

## Greenplum Database 4.1 Connectivity Tools for Windows

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Greenplum provides database drivers and a C API for connecting to Greenplum Database. In this version 4.1 distribution, the following connectivity tools are provided for Windows Advanced Server 2003:

- [psqlODBC](#)
- [PostgreSQL JDBC Interface](#)
- [libpq](#)

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### psqlODBC

psqlODBC is the official PostgreSQL ODBC Driver. The driver is currently maintained by a number of contributors to the PostgreSQL project at <http://pgfoundry.org/projects/psqlodbc>. It is developed and supported through the [pgsql-odbc@postgresql.org](mailto:pgsql-odbc@postgresql.org) mailing list. psqlODBC is released under the Library General Public Licence, or LGPL.

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### PostgreSQL JDBC Interface

The PostgreSQL JDBC interface is the official PostgreSQL JDBC driver. The driver is currently maintained by a number of contributors to the PostgreSQL project at <http://jdbc.postgresql.org>. JDBC is a core API of Java 1.1 and later. It provides a standard set of interfaces to SQL-compliant databases. PostgreSQL provides a type 4 JDBC driver. Type 4 indicates that the driver is written in Pure Java, and communicates in the database system's own network protocol. Because of this, the driver is platform independent; once compiled, the driver can be used on any system. The PostgreSQL JDBC Interface has not been modified from the original PostgreSQL distribution.

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### libpq

`libpq` is the C application programmer's interface (API) to PostgreSQL (and Greenplum Database). `libpq` is a set of library functions that allow client programs to pass queries to the PostgreSQL backend server and to receive the results of these queries.

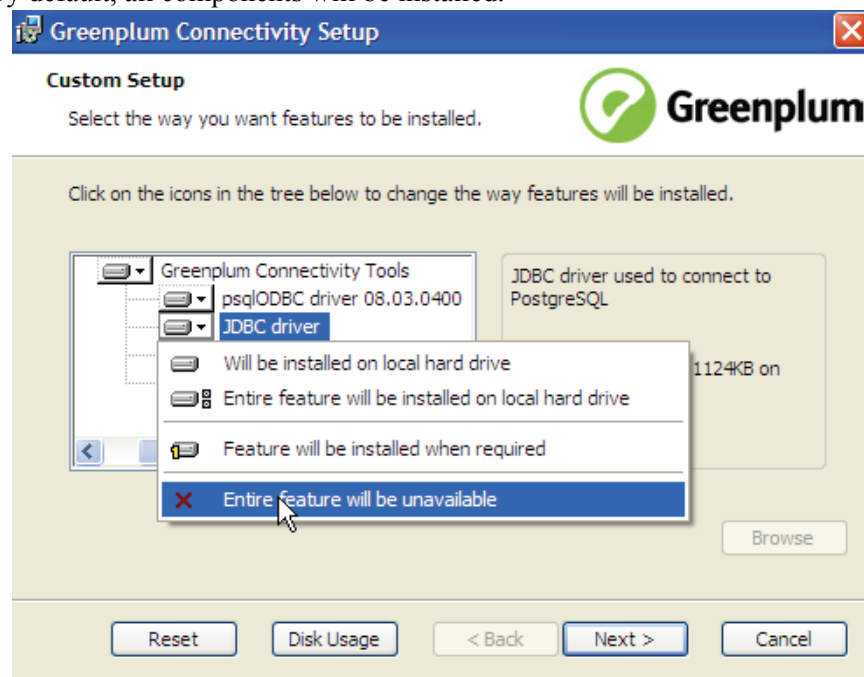
For more information on using `libpq`, see [libpq - C Library](#) in the PostgreSQL documentation.

## Running the Connectivity Tools Installer

You can choose to install all connectivity tools or a subset. After installing, some connectivity tools require additional installation or configuration steps.

### To install the Greenplum Database Connectivity Tools

1. Download the `greenplum-connectivity-4.1.x.x-WinXP-x86_32.msi.zip` package from <http://gpn.greenplum.com>.
2. Unzip the installer package using a program such as Winzip.
3. Double-click on the `greenplum-connectivity-4.1.x.x-WinXP-x86_32.msi` package to launch the installer.
4. Click **Next** on the Welcome screen.
5. Click **I Agree** on the License Agreement screen.
6. On the **Custom Setup** screen, deselect the components you do not want to install. By default, all components will be installed.



7. By default, the Greenplum Database connectivity tools will be installed into `C:\Program Files\Greenplum\greenplum-drivers-4.1.x.x`. Click **Browse** to choose another location.
8. Click **Next** when you have chosen the components and install path you want.
9. Click **Install** to begin the installation.
10. Click **Finish** to exit the installer.

## About Your Installation

Your Greenplum Database connectivity tools installation contains the following files and directories:

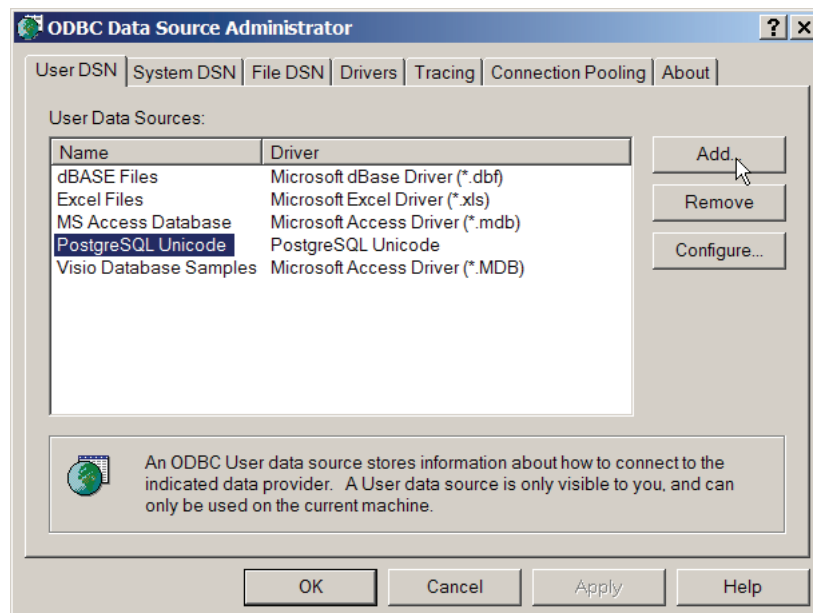
- `GP_ConnectWin.pdf` — the documentation file for connectivity tools
- `greenplum_connectivity_path.bat` — script to set environment variables. This script is run automatically as part of the installation.
- **drivers** — PostgreSQL ODBC and JDBC database drivers
- **include** — libpq C header files
- **lib** — shared object files and other library files to support the drivers

## Creating an ODBC Data Source

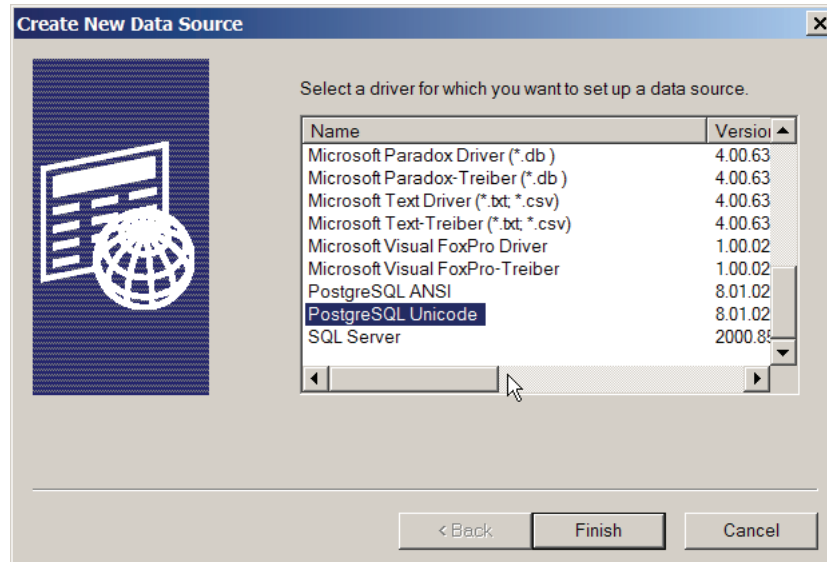
A data source configures your ODBC driver to connect to a particular database. For Greenplum Database you should configure your data source to connect to the master instance.

### To configure a data source

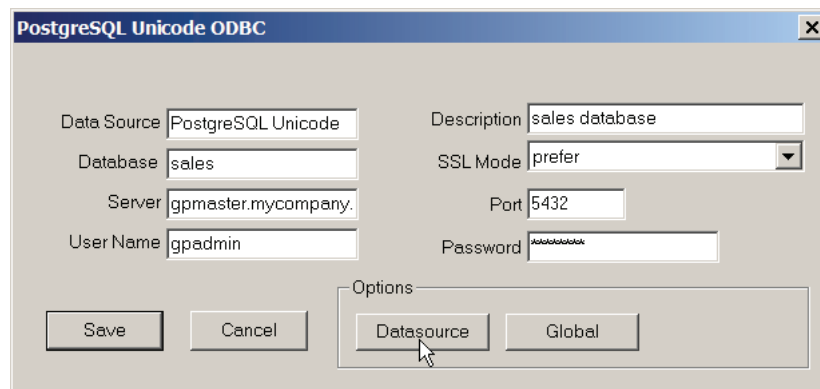
1. In Windows Explorer, go to `C:\Control Panel`.
2. Double-click the **Administrative Tools** icon.
3. Double-click **Data Sources (ODBC)** to open the ODBC Data Source Administrator.
4. Select **PostgreSQL Unicode** and click **Add** to add a new data source.



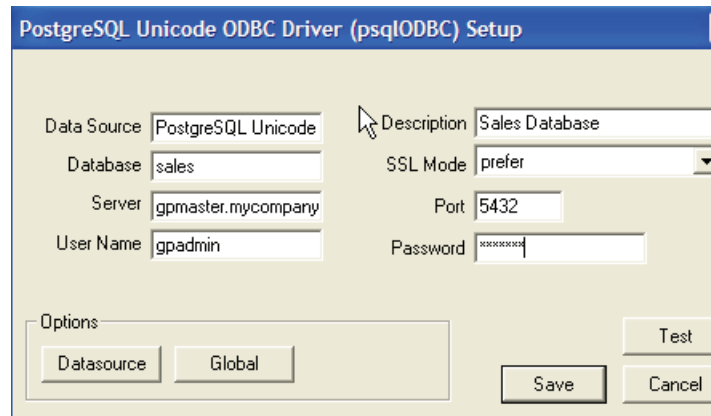
- For the driver, **PostgreSQL Unicode** is the recommended choice. Unicode (UTF-8) is the default database encoding for Greenplum Database. There is also a **PostgreSQL ANSI** driver which can handle some multi-byte character sets and LATIN character sets.



- Fill in the connection information for your database (on the Greenplum Database master instance).



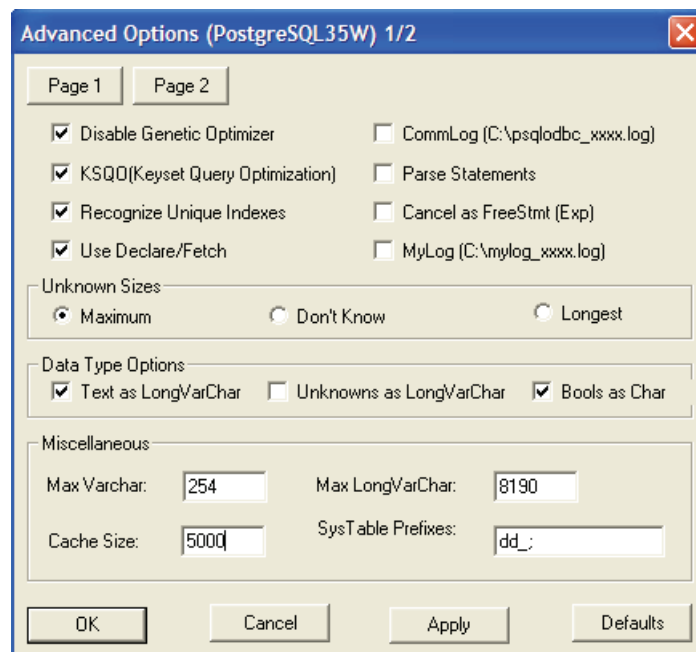
7. Click **Datasource** to access the Advanced Options. the following settings are recommended for Greenplum Database.:



The screenshot shows the 'PostgreSQL Unicode ODBC Driver (psqlODBC) Setup' dialog box. It contains the following fields and options:

- Data Source:** PostgreSQL Unicode
- Description:** Sales Database
- Database:** sales
- SSL Mode:** prefer (dropdown menu)
- Server:** gpmaster.mycompany
- Port:** 5432
- User Name:** gpadmin
- Password:** [masked with asterisks]
- Options:** A group box containing 'Datasource' and 'Global' buttons.
- Buttons:** 'Test', 'Save', and 'Cancel'.

8. Click **Page2**. the following settings are recommended for Greenplum Database:



The screenshot shows the 'Advanced Options (PostgreSQL35W) 1/2' dialog box. It contains the following sections and settings:

- Page 1 / Page 2:** 'Page 2' is selected.
- Options:**
  - ☒ Disable Genetic Optimizer
  - ☒ KSQO(Keyset Query Optimization)
  - ☒ Recognize Unique Indexes
  - ☒ Use Declare/Fetch
  - ☐ CommLog (C:\psqlodbc\_XXXX.log)
  - ☐ Parse Statements
  - ☐ Cancel as FreeStmt (Exp)
  - ☐ MyLog (C:\mylog\_XXXX.log)
- Unknown Sizes:**
  - ☒ Maximum
  - ☐ Don't Know
  - ☐ Longest
- Data Type Options:**
  - ☒ Text as LongVarChar
  - ☐ Unknowns as LongVarChar
  - ☒ Bools as Char
- Miscellaneous:**
  - Max Varchar:** 254
  - Max LongVarChar:** 8190
  - Cache Size:** 5000
  - SysTable Prefixes:** dd\_
- Buttons:** 'OK', 'Cancel', 'Apply', and 'Defaults'.

9. Click **OK**.

10. Click **Save**.

## Configuring the PostgreSQL JDBC Driver

The PostgreSQL JDBC driver is installed by the connectivity tools installer into `C:\Program Files\Greenplum\greenplum-drivers-4.1.x.x\drivers\jdbc`. In order to use the driver, you must add its jar files to your `CLASSPATH` environment variable.

### To edit the `CLASSPATH` on Windows XP

1. In Windows Explorer, go to `C:\Control Panel`.
2. Double-click the **System** icon.
3. On the **Advanced** tab, click **Environment Variables** (bottom).
4. Find the **CLASSPATH** environment variable and double-click on it to edit it (if not there, click **New** to create it).
5. Add the path to the JDBC driver jar file directory at the end of the current class path. For example:  
`C:\Program Files\Java\jdk1.5.0_02\bin;greenplum-drivers-4.1.x.x\drivers\jdbc\*`
6. Click **OK**.

## About `greenplum_connectivity_path.bat`

The installer automatically creates the necessary environment variables needed for the connectivity tools. As a convenience, the script `greenplum_connectivity_path.bat` is provided in your connectivity tools installation directory. This script sets the following environment variables:

**GPHOME\_CONNECTIVITY** — The installation directory of the Greenplum Database connectivity tools.

**PATH** – To allow access to the connectivity tools from any directory, the `PATH` environment variable is modified to add `GPHOME_CONNECTIVITY\bin` and `GPHOME_CONNECTIVITY\lib`.

If you do not need to modify these environment variables, you do not need to run this script.

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