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Data Management Tools

Navicat provides a number of powerful tools for working with the databases.

The following tools are available:

[Import Wizard](#)

Imports data from DBF, TXT, CSV, HTML, XML and more.

[Export Wizard](#)

Exports data to various formats, including DBF, TXT, CSV, HTML, Excel, XML, RTF and more.

[Data Transfer](#)

Transfers tables/views/procedures/functions/sequences/events between databases/schemas or to plain text file.

[Data Synchronization](#)

Synchronizes data in different databases/schemas to be kept up-to-date so that each repository contains the same information.

[Structure Synchronization](#)

Compares the structure of two similar databases/schemas and produces a set of alter statements for MySQL, Oracle and PostgreSQL.

[Backup/Restore](#)

Allows you to backup/restore your databases/schemas for MySQL, PostgreSQL and SQLite.

[Batch Job/Schedule](#)

Allows you to schedule a batch job which being executed at a specified time and support e-mail notification service.

[Dump SQL File](#)

Dumps database/schema/table(s) to SQL file.

[Execute SQL File](#)

Executes SQL file.

[Print Structure](#)

Prints database/schema/table structure.

[Log Files](#)

Keeps track on the actions (e.g. SQL statements being executed) which have been performed in Navicat.

Import Wizard

Import Wizard allows you to import data to a table from DBF, TXT, CSV, HTML, XML and more. You can save your settings as a profile for setting schedule.

Note: Navicat Essentials version supports to import text-based files, such as TXT, CSV, HTML and XML file.

To open the Import Wizard, click  **Import Wizard** from the table object pane toolbar.

- [Setting Import File Format \(Step 1\)](#)
- [Selecting Source File Name \(Step 2\)](#)
- [Setting Additional Options for Specific File Type](#)
- [Setting Target Table \(Step 5\)](#)
- [Adjusting Field Structures and Mapping Fields \(Step 6\)](#)
- [Selecting Import Mode \(Step 7\)](#)
- [Saving and Confirming Import \(Step 8\)](#)

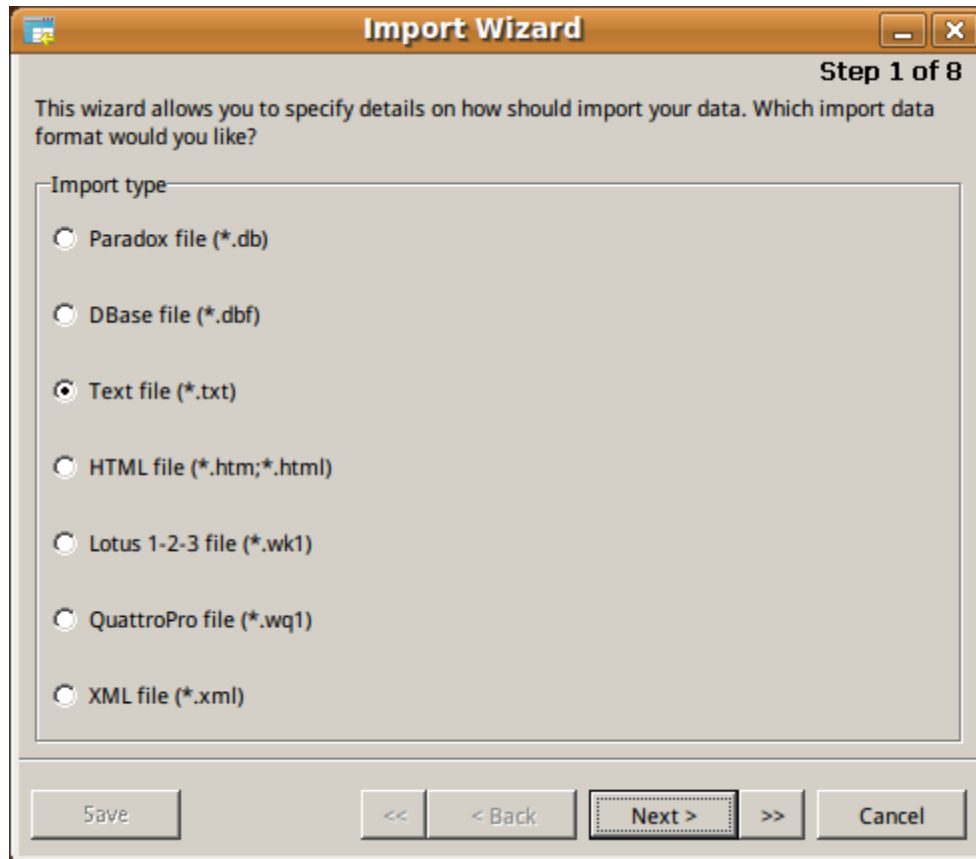
To run a saved import profile from the command line

- Create and save the import profile.
- Start Navicat from command line, type the command (see Command for details)

Setting Import File Format (Step 1)

Select one of the available import types of the source file.

Note: Navicat Essentials only supports importing from TXT, CSV, HTML and XML file.



Setting Source File Name (Step 2)

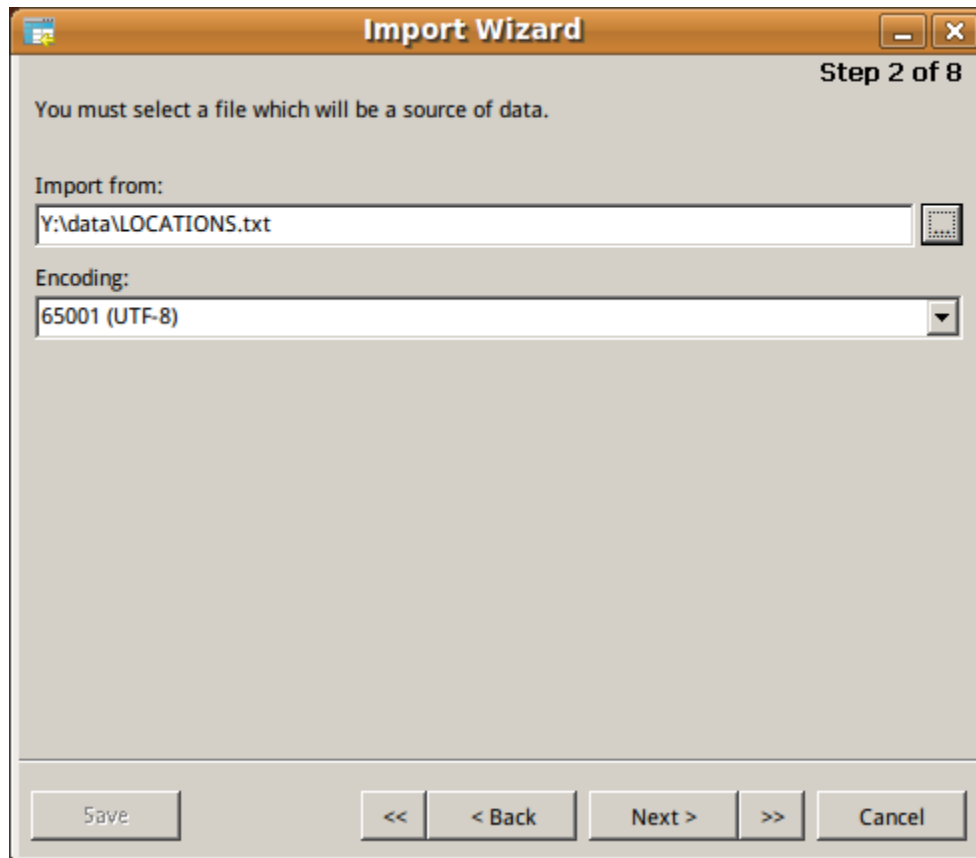
Import from

Browse the source file name. The file name extension in the Import from text box changes according to the selected table type in step 1.

Note: For TXT and XML file, you can select more than one file to import.

Encoding

Select the encoding for the source file.



Setting Additional Options for Specific File Type

Additional options specifies for file type.

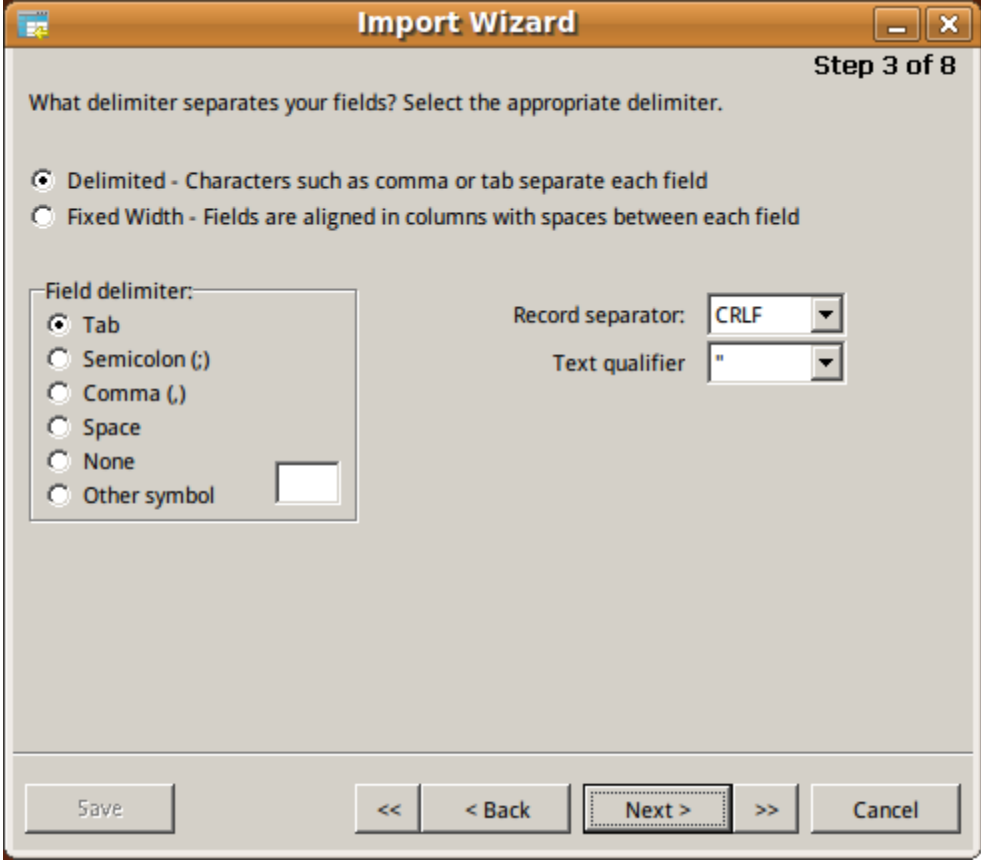
- [Setting Delimiter \(Step 3\) - TXT, XML](#)
- [Setting Data Format \(Step 4\) - TXT, XML, HTML](#)

Setting Delimiter (Step 3) - TXT, XML

TXT

Define **Field delimiter**, **Record separator** and **Text qualifier** for file. Record separator indicates how the file recognizes as new record (row).

Note: You should choose **Comma** for Field delimiter if you are importing CSV file.



Import Wizard Step 3 of 8

What delimiter separates your fields? Select the appropriate delimiter.

Delimited - Characters such as comma or tab separate each field

Fixed Width - Fields are aligned in columns with spaces between each field

Field delimiter:

Tab

Semicolon (;)

Comma (,)

Space

None

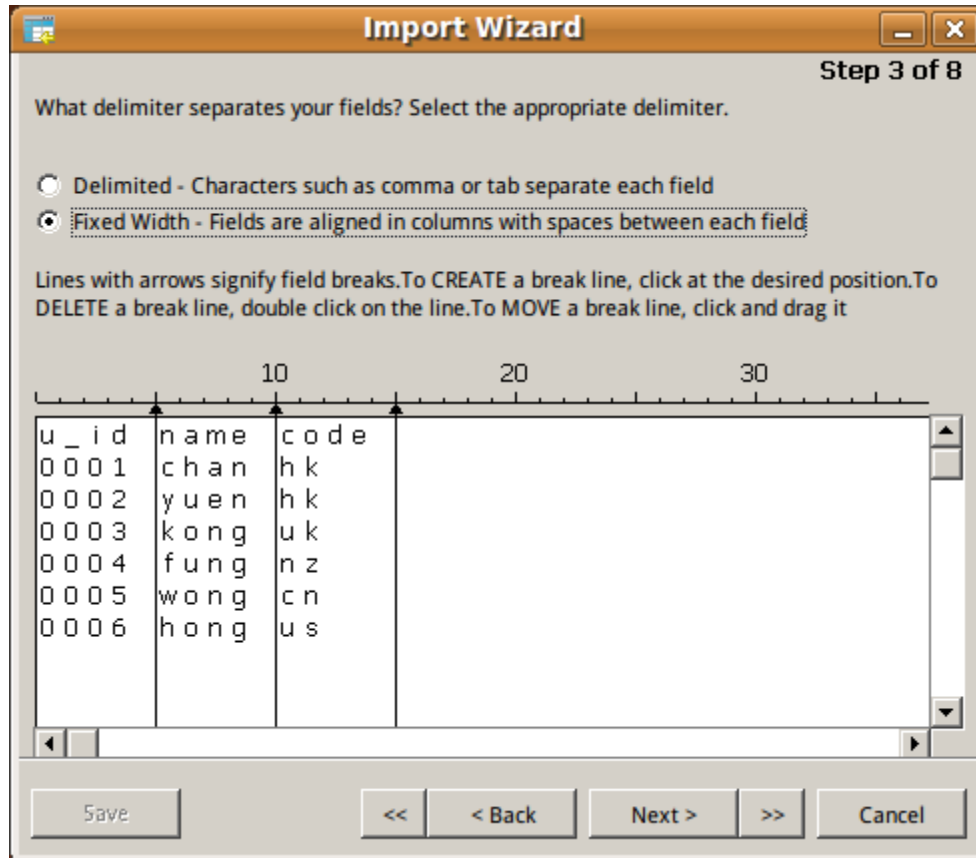
Other symbol

Record separator: CRLF

Text qualifier: "

Save << < Back Next > >> Cancel

Choose **Fixed Width** to import the text file with fixed width format. To delimit the source column bounds, click on the desired position. To remove it, just simply double-click the break line.



XML

Define tag to identify table row.

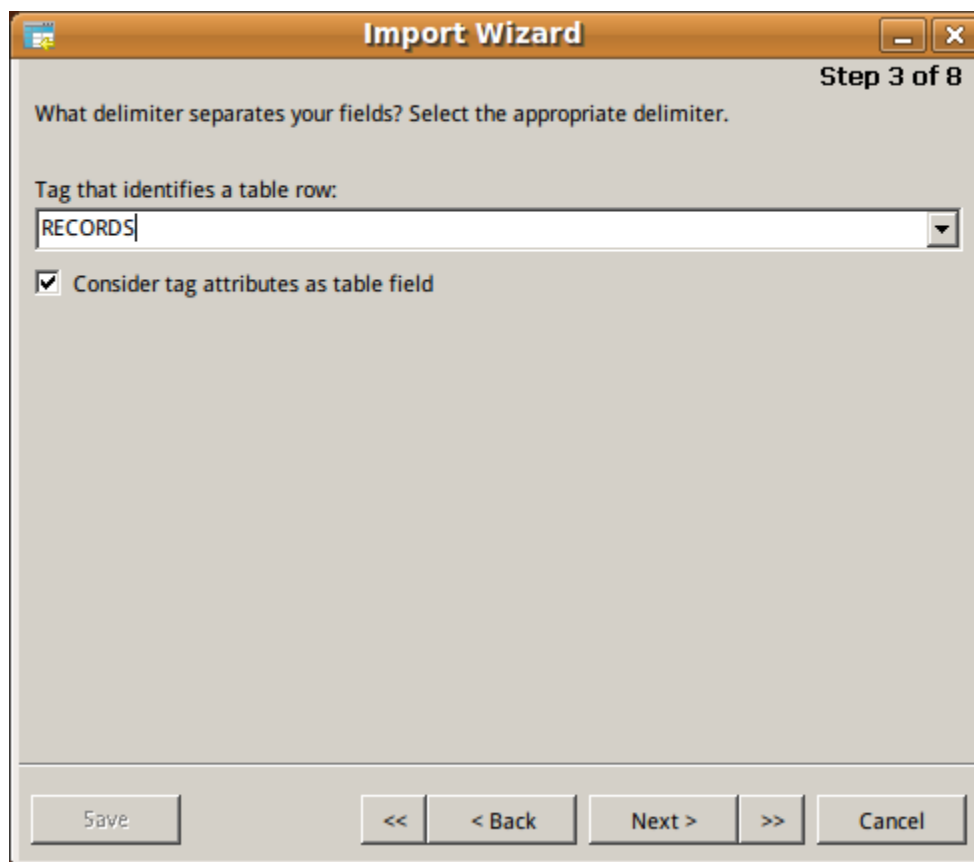
Consider tag attributes as table field

For example:

```
<row age="17">  
<id>1</id>  
<name>sze</name>  
</row>
```

With this option is on, Navicat will recognizes "age" as a table field together with "id" and "name", otherwise, only "id" and "name" will be imported as table fields.

Note: Navicat does not support multiple level of XML file.



Setting Data Format (Step 4) - TXT, XML, HTML

Import Wizard provides a number of options for setting common formats for all imported data.

Field name row

Field name row indicates which row should Navicat recognize as Column Title.

First data row

First data row indicates which row should Navicat start reading the actual data.

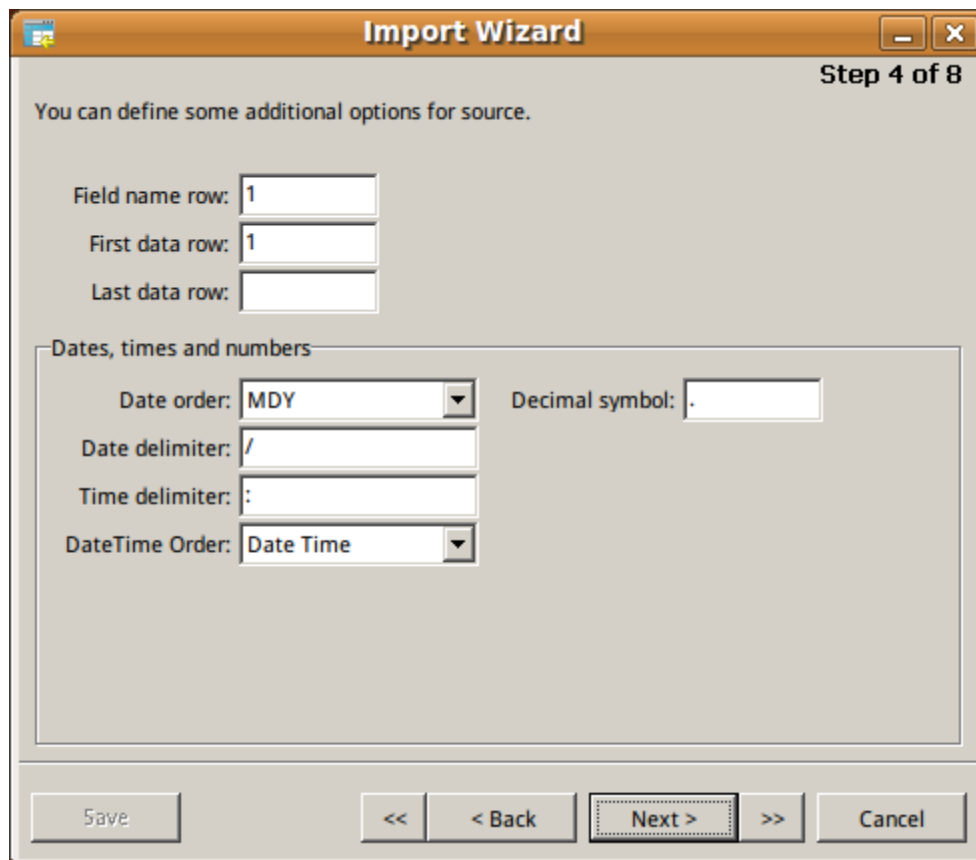
Last data row

Last data row indicates which row should Navicat stop reading the actual data.

Note: If no column title are defined for the file, please enter **1** for First data row and **0** for Field name row.

Dates, times and numbers

Defines the formats of the date, time and number.



Import Wizard Step 4 of 8

You can define some additional options for source.

Field name row:

First data row:

Last data row:

Dates, times and numbers

Date order: Decimal symbol:

Date delimiter:

Time delimiter:

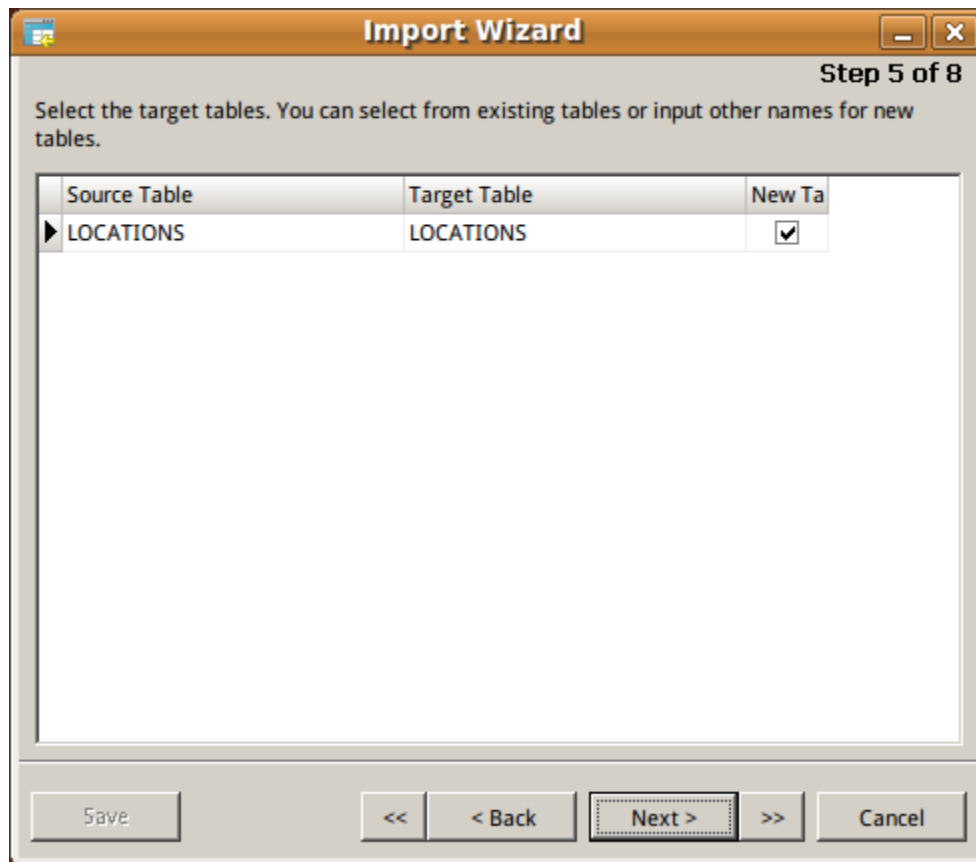
DateTime Order:

Save << < Back Next > >> Cancel

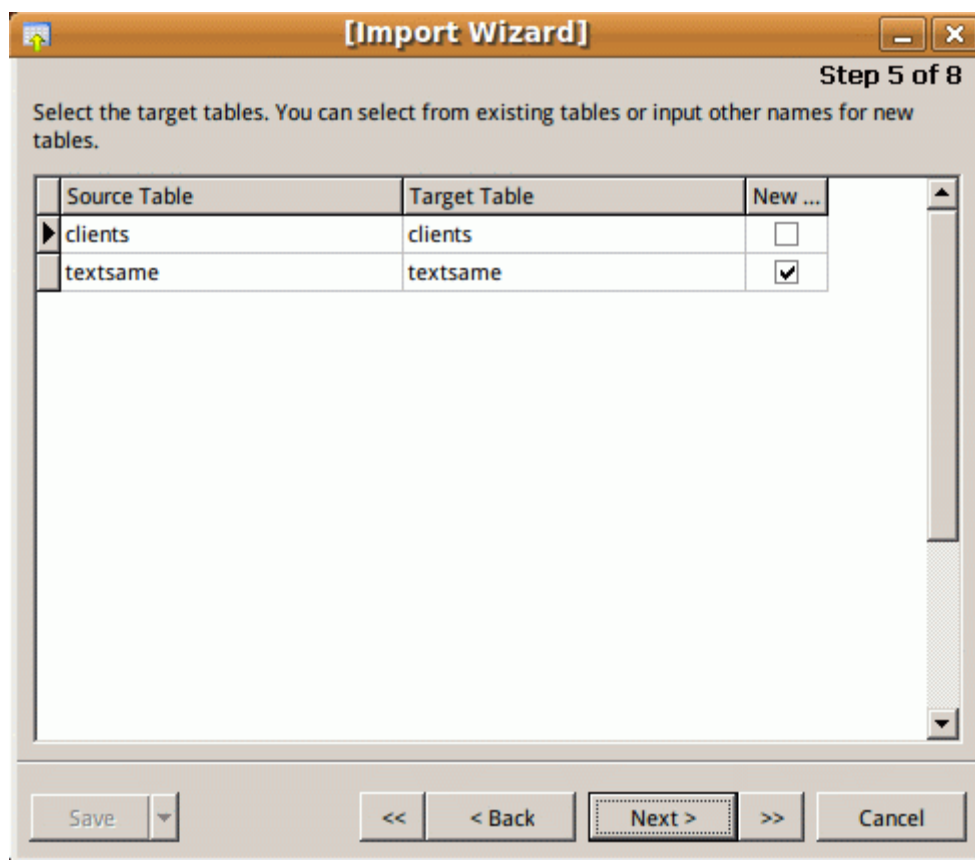
Setting Target Table (Step 5)

You are allowed to define a new table name or choose to import into the existing table from the drop-down list.

Note: If you type a new table name in **Target Table**, the box in **New Table** will be checked automatically.



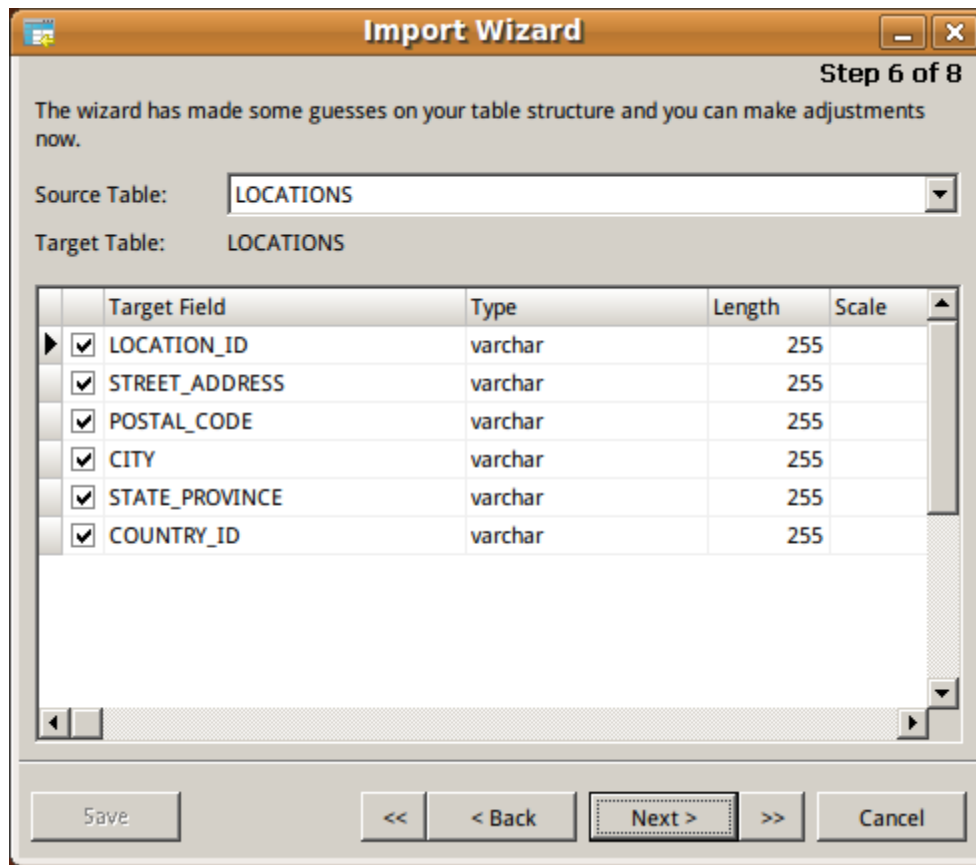
For importing multiple tables, all tables will be shown in the list.



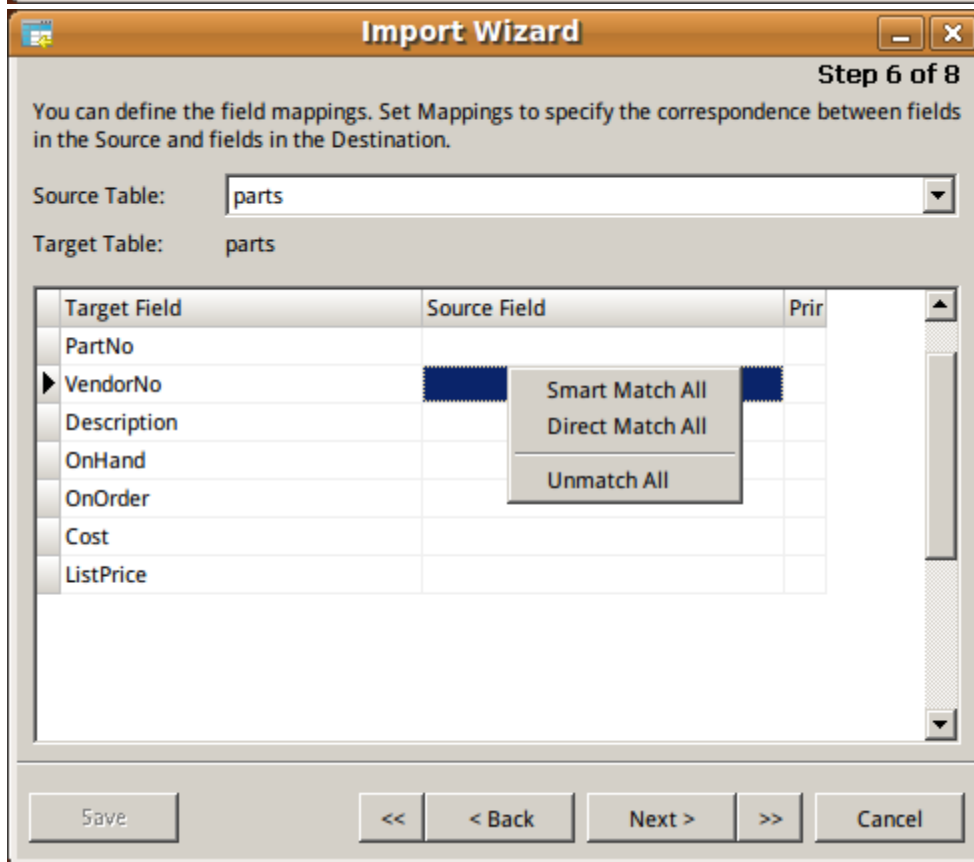
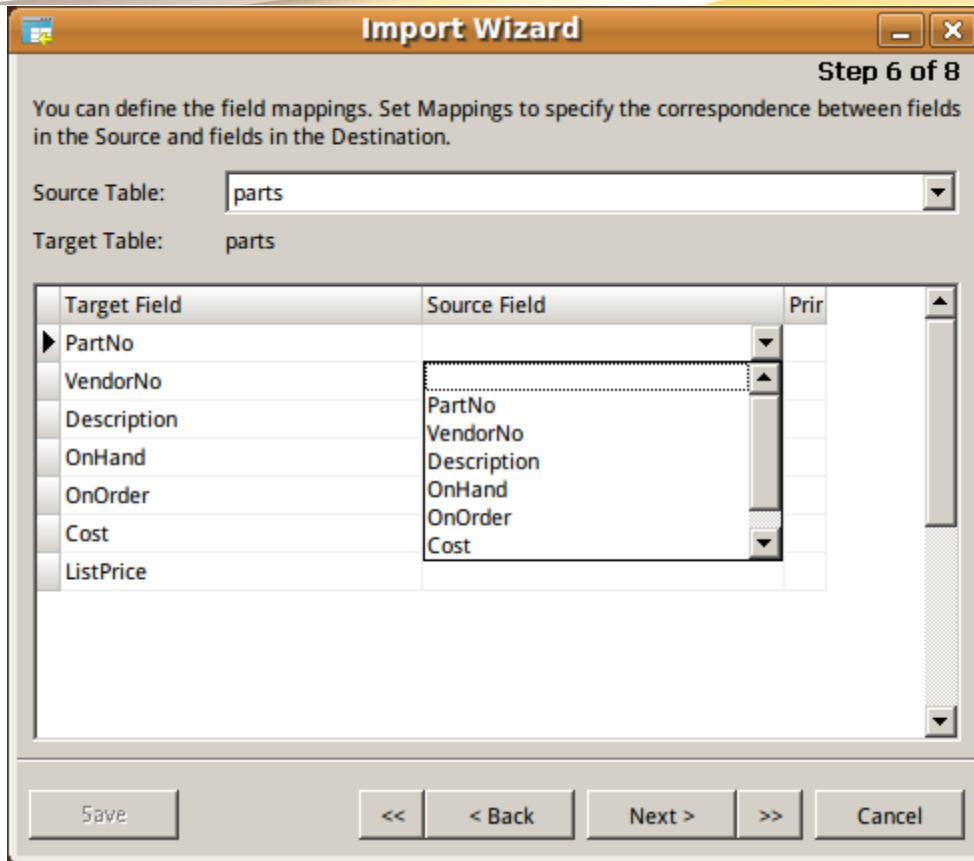
Adjusting Field Structures and Mapping Fields (Step 6)

Navicat will make assumption on the field types and length in the source table. You are allowed to choose your desired type from the drop-down list.

Hint: For importing multiple tables, select the other tables from the **Source Table** drop-down list.

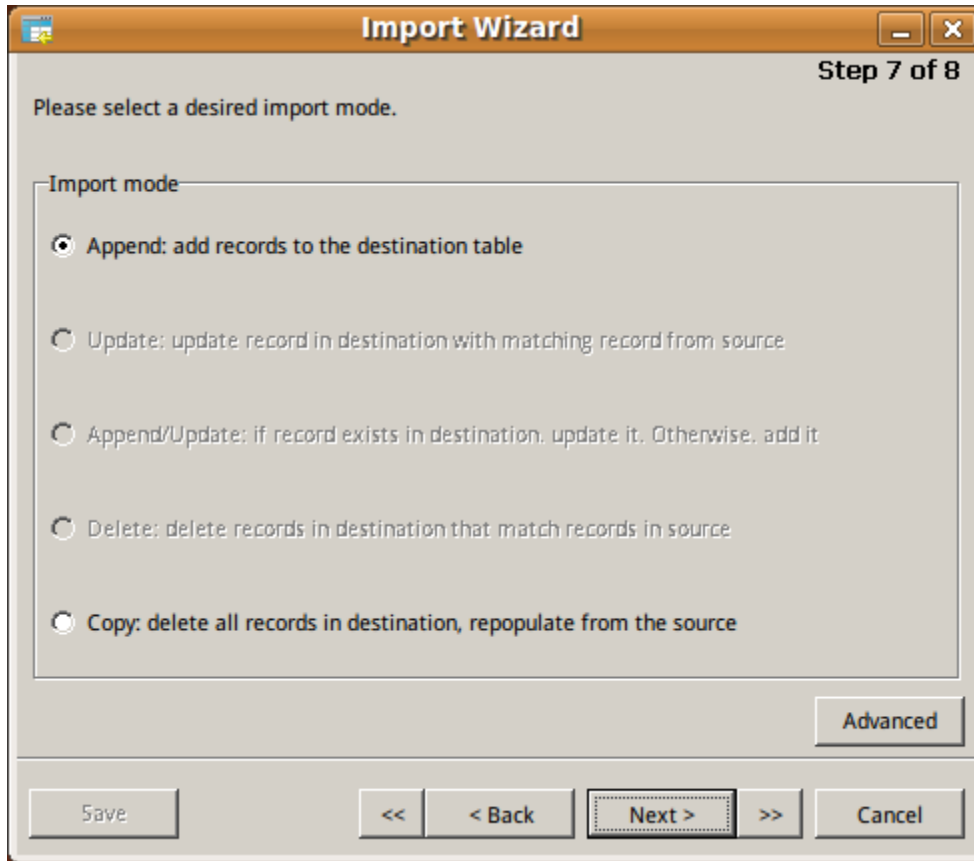


If you are importing your data into the existing table, then you might need to map the source field names manually to the destination table or just simply right-click and select **Smart Match All**, **Direct Match All** and **Unmatch All** from the popup menu for quick mapping.



Selecting Import Mode (Step 7)

Select the import mode that define how the data being imported.



Hint: To activate the remaining options, you must enable Primary Key in step 6.

	Target Field	Type	Length	Scale	Primary Key
<input checked="" type="checkbox"/>	LOCATION_ID	varchar	255	0	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	STREET_ADDRESS	varchar	255	0	<input type="checkbox"/>
<input checked="" type="checkbox"/>	POSTAL_CODE	varchar	255	0	<input type="checkbox"/>
<input checked="" type="checkbox"/>	CITY	varchar	255	0	<input type="checkbox"/>
<input checked="" type="checkbox"/>	STATE_PROVINCE	varchar	255	0	<input type="checkbox"/>
<input checked="" type="checkbox"/>	COUNTRY_ID	varchar	255	0	<input type="checkbox"/>

Advanced

Run multiple queries in each execution (Available only for PostgreSQL)

Checks this option if you want to run multiple queries in each execution.

Use extended insert statements (Available only for MySQL)

Inserts records using extended insert syntax.

Example:

```
INSERT INTO `users` VALUES ('1', 'Peter McKindsy', '23'), ('2', 'Johnson Ryne', '56'), ('0', 'Katherine', '23');
```

Use empty string as NULL

Imports **NULL** value if the source data field contains empty string.

Use Foreign Key constraint (Available only for MySQL)

Adds foreign key if there is foreign key relations between tables.

Continue on error

Ignores errors that are encountered during the import process.

Create Auto Increment Fields (Available only for MySQL and PostgreSQL)

Creates Auto Increment Fields during the import process.

Note: Support only when file type is Paradox file or DBase file.

Import Deleted Records

Import the deleted records in the DBase file during the import process.

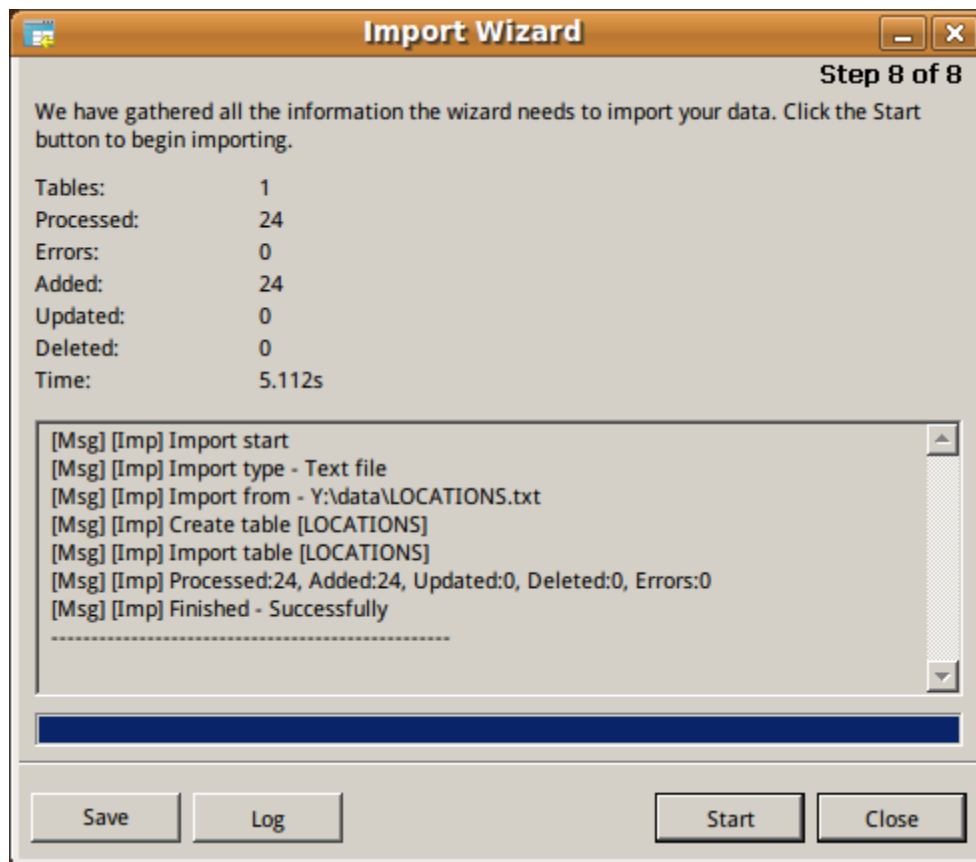
Note: Support only when file type is DBase file.

Saving and Confirming Import (Step 8)

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

Hint: Click **Save** button to save your settings as a profile for setting schedule.

You can click **Log** button to view the running process indicating success or failure. These messages are saved in file - LogImport.txt.



Export Wizard

Export Wizard allows you to export data from table, view, or query result to any available format. You can save your settings as a profile for setting schedule.

Note: Navicat Essentials version supports to export text-based files, such as TXT, CSV, HTML and XML file.

To open the Export Wizard, click  **Export Wizard** from the table object pane toolbar.

- [Settings Export File Format \(Step 1\)](#)
- [Setting Destination File Name and Encoding \(Step 2\)](#)
- [Selecting Fields for Export \(Step 3\)](#)
- [Setting Data Format \(Step 4\)](#)
- [Saving and Confirming Export \(Step 5\)](#)

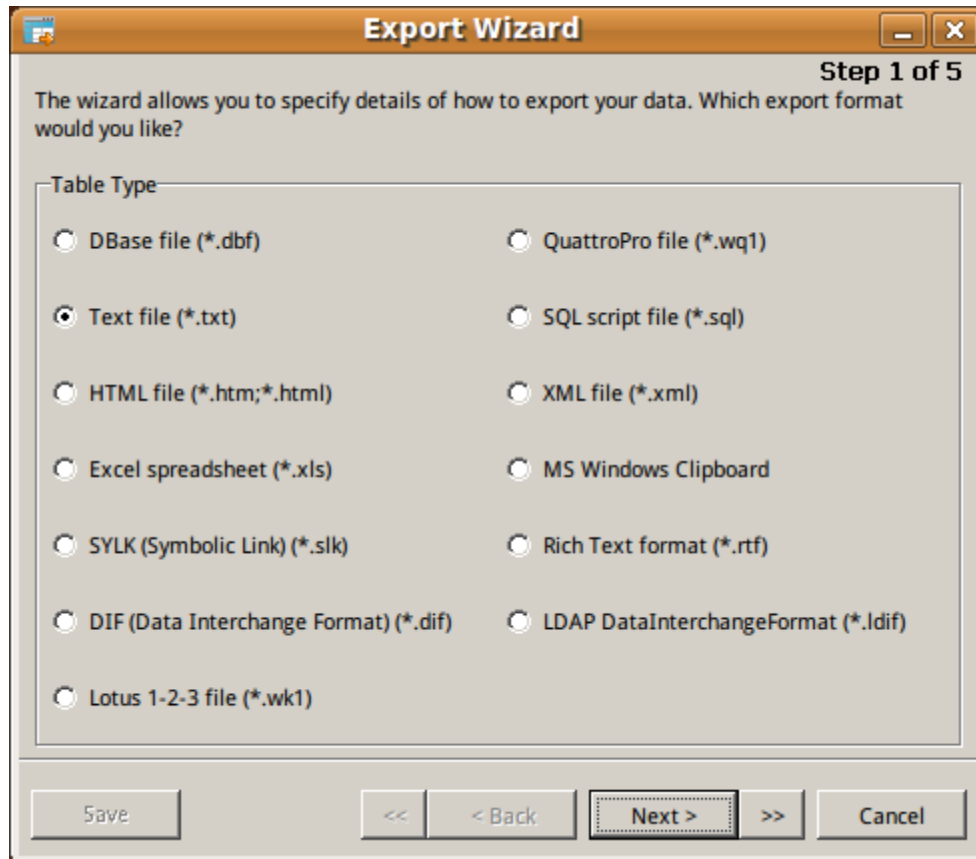
To run a saved export profile from the command line

- Create and save the export profile.
- Start Navicat from command line, type the command (see Command for details)

Setting Export File Format (Step 1)

Select one of the available table formats.

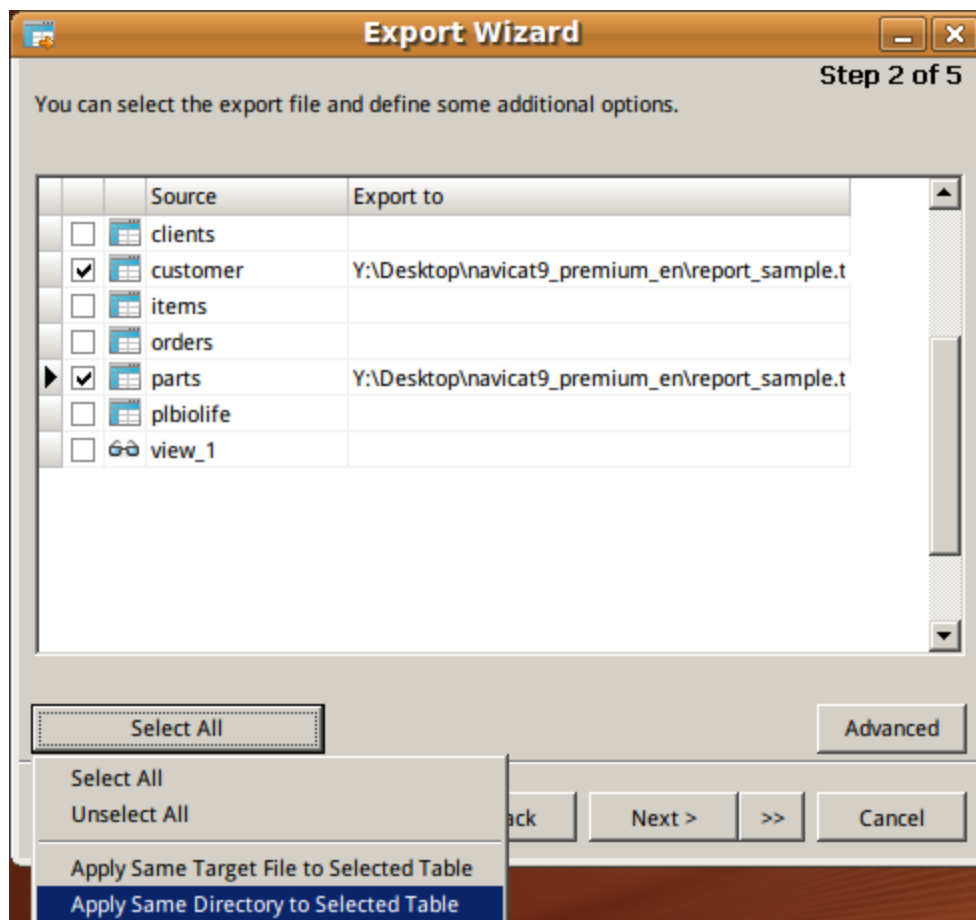
Note: Navicat Essentials only supports exporting to TXT, CSV, HTML and XML file.



Setting Destination File Name and Encoding (Step 2)

Set name for the result file. The file name extension in the **Export to** text box changes according to the selected table type in step 1.

Note: For exporting query result, please ensure that you have saved the query before running the Export Wizard. Otherwise, no source table displayed in here.



Select All

You can select/unselect all exported tables by simply right-click and select **Select All** or **Unselect All** from the popup menu or from **Select All** button for quick mapping.

If you are exporting selected tables into the same target file, you can just simply right-click and select **Apply Same Target File to Selected Table** from the popup menu or from **Select All** button for quick mapping.

If you are exporting selected tables into the same directory, you can just simply right-click and select **Apply Same Directory to Selected Table** from the popup menu or from **Select All** button for quick mapping.

Advanced

Encoding

Select the encoding for the exported file.

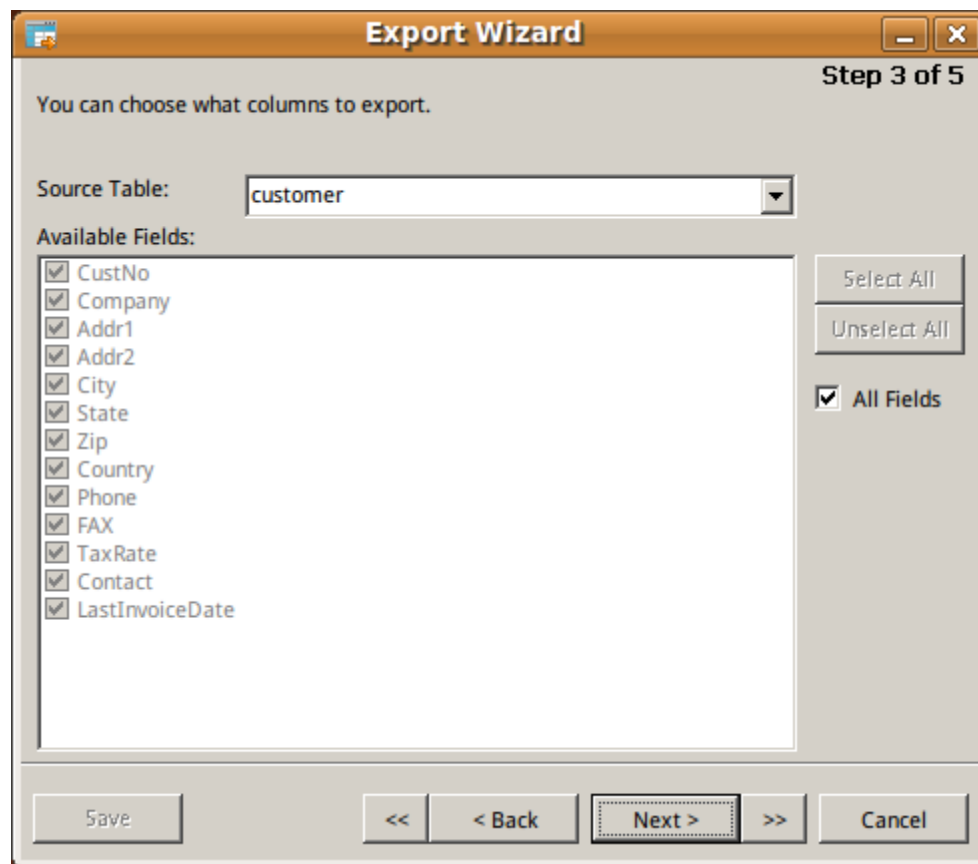
Add timestamp

Checks this option if you want your file name specifies the timestamp of the export is run. Select the date/time format from the drop-down list.

Selecting Fields for Export (Step 3)

Select table fields for export. All the fields are selected in the **Available Fields** list by default. If you want to omit some fields to be exported, just simply uncheck the box **All Fields** first and then uncheck those fields in the Available Fields list.

Note: For exporting query result, the wizard will skip this step.



Setting Data Format (Step 4)

You are allowed to customize formats applied to exported data.

Include column titles

Field names will be included into the exported file if this option is on.

Append

Append records to the existing file. If you select **Apply Same Target File to Selected Table** option for multiple tables in step 2, check this option to append the records.

Continue on error

Ignores errors that are encountered during the export process.

Use Attributes Format in XML (apply on XML format only)

Attributes Format
<pre><RECORDS> <RECORD OrderNo="1003" ItemNo="1" PartNo="1313" Qty="5" Discount="0"></RECORD> <RECORD OrderNo="1004" ItemNo="1" PartNo="1313" Qty="10" Discount="50"></RECORD> </RECORDS></pre>
Non-Attributes Format
<pre><RECORDS> <RECORD> <OrderNo>1003</OrderNo> <ItemNo>1</ItemNo> <PartNo>1313</PartNo> <Qty>5</Qty> <Discount>0</Discount> </RECORD> <RECORD> <OrderNo>1004</OrderNo> <ItemNo>1</ItemNo> <PartNo>1313</PartNo> <Qty>10</Qty> <Discount>50</Discount> </RECORD></pre>

</RECORDS>

Hint: Only related options will be enabled according to the selected table type in step 1.



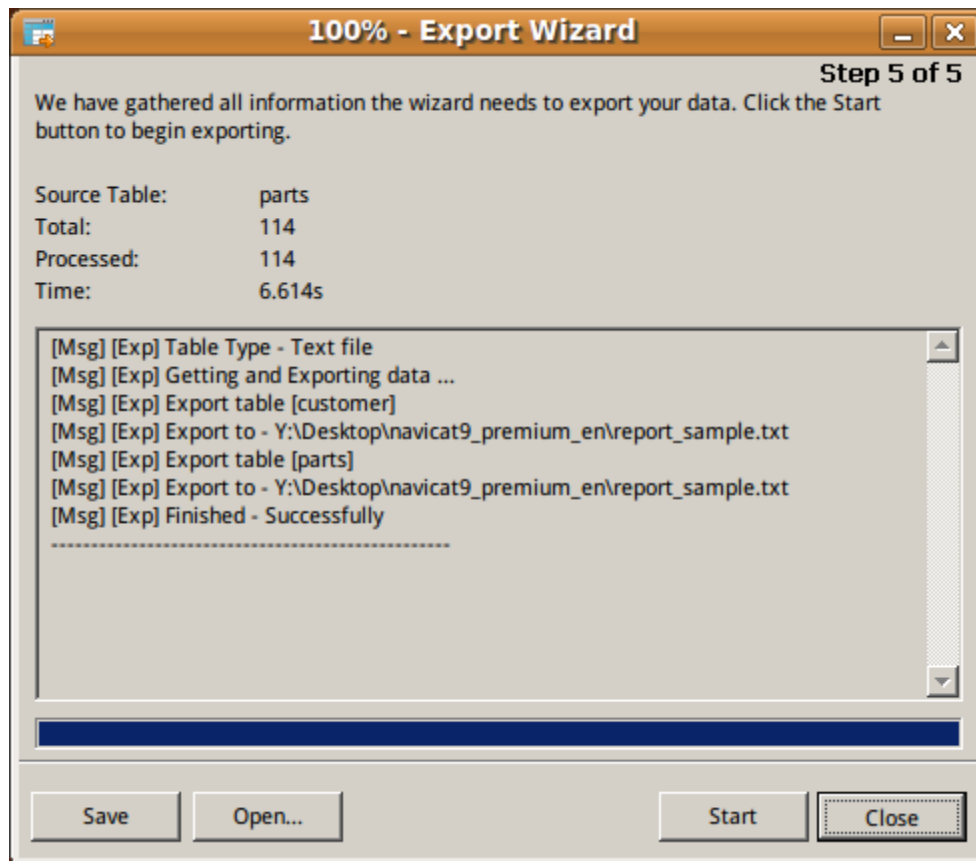
Saving and Confirming Export (Step 5)

Click **Start** button to start the export process.

Hint: Click **Save** button to save your settings as a profile for setting schedule.

You can view the running process indicating success or failure. These messages are saved in file - LogExport.txt.

Click the **Open** button to open the log file.





Data Transfer (Available only in Full Version)

Navicat allows you to transfer tables/views/functions/sequences/events from one database/schema to another database/schema, or to a sql file. The target database/schema can be on the same server as the source database/schema or on another server. It also allows you to save a profile for easy retrieval and running of data transfer between databases/schemas. You can also invoke data transfer from the command line, which makes it possible to schedule data transfer between databases/schemas. You can save your settings as a profile for setting schedule.



Simply open the data transfer and use the data transfer toolbar, which allows you to create, save and delete the data transfer.


Create Data Transfer

To create a new data transfer

- Select **Tools** ->  **Data Transfer...** from the main menu or just select  **New** from the toolbar above.
- Edit data transfer properties on the appropriate tabs.


To create a new data transfer with modification as one of the existing data transfer profiles

- Select **Tools** ->  **Data Transfer...** from the main menu
- Select the data transfer for modifying from the drop-down list.
- Modify data transfer properties on the appropriate tabs.
- Click  **Save As.**

Hint: To create new data transfer, you can also right-click the Database node in the navigation pane and select the  **Data Transfer...** from the popup menu.

Edit Data Transfer

To edit the existing data transfer

- Select **Tools** ->  **Data Transfer...** from the main menu.
- Select the data transfer for modifying from the drop-down list.
- Modify data transfer properties on the appropriate tabs.

Run Data Transfer

To run a data transfer



- Create a new data transfer/open the existing one.
- Click **Start**.

To run a saved data transfer profile from the command line

- Create and save the data transfer profile.
- Start Navicat from command line, type the command (see [Command](#) for details)

Delete Data Transfer

To delete a data transfer

- Select **Tools** ->  **Data Transfer...** from the main menu.
- Select the data transfer from the drop-down list.
- Click the  **Delete** from the toolbar.
- Confirm deleting in the dialog window.

General Settings for Data Transfer

The following instruction guides you through the process of setting up a data transfer. Customize options according to your needs.

Source

Defines connection, database and schema for the source.

All the objects are selected in the **Database Objects** list by default. If you do not want some objects to be transferred, just simply uncheck them.

With this option is on, only the checked objects will be transferred. However, if you add any new objects in the source database/schema after you create your data transfer profile, the newly added objects will not be transferred unless you manually modify the **Database Objects** list.

Chooses this option if you wish all the objects being transferred to the target database/schema, all newly added objects will also be transferred without amending the data transfer profile.

Target

Connection

Transfers your selected objects directly to the other database/schema. Chooses the connection and database/schema you wish to transfer to.

File

Transfers your selected objects directly to a text file. You can select different **SQL Format** and **Encoding** for the file.

Advanced Settings for Same Server Type Data Transfer

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Include indexes

Includes indexes in the table with this option is on.

Include foreign key constraints

Includes foreign keys in the table with this option is on.

Include engine/table type (Available only for MySQL)

Includes table type with this option is on.

Include character set (Available only for MySQL)

Includes character set in the table with this option is on.

Include auto increment (Available only for MySQL and SQLite)

Includes auto increment in the table with this option is on.

Include other table options (Available only for MySQL)

Includes other options in the table with this option is on.

Include unique constraints (Available only for Oracle, PostgreSQL and SQLite)

Includes uniques in the table with this option is on.

Include rules (Available only for PostgreSQL)

Includes rules in the table with this option is on.

Include check constraints (Available only for Oracle, PostgreSQL and SQLite)

Includes checks in the table with this option is on.

Include triggers

Includes triggers in the table with this option is on.

Include excludes (Available only for PostgreSQL)

Includes exclusion constraints in the table with this option is on.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Lock target tables (Available only for MySQL and PostgreSQL)

Locks the tables in the target database/schema during the data transfer process.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements (Available only for MySQL, Oracle, PostgreSQL and SQLite)

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('1', 'Peter McKindsy', '23');
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('2', 'Johnson Ryne', '56');
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('0', 'katherine', '23');
```

Use extended insert statements (Available only for MySQL)

Inserts records using extended insert syntax.

Example:

```
INSERT INTO `users` VALUES ('1', 'Peter McKindsy', '23'), ('2', 'Johnson Ryne', '56'), ('0', 'Katherine', '23');
```

Use delayed insert statements (Available only for MySQL)

Inserts records using *DELAYED* insert SQL statements.

Example:

```
INSERT DELAYED INTO `users` VALUES ('1', 'Peter McKindsy', '23');
INSERT DELAYED INTO `users` VALUES ('2', 'Johnson Ryne', '56');
INSERT DELAYED INTO `users` VALUES ('0', 'katherine', '23');
```

Run multiple insert statements (Available only for PostgreSQL)

Check this option if you want to run multiple insert statements in each execution, which will make the data transfer process faster.

Use hexadecimal format for BLOB (Available only for MySQL, PostgreSQL and SQLite)

Inserts BLOB data as hexadecimal format.

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Lock source tables (Available only for MySQL, Oracle and PostgreSQL)

Locks the tables in the source database so that any update on the table is not allowed once the data transfer is triggered off.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Create target database/schema if not exist (Available only for MySQL, Oracle and PostgreSQL)

Creates a new database/schema if the database/schema specified in target server does not exist.

Use DDL from SHOW CREATE TABLE (Available only for MySQL)

If this option is on, DDL will be used from show create table.

Use DDL from sqlite_master (Available only for SQLite)

If this option is on, DDL will be used from the *SQLITE_MASTER* table.

Advanced Settings for Cross Server Data Transfer (Available only in Navicat Premium)

Navicat Premium supports transferring data across different server types, e.g. from MySQL to Oracle. The Data Transfer process can transfer tables to the target. While the target server is MySQL or SQLite, the process can transfer tables with primary key constraints. The following part shows the settings for different server types.

- [Data transfer from MySQL to Oracle](#)
- [Data transfer from MySQL to PostgreSQL](#)
- [Data transfer from MySQL to SQLite](#)
- [Data transfer from Oracle to MySQL](#)
- [Data transfer from Oracle to PostgreSQL](#)
- [Data transfer from Oracle to SQLite](#)
- [Data transfer from PostgreSQL to MySQL](#)
- [Data transfer from PostgreSQL to Oracle](#)
- [Data transfer from PostgreSQL to SQLite](#)
- [Data transfer from SQLite to MySQL](#)
- [Data transfer from SQLite to Oracle](#)
- [Data transfer from SQLite to PostgreSQL](#)

Advanced Settings for Transferring from MySQL to Oracle

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('0',  
'katherine', '23');
```

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Lock source tables

Locks the tables in the source database so that any update on the table is not allowed once the data transfer is triggered off.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Create target database/schema if not exist

Creates a new database/schema if the database/schema specified in target server does not exist.

Advanced Settings for Transferring from MySQL to PostgreSQL

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Lock target tables

Locks the tables in the target database/schema during the data transfer process.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('0',  
'katherine', '23');
```

Run multiple insert statements

Check this option if you want to run multiple insert statements in each execution, which will make the data transfer process faster.

Use hexadecimal format for BLOB

Inserts BLOB data as hexadecimal format.

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Lock source tables

Locks the tables in the source database so that any update on the table is not allowed once the data transfer is triggered off.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Create target database/schema if not exist

Creates a new database/schema if the database/schema specified in target server does not exist.

Advanced Settings for Transferring from MySQL to SQLite

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (` ID Number`, ` User Name`, ` User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (` ID Number`, ` User Name`, ` User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (` ID Number`, ` User Name`, ` User Age`) VALUES ('0',  
'katherine', '23');
```

Use hexadecimal format for BLOB

Inserts BLOB data as hexadecimal format.

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Advanced Settings for Transferring from Oracle to MySQL

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Lock target tables

Locks the tables in the target database/schema during the data transfer process.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('0',  
'katherine', '23');
```

Use extended insert statements

Inserts records using extended insert syntax.

Example:

```
INSERT INTO `users` VALUES ('1', 'Peter McKindsy', '23'), ('2', 'Johnson Ryne',  
'56'), ('0', 'Katherine', '23');
```

Use delayed insert statements

Inserts records using *DELAYED* insert SQL statements.

Example:

```
INSERT DELAYED INTO `users` VALUES ('1', 'Peter McKindsy', '23');  
INSERT DELAYED INTO `users` VALUES ('2', 'Johnson Ryne', '56');  
INSERT DELAYED INTO `users` VALUES ('0', 'katherine', '23');
```

Use hexadecimal format for BLOB

Inserts BLOB data as hexadecimal format.

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Lock source tables

Locks the tables in the source database so that any update on the table is not allowed once the data transfer is triggered off.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Create target database/schema if not exist

Creates a new database/schema if the database/schema specified in target server does not exist.

Advanced Settings for Transferring from Oracle to PostgreSQL

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Lock target tables

Locks the tables in the target database/schema during the data transfer process.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('0',  
'katherine', '23');
```

Run multiple insert statements

Check this option if you want to run multiple insert statements in each execution, which will make the data transfer process faster.

Use hexadecimal format for BLOB

Inserts BLOB data as hexadecimal format.

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Lock source tables

Locks the tables in the source database so that any update on the table is not allowed once the data transfer is triggered off.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Create target database/schema if not exist

Creates a new database/schema if the database/schema specified in target server does not exist.

Advanced Settings for Transferring from Oracle to SQLite

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (` ID Number`, ` User Name`, ` User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (` ID Number`, ` User Name`, ` User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (` ID Number`, ` User Name`, ` User Age`) VALUES ('0',  
'katherine', '23');
```

Use hexadecimal format for BLOB

Inserts BLOB data as hexadecimal format.

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Advanced Settings for Transferring from PostgreSQL to MySQL

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Lock target tables

Locks the tables in the target database/schema during the data transfer process.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('0',  
'katherine', '23');
```

Use extended insert statements

Inserts records using extended insert syntax.

Example:

```
INSERT INTO `users` VALUES ('1', 'Peter McKindsy', '23'), ('2', 'Johnson Ryne',  
'56'), ('0', 'Katherine', '23');
```

Use delayed insert statements

Inserts records using *DELAYED* insert SQL statements.

Example:

```
INSERT DELAYED INTO `users` VALUES ('1', 'Peter McKindsy', '23');  
INSERT DELAYED INTO `users` VALUES ('2', 'Johnson Ryne', '56');  
INSERT DELAYED INTO `users` VALUES ('0', 'katherine', '23');
```

Use hexadecimal format for BLOB

Inserts BLOB data as hexadecimal format.

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Lock source tables

Locks the tables in the source database so that any update on the table is not allowed once the data transfer is triggered off.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Create target database/schema if not exist

Creates a new database/schema if the database/schema specified in target server does not exist.

Advanced Settings for Transferring from PostgreSQL to Oracle

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (` ID Number`, ` User Name`, ` User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (` ID Number`, ` User Name`, ` User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (` ID Number`, ` User Name`, ` User Age`) VALUES ('0',  
'katherine', '23');
```

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Lock source tables

Locks the tables in the source database so that any update on the table is not allowed once the data transfer is triggered off.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Create target database/schema if not exist

Creates a new database/schema if the database/schema specified in target server does not exist.

Advanced Settings for Transferring from PostgreSQL to SQLite

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('0',  
'katherine', '23');
```

Use hexadecimal format for BLOB

Inserts BLOB data as hexadecimal format.

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Advanced Settings for Transferring from SQLite to MySQL

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Lock target tables

Locks the tables in the target database/schema during the data transfer process.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('0',  
'katherine', '23');
```

Use extended insert statements

Inserts records using extended insert syntax.

Example:

```
INSERT INTO `users` VALUES ('1', 'Peter McKindsy', '23'), ('2', 'Johnson Ryne',  
'56'), ('0', 'Katherine', '23');
```

Use delayed insert statements

Inserts records using *DELAYED* insert SQL statements.

Example:

```
INSERT DELAYED INTO `users` VALUES ('1', 'Peter McKindsy', '23');  
INSERT DELAYED INTO `users` VALUES ('2', 'Johnson Ryne', '56');  
INSERT DELAYED INTO `users` VALUES ('0', 'katherine', '23');
```

Use hexadecimal format for BLOB

Inserts BLOB data as hexadecimal format.

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Lock source tables

Locks the tables in the source database so that any update on the table is not allowed once the data transfer is triggered off.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Create target database/schema if not exist

Creates a new database/schema if the database/schema specified in target server does not exist.

Advanced Settings for Transferring from SQLite to Oracle

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('0',  
'katherine', '23');
```

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Lock source tables

Locks the tables in the source database so that any update on the table is not allowed once the data transfer is triggered off.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Create target database/schema if not exist

Creates a new database/schema if the database/schema specified in target server does not exist.

Advanced Settings for Transferring from SQLite to PostgreSQL

Table Options

Create tables

Creates tables in the target database with this option is on.

Supposes this option is unchecked and tables already exist in the target database, then all data will be appended to the destination tables.

Record Options

Insert records

Check this option if you require all records to be transferred to the destination database/schema.

Lock target tables

Locks the tables in the target database/schema during the data transfer process.

Use transaction

Check this option if you use transaction during the data transfer process.

Use complete insert statements

Inserts records using complete insert syntax.

Example:

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('1',  
'Peter McKindsy', '23');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('2',  
'Johnson Ryne', '56');
```

```
INSERT INTO `users` (`ID Number`, `User Name`, `User Age`) VALUES ('0',  
'katherine', '23');
```

Run multiple insert statements

Check this option if you want to run multiple insert statements in each execution, which will make the data transfer process faster.

Use hexadecimal format for BLOB

Inserts BLOB data as hexadecimal format.

Other Options

Continue on error

Ignores errors that are encountered during the transfer process.

Lock source tables

Locks the tables in the source database so that any update on the table is not allowed once the data transfer is triggered off.

Drop target objects before create

Check this option if objects already exist in the target database/schema, the existing objects will be deleted once the data transfer starts.

Create target database/schema if not exist

Creates a new database/schema if the database/schema specified in target server does not exist.

Data Transfer Message Log

The **Message Log** tab allows you to view the running process indicating success or failure.

Example:

```
[Msg] [Dtf] DataTransfer started
[Msg] [Dtf] Getting tables properties
[Msg] [Dtf] Getting tables fields
[Msg] [Dtf] Getting tables constraints
[Msg] [Dtf] Getting tables indexes
[Msg] [Dtf] Getting total records count
[Msg] [Dtf] Drop table: items
[Msg] [Dtf] Create table: items
[Msg] [Dtf] Get table data for: items
[Msg] [Dtf] Start transfer to Target Server: items
[Msg] [Dtf] Begin transaction on target server
[Msg] [Dtf] End transaction on target server
[Msg] [Dtf] Drop view: view_for_mysql1
[Msg] [Dtf] Create view: view_for_mysql1
[Msg] [Dtf] Drop procedure: procedure1
[Msg] [Dtf] Create procedure: procedure1
[Msg] [Dtf] Finished - Successfully
```

Data Synchronization (Available only in Full Version)

Navicat allows you to transfer data from one database/schema to another database/schema with detailed analytical process. In other words, Navicat provides the ability for data in different databases/schemas to be kept up-to-date so that each repository contains the same information. The target database/schema can be on the same server as the source database/schema or on another server. You are not only authorized to rollback the transferring process, but also insert, delete and update records to the destination. You can also save your settings as a data synchronization profile for setting schedule. Same as Data Transfer, Data Synchronization can be invoked from the command line.

Note:



For Oracle Database:

- BLOB, CLOB, NCLOB, LONG and LONG RAW data are skipped during the data synchronization process.
- TIMESTAMP primary key cannot synchronize (insert, update) with Database Link to 9i server.
- RAW primary key cannot synchronize (insert, update, delete) with Database Link to any server, without error.



Just simply open the data synchronization and use the data synchronization toolbar, allowing you to create, save and delete the data synchronization.

Create Data Synchronization

To create a new data synchronization


- Select **Tools** ->  **Data Synchronization...** from the main menu or just select  **New** from the toolbar above.
- Edit data synchronization properties on the appropriate tabs.

To create a new data synchronization with modification as one of the existing data synchronization profiles

- Select **Tools** ->  **Data Synchronization...** from the main menu
- Select the data synchronization for modifying from the drop-down list.
- Modify data synchronization properties on the appropriate tabs.
- Click  **Save As**.

Edit Data Synchronization

To edit the existing data synchronization

- Select **Tools** ->  **Data Synchronization...** from the main menu.
- Select the data synchronization for modifying from the drop-down list.
- Modify data synchronization properties on the appropriate tabs.

Preview Data Synchronization

To preview a data synchronization before execution

- Create a new data synchronization/open the existing one.
- Click **Preview**.

Run Data Synchronization

To run a data synchronization



- Create a new data synchronization/open the existing one.
- Click **Start**.

To run a saved data synchronization profile from the command line

- Create and save the data synchronization profile.
- Start Navicat from command line, type the command (see Command for details)

Delete Data Synchronization

To delete a data synchronization

- Select **Tools** ->  **Data Synchronization...** from the main menu.
- Select the data synchronization for dropping from the drop-down list.
- Click the  **Delete** from the toolbar.
- Confirm deleting in the dialog window.

General Settings for Data Synchronization

The following instruction guides you through the process of setting up a data synchronization. Customize options according to your needs.

Note: All tables must contain primary key(s) and all table structures must be identical between the source and target (see Structure Synchronization).

Source

Defines connection, database and schema for the source.

Target

Defines connection, database and schema for the target.

Note: For Oracle server, you need to create Public/Private Database Link to the target Oracle server database before.

Source Table/Target Table

Only tables which contain identical table names between the source and target are mapped in the list by default. If you do not want some tables to be synchronized, simply disable them manually from the drop-down list.

Hint: You can preview the outcome before execution.

Advanced Settings for Data Synchronization

Use Transaction

Rollbacks all data when error occurs.

Show synchronization detail

Check this option if you want to list the details process under the message log tab during the synchronization.

Note: The process will be faster if this option is unchecked.

Insert records, Delete records, Update records

Check these options to performing such actions to the target when data are synchronized.

Data Synchronization Message Log

The **Message Log** tab allows you to view the running process indicating success or failure. These messages are saved in file - LogSynchronize.txt.

Example:

```
[Msg] [Dsy] Syn Start...  
[Msg] [Dsy] Synchronize table: localhost.report_sample.clients ->  
remote.report_sample.clients  
[Msg] [Dsy] total 5, equal 5, insert 0, update 0, delete 0  
[Msg] [Dsy] Time elapsed: 0.031s  
[Msg] [Dsy] Syn Success  
[Msg] [Dsy] Finished - Successfully
```



Structure Synchronization (Available only in Full version & only for MySQL, Oracle and PostgreSQL)

Navicat allows you to compare and modify the table structures with detailed analytical process. In other words, Navicat compares tables between two databases/schemas and states the differential in structure. The target database/schema can be on the same server as the source database/schema or on another server.



Open the structure synchronization and use the structure synchronization toolbar, allowing you to create, save and delete the structure synchronization.

Create Structure Synchronization

To create a new structure synchronization


- Select **Tools** ->  **Structure Synchronization...** from the main menu or just select  **New** from the toolbar above.
- Edit structure synchronization properties on the General tab.

To create a new structure synchronization with modification as one of the existing structure synchronization profiles

- Select **Tools** ->  **Structure Synchronization...** from the main menu
- Select the structure synchronization for modifying from the drop-down list.
- Modify structure synchronization properties on the General tab.
- Click  **Save As**.

Edit Structure Synchronization

To edit the existing structure synchronization

- Select **Tools** ->  **Structure Synchronization...** from the main menu.
- Select the structure synchronization for modifying from the drop-down list.
- Modify structure synchronization properties on the General tab.



Run Structure Synchronization

To run a structure synchronization

- Create a new structure synchronization/open the existing one.
- Click **Compare** to generate a set of scripts which shows the differentiation between the databases/schemas.
- Select the scripts you want to run.
- Click **Run Query**.

Delete Structure Synchronization

To delete a structure synchronization

- Select **Tools** ->  **Structure Synchronization...** from the main menu.
- Select the structure synchronization for dropping from the drop-down list.
- Click the  **Delete** from the toolbar.
- Confirm deleting in the dialog window.

General Settings for MySQL Structure Synchronization

The following instruction guides you through the process of setting up a structure synchronization. Customize options according to your needs.

Source

Defines connection and database for the source.

Target

Defines connection and database for the target.

Compare Options

Compare Tables

Check this option if you want to compare tables between the source and target databases. Select/unselect the seven options below:

Compare Primary Keys

Check this option if you want to compare table primary keys.

Compare Foreign Keys

Check this option if you want to compare table foreign keys.

Compare Indexes

Check this option if you want to compare indexes.

Compare Triggers

Check this option if you want to compare triggers.

Compare Character Set

Check this option if you want to compare character set of the tables.

Compare Auto Increment Value

Check this option if you want to compare table auto increment values.

Compare Partitions

Check this option if you want to compare table partitions.

Compare Views

Check this option if you want to compare views.

Compare Functions

Check this option if you want to compare functions.

Compare Events

Check this option if you want to compare events.

Execution Options

SQL for objects to be created

Check this option to include all related SQL statements if new objects will be created in the target database.

SQL for objects to be changed

Check this option to include all related SQL statements if objects will be changed in the target database.

SQL for objects to be dropped

Check this option to include all related SQL statements if objects will be dropped from the target database.

Compare after execution

Compares tables after the synchronization is executed.

Continue on error

Ignores errors that are encountered during the synchronization process.

General Settings for Oracle Structure Synchronization

The following instruction guides you through the process of setting up a structure synchronization. Customize options according to your needs.

Source

Defines connection and schema for the source.

Target

Defines connection and schema for the target.

Compare Options

Compare Tables

Check this option if you want to compare tables between the source and target schemas. Select/unselect the four options below:

Compare Primary Keys

Check this option if you want to compare table primary keys.

Compare Foreign Keys

Check this option if you want to compare table foreign keys.

Compare Uniques

Check this option if you want to compare uniques.

Compare Checks

Check this option if you want to compare checks.

Compare Views

Check this option if you want to compare views.

Compare Functions

Check this option if you want to compare functions.

Compare Indexes

Check this option if you want to compare indexes.

Compare Sequences

Check this option if you want to compare sequences.

Compare Triggers

Check this option if you want to compare triggers.

Compare Tablespace and Physical Attributes

Check this option if you want to compare tablespace and physical attributes.

Execution Options

SQL for objects to be created

Check this option to include all related SQL statements if new objects will be created in the target schema.

SQL for objects to be changed

Check this option to include all related SQL statements if objects will be changed in the target schema.

SQL for objects to be dropped

Check this option to include all related SQL statements if objects will be dropped from the target schema.

Drop with CASCADE

Check this option if you want to cascade to drop the dependent objects.

Compare after execution

Compares tables after the synchronization is executed.

Continue on error

Ignores errors that are encountered during the synchronization process.

General Settings for PostgreSQL Structure Synchronization

The following instruction guides you through the process of setting up a structure synchronization. Customize options according to your needs.

Source

Defines connection, database and schema for the source.

Target

Defines connection, database and schema for the target.

Compare Options

Compare Tables

Check this option if you want to compare tables between the source and target schemas. Select/unselect the five options below:

Compare Primary Keys

Check this option if you want to compare table primary keys.

Compare Foreign Keys

Check this option if you want to compare table foreign keys.

Compare Uniques

Check this option if you want to compare uniques.

Compare Checks

Check this option if you want to compare checks.

Compare Excludes

Check this option if you want to compare exclude constraints.

Compare Views

Check this option if you want to compare views.

Compare Functions

Check this option if you want to compare functions.

Compare Indexes

Check this option if you want to compare indexes.

Compare Sequences

Check this option if you want to compare sequences.

Compare Triggers

Check this option if you want to compare triggers.

Compare Rules

Check this option if you want to compare rules.

Execution Options

SQL for objects to be created

Check this option to include all related SQL statements if new objects will be created in the target database and schema.

SQL for objects to be changed

Check this option to include all related SQL statements if objects will be changed in the target database and schema.

SQL for objects to be dropped

Check this option to include all related SQL statements if objects will be dropped from the target database and schema.

Drop with CASCADE

Check this option if you want to cascade to drop the dependent objects.

Compare after execution

Compares tables after the synchronization is executed.

Continue on error

Ignores errors that are encountered during the synchronization process.

Create inheriting parent

Creates tables of inheriting parents during the synchronization process.

Structure Synchronization Result

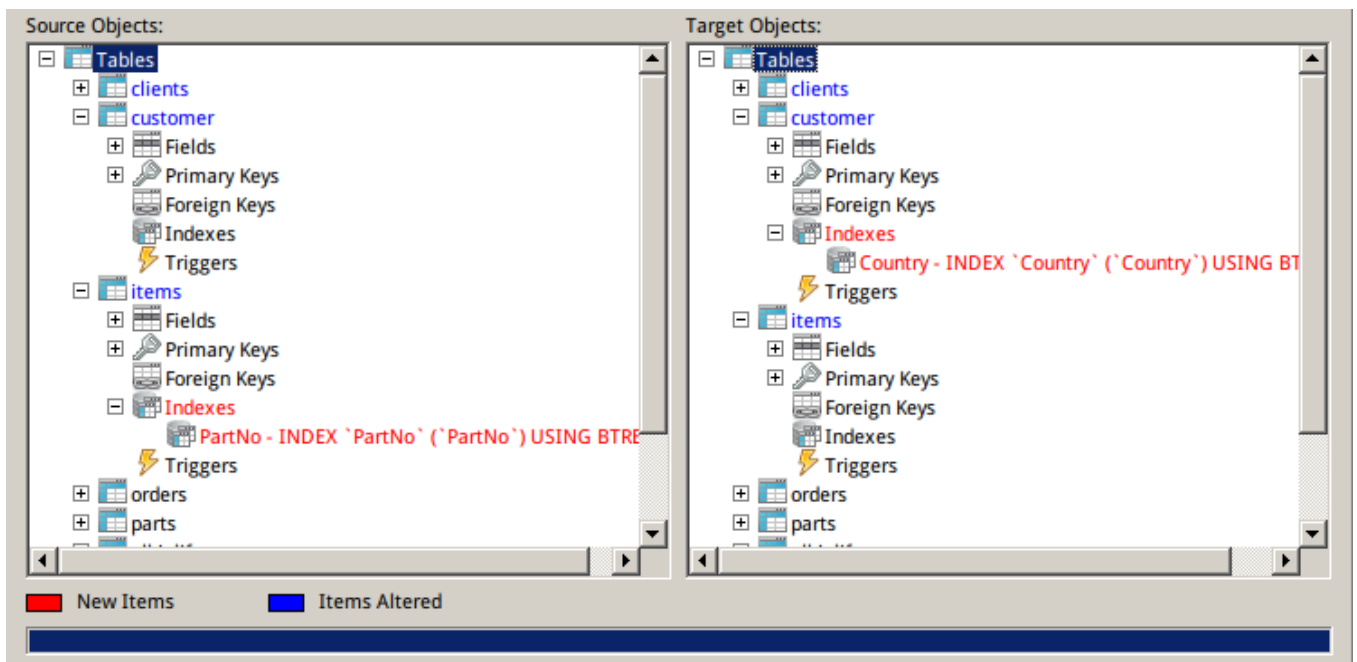
Source Objects/Target Objects

The tree view shows the differentiation between the source database/schema and target database/schema after the computation of the structure synchronization, providing with the detailed SQL statements shown in the **Queries for Modification** list.

The red item represents the non-existence for the other database/schema.

The blue item represents the existence for the other database/schema, but different definition detected.

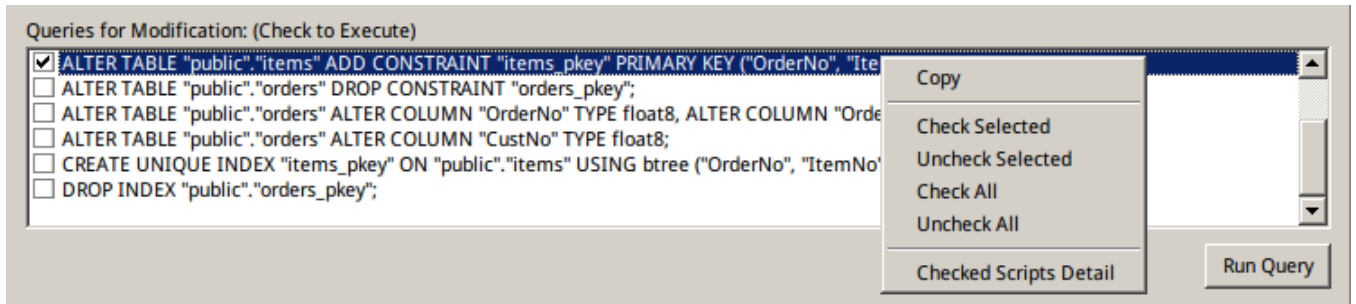
You are allowed to edit the object structure manually, just simply right-click the object in the tree view and click **Edit** to open the relevant designer.



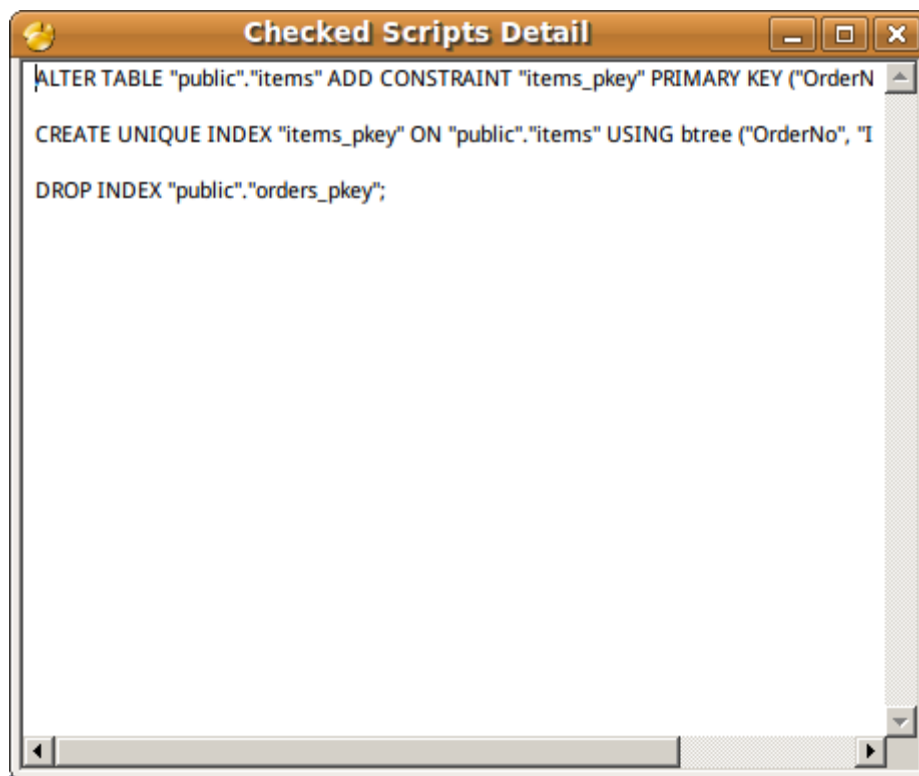
Queries for Modification

All the scripts are applied to the target database/schema and they are being unchecked in the **Queries for Modification** list by default. Just simply select the scripts you want to execute.

You can highlight multiple lines of scripts, and then right-click to show the pop-up menu. Choose **Copy** can copy the selected queries to preferred editor. Choose **Check Selected**, **Uncheck Selected**, **Check All** or **Uncheck All** so as to perform selection/unselection of scripts at one go.



To view the full SQL statements you selected, right-click the **Queries for Modification** list and select **Checked Scripts Detail**.



Press **Run Query** to execute the selected query.

Structure Synchronization Message Log

The **Message Log** tab allows you to view the running process indicating success or failure.


Example:

```
[Msg] Starting Synchronization  
[Msg] Source Server : Localhost  
[Msg] Source Database : report_sample  
[Msg] Target Server : Localhost  
[Msg] Target Database : report_backup  
[Msg] Executing - ALTER Table 'clients' MODIFY COLUMN 'RecordID' int(10) NOT NULL  
auto_increment;  
[Msg] Completed  
[Msg] Synchronization Completed
```

Backup/Restore (Available only in Full version & only for MySQL, PostgreSQL and SQLite)



A secure and reliable server is closely related to performing regular backups, as failures will probably occur sometimes - caused by attacks, hardware failure, human error, power outages, etc.


Navicat allows you to backup/restore all tables and records, views and functions for your database. Backup can be invoked from the command line, which makes it possible to schedule backups between databases.

Just simply click  to open an object pane for **Backup**. A right-click displays the popup menu or using the backup object pane toolbar, allowing you to create new, restore, extract and delete the backup.

Create Backup

To create a new backup

- Select anywhere on the object pane.
- Click the  **New Backup** from the object pane toolbar.
or
- Right-click and select  **New Backup** from the popup menu.
- Edit backup properties on the appropriate tabs.
- Click **Start**.

Hint: To create new backup you can also right-click the Backups node of the navigation pane and select the  **New Backup** from the popup menu.

Edit Backup

To change the name of the backup

- Select the backup for editing in the navigation pane/object pane.
- Right-click and select the **Rename** from the popup menu.



Compress or Decompress Backup

To compress or decompress the backup

- Select the backup for compressing or decompressing in the navigation pane/object pane.
- Right-click and select the **Compress Backup** or **Decompress Backup** from the popup menu.



Delete Backup



To delete a backup

- Select the backup for deleting in the navigation pane/object pane.
- Right-click and select the  **Delete Backup** from the popup menu.
or
- Click the  **Delete Backup** from the object pane toolbar.
- Confirm deleting in the dialog window.




Restore Backup

To restore a backup to an existing database

- Open the database and select the existing backup.
- Click the  **Restore Backup** from the object pane toolbar or right-click and select  **Restore Backup** from the popup menu.
- Edit restore options on the appropriate tabs.
- Click **Start**.



Hint: To restore the backup you can also click the  **Restore Backup** from the object pane toolbar or right-click the Backup node of the navigation pane and select the  **Restore Backup** from the popup menu.

To restore a backup to a new database

- Create a new database (MySQL, PostgreSQL or SQLite) and click  to open an object pane for Backup.
- Click the  **Restore Backup** from the object pane toolbar or right-click anywhere on the object pane and select  **Restore Backup** from the popup menu.
- Browse the backup file.
- Edit restore options on the appropriate tabs.
- Click **Start**.

Extract SQL

To extract backup to sql file

- Select the backup for extracting in the navigation pane/object pane.
- Right-click and select the  **Extract SQL** from the popup menu.
or
- Click the  **Extract SQL** from the object pane toolbar.
- Edit extract SQL options on the appropriate tabs.
- Click **Start**.

Achieve Backup Information

To achieve a backup information (Name, Group Name and File Size, etc)

- Select the backup in the navigation pane/object pane.
- Right-click the selected backup and choose **Object Information** from the popup menu to view the Object Information.
or
- Choose View -> Object Information in the main menu.

Backup

Backup is the basic Navicat tool for performing regular backups.

- [General Settings for Backup](#)
- [Object Selection for Backup](#)
- [Advanced Settings for Backup](#)
- [Message Log](#)

Hint: Backup files are stored under Settings Save Path.

To run a backup from the command line

- Create and save the backup profile.
- Start Navicat from command line, type the command (see Command for details)

General Settings for Backup

Backup File Option

Comment

Allows you to enter the comment for the backup.

Object Selection for Backup

You are allowed to choose your preferable database objects, i.e. tables, views, functions, sequences, events, indexes and triggers you wish to backup.

Advanced Settings for Backup

Compressed

Check this option if you want to produce smaller backup size.

Hint: compressed (.psc), uncompressed (.psb).

Lock All Tables (Available only for MySQL and PostgreSQL)

Lock all objects while backup is being processed.

Use Single Transaction (InnoDB only) (Available only for MySQL)

If a table uses InnoDB storage engine, with this option is on, Navicat uses transaction before the backup process starts.

Use specify file name

Define your file name for backup. Otherwise, your backup file will be named as "**2007-05-10 17:38:20**" for example.

Backup Message Log

The **Message Log** tab allows you to view the running process indicating success or failure.

Example:

```
[Msg] [Bak] Starting backup...
[Msg] [Bak] Writing file header...
[Msg] [Bak] Writing structure header...
[Msg] [Bak] Writing schema dummy header...
[Msg] [Bak] Writing table clients header...
[Msg] [Bak] Writing table customer header...
[Msg] [Bak] Writing table items header...
[Msg] [Bak] Writing table orders header...
[Msg] [Bak] Writing table parts header...
[Msg] [Bak] Writing table plbiolife header...
[Msg] [Bak] Writing view view_mysql1 header...
[Msg] [Bak] Prepare writing data...
[Msg] [Bak] Writing data...
[Msg] [Bak] Writing table clients data...
[Msg] [Bak] Writing table customer data...
[Msg] [Bak] Writing table items data...
[Msg] [Bak] Writing table orders data...
[Msg] [Bak] Writing table parts data...
[Msg] [Bak] Writing table plbiolife data...
[Msg] [Bak] Compressing backup file...
[Msg] [Bak] Finished - Successfully
```

Restore

Navicat provides a useful tool for restoring your backup while hardware failure occurs.

- [General Settings for Restore](#)
- [Object Selection for Restore](#)
- [Advanced Settings for Restore](#)
- [Message Log](#)

Note: You must have Create, Drop and Insert Privileges (MySQL or PostgreSQL) to run the restore.

Hint: Restore function will firstly drop the selected objects of the database, then recreate the new objects according to your backup. Finally, inserting the data.

General Settings for Restore

Backup file information

Comment

Allows you to enter the comment for the restore.

Object Selection for Restore

You are allowed to choose your preferable database objects, i.e. tables, views, functions, sequences, events, indexes and triggers you wish to restore.

Advanced Settings for Restore

Server Options

Use Transaction

Rollbacks all data when error occurs.

Continue on error

Ignores errors that are encountered during the restore process.

Lock tables for write (Available only for MySQL and PostgreSQL)

Locks the tables to prevent user to modify tables during the restore process.

Use extended insert statements (Available only for MySQL)

Inserts records using extended insert syntax.

Example:

```
INSERT INTO `users` VALUES ('1', 'Peter McKindy', '23'), ('2', 'Johnson Ryne', '56'), ('0', 'Katherine', '23');
```

Run multiple queries in each execution (Available only for PostgreSQL)

Checks this option if you want to run multiple queries in each execution, which will make the restore process faster.

Object Options

Create tables

Creates tables during the restore process with this option is on.

Create records

Restores records during the restore process with this option is on, otherwise, only table structures will be restored.

Create indexes (Available only for PostgreSQL)

Creates indexes for the restored table with this option is on.

Create triggers (Available only for MySQL and PostgreSQL)

Creates triggers for the restored table with this option is on.

Overwrite existing tables

Overwrites if tables already exist in the database.

Overwrite existing views

Overwrites if views already exist in the database.

Overwrite existing functions (Available only for MySQL and PostgreSQL)

Overwrites if functions already exist in the database.

Overwrite existing events (Available only for MySQL)

Overwrites if events already exist in the database.

Overwrite existing sequences (Available only for PostgreSQL)

Overwrites if sequences already exist in the database.

Overwrite existing indexes (Available only for SQLite)

Overwrites if indexes already exist in the database.

Overwrite existing triggers (Available only for SQLite)

Overwrites if triggers already exist in the database.

Insert Auto Increment Values (Available only for SQLite)

Inserts auto increment values in the database.

Restore Message Log

The **Message Log** tab allows you to view the running process indicating success or failure.

Example:

```
[Msg] Decompressing...  
[Msg] Table Created: clients  
[Msg] Table Created: customer  
[Msg] Table Created: items  
[Msg] Table Created: orders  
[Msg] Table Created: parts  
[Msg] Table Created: plbiolife  
[Msg] Importing Data...  
[Msg] Table Restored: clients  
[Msg] Table Restored: customer  
[Msg] Table Restored: items  
[Msg] Table Restored: orders  
[Msg] Table Restored: parts  
[Msg] Table Restored: plbiolife  
[Msg] Finished successfully
```

Extract SQL


You are allowed to extract your backup into a SQL file. See Restore for details.

Example:

```
[Msg] Decompressing...
[Msg] Table DDL Extracted: clients
[Msg] Table DDL Extracted: customer
[Msg] Table DDL Extracted: items
[Msg] Table DDL Extracted: orders
[Msg] Table DDL Extracted: parts
[Msg] Table DDL Extracted: plbiolife
[Msg] Table Data Extracted: clients
[Msg] Table Data Extracted: customer
[Msg] Table Data Extracted: items
[Msg] Table Data Extracted: orders
[Msg] Table Data Extracted: parts
[Msg] Table Data Extracted: plbiolife
[Msg] Finished - Successfully
```



Batch Job/Schedule (Available only in Full Version)

Navicat allows you to create a batch job for setting schedule to execute at one interval. Batch job can be created for Query, Report printing, Backup, Data Transfer, Data Synchronization, Import and Export from MySQL, Oracle, PostgreSQL and SQLite. You can define a list of actions to be performed within one batch job, either run it manually or at the specified time/periodically.




Just simply click  to open an object pane for **Schedule**. A right-click displays the popup menu or using the schedule object pane toolbar, allowing you to create new, edit, open and delete the selected batch job/schedule.

Create Batch Job

To create a new batch job



- Select anywhere on the object pane.
- Click the  **New Batch Job** from the object pane toolbar.
or
- Right-click and select  **New Batch Job** from the popup menu.
- Edit batch job properties on the appropriate tabs.

To create a new batch job with modification as one of the existing batch jobs

- Select the batch job for modifying in object pane.
- Right-click and select the  **Design Batch Job** from the popup menu.
or
- Click the  **Design Batch Job** from the object pane toolbar.
- Modify batch job properties on the appropriate tabs.
- Click  **Save As**.

Edit Batch Job

To edit the existing batch job


- Select the batch job for editing in the object pane.
- Right-click and select the  **Design Batch Job** from the popup menu.
or
- Click the  **Design Batch Job** from the object pane toolbar.
- Edit batch job properties on the appropriate tabs.

To change the name of the batch job

- Select the batch job for editing in the object pane.
- Right-click and select the **Rename** from the popup menu.

Run Batch Job

To run a batch job



- Create a new batch job/open the existing one.
- Click  **Start**.

To run a saved batch job from the command line

- Create and save the batch job.
- Start Navicat from command line, type the command (see [Command](#) for details)

Delete Batch Job

To delete a batch job

- Select the batch job for deleting in the object pane.
- Right-click and select the  **Delete Batch Job** from the popup menu.
or
- Click the  **Delete Batch Job** from the object pane toolbar.
- Confirm deleting in the dialog window.



Convert Batch Job

To convert a batch job

- Right-click and select the **Batch Job Converter** from the popup menu in the object pane.
- Select the batch jobs.
- Set the convert options.
- Click **Start**.

Set Schedule



To set schedule to the batch job

- Create and save the batch job/open the existing one.
- Select the batch job in the object pane.
- Right-click and select the  **Set Task Schedule** from the popup menu.
or
- Click the  **Set Task Schedule** from the object pane toolbar.
- Set your schedule using Windows Scheduler.

Hint: LogCmd.txt stores all the operations executed, indicating success or failure during the schedule.

Delete Schedule

To delete a schedule

- Select the scheduled batch job in the object pane.
- Right-click and select the  **Delete Task Schedule** from the popup menu.
or
- Click the  **Delete Task Schedule** from the object pane toolbar.
- Confirm deleting in the dialog window.

Achieve Batch Job Information

To achieve a batch job information (Name, Group name, File and Create Time, etc)

- Select the batch job in the object pane.
- Right-click the selected batch job and choose **Object Information** from the popup menu to view the Object Information.
or
- Choose View -> Object Information in the main menu.

General Settings for Batch Job/Schedule

The following instruction guides you through the process of setting up a batch job/schedule. Customize options according to your needs.

Move the objects from the **Available Jobs** list to the **Selected Jobs** list using **Select../Unselect..** buttons, by double-clicking them. To delete the objects from the selected jobs list, remove them in the same way. You are allowed to run profiles from different servers in a single batch job/schedule.

You are allowed to group jobs into a procedure, running them in sequence, each starting the next. To rearrange the sequence of the jobs, select the **↑ Move Up/ ↓ Move Down** buttons.

Exported file or printed report can be added to the batch job as mail attachment. Simply select the job in Selected Jobs and click **🔗 Add Attachment** or **🔗 Remove Attachment** to add or remove the mail attachment. (To set up the mail sending, see Advanced Settings for Batch Job/Schedule.)

You are allowed to backup server/multiple servers, just simply select the servers from the left panel and move the **Backup Server xxx..** from the **Available Jobs** list to the **Selected Jobs** list.

To set schedule for running Data Transfer or Data Synchronization profile, choose **🕒 Navicat** at the top on the left panel.

Note: Please save the batch job before setting schedule.

<p>Note: Passwords must be saved in Connection Properties (MySQL, Oracle or PostgreSQL) before running your schedule.</p>	<h3>Connection Properties</h3>
	<div style="background-color: #f0f0f0; padding: 10px;"> <p>User Name: <input type="text" value="root"/></p> <p>Password: <input type="password" value="*****"/></p> <p><input checked="" type="checkbox"/> Save Password</p> </div>

Untitled - Batch Job *

File Edit Schedule Window Help

Start New Save Save As Set Task Schedule Delete Task Schedule

General Advanced Message Log

Navicat

- Server 5.1
- Server 5.5
- Server 8.4
- Server 9.0
- Oracle 10g
- Oracle 11g
- Oracle 9i
- SQLite 2
- SQLite 3
- main

Available Jobs	Type	Connection Type	Connection	Database
cross_data_transfer	DataTransfer	N/A	N/A	N/A
data_sync	DataSynchronize	MYSQL	N/A	N/A

Select Select All Unselect Unselect All Move Up Move Down Add Attachment

Selected Jobs	Type	Connection Type	Connection	Database
Backup Server SQLite 3	BackupServer	SQLITE	SQLite 3	N/A
cross_data_transfer	DataTransfer	N/A	N/A	N/A
data_sync	DataSynchronize	MYSQL	N/A	N/A
Backup public	Backup	PGSQL	Server 8.4	report_sample

Available Jobs: 2 Selected Jobs: 4

Advanced Settings for Batch Job/Schedule

Navicat allows you to generate and send personalized e-mails with results returned from a schedule. The resultset(s) can be emailed to multiple recipients.

Send Email

From

Specifies the e-mail address that people should use when sending e-mail to you at this account. For example, someone@navicat.com.

To, CC

Specifies the e-mail address of each recipient, separating them with a comma or a semicolon (;).

Host (SMTP Server)

Enters your Simple Mail Transfer Protocol (SMTP) server for outgoing messages.

Port

Enters the port number you connect to on your outgoing e-mail (SMTP) server. Default value is **25**.

Use Authentication

Check this option and enter required user name and password if your SMTP server requires authorization to send email.

Secure Connection

Specifies the connection to use TLS, SSL secure connection or not.

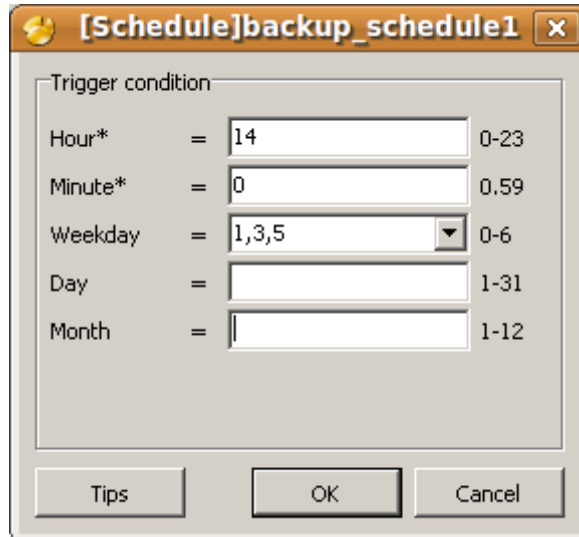
Send test mail

Navicat will send you a test mail indicating success or failure.

Setup Schedule

Schedule Setting Examples

Example 1 : The batch job will be executed at 2:00pm on every Monday, Wednesday and Friday.

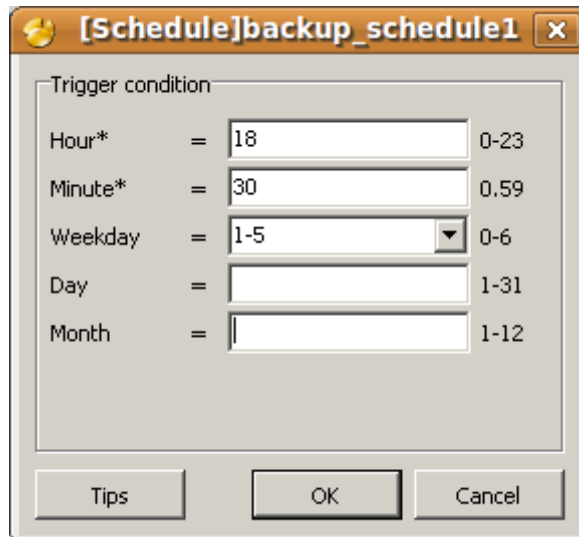


The screenshot shows a dialog box titled "[Schedule]backup_schedule1" with a close button (X) in the top right corner. The dialog contains a "Trigger condition" section with the following fields:

Hour*	=	14	0-23
Minute*	=	0	0-59
Weekday	=	1,3,5	0-6
Day	=		1-31
Month	=		1-12

At the bottom of the dialog are three buttons: "Tips", "OK", and "Cancel".

Example 2 : The batch job will be executed at 6:30pm every weekday.

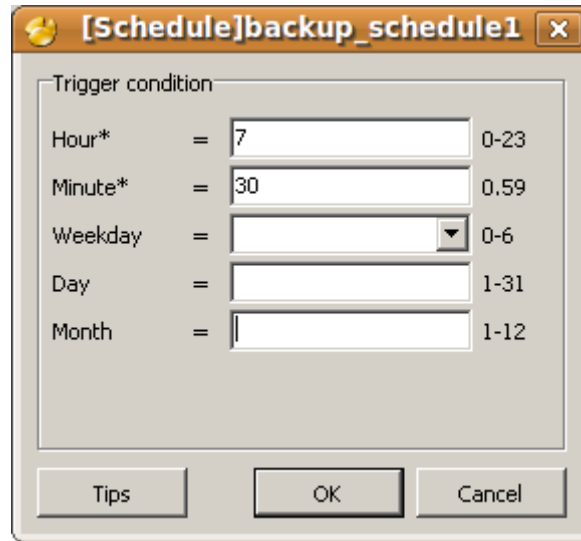


The screenshot shows a dialog box titled "[Schedule]backup_schedule1" with a close button (X) in the top right corner. The dialog contains a "Trigger condition" section with the following fields:

Hour*	=	18	0-23
Minute*	=	30	0-59
Weekday	=	1-5	0-6
Day	=		1-31
Month	=		1-12

At the bottom of the dialog are three buttons: "Tips", "OK", and "Cancel".

Example 3 : The batch job will be executed at 7:30am everyday.



Note:

- If a field is left without a value, then all the values will be used. For example, if the "weekday" field is empty, then the system will treat the field to be entered with "0, 1, 2, 3, 4, 5, 6".
- Use commas to separate values. For example, "0, 1, 3, 6"
- Use hyphen, without spaces to indicate values. For example, "0-4".

Remarks: The pattern follows a crontab entry's format.

Tips: What is crontab?

For commands that need to be executed repeatedly (e.g., hourly, daily, or weekly), you can use the crontab command. The crontab command creates a crontab file containing commands and instructions for the cron daemon to execute. You can use the crontab command with the following options:

crontab -a filename	Install filename as your crontab file. On many systems, this command is executed simply as crontab filename (i.e., without the -a option).
crontab -e	Edit your crontab file, or create one if it doesn't already exist.
crontab -l	Display your crontab file.

crontab -r	Remove your crontab file.
crontab -v	Display the last time you edited your crontab file. (This option is only available on a few systems.)
crontab -u user	Used in conjunction with other options, this option allows you to modify or view the crontab file of user. When available, only administrators can use this option.

Each entry in a crontab file consists of six fields, specifying in the following order:

minute(s) hour(s) day(s) month(s) weekday(s) command(s)

The fields are separated by spaces or tabs. The first five are integer patterns and the sixth is the command to execute. The following table briefly describes each of the fields:

Field	Value	Description
minute	0-59	The exact minute that the command sequence executes
hour	0-23	The hour of the day that the command sequence executes
day	1-31	The day of the month that the command sequence executes
month	1-12	The month of the year that the command sequence executes
weekday	0-6	The day of the week that the command sequence executes (Sunday = 0, Monday = 1, Tuesday = 2, and so forth)
command	Special	The complete sequence of commands to execute. The command string must conform to Bourne shell syntax. Commands, executables (such as scripts), or combinations are acceptable.

Batch Job/Schedule Message Log

The **Message Log** tab allows you to view the running process indicating success or failure.

Note: LogCmd.txt stores all the operations executed during the schedule.

Example:

```
[Msg] Batch job started
[Msg] [Bak] Backup Localhost->report_sample
[Msg] [Bak] Starting backup...
[Msg] [Bak] Writing header...
[Msg] [Bak] Writing Data...
[Msg] [Bak] Compressing Backup File...
[Msg] [Rep] Report Localhost->report_sample->invoice
[Msg] [Rep] Finished - Successfully
[Msg] [Que] Query Localhost->report_sample->query_2
[Msg] [Que] Finished - Successfully
[Msg] Finished - Successfully
```

Batch Job Converter (Available only in Navicat Premium)

Navicat Premium allows you to convert saved batch jobs from Navicat for MySQL, Navicat for Oracle, Navicat for PostgreSQL and Navicat for SQLite to it.

A right-click in **Schedule** object pane and select **Batch Job Converter...** from the popup menu to open the batch job converter window.

- [Selecting batch jobs](#)
- [Setting convert options](#)
- [Starting convert](#)

Selecting Batch Jobs

Select batch jobs to convert.

Select All

You can select all batch jobs by simply selecting **Select All** button for quick mapping.

Unselect All

You can unselect all selected batch jobs easily.

Setting Convert Options

Options

Delete original batch jobs

Check this option if you want to delete the original batch jobs in Navicat. If the original batch job is deleted, the scheduled batch job will not work until it is set again in Navicat Premium or the original application.

Overwrite existing batch jobs

Check this option if you want to overwrite the existing batch jobs in Navicat Premium.

Append when batch job exists

Check this option and enter the name of existing batch job if you want to append the details to the existing batch jobs in Navicat Premium.

Starting Convert

You can view the running process indicating success or failure.

Example:

```
----- Batch job conversion starts -----  
[Msg] Converting batch jobs: "postgresql_schedule1"..  
[Msg] "postgresql_schedule1" created  
----- Batch job conversion done -----  
Batch job created: 1  
Batch job overwritten: 0  
Batch job renamed: 0  
Batch job conversion failed: 0  
Old batch job deleted: 0
```

Dump SQL File

Navicat allows you to backup your database/schema/table(s) using the **Dump SQL File** feature.

- Select the database/schema/table(s).
- Right-click and select **Dump SQL File...** from the popup menu.
- Save the sql file to your destination.

Execute SQL File




Navicat allows you to restore your database/execute SQL file using the **Execute SQL File** feature.

- Select the database/schema.
- Right-click and select **Execute SQL File...** from the popup menu.

Example:

```
[Msg] Finished - 35 queries executed successfully
```

Print Database/Schema/Table Structure (Available only in Full Version)

Navicat allows you to view and print database, schema and table structure. Just simply right-click the database/schema/table(s) and select  **Print Database** or  **Print Schema** or  **Print Tables**.

Log Files

Navicat provides number of **Log Files** to keep track on the actions have been performed in Navicat. Most of the log files are represent as text format, and they are located in the sub-directory called **logs**, e.g. Y:\.navicat\Navicat\MySQL\logs\. You are allowed to change the log files location under Options.

- HttpDump.log
Stores information which response from your HTTP Server.
- LogHistory.txt
Stores all SQL statements of all the operations executed over databases and database objects in Navicat.

Note: This log will be overwritten while Navicat being restarted.

Hint: Simply press Ctrl+H or click Tools > **History Log...** to open the LogHistory.txt file in the History Log Viewer.

- LogImport.txt
Records detailed information on every error (indicating success or failure) that occurred during the import process.
- LogExport.txt
Records detailed information on every error (indicating success or failure) that occurred during the export process.
- LogSynchronize.txt
Records detailed information on every error (indicating success or failure) that occurred during the data synchronization process.

Note: This log will be overwritten on each synchronization.

- LogCmd.txt
Stores all operations while running schedule.