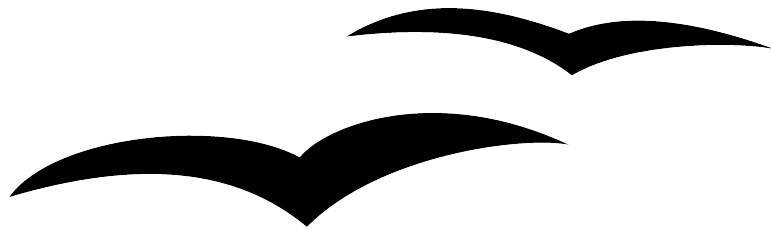


Using Data Sources



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Overview

OpenOffice.org doesn't have a database server capability (limited ability to create and work with dBase format files), but it does have a great integrated¹ client ability.

This chapter introduces the concepts and tools required to work with data sources. More advanced topics are found in other documents, some of which are referenced from this one.

Note to Microsoft Access users: To replace Access entirely requires transferring .mdb (Access' own proprietary format) files to another database server such as MySQL. For information on how to do this, see: <http://mdbtools.sourceforge.net/>. To keep database files in .mdb format, use ODBC to connect to the files. See <http://www.openoffice.org/FAQs/mostfaqs.html#10>.

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The Original Documentation is Using Data Sources. The Initial Writer(s) of the Original Documentation is/are Ian Laurenson © 2004. All Rights Reserved. (Initial Writer contact(s): hillview@paradise.net.nz. The Initial Writer contact(s) is to report errors in the documentation. For questions regarding how to use the software, subscribe to the Users Mail List and post your question there: <http://support.openoffice.org/index.html>)

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Feedback

Please direct any comments or suggestions about this document to:

authors@user-faq.openoffice.org.

Acknowledgments

Some of this material is based on work by Scott Carr and Daniel Strome.

Modifications and updates

<i>Version</i>	<i>Date</i>	<i>Description of Change</i>
1.0	7November 2004	First published version.

¹ The term integrated is used here to reflect that it isn't a separate application but works in with all the applications in OpenOffice.org.

Working with a data source (dBase example)

This section is based upon a “howto” written by Scott Carr, titled “How to Create a Data Source from Scratch”. The original is at:

http://documentation.openoffice.org/HOW_TO/data_source/data1_EN.html.

Other useful links:

Registering other data sources: <http://openoffice.homelinux.org/index.php?s=38>

Step by step guide: <http://homepage.ntlworld.com/garryknight/linux/oodbase.html>

Comparison with Access:

<http://articles.linmagau.org/modules.php?op=modload&name=Sections&file=index&req=viewarticle&artid=230&page=1>

The steps in this section set up a data source in OpenOffice.org. A dBase type database will be created as these can be created and worked on without a separate database engine. However, registered data sources of type dBase do not have the ability to have more than one table in a query (or SQL statement), so the tables can not be related to each other.

Registering the data source

- 1) From within OpenOffice.org Writer or Calc, use **Tools > Data Source**.
- 2) Click **New Data Source**.
- 3) Enter a name for your data source. This example uses “TEST” as the Data Source name.
- 4) Select dBase as the data source. (We are using dBase because it allows full control over the database on a local system.)
- 5) Enter a directory for the program to store the data files in. If the directory does not yet exist, OpenOffice.org will automatically create it (checking with the user first).
- 6) Click **Apply**.

Adding tables in a data source

This section assumes that your data source allows full access to the database. Currently, dBase is the only type that allows this type of access to files on your computer. JDBC and ODBC can be used if you already have a database system setup like MySQL, SQL Server, or Oracle.

- 1) Click on the **Tables** tab.
- 2) Click on the **New Table Design** button to display the *Table Design* screen.
- 3) Enter field names, for example Name (**down** arrow), Telephone (**down** arrow) ...
- 4) Save the table: **File > Save > [name the file]**. This example will be TestTable.
- 5) Close the *Table Design* screen and the Data Source dialog.

Viewing a data source

Data is viewed and edited using the Data source viewer, sometimes referred to as the beamer or database beamer.

- 1) Display the Data source viewer by pressing **F4** or click the **Data Sources** button in the Main toolbar or **View > Data Sources**.
- 2) In the data explorer (on the left side of the Data source viewer), navigate to the desired table, for example **Test > Tables > TableTest**. (If the data explorer is not visible, click the Explorer on/off button – the button on the left.)

Editing the data

This section demonstrates how OpenOffice.org can be used to enter, edit, and remove values in a data source.


Note: OpenOffice.org can not edit data source files of types text or spreadsheet in the Data source viewer.

- To add a new record, simply type into the bottom blank row of the displayed table or click the button that looks like an asterisk “*” in the record number status bar.
- To move between fields, use **Tab** and **Shift + Tab**. This is just like any other table so key controls and mouse clicks work as expected.
- Editing records is simply making the change. Moving to a different record saves the change. To cancel a change, simply press **Escape**.
- Deleting records: Select the record(s) by clicking to the record’s left; selected records are highlighted, (Control and shift keys work as expected.) Then either press the **Del** key or **Right Click > Delete Rows**. Confirm the deletion.

Using queries to select records

Using queries is a large subject area, so what follows is just a getting started guide on creating a query. Once the query is created, use the query as your data source. Help covers this in more detail; select the Index tab and type “queries”.

- 1) In the explorer window (left window showing tree-like controls) of the Data source viewer, open the desired data source by clicking on the “+” to the left, if required.
- 2) Right click **Queries > New Query (Design View)**.
- 3) Choose the table for your query and click **Add**.
- 4) Typically the next step is to double-click the * to add all the field names to the query.

- 5) Double-click the field name(s) that have the data you want to limit the query to. For example, the field name might be “Keyword” and only records containing “Friend” are desired.
- 6) Un-check the visible checkbox for these criteria fields. (This is not necessary but it saves getting the field repeated in the final table.)
- 7) Type the criteria into the Criterion row. For example, 'friend' or if there might be other text in the field for the record but it must contain the word 'friend' somewhere in the field type “LIKE '*friend*' ”.
- 8) Check the query by clicking the **Run query** button . To adjust the various panes, click and drag pane borders to get a desired arrangement.
- 9) **File > Save As** and name the query.
- 10) **File > Close Window**.

Creating a data source from a spreadsheet

To do a mail merge in OpenOffice.org Writer from a spreadsheet, the spreadsheet needs to be registered as a database source, so that you can display it inside the Data source viewer.

- 1) Make sure your spreadsheet is saved (preferably in .sxc format). The top row will be used for field names.
- 2) **Tools > Data sources... > New Data Source**.
- 3) Give it a meaningful name.
- 4) For Connection, choose Spreadsheet.
- 5) Click ... > navigate to the desired spreadsheet.
- 6) In the **Tables** tab, verify that your spreadsheet name has been selected.
- 7) Click on **OK** and your sheet will be usable for things like mail merge.

Note: This method can be used to register into OpenOffice.org whatever supported data source type you already have present on your system.

Database forms

This section is based upon a document by Daniel Strome, titled “How to Link Tables Using Named Parameters”. The full document is available for download from http://documentation.openoffice.org/HOW_TO/index.html. (There is a section in the document about running a macro, but this is no longer necessary.)

This section is only a very brief look as OpenOffice.org provides a full graphical user interface as a database client. Refer to the Database Guide for more details.

Form creation using AutoPilot

It is possible to create forms from scratch using the forms toolbar, but to get an idea of what is possible, using the AutoPilot is a good place to start.

- 1) **File > AutoPilot > Form...**
- 2) Follow the steps in the dialog. In the second page of the AutoPilot, as selections are made they are immediately visible in the newly created Writer document.

Form use

When using a form a *Navigation toolbar* should be visible (by default across the bottom of the window). If it is not visible, right-click any toolbar and select *Navigation bar*. The controls on this form are similar to those used in Access.

Note1: Doing a find is slow because it is handled by OpenOffice.org rather than the database server (lot of information passing). Use filters instead.

*Note2: If the table is read-only then it could be because:
OpenOffice.org requires a primary key (or bookmark facility) for the table, or
OpenOffice.org hasn't implemented writing to text or spreadsheet files, or
The database driver isn't providing the required privileges – try updating the database driver (it may be that you don't have sufficient privileges).*

Editing the form

To edit the form, display the *Form functions* toolbar by clicking **Show Form Functions** on the *Main toolbar*. To toggle the form so that it can be edited, click **Design Mode On / Off**.

Viewing / editing controls / forms properties

- 1) Click the **Select tool** then click a control.
- 2) Click **Control Properties...** on the *Form functions* toolbar.
- 3) Fields are frequently grouped with labels. When this is the case, the title bar of the Properties window will say “Properties: Multiselection”. To ungroup the fields, **Right click > Group > Ungroup**. Now select a field and see the properties.
- 4) To change to the form's properties, click **Form properties** on the *Form functions* toolbar.

Editing controls

- To add a control, click a button and drag in the document.
- Many controls have an associated AutoPilot. To turn these off / on, click the **AutoPilots On / Off** button.
- To change a control from one type to another: right-click the control > **Replace with >** [choose the new control type].

- To change the order that the fields are accessed when entering data and pressing **Tab**, click **Activation order**.

Adding a sub-form

A sub-form is where the records displayed in the sub-form are dependent on the record displayed in the main form. The two tables must have a common field. For example, the main form might be customers' details and the sub-form the orders for that customer; the fields in common might be a customer identity.

To add a sub-form:

- 1) Display the Form navigator: Click **Form Navigator** on the *Form Functions* toolbar.
- 2) The Form Navigator displays a tree of forms and their controls. Click on the form (second level - maybe called "Standard").
- 3) Right click on the form > **New > Form**.

Note: It is very important that it is a sub-form in the hierarchy, otherwise this will not work.

- 4) Optionally rename the sub-form.
- 5) With the sub-form selected in the *Form navigator*, click **Table Control**.
- 6) Drag a box in the document.
- 7) If AutoPilots is turned on, select the data source again, but this time select the new table and then its fields. If AutoPilots is turned off, specify the data source for the form in the Forms Properties window, then add columns by right-clicking in the top row of the control > **Insert Column > Textbox**. Change the properties of the column by right clicking it > **Column...**
- 8) Display the data properties for the sub-form: With the table control selected > click **Form Properties > Data**.
- 9) Change the content type to SQL Command.
- 10) Enter into content something like:

```
SELECT * FROM Orders WHERE CustId = :x
```

Where Orders = the name of the second table, CustId is the name of the field within that table that has the values in common with the table for the main form, and x is any variable name.

- 11) Scroll to the bottom of the list.
- 12) In Link master fields, type: CustomerId
Where CustomerId is the name of the field in the table of the main form.
- 13) In Link slave field, type: x
Where x is the variable used in step 11. Do not type a colon this time!
- 14) Click **Design Mode On/ Off** and it should be working.

Report creation

- 1) **File > AutoPilot > Report...**
- 2) Follow the AutoPilot.
- 3) In the last step (Save Report), choose “Modify report template”.
- 4) Adjust the column widths. This is a table, so you can drag columns or use **Format > Table... > Columns.**
- 5) Save and close the file.
- 6) Display the Data source viewer.
- 7) Navigate to the data source and open Links.
- 8) Double-click on the report. A new document based on the template will be created.

Note: The report must be closed or nothing will happen.