FmPro Migrator for Windows

FileMaker to FileMaker 7 Quickstart Guide

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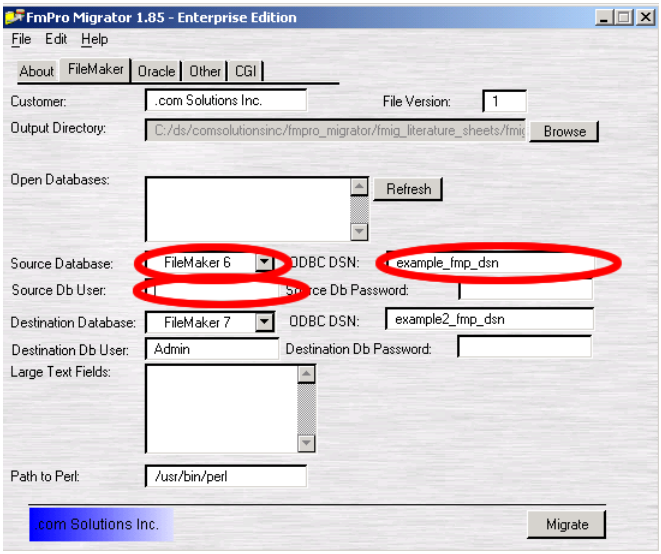
www.fmpromigrator.com

Overview

This quickstart guide provides step by step instructions for migrating individual FileMaker databases into a FileMaker 7 multi-table database structure. This process involves three phases (1) the generation of migration scripts, (2) the creation of new FileMaker 7 database tables and (3) the import of existing data into the new database tables. This document shows a migration from a FileMaker 6 database to FileMaker 7.

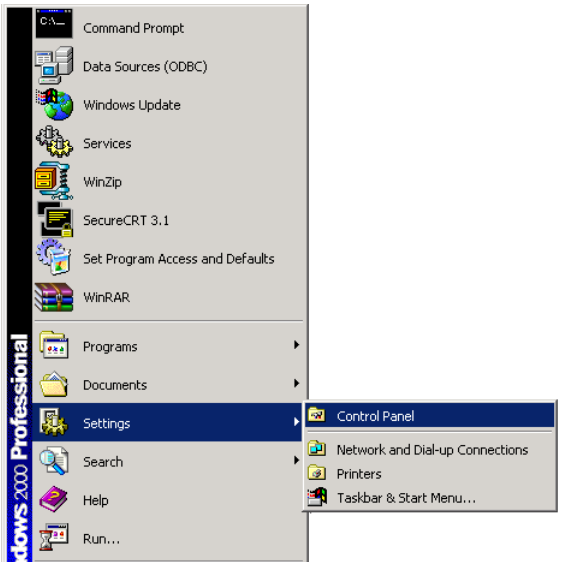
Step 1

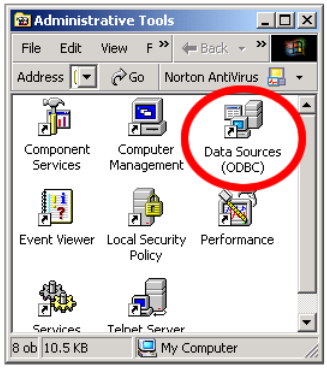
Open one or more FileMaker database files within FileMaker. Change the names of any FileMaker database files which contain spaces or special characters, because database names are used for the names of database tables within FileMaker 7. Launch FmPro Migrator and select the type of source and destination databases. Either keep the ODBC DSNs listed in FmPro Migrator or change them to match ODBC DSNs which already exist on your computer. For a FileMaker 6 database there is no need to enter a database username, so the "Admin" text can be deleted from this field.

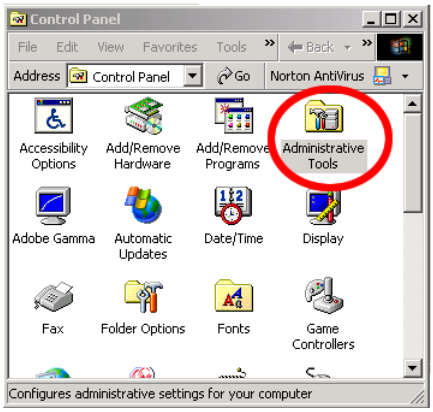


Step 2

Open the Windows Data Sources (ODBC) Control Panel to create a new FileMaker 6 System DSN to match the ODBC DSN name used by FmPro Migrator for the source database. FmPro Migrator will use this ODBC DSN to query the database to obtain database structure information. The Data Sources (ODBC) control panel is located within the Administrative Tools folder of the Windows Control Panel.
Note: With Windows XP, it may be necessary to select the Classic View of the Control Panel in order to see the Administrative Tools folder.

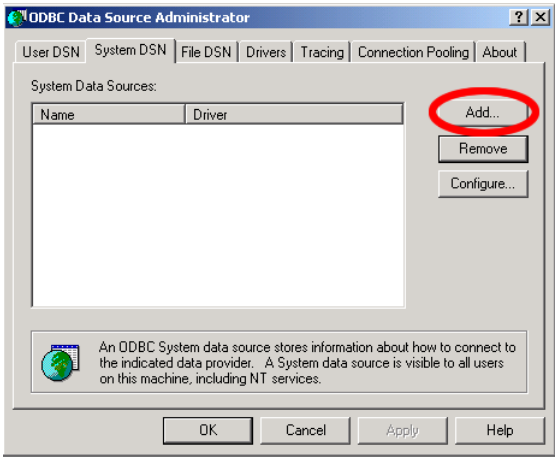


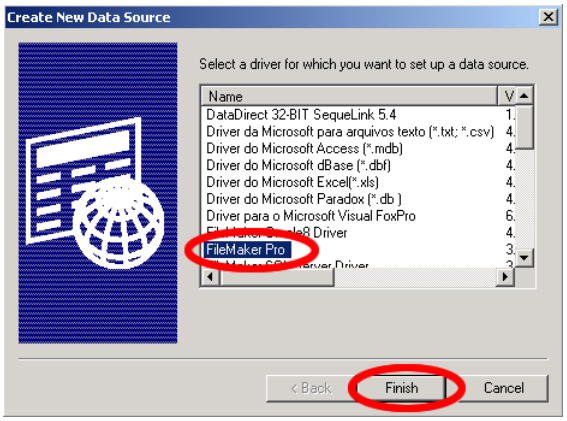




Step 3

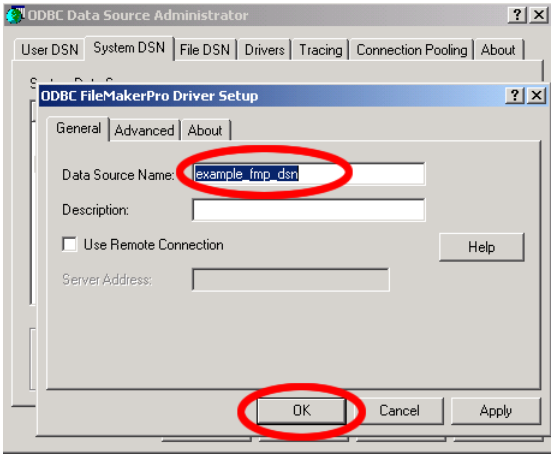
Click the System DSN tab, then click the Add button.
Select the FileMaker Pro driver, then click the Finish button.





Step 4

Enter the name of the ODBC DSN in the first field. This name should exactly match the name used in the Source Database ODBC DSN field within FmPro Migrator.
Click the Ok button.

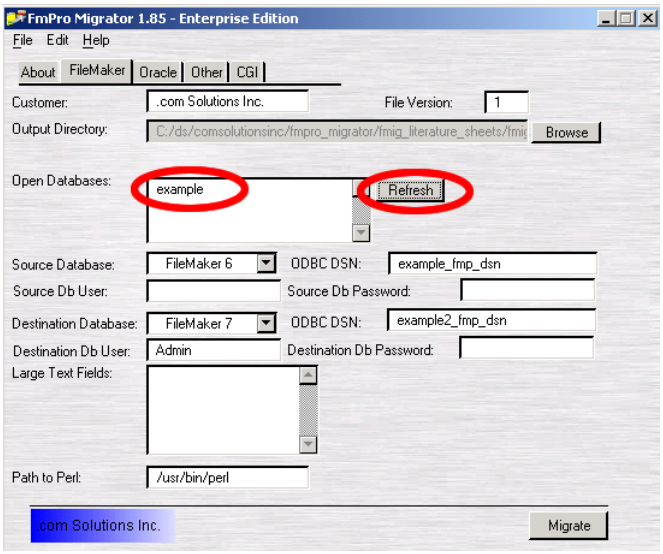


Step 5

Within FmPro Migrator, select or create the destination directory for the migration files.

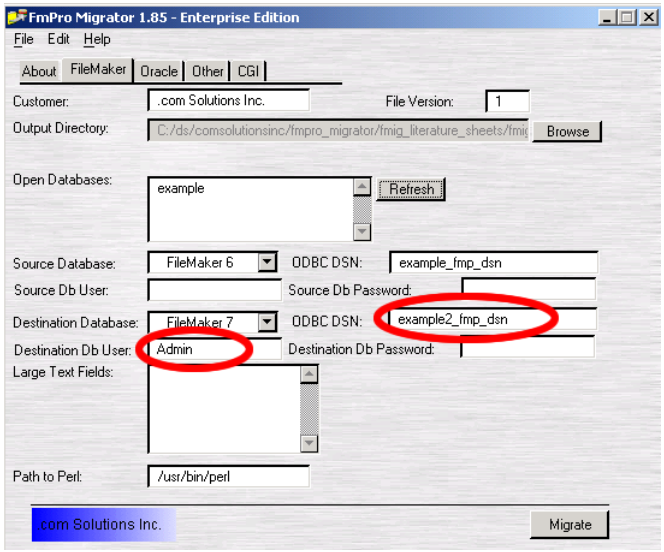
Step 6

Click the Refresh button in FmPro Migrator. All of the database files opened in FileMaker 6 should show up in the Open Databases field. In the example below, only one database file is opened in FileMaker, a database named **example.**



Step 7

You may optionally enter the name which will be used for the destination FileMaker 7 ODBC DSN, username, and password on the FileMaker tab of FmPro Migrator. These items are optional, because the default values within these fields can generally be used. The ODBC DSN will be used to communicate with the FileMaker 7 database in order to create the new FileMaker 7 database table(s). Note: The default "Admin" account created within a new FileMaker 7 database is already configured with ODBC/JDBC access privileges. If you use a different FileMaker 7 user account, make sure that ODBC/JDBC access privileges have been granted to the account.

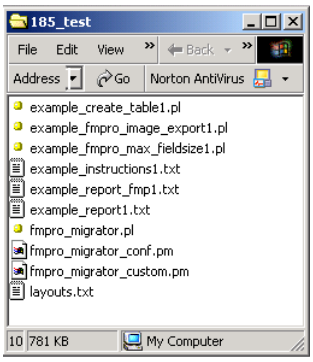


Step 8

Save the configuration information by selecting Save As from the File menu within FmPro Migrator.

Step 9

Press the Migrate button in FmPro Migrator to generate migration scripts and database documentation files. Scripts named after the original FileMaker database file(s) will then be created within the output directory as shown below. If these scripts are not created, select the Status Window menu item from the FmPro Migrator File menu. The status window will display info about any problems which occurred during the script generation process.

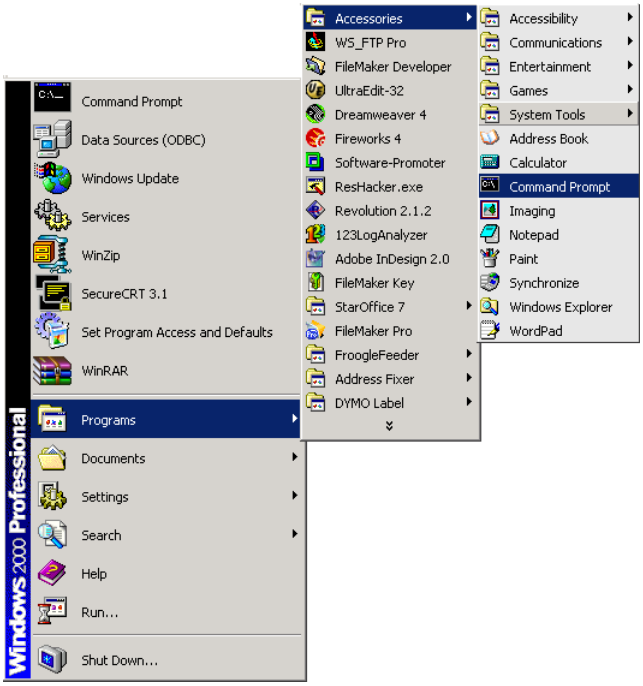


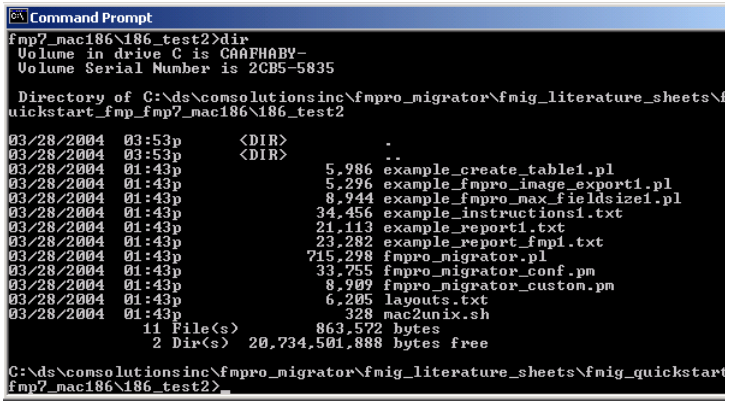
Step 10

The table creation script generated by FmPro Migrator is a Perl script which uses the FileMaker 7 ODBC driver. ActiveState Perl needs to be installed before this script can be run. Download and install the latest version of ActiveState Perl from www.activestate.com.

Step 11

Open the Windows Command Prompt by selecting Start > Programs > Accessories > Command Prompt. (You can drag the Command Prompt menu item over to the top of the Start menu in order to make it easier to access in the future.)
Use the `cd` command to navigate into the folder of generated scripts.
Note: Using the `cd ..` command allows you to navigate up one level in the directory structure.
Typing the `dir` command displays a list of files/folders.





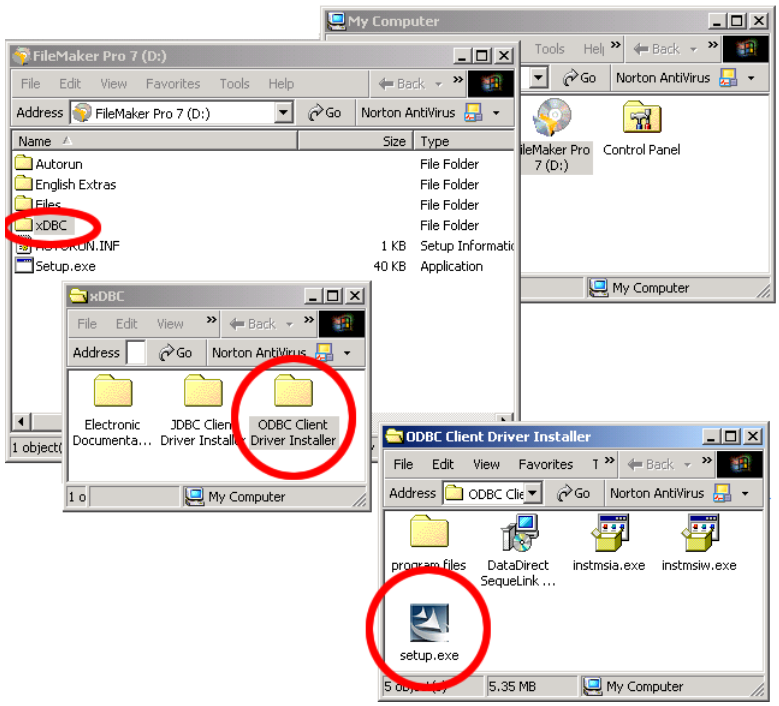
Step 12

Enter the following commands within the command prompt window to install the Perl DBI and DBD-ODBC modules using the ActiveState Perl Package Manager (PPM). PPM will download and install these modules from the ActiveState website automatically with the following commands.

```
ppm
install DBI
install DBD-ODBC
quit
```

Step 13

Install the FileMaker 7 ODBC driver.
Unlike previous versions of FileMaker for Windows, the ODBC driver is not installed automatically during the installation of FileMaker 7. Launch the DataDirect installer from the xDBC folder on the FileMaker 7 installation CD. You may use the default installation options during the install process.



Step 14

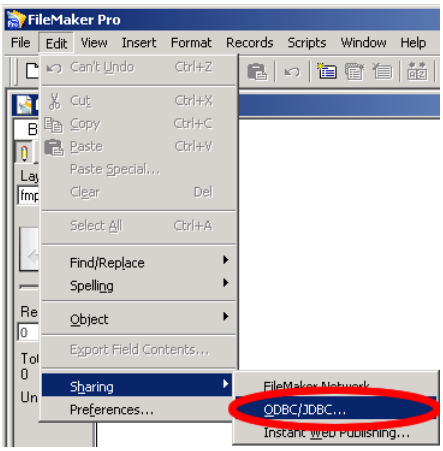
Due to a problem with the ODBC installer, the DataDirect SequeLink software needs to be installed twice in order to work correctly.
Double-click the setup.exe installer again to remove the DataDirect SequeLink software. Use the default options to de-install the software.
Double-click the setup.exe installer again to install the DataDirect SequeLink software for the 2nd time.

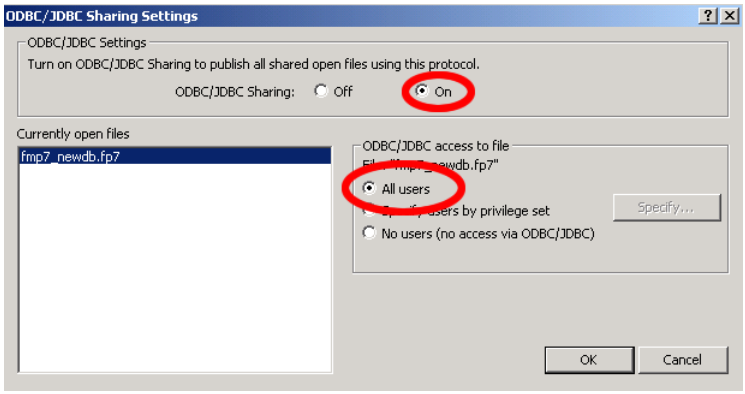
Step 15

Create a new database in FileMaker 7 or open an existing FileMaker 7 database file. Your migrated FileMaker 7 table(s) will be created within this new FileMaker 7 database file. For this Quickstart Guide, a new FileMaker 7 database named **fmp7_newdb** has been created.

Step 16

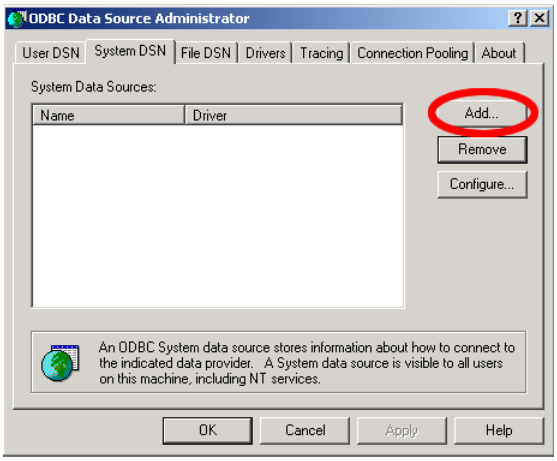
Enable the ODBC/JDBC Sharing Companion for all users of this new FileMaker 7 database, after making sure that the Remote/Local Data Access Companions are disabled within any older versions of FileMaker running on the same computer.
Note: If an ODBC sharing conflict occurs between an older version of FileMaker and FileMaker 7 running on the same computer - it may be necessary to exit from both FileMaker applications. Then re-launch only the FileMaker 7 database with the ODBC/JDBC Sharing Companion enabled.

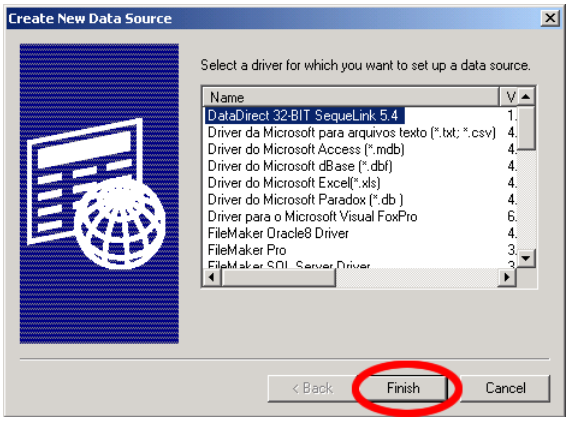




Step 17

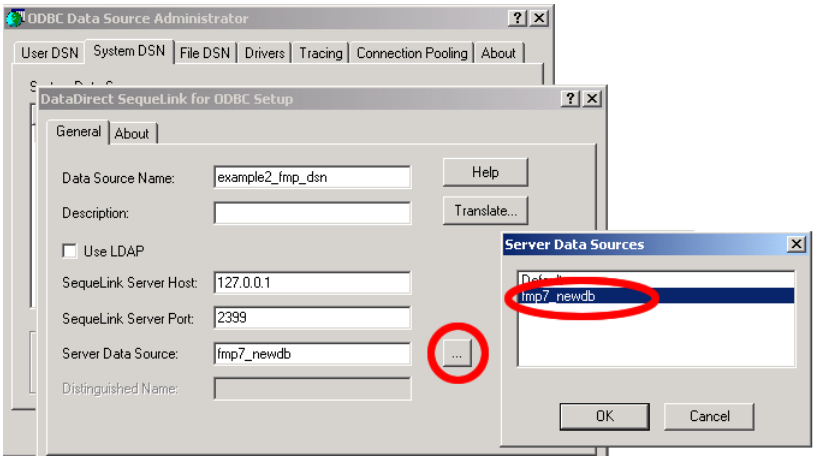
Create a new ODBC System DSN to match the Destination Database ODBC DSN entered into FmPro Migrator.
Click the System DSN tab, then click the Add button.
Select the **DataDirect 32Bit SequeLink 5.4** driver, then click the Finish button.





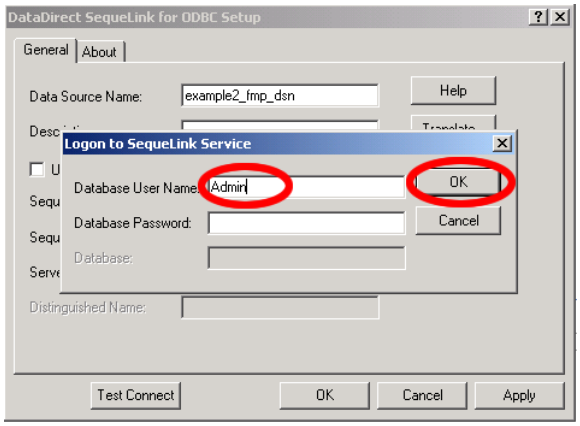
Step 18

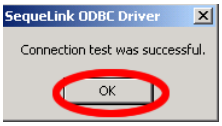
Enter the name of the ODBC DSN in the first field. This name should exactly match the ODBC DSN name which was entered into the FmPro Migrator Destination Database ODBC DSN field. Fill in the SequeLink Server Host (127.0.0.1), and SequeLink Server Port (2399) fields as shown in the image below.
Click the "..." button to the right of the Server Data Source field, then select the name of the new FileMaker 7 database (fmp7_newdb). Click the Ok button.



Step 19

Click the Test Connect button to verify that a connection can be made to the new FileMaker 7 database.
Enter Admin as the username, with no password, then click the Ok button.
Click the Ok button to close the test results dialog box.
Note: If the connection test fails, verify that ODBC/JDBC sharing is turned on and that an older version of FileMaker is **not** running with the Local or Remote Data Access Companion plug-ins enabled.





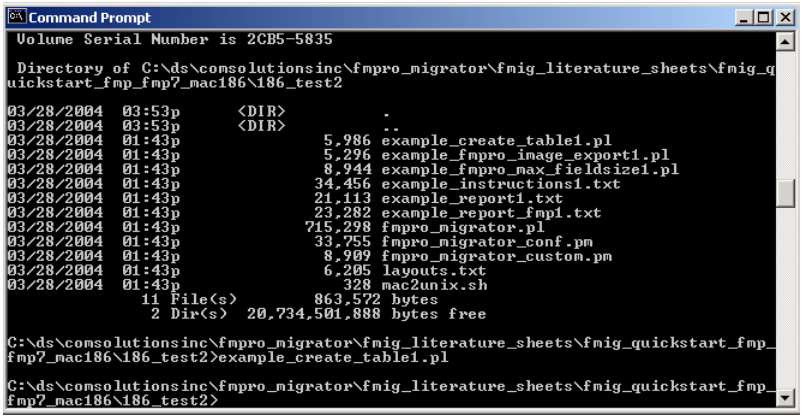
Step 20

Type the following command in the Windows Command Prompt window to run the **example_create_table1.pl** Perl script to create the new database table in the new FileMaker 7 database.

```
example_create_table1.pl
```

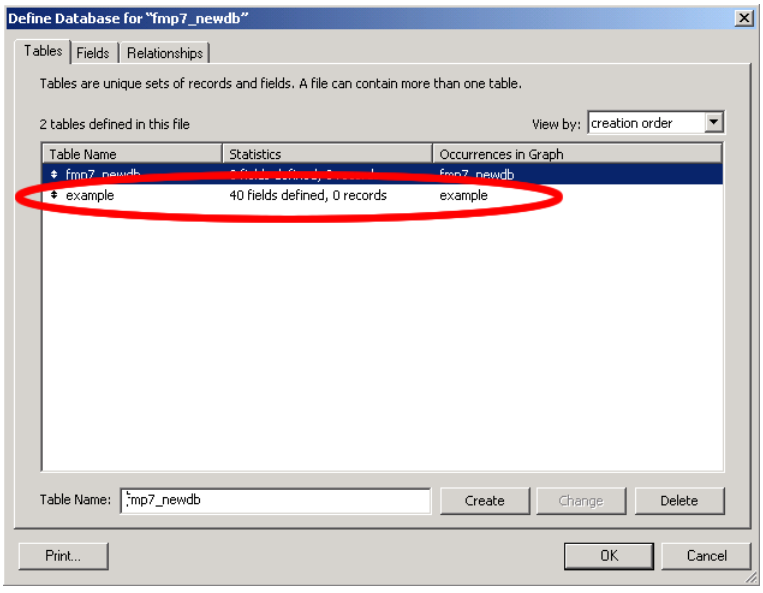
If the program runs successfully, no message will be printed on the screen and the new table will be created within the FileMaker 7 database.

Note: If FileMaker 7 is the source database, please see the troubleshooting section for info about working with Container fields and the configuration of NULL/NOT NULL attributes for each field.



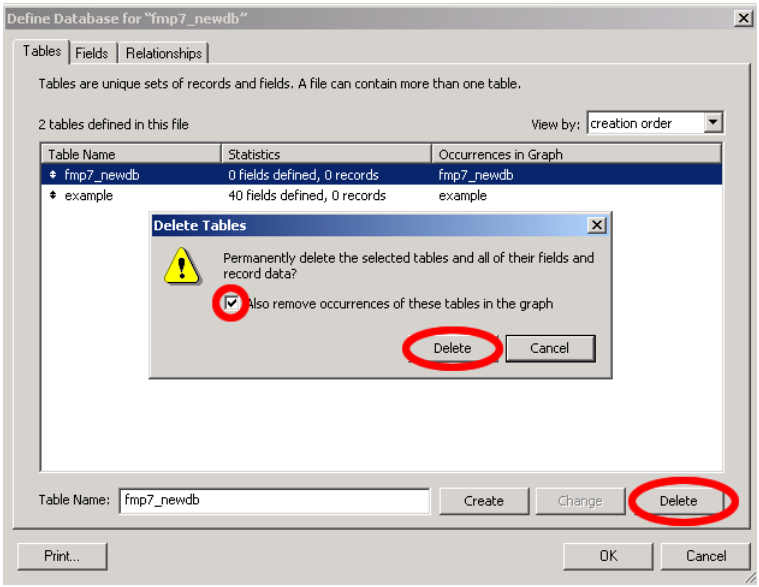
Step 21

Verify that the new table has been created within the FileMaker 7 database by looking for the new table within the Tables tab of the Define Databases window. The new table will be displayed within this window in addition to the empty table named **fmp7_newdb**.



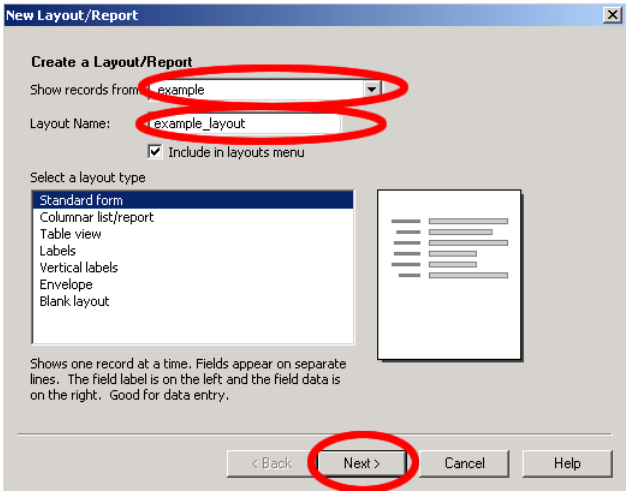
Step 22

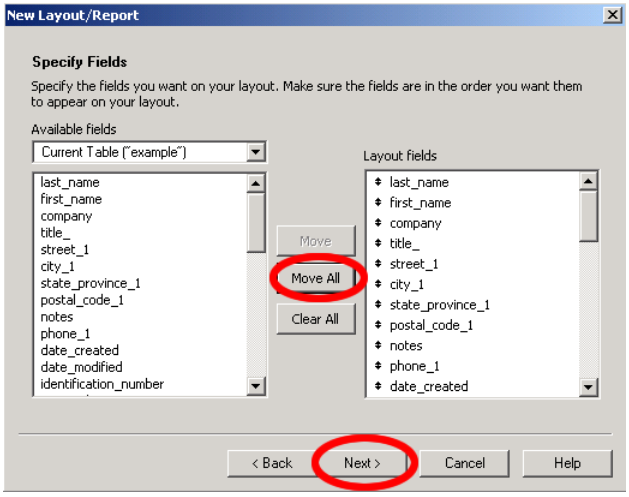
Delete the empty **fmp7_newdb** table within the Define Database window along with its associated occurrence on the relationships graph.



Step 23

Create a new layout for the new FileMaker 7 database table containing all of the fields within the table. This new layout will be used for importing records from the original FileMaker database file.





Step 24

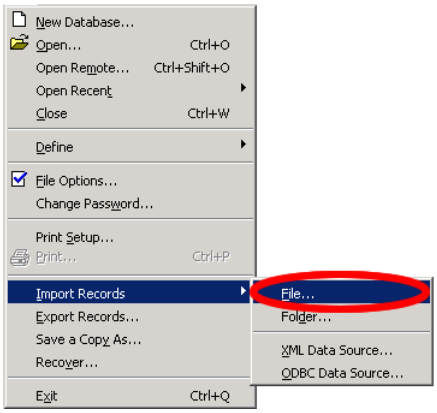
If you have not yet done so, convert the original FileMaker database file into a FileMaker 7 database file.

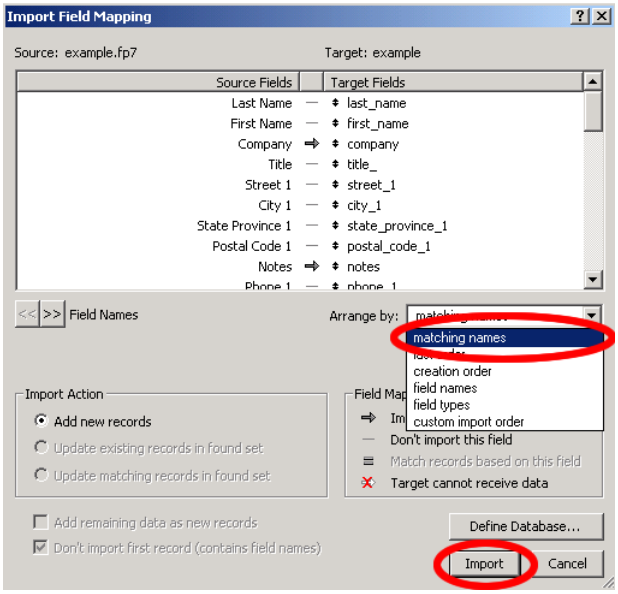
Step 25

Verify that the field validation parameters are configured as you intend for the new FileMaker 7 table. You may also copy field calculation formulas and layouts from the converted FileMaker 7 file at this time.

Step 26

Select Import Records from the FileMaker File menu to import all of the records from the original or converted FileMaker file into the new FileMaker 7 database table.
Note: Make certain that you are using the newly created layout for the new database table when importing these records.
Selecting the matching names option makes it easier to match up the old and new field names.





Troubleshooting

The following errors may occur while creating the new database table:
Error: `Can't call method "execute" on an undefined value at example_create_table1.pl line 100.`

Solution: There are multiple reasons why this error may occur. One reason is that there is a FileMaker reserved word or illegal name being used as a column name. FmPro Migrator contains a pre-defined list of FileMaker SQL reserved words. Column names which are found to consist of these words are renamed by FmPro Migrator by appending the "_" character at the end of the column name. This error may also occur due to almost any type of SQL syntax error within the CREATE TABLE SQL statement. Using incorrectly spelled column types, omitting a comma at the end of each statement line or having a comma at the end of the very last line of the SQL code will cause these errors. These types of errors generally occur after manually editing the CREATE TABLE SQL statements. If the number of edits have been minimal, it may be easier to regenerate the script again with FmPro Migrator, then manually re-edit the file.
FileMaker 7 column names created via an ODBC connection to the database cannot start with a number or an underscore "_" character, and these conditions will also result in this error being displayed.

Troubleshooting continued

Error: `DataDirect][ODBC SequeLink driver][ODBC Socket][DataDirect][ODBC FileMaker driver][FileMaker]`**`Cannot Create Table`** `(SQL-HY000) [DataDirect][ODBC SequeLink driver][ODBC Socket][DataDirect][ODBC FileMaker driver][FileMaker]Query Failed (SQL-HY000)(DBD:st_execute/ SQLExecute err=-1) at example_create_table1.pl line 832.`

Solution: This error message is displayed whenever an attempt is made to create a duplicate column name within the FileMaker database through an ODBC connection. During the generation of the list of column names, FmPro Migrator removes illegal SQL characters and replaces spaces with underscore characters. This renaming process guarantees that column names will be valid within any SQL statements, compatible with web publishing and when sharing data with other applications. However duplicate column names may occur as a result of this renaming process. FileMaker 7 and its associated ODBC driver do not report the name of the duplicate column name which is contained within the CREATE TABLE SQL statement. Generally it will be necessary to look through the column names listed in the CREATE TABLE SQL statement in order to determine which column has been duplicated. Another option is to look through the list of columns within the original FileMaker database, make changes to field names within the original database, then regenerate the **example_create_table1.pl** file with FmPro Migrator.

Problem: When performing a FileMaker 7 to FileMaker 7 migration, FileMaker container fields are migrated as text fields and every field is set to require "Not Empty" data validation. This occurs when FileMaker 7.0v1 on Windows is used as the source of the migration in FmPro Migrator.

Solution: FmPro Migrator for Windows makes an ODBC connection to the FileMaker database which is being migrated in order to obtain database structure information. When FileMaker 7 is used as the source of the migration, the data types returned from the ODBC driver report that Container fields are text fields and that all fields are "NOT NULL" fields. There are two solutions to this issue:
Solution1: If a version of the database file is available within the FileMaker 3/4/5/6 format, then use the older version of the file as the source of the migration for FmPro Migrator. Versions of the FileMaker ODBC driver prior to FileMaker 7 do not display this behavior. FmPro Migrator will query the database and obtain the correct data types and NULL/NOT NULL attributes for creating the **example_create_table1.pl** file. Use of the older database file is only required when creating the migration scripts. After the scripts have been created, use the FileMaker 7 version of the file for the actual import of the data into the new FileMaker 7 database table.
Solution2: If an older version of the source database file is not available, then use FmPro Migrator to create the migration scripts from the FileMaker 7 source database file. Then make changes to the field types and validation settings within the Define Database Fields window prior to importing the data into the new FileMaker 7 database table. Depending upon the number of fields which are contained within the source database file, it may be more efficient to update the create table SQL commands within the **example_create_table1.pl** file prior to creating the new FileMaker 7 table. To make these change manually, change the VARCHAR(1000000) field types to BLOB for each of the container fields. Then perform a search and replace within a text editor to change all "NOT NULL" text to "NULL". It is likely that very few database fields will require "NOT NULL" validation so these few fields can be updated manually. One text editor worth considering as a replacement for WordPad/ NotePad is UltraEdit, available from www.ultraedit.com

For additional troubleshooting tips, please see the instructions file which is created along with the migration scripts.