scripts known as "prologue" and "epilogue". The comparer will run the scripts before and after synchronization against the target (secondary) database. The "Run always" option allows executing script or both scripts for comparison as well.



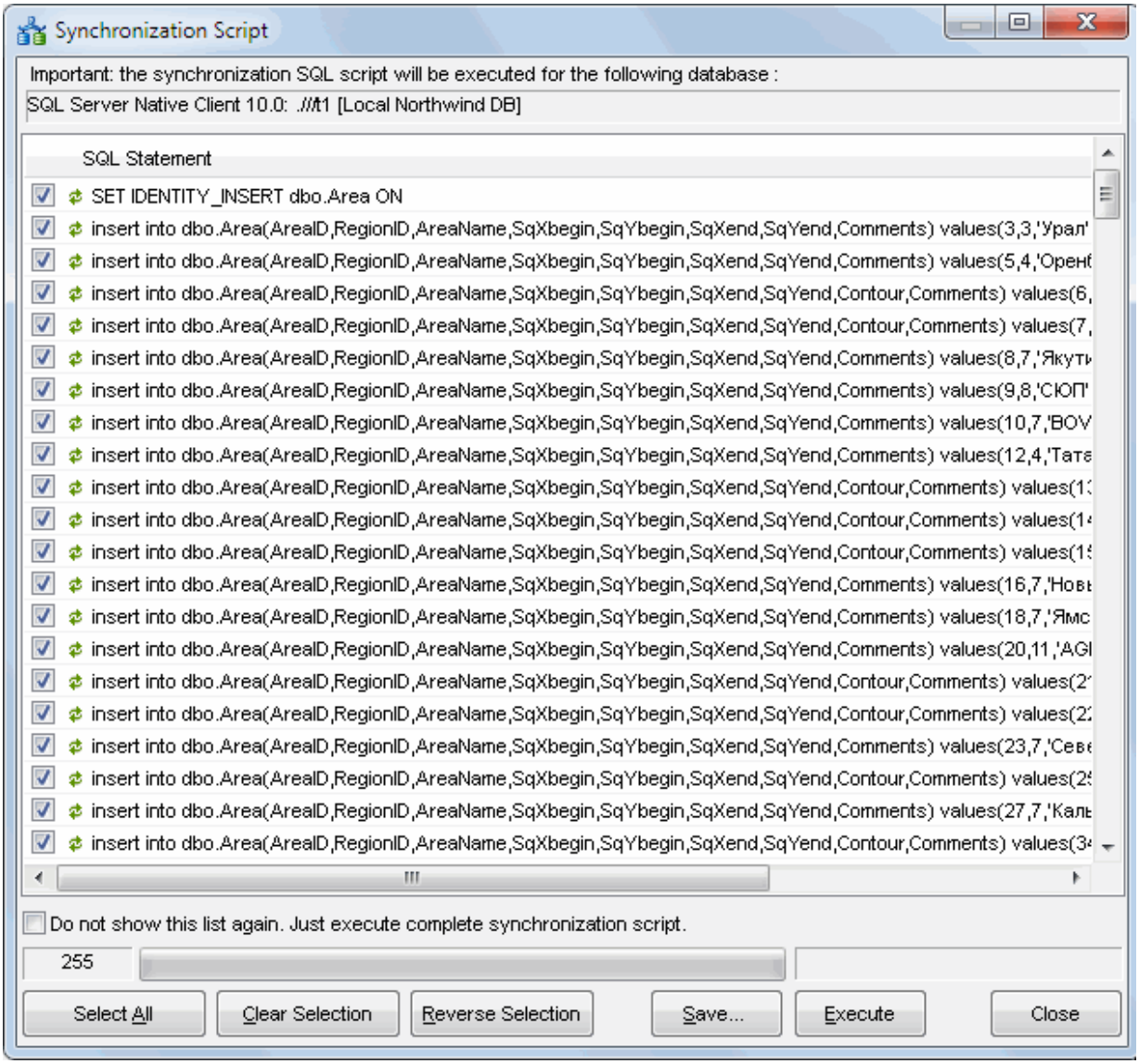
See also: Product Settings.

Execute Synchronization Script

During database comparison process the program creates a set of insert, update and delete statements for data synchronization. The user can select the necessary statements or forbid the unnecessary ones in a special dialog box.

Also, he or she can save the produced set of SQL statements to a file on the disk with the statement delimiter specified in the settings.
COMMIT statements will be added according to settings as well as SET IDENTITY_INSERT ON/OFF.

The program shows a total number of generated synchronization statements at the left bottom corner of the window.



Note: the user can switch off this dialog opening by related option. The program will execute the whole script in this case.

See also: synchronization process.

Command Line Options

DTM Data Comparer supports following command line switches:

-r - if the project specified and configured, run compare at program startup.

-s - if the project specified and configured, run synchronization at program startup.

-q - quit application after the project execution.

-a - synchronization: disable "Add" operation for the secondary database.

-d - synchronization: disable "Delete" operation for the secondary database.

-u - synchronization: disable "Update" operation for the secondary database.

-PM - switch "performance mode" on. This mode increases comparison speed for about 10-15% but produces fewer diagnostics. The program shows {PM} in the windows title when this mode is switched on.

-c - console mode. -r or -s switch required to run the process.

-x - disable connection restoring. Please use it for corrupted profiles or incorrect connections only.

Also, you can use project name as a command line parameter. Please note that you should use quotation for path or filename with spaces:
"c:\Program Files\dcmp.exe" "D:\Projects And Files\test2testscr.dcmp"

Console Mode

The console mode is a mode when the program doesn't open any dialogs and doesn't need any interference from the user. A project for the console mode must be prepared and tested beforehand. This mode enables you to integrate the product with the Windows task schedule system as well as to execute projects prepared beforehand according to the schedule.

For example, in order to execute a project file today at 11.00, use the following command line:

at 11:00 "c:\tools\comparer\dcmp.exe -c -s"

Return codes

The program returns a few error codes in console mode:

- 0 - error occurs, not enough parameters or nothing to compare/synchronize
- 1 - tables have been compared successfully, differences found
- 2 - tables are identical

How to use return codes? The user can use ERRORLEVEL environment variable in a batch file after the program execution. ECHO.%ERRORLEVEL% line shows return code and IF ERRORLEVEL can be used for execution branching.

Sample command file uses ERRORLEVEL code

```
@echo off
"c:\Program Files\dcmp.exe" -c -r "D:\Projects And Files\project1.dcmp"
IF ERRORLEVEL 2 GOTO SAME
IF ERRORLEVEL 1 GOTO DIFFERENT

echo "Error or nothing to compare"
goto end

:SAME
echo "The tables are identical"
goto end

:DIFFERENT
echo "The tables are different"
goto end
:end
```

Comparison process cancellation

The data show, comparison and synchronization processes can be interrupted.
Please use "Break" button for this purpose. The program makes this button visible during long time process only.

Please keep in mind that after operation canceling the program shows partial data in the data grid. You may use it at your own risk. It is recommended to save the project and restart the synchronization utility after process interruption.

Comparison Report

The program can create HTML, XML or Excel comparison report. The user can specify product level output file at the settings window or project level one at the project properties window. In both cases $TableLeft$ (primary table name with schema/owner if present), $TableRight$ (secondary table name), $DATE$ and $TIME$ macros are acceptable as a part of the file name.

There are three report modes: rows and totals, rows only and totals only. The report file location can be defined at the project level or product level.

The program can open report automatically after comparison complete if related option is switched on.

Table to table mode report contains three sections: general information, data rows comparison results and statistics. The first section collects information about project, database connections, project's author, etc. The second section shows comparison results with a number of rows, column names, and values. The third block of data shows number or rows, the number of equal rows and other statistics.

The report for database mode has same general information section and the pair of data rows and statistics blocks for each compared or synchronized tables.

Note: if the mapping present, the program includes no columns without mapping to the comparison report.

See also: report customization.

Database Comparison Report, customization and localization

The installation folder of the comparison software has TMPL subfolder. This subfolder contains files for report customization and localization.

The HEAD.HTM file is a report header. The user can modify CSS items definitions to customize comparison report.

The ENGLISH.INI file is a text file that contains strings to be used in the report. The user can create another file with localized or modified strings. Please refer to settings to assign another file to the database synchronization tool.

Collate and Sort Order Information

The data comparer shows this window if you have strings as a part of the primary key and comparison or sort ordering settings are different. There are three modes for this window: "if necessary" (default), "always" or "never". The mode can be changed at "User Interface" page of the settings window.

The comparer expects coincidence of the following database sort order parameters:

- Case sensitivity. It is recommended to use "case sensitive" mode.
- 'a' is greater than 'B'. The recommended setting is TRUE.
- 'a' is greater than '1'. The recommended setting is TRUE.
- 'a' is greater than 'A'. The recommended setting is TRUE.

In case the program could not find the optimal pair of options the user can assign them manually. To do that please:

1. Switch on "specify options manually" checkbox.
2. Select or enter required collation or sort order mode for one or both databases.
3. Click "test" to analyze changes.

Note: if the drop-down menu is empty just enter required option manually.
If it is disabled at all you should assign or change this option outside the data comparer. Currently, the program offers built-in option change feature for Oracle, DB2, MS SQL and MySQL only.

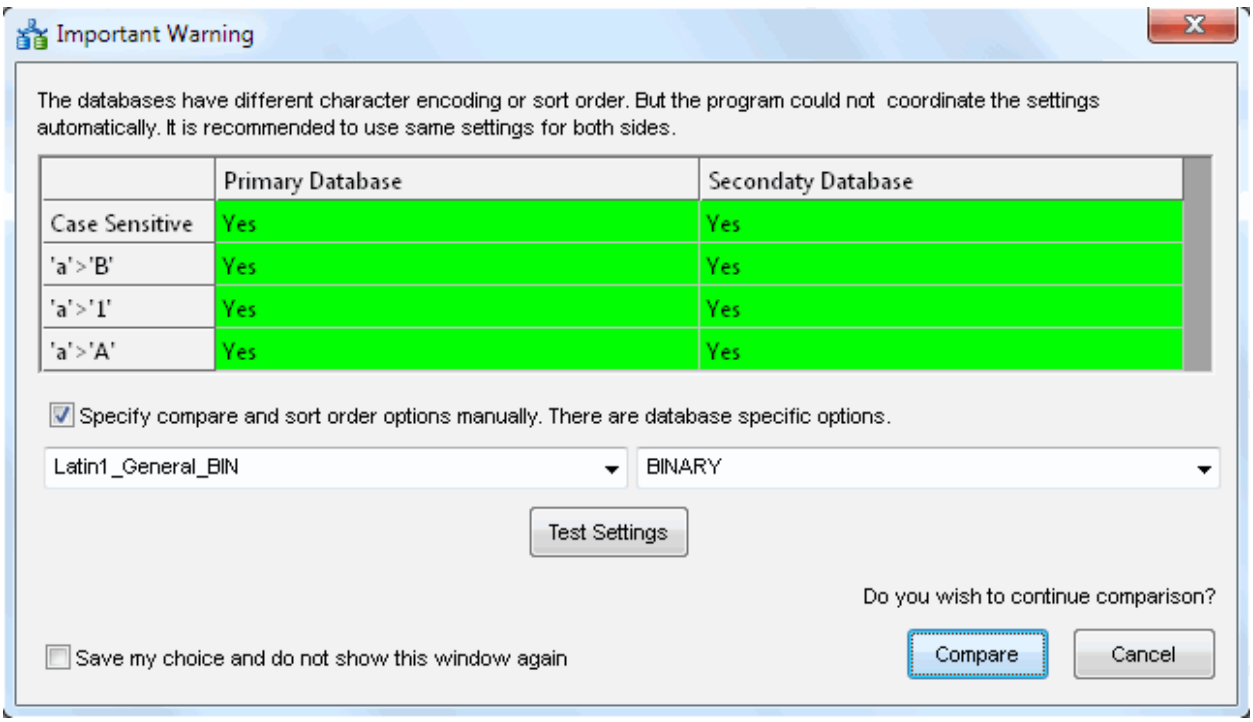


Table List Context Menu

The table list context menu allows the user to copy currently selected table name and find table selected at another side of the form.

Run SQL statements

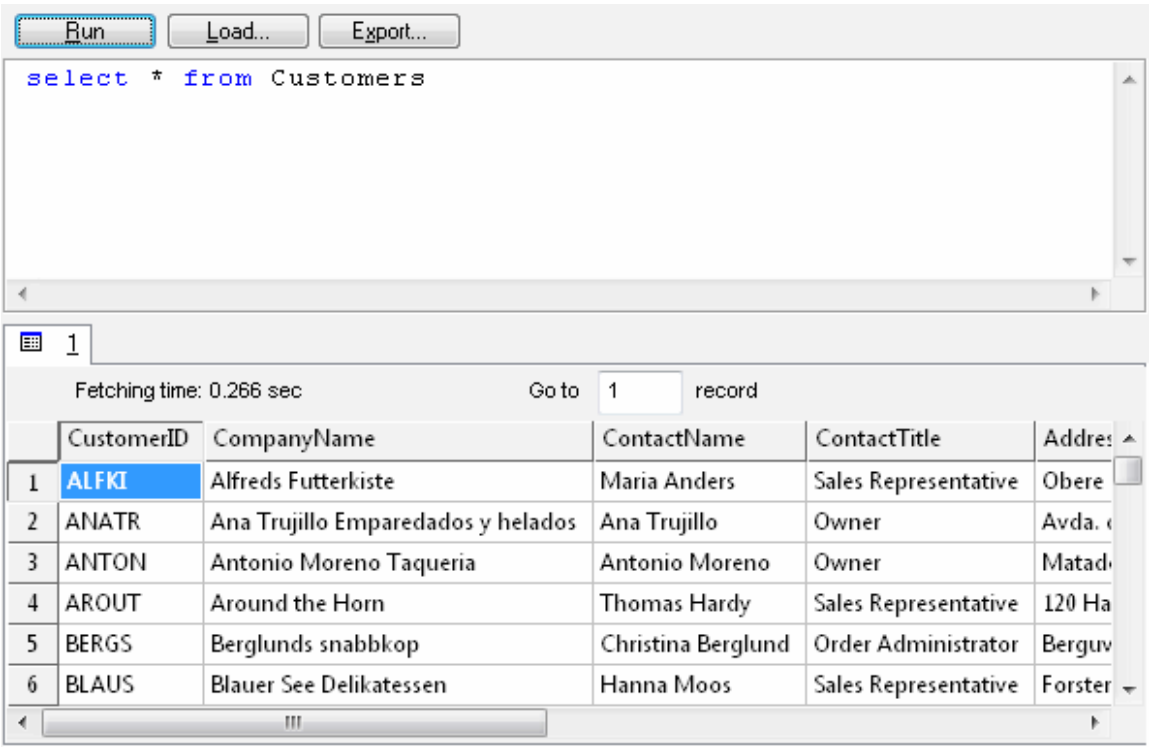
For both database connections, the DB comparison tool provides SQL Console.
The SQL console is a quick tool that allows the user to execute various SQL statements against the connected data source.
Please use menu items, toolbar buttons or hotkeys to access this feature.

SQL Console

The tool has a special window where you can specify and execute any SQL statements. You can copy the results of executing a statement onto the clipboard or export it into various formats like text, SQL, HTML, XML or Microsoft Excel. Placing the mouse cursor over the column header will show the type of data stored in this field.

Important: the SQL console does not show any warning before data deletion or modifying.

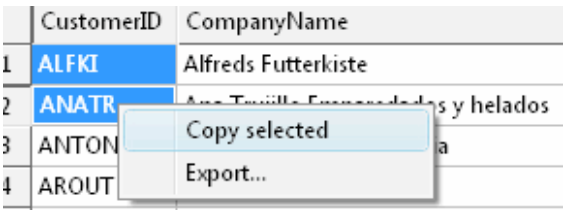
Note: SQL console shows only begins of large strings. Typically you can view up to 512 first symbols.



	CustomerID	CompanyName	ContactName	ContactTitle	Addres
1	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere
2	ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda.
3	ANTON	Antonio Moreno Taqueria	Antonio Moreno	Owner	Matad
4	AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Ha
5	BERGS	Berglunds snabbkop	Christina Berglund	Order Administrator	Berguv
6	BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Forster

Menu item "Load" allows you to read SQL script from the external file.

There is a picture of local menu accessed by the right click inside the results window.



Hotkeys

There are three shortcuts groups: for primary connection, for secondary connection and common options.

Primary Connection Hot Keys

Hotkey	Function or Option
F2	Show table content in the data grid
F3	Open Unique key selection window
F4	Run DTM Data Editor for the connection, if installed
F5	Open SQL console for the connection

Secondary Connection Hot Keys

Hotkey	Function or Option
Ctrl+F2	Show table content in the data grid
Ctrl+F3	Open Unique key selection window
Ctrl+F4	Run DTM Data Editor for the connection, if installed
Ctrl+F5	Open SQL console for the connection

Common Hot Keys

Hotkey	Function or Option
Ctrl+L	View log file
Ctrl+M	Open the mapping window
Ctrl+R	Run compare process
Ctrl+Y	Run synchronization process
Ctrl+P	Open Project properties
Ctrl+O	Load Project file from the disk
Ctrl+S	Save Project file to the disk
F1	Open help
F6	Open face to face row viewer
F7	Open settings window
F8	Open report file created in the current product session

Limitations

Limitation of the current version:

- This version of the comparer does not support all BLOB synchronization. The size of BLOB that can be synchronized depends on database system you have.

Technical support

If you have some question or unusual problem feel free to contact the DTM Data Comparer technical support at support@sqledit.com

When you contact technical support, you should be prepared to provide the following information:

- DTM Data Comparer version (you can find this information from About menu item of Help menu).
- Type and version of the ODBC or IDAPI driver or OLE DB provider.
- DBMS version and operating system version (including service pack version, if applicable).
- DTM Data Comparer Log file.
- A description of what you do before the problem occurs.
- Error messages you see when the problem occurs.
- Your name, company name and how to contact you.

See Also: log file

License Agreement (EULA)

This License Agreement covers all existing versions of DTM Data Comparer (Software) and technical support service (Service). This License Agreement is a legal agreement between the end-user (Licensee) and DTM soft (Licensor).

CAREFULLY READ THE TERMS AND CONDITIONS OF THIS AGREEMENT PRIOR TO USING THIS PRODUCT. USE OF ANY PORTION OF THIS PACKAGE INDICATES YOUR AGREEMENT TO THE FOLLOWING TERMS AND CONDITIONS. IF YOU DO NOT AGREE WITH SUCH TERMS AND CONDITIONS, DO NOT INSTALL THE SOFTWARE.

General Information

1. Licensor is exclusive owner of all DTM Data Comparer copyrights. DTM Data Comparer is protected by copyright laws and international copyright treaties.
2. Demo version. Anyone may install and use demo version of DTM Data Comparer for evaluation and testing purposes free of charge.
3. The product is licensed, not sold. I.e. Licensor grants to Licensee non-exclusive, perpetual, royalty-free right and license to install, configure, execute and otherwise productively use a copy of the Software for the commercial or non-commercial purposes, including internal business purposes. Licensee may install and use each licensed copy of the Software on a single computer. The primary user of the computer on which DTM Data Comparer is installed may make a second copy for his or her exclusive use on a portable computer.
4. Licensee may not reverse engineer, modify, translate, decompile, or disassemble DTM Data Comparer. The Software is licensed as a single product. Its component parts may not be separated for use on more than one computer.
5. Licensee may not rent, lease, or lend the Software. Also, Licensee may not resell, or otherwise transfer for value, the Software.
6. Without prejudice to any other rights, Licensor may terminate this License Agreement if Licensee fail to comply with the terms and conditions of this Agreement. In such event, Licensee must destroy all copies of the Software with all of its component parts.
7. Licensee may permanently transfer all of rights under this license, provided Licensee retain no copies, Licensee transfer all of DTM Data Comparer (including all component parts), and the recipient agrees to the terms of this license.
8. DTM Data Comparer IS DISTRIBUTED "AS IS". NO WARRANTY OF ANY KIND IS EXPRESSED OR IMPLIED. LICENSEE USE DTM Data Comparer AT YOUR OWN RISK. IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR DATA LOSS, DAMAGES, LOSS OF PROFITS OR ANY OTHER KIND OF LOSS WHILE USING OR MISUSING THIS SOFTWARE.

Delivery

Licensor delivers the Software electronically over Internet. The delivery includes installation/activation key, software, documentation* and additional materials with installation program*. Licensor confirms that the delivery contains no illicit code or third party code.
The customers in North America allowed to request physical delivery on CD for extra fee.

*- the multiplatform edition of the software (if applicable) has online documentation only and requires no installation program.

Licensee Data

Licensor understands and acknowledges that Licensee may manage, modify, summarize, maintain, create derivative works of, and update pre-existing data and information, and generate, manage, modify, summarize, maintain, create derivative works of, and update additional data and information using the Software. Licensor acknowledges and agrees that all rights in any work product created by Licensee shall be solely owned by Licensee. Licensor has no access to mentioned work product without grant by Licensee. Moreover,

Licensor shall not seek access to Licensee personal data.

Functionality

Licensor may remove or change any supplemental or non critical functionality of the Software without any notifications. Licensor may change product documentation and project file format. If Licensor deletes any key feature or functionality from the Software equal solution should be provided to Licensee without additional fee.

Third Party Software and Intellectual Property

Licensor hereby confirms that the Software contains no third party components including Open Source code.

Support and Upgrades

During one year after ordering any license of the Software except "Site" and "World" licenses, Licensee are entitled to free technical services and support for DTM Data Comparer which is provided by Licensor. During this period, e-mail support is unlimited and includes technical and support questions. Also, during one year, Licensee may access to free updates to DTM Data Comparer when and as DTM soft publishes them on www.sqledit.com. After end of the described period Licensee may continue to use the software product in accordance with the terms of this Agreement except free support and upgrades. After end of the free support and updates period (one year), Licensee may purchase annual Upgrade and Support subscription. If Licensee has a few licenses, Licensee will access to free upgrade and support period and will use subscriptions independently.

There are two support service levels: Standard and Premium. By default, the Software includes Standard level of the Service. The Premium should be ordered separately. The Premium service offers reduced response time and high priority for support requests. The technical support response time for Standard level is between 2 and 12 hours except Jun, July and August with 2 to 24 hours range. It is available 5 days per week (Monday to Friday). For the Premium level it is 2 to 6 hours 7 days per week.

Export Compliance

Licensor hereby confirms that the Software requires no export controls at a level other than EAR99/AT.

Price Protection

Licensee who purchases volume license of the Software allowed to order additional copies with the same price during following period after initial deal: 3 months for 3 to 5 copies, 6 months for 6 to 10 copies and 9 months for 11 or more copies.

Trademarks information

DTM Data Comparer is trademark of DTM soft.

Licensee hereby grants DTM soft a right to use company name or trade names solely in connection with the rights granted to DTM soft pursuant to marketing materials and web site. If this clause breaches company policy DTM soft is happy to remove it upon request.

Demo and Full version differences

What differences between the demo and full versions of the DTM Data Comparer?

General functions

- Demo version allows user to compare up to 50 top rows of tables only.
- Demo version produces synchronization script for first 50 differences only.

Supplemental functions

- SQL console partially replaces result values to DEMO string.

No other demo limitations are present except nag-screen at the data synchronization tool shutdown.

Program Installation

To run installation program:

- Open the windows Start menu and select "Run" item
- Select or enter installation file name and path (dcmp.exe or dcmp_d.exe)* and click OK

* - professional and enterprise editions of the tool may have another suffix.

Notes:

- Please be sure that existing version of the tool is not running when you install a new version.
- We recommend to uninstalling old version of the DTM Data Comparer before new version installation.
- Installation by administrator for another user is supported for most environments.

How can I order DTM Data Comparer software?

The software is available worldwide via the Internet. Secure online, mail/check and corporate purchase order options are available. For detailed information please click following link to open order page or copy http://www.sqledit.com/dcmp/order.html to your web browser.

If you have any payment questions feel free to contact the DTM Data Comparer technical support at support@sqledit.com

How to upgrade your copy of DTM Data Comparer?

The user can refer to "Check for Update" features to get information about available updates.
Please contact our support staff at support@sqledit.com to upgrade commercial version of the tool.

Demo version is available for download free of charge.

When you upgrade your copy of DTM Data Comparer please send us the following information:

- You name, company name and how to contact you
- Payment information (at least "ORDER No" and "Date")

Uninstall the Software

The Uninstall feature removes all installed DTM Data Comparer components and all records in the Windows registry made by the installation script. You can uninstall this program by selecting the "**DTM Data Comparer**" item in "**Add/Remove Programs Dialog**" in "**Control Panel**".

Another uninstallation way is to run "unins000.exe" from the product's folder directly.

Important! Uninstall feature of the program does not remove files and objects created by users such as configuration files, registry records etc.

Database utilities by DTM soft

DTM SQL Editor (www.sqledit.com/editor) is a set of powerful database management tools that allow you to achieve two goals - to have unified access to different types of databases and to have a set of solutions that makes processing your data easy. DTM SQL Editor gives database users, developers and administrators an ability to access different databases, whether desktop or client-server ones (provided you have ODBC driver installed). This is very convenient, since most organizations use several different types of databases installed and each stores data in different formats and with varying parameters. Having a program that can get data from various sources is often essential. Furthermore, in addition to letting you quickly switch between different data sources, DTM SQL Editor lets you see database schema and results of the query execution.

DTM Migration Kit (www.sqledit.com/mk) is a powerful yet simple data migration tool that comes in handy if you run multiple databases. Use it to import, export or migrate data between different data sources (ODBC, OLE DB, or Oracle Call Interface supported). The program is fully automatic and supports all popular database formats. Simple visual interface lets you set own transformation and flow control rules to give you added flexibility.

DTM Schema Reporter (www.sqledit.com/sr) is a reporting tool for database schema. The program creates reports in RTF, HTML, XML or plain text formats and supports all common database interfaces - ODBC, OLE DB, or even Oracle Call Interface. This utility helps technical writers and database administrators create a report of any complexity level within seconds. Also, you can alter table order in the report and manually add annotations to the individual tables.

DTM Data Generator (www.sqledit.com/dg) is a simple, powerful and fully customizable utility that generates data for database testing purposes. Currently, database developers and administrators often have to spend hours of dull work to create test data sets before examining database performance. This tool makes all this unnecessary by automatically creating database objects AND sets of SQL statements, if necessary.

DTM Data Editor (www.sqledit.com/de) is a data viewer and editor for database professionals who are tired of wasting their time on mundane tasks. The program uses form-based interface and works with any ODBC data source. SQL statements are generated automatically and can by modified later. For data that has foreign key - primary key relation, there are options to enter values manually or select them from a list, which is much faster.

DTM DB Stress (www.sqledit.com/stress) is a utility for stress testing the server parts of information systems and applications, as well as DBMSs and servers themselves. This tool allows you to create and configure a continuous set of requests to the server of the OLAP (query execution) and OLTP (adding, modifying and deleting data in the database) types. At the same time, the user can flexibly change both the number and the priority of this or that type of requests to a database or an application.

DTM Data Modeler (www.sqledit.com/dm) is a CASE tool for database developers that supports both forward and reverse engineering. It is an easy-to-use tool allowing you to work both with logical and physical data models in the form of an entity-relationship diagram. The product is intended for database architects and developers and works with data sources via the ODBC interface, which means compatibility with all modern DBMS. Along with basic model properties (sets of entities and relationships between them), the program allows you to create indexes and triggers on the physical level corresponding to the tables of the database that is modeled.

DTM Data Scrubber (www.sqledit.com/scr) is a set of intelligent tools for data verification (audit) and scrubbing (cleaning). Depending on user-defined rules and data properties, the program either creates a report about the actual state of affairs or performs database data correction.

DTM Data Comparer (www.sqledit.com/dcmp) is a visual tool for data compare and synchronization. The program successively views the contents of both tables basing on the order of ascending of unique key values and shows differences or creates synchronization script.

DTM Schema Comparer (www.sqledit.com/scmp) is a tool for database schemas comparison and synchronization. The comparison process supports tables, views, indexes, triggers and stored procedures. The visual representation of database schemas as a tree makes the comparison process more comfortable.

DTM Query Reporter (www.sqledit.com/qr) is a reporting tool for database query. This utility helps technical writers, developers and database administrators create a report based on database query within seconds.

DTM Schema Inspector (www.sqledit.com/si) is a database schema browsing and management tool that let you work with database schemas more effectively.

DTM DB Event (www.sqledit.com/event) is a database monitoring and management tool. This utility allows the user to define a few situations (events). For each event the user can define what the program should do if the event is occur.

DTM Flat File Generator. Easy to use tool that helps any developer or QA engineer to create test data file. It supports tab-delimited, CSV, fixed width and custom separated output files. The generator has powerful import and export file structure features.

DTM Test XML Generator. The tool is powerful generator for XML documents with structure defined by user and random but realistic data. More than 30 predefined generators with powerful pattern engine. The rich import XML structure options are available.

DTM Data Generator for Excel is a tool for text Excel spreadsheet population. Easy to use interface based on predefined generators, rich value library and high performance.

DTM Data Generator for JSON produces JSON files with defined structure in a bulk manner. Fast and easy structure editor and smart import options helps the user to generate test set in a few clicks only.

DTM Database Content Analyzer is a statistical tool for database content. It collects a few dozens of most interesting data: database objects size, value frequency, clusters, etc. This tool replaces and extends "Statistics" report of obsolete versions DTM Schema Reporter.

Trademark Information

Microsoft Excel, Microsoft SQL Server and Microsoft Windows are trademarks of Microsoft Corp.

Oracle is a registered trademark of Oracle Corp.

PostgreSQL is copyrighted by PostgreSQL Global Development Group.

Borland Interbase is a registered trademark of Borland Software Corp.

Glossary

Database catalog - The collection of system tables, tables that store metadata about that specific database.

Database record - one row in a table (table can be a result of SQL-query).

Database schema - logically connected, usually owner-based, set of DBMS objects (tables, views, procedures etc).

DBMS - database management system.

DBMS connection - the fact that both client and DBMS server have signed a contract and ready to query and data communications.

Drag-n-drop - the file manipulation technique when the mouse is used to move the file from the place of storage to the program, which performs processing.

SQL language - the declarative language used to manipulate the data and its' structure in the modern DBMS and their client applications.

IDAPI - Integrated Database Application Program Interface, unified DBMS access interface.

OCI - Oracle Call Interface, access interface for Oracle Server.

ODBC - Open Database Connectivity, unified DBMS access interface.

Metadata - information about data. See also: database schema

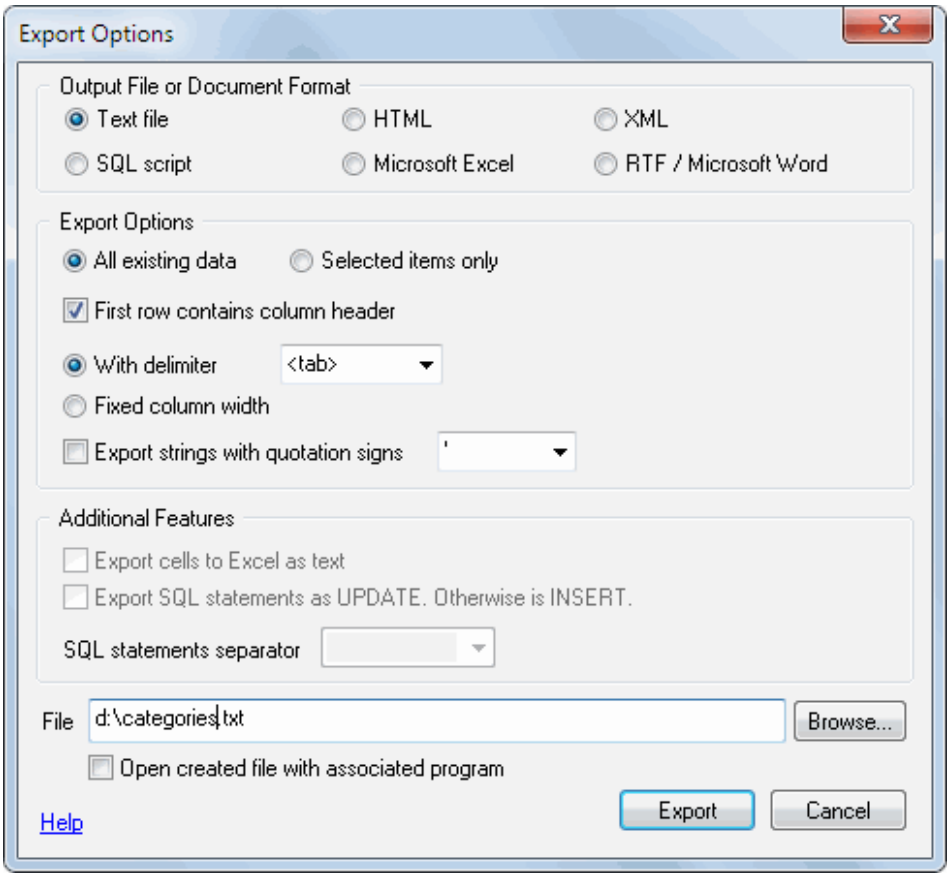
SQL statement - single SQL operator having the complete role in a data manipulation script.

SQL-server - program or program complex, which is able to execute the SQL-queries.

Export results of Query Execution

Types of export:

- text file with separators or with fixed columns width.
- HTML file
- XML document
- RTF document
- set of SQL statements (INSERT or UPDATE)
- direct to Microsoft® Excel (installed Microsoft Excel required)



Warning! Export for long binary data types (also known as BLOBs) is not supported.

Clipboard support

Copy selected text onto Clipboard	Ctrl-Ins, Ctrl-C
Cut selected onto Clipboard	Shift-Del, Ctrl-X
Insert text from clipboard into cursor position	Shift-Ins, Ctrl-V

Log file

When running the program, you have to select one of menu items from "**Tools->Log file**" in order to view or truncate your Log file. The log file contains the detailed description of any errors and other events that occurred while processing script.

Default log file location is product's directory and the name is ERROR.LOG. When the user has no enough permissions DTM Data Comparer saves log to typical path like C:\Documents and Settings\<username>\Application Data\dcmp.log or C:\Users\<username>\AppData\Roaming\dcmp.log

The log file is a text file that contains three type of records:

1. The software product identification block: product name version and operating system information.
2. Error records: wrong SQL statements, exceptions, etc.
3. Notification and statistics.

Data Grid

The data grid allows the user to view table content or comparison results.