

# Managing Database Connections

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## Overview

Almost all Servoy applications utilize a database to store user data and application metadata. Servoy can connect to any database that has a [JDBC](#) driver available. Servoy bundles PostgreSQL by default, but PostgreSQL can be removed and replaced by any database management system (DBMS).

## Creating a New Database in PostgreSQL

In Servoy Developer, a new PostgreSQL database can be created from the Solution Explorer tree.

1. In the Servoy Developer Solution Explorer tab, expand the **Database Servers** node (under **Resources**) and right click on any PostgreSQL database (all the example databases provided by Servoy are PostgreSQL) to show the popup menu.
2. Select **Create PostgreSQL Database**.
3. Enter a name for the database in the dialog window.
4. A dialog will appear as the database is being created.
5. Another dialog will alert that the creation is finished.

## Connecting to an Existing Database

From within Servoy Develop connections to existing databases can also be setup:

1. Determine the JDBC driver required for making connections to the database. The proper driver can normally be determined from the DBMS manufacturer/documentation; another source that may help is the Servoy Forum as other developers have possibly used the database with Servoy.
2. Install the driver by placing the .jar file in the `application_server/drivers` folder in the Servoy installation folder.
3. Restart Servoy Developer.
4. Create a new Database Server connection by right clicking on **Database Servers** node (under **Resources**) and selecting **New Server**. A submenu will provide choices of different popular database choices that will fill in some of the connection information to make setup easier.



### NOTE

Even though a database is listed here, the JDBC driver must still be installed in the drivers folder in order to connect to the database.

5. Fill in the **Server Name**, **User Name**, **Password**, **URL**, and **Driver** for the database. The correct values for the **URL** and **Driver** should be obtained from the database documentation, or suggested values will be already entered when going through the **New Server** menu.



### NOTE

The user account should be of administrator level as to have full access to database objects in Servoy.

6. Save the tab by clicking the save button in the toolbar or using Ctrl-S to save the tab.
7. The database should now appear in the **Database Servers** list.

## Creating Tables and Columns

It is best practice to create the data model (tables, primary keys, foreign keys, and fields) before starting to create a solution. Objects in the database can be created with database tools built to administer the database, or within Servoy Developer.

### Creating Tables

To create a table in Servoy Developer:

1. Right click on the database name in the **Database Servers** node and select **Create Table** OR With the database name selected, click on the create table button in toolbar of the list view in Solution Explorer.
2. A dialog will ask for the name for a new table. Enter a preferred name.
3. The table editor view will appear allowing new columns to be entered.

**NOTE**

When a new table is created, Servoy will add a column in the table editor for the primary key. All tables used in Servoy must have a primary key or a row identifier.

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## Creating Columns

To create columns in Servoy Developer:

1. Open the table editor by selecting the database server in the Solution Explorer and doing one of the following in the list view:
  - a. Double clicking on the table name.
  - b. Right clicking on the table name and selecting **Edit table/view**.
  - c. Select the table and click on the edit table button in the list view toolbar.
2. The table editor will appear allowing editing of the columns for the table.
3. To add a column, click on the **Add** button. Change the name from 'type here' to the desired name, the column type, and size (if applicable). Be sure to save when finished.
4. To remove a column, click on the **Remove** button.

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## Webinars

Servoy periodically produces [Technical Webinars targeted to developers](#) covering a broad range of topics, from new features to new capabilities to best practices.

The following webinar is focused on how Servoy manages some advanced DB functionality like handling failed saves, transactions, record locking and batch updates

The following webinar is focused on the **Servoy Query Builder** Tool that makes easier to query databases without writing SQL and makes queries database independent