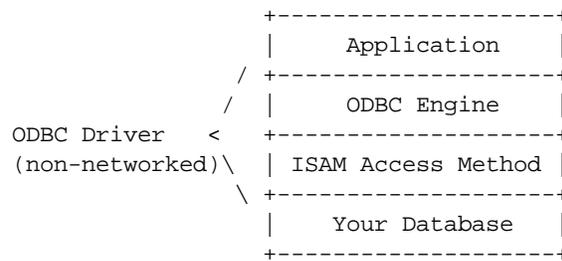


Dr. DeeBee[®] ODBC Driver Kit (Network Edition)

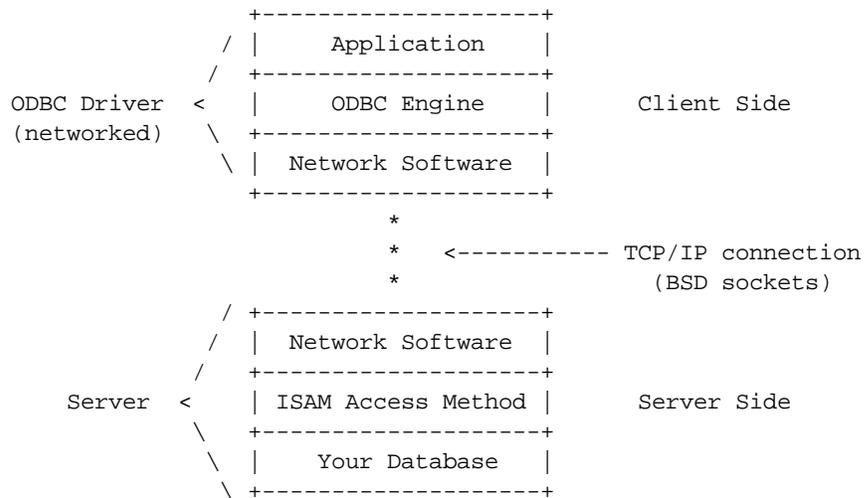
Overview

The Dr. DeeBee ODBC Driver Kit (Network Edition) provides true client/server access to your legacy or proprietary database. The kit allows you to easily create both the ODBC driver to be used by a client and the database server the client can connect to. The client and server communicate via TCP/IP, and the kit includes the source code necessary to build software to establish a connection and communicate over this link.

The basic architecture of the non-networked Dr. DeeBee ODBC Driver Kit is as follows:



The Network Edition extends the basic architecture as follows:



All you have to do is implement the ISAM Access Method compliant to the API we define. We provide the ODBC Engine and Network Software components. We also provide a sample implementation of the ISAM Access Method which can read and write dBase files.

What You Need

In addition to the Dr. DeeBee ODBC Driver Kit (Network Edition), you will need the following to build and distribute your ODBC driver:

- A C/C++ compiler for Windows such as Microsoft Visual C++.
- The ODBC SDK. The ODBC SDK is available directly from Microsoft as part of MSDN Level 2. Call Microsoft at 1-800-759-5474 or 1-206-882-8080 for more information. At the time of this writing, the ODBC SDK was also posted on the Microsoft web site at <http://www.microsoft.com/data/odbc/download/>.
- If your server will run on a non-Windows based machine, a C compiler for that machine.

It is assumed that the user has working knowledge of what ODBC is, the ODBC API, how to use ODBC, etc. Recommended reading in these areas is:

- *Windows Multi-DBMS Programming*; Ken North; John Wiley & Sons; 1995
- *Inside ODBC*; Kyle Geiger; MS Press; expected June 1995
- *The ODBC Solution*; Robert Signore, John Creamer, Michael O. Stegman; McGraw-Hill; 1995
- *Microsoft ODBC 2.0 Programmer's Reference and SDK Guide*; Microsoft Press; 1994

SYWARE Support

Included with your purchase is one hour of telephone support at 617-497-1300. Additional telephone support is available on a fee-per-event basis. Questions can also be E-mailed to support@syware.com.

If you find bugs or have other feedback, we welcome your comments. Please E-mail them to support@syware.com.

Installing the Dr. DeeBee ODBC Driver Kit (Network Edition)

WARNING:
If you are installing over a previous version of the kit, backup any old installation of the kit before installing. The installation overwrites everything in any previous installation without making any backup files.

To install the Dr. DeeBee ODBC Driver Kit (Network Edition), do the following:

- Install your C compiler.
- Install the ODBC SDK.
- Put the installation disk labeled "Gold Edition" in drive A: and run SETUP.EXE.
- Put the installation disk labeled "Network Edition" in drive A: and run SETUP.EXE.

Once installed, you will see the following:

C:\DRDBDR	- Your installation directory (the default)
C:\DRDBDR\SOURCE	- ODBC driver and server source code (for Windows)
C:\DRDBDR\SOURCE\INSTALL	- Source code for 32-bit Windows installer components
C:\DRDBDR\UNIX	- ODBC driver and server source code (for UNIX)
C:\DRDBDR\SETUP	- 16-bit ODBC driver (non-networked) DLL and installer
C:\DRDBDR\SETUP32	- 32-bit ODBC driver (non-networked) DLL and installer
C:\DRDBDR\SETUPC	- 16-bit ODBC driver (networked) DLL and installer
C:\DRDBDR\SETUPCL	- 32-bit ODBC driver (networked) DLL and installer

C:\DRDBDR\SETUP\DRDBDR.DLL and C:\DRDBDR\SETUPCL\DRDBDRC.DLL are 16-bit compiled versions of the source code found in C:\DRDBDR\SOURCE.

C:\DRDBDR\SETUP32\DRDBDR32.DLL and C:\DRDBDR\SETUPCL\DRDBDRCL.DLL are 32-bit compiled versions of the source code found in C:\DRDBDR\SOURCE.

Getting Started

If you are creating an ODBC Driver (non-networked), follow the directions in Appendix C of the "Dr. DeeBee ODBC Driver Kit (Gold Edition)" documentation.

If you are creating an ODBC Driver (networked) and your server will run on a Windows platform:

First implement your driver to work without using the network. To do this, implement your driver by following the directions in Appendix C of the "Dr. DeeBee ODBC Driver Kit (Gold Edition)".

Then, create your server from the files listed in Appendix A. Run your server.

Lastly, run SETUP.EXE in C:\DRDBDR\SETUPCL (or C:\DRDBDR\SETUPC for 16-bit) to install the ODBC Driver (networked), create a datasource using this newly installed driver, and test to make sure the new datasource works with your server.

If you are creating an ODBC Driver (networked) and your server cannot run on a Windows platform:

Copy the files in C:\DRDBDR\UNIX to the server machine and compile them. They are written to be compiled with GCC compiler on UNIX. A makefile is provided ("make server"). You may have to make some modifications to get them to compile. Run the server you created.

Then, on the Windows machine, run SETUP.EXE in C:\DRDBDR\SETUPCL (or C:\DRDBDR\SETUPC for 16-bit) to install the ODBC Driver (networked), create a datasource using this newly installed driver, and test to make sure the new datasource works with the server. This should give you access to dBase files on the server machine.

Lastly, on the server machine, implement the ISAM layer as described in Appendix C of the "Dr. DeeBee ODBC Driver Kit (Gold Edition)". When implementing your ISAM Access Method, all the coding and compiling will be done on the server machine. When testing your ISAM Access Method, you enter the commands into ODBC Test running on a client Windows machine, and debug the calls when they arrive on the non-Windows platform.

Note: If you need to make changes to the client side ODBC driver, you can remake the ODBC Driver (networked) DLL (DRDBDRCL.DLL (or DRDBDRC.DLL for 16-bit)) by compiling and linking the files specified in Appendix A..

You should also read the "Tips and Tricks" section below.

Distributing Your Driver

Except for DRDBDR.DLL, DRDBDRC.DLL, the files in the SETUP32 directory, and the files in the SETUPCL directory; none of the components in the Dr. DeeBee ODBC Driver Kit (Network Edition) are redistributable. The driver and server you create using the kit is redistributable royalty-free in most cases. See your license (Appendix B) for more details.

If you copy C:\DRDBDR\SETUPC*. * to a diskette, you will have a setup disk that will load the 32-bit ODBC Driver (networked). However, your license agreements with SYWARE only allows you to redistribute DRDBDRC.DLL. Your right to redistribute the other components in C:\DRDBDR\SETUPC can be obtained from your ODBC SDK license.

If you don't make any to modifications to the 16-bit ODBC Driver (networked), just copy C:\DRDBDR\SETUPC*. * to a diskette. This will be your redistributable driver.

If you make any to modifications to the 16-bit ODBC Driver (networked), you can create a setup disk for it as follows:

- Delete C:\DRDBDR\SETUPC\DRDBDRC.DLL.
- Copy your DRDBDRC.DLL into C:\DRDBDR\SETUPC.
- **Rename C:\DRDBDR\SETUPC\DRDBDRC.DLL to something else of your choosing (for example MYDRIVER.DLL).**
- Edit C:\DRDBDR\SETUPC\ODBC.INF as follows:
 - **Change every occurrence of "Dr. DeeBee Client Driver 16" to some name of your choosing (for example "My Driver").**
 - Change every occurrence of DRDBDRC.DLL to MYDRIVER.DLL.
 - In the section [My Driver], change 1998-06-12 to the date on your MYDRIVER.DLL, and change 242864 to the size of your MYDRIVER.DLL.
 - Search for "Dr. DeeBee" elsewhere in the ODBC.INF and make the appropriate changes.

If you make any to modifications to the 32-bit ODBC Driver (networked), you can create a setup disk for it as follows:

- Delete C:\DRDBDR\SETUPCL\DRDBDRCL.DLL.
- Copy your DRDBDRCL.DLL into C:\DRDBDR\SETUPCL.
- **Rename C:\DRDBDR\SETUPCL\DRDBDRCL.DLL to something else of your choosing (for example MYDRIVER.DLL).**
- Edit C:\DRDBDR\SETUPCL\ODBCLOAD.INI as appropriate.

Tips and Tricks

The following tips and tricks will make your development easier:

1. First try to build an ODBC Driver (networked) and a server that can read and write dBase files by just recompiling the system as shipped without modifying ISAM.C or any other modules. This will allow you find problems in your development environment independently of bugs you might enter into the code.

2. If your server will run on a Windows platform, do the following in order to easily code and debug your ISAM Access Method:

Run SETUP.EXE in C:\DRDBDR\SETUP32 to install the driver and create a datasource (MYSOURCE) using the non-networked driver. When creating the new datasource, be sure to use the "Database" edit control to specify the name of the directory that holds the .DBF files.

Once you have done this, redirect the MYSOURCE datasource to use the DLL created by your compiler rather than the one in the windows system directory. Using the registry editor change the value of /HKEY_CURRENT_USER/Software/ODBC/ODBC.INI/MYSOURCE/Driver to specify the complete pathname of the .DLL file created by your compilation.

Once you do this, you will not have to reinstall after each compilation of your driver, since the MYSOURCE datasource will always be pointing at the DLL just created.

3. If your server will run on a Windows platform, do the following in order to easily code and debug your ISAM Access Method: If you are using Microsoft Visual C++, set the executable to use when running under the debugger to C:\ODBCSDK\BIN32\ODBCTE32.EXE. You can then set breakpoints in your driver, and run (DEBUG | GO).
4. You can easily generate a trace of the calls to ISAM.C by setting the ISAM_TRACE flag to TRUE and recompiling. This flag is declared in UTIL.H.

Appendix A: Setting up a Project

The first thing you want to do is create a project to build your driver with.

If you happen to be building a 16-bit driver using Microsoft Visual C/C++ 1.5, you can use:

- DRDBDR.MAK file provided to build the non-networked client
- DRDBDRC.MAK file provided to build the networked client.

If you happen to be building a 32-bit driver using Microsoft Visual C/C++ 2.0, 3.0, 4.0, or 5.0 you can use:

- DRDBDR32.MAK file provided to build the non-networked client
- DRDBDRCL.MAK file provided to build the networked client.
- DRDBDRSE.MAK file provided to build the server (as an EXE).
- DRDBDRSD.MAK file provided to build the server (as a DLL).

Otherwise you will have to build your own project containing the following files (a sample makefile for UNIX builds is provided):

16-bit ODBC Driver (non-networked)

BCD.C	RESULTS.C	PARSE.H
CATALOG.C	SCALAR.C	SCALAR.H
COLDEFS.C	SEMANTIC.C	SEMANTIC.H
CONNECT.C	SETUP.C	SQLTYPE.H
DBASE.C	SORT.C	TRACE.H
DLL.C	SQLTYPE.C	UNIXDEFS.H
DRDBDR.C	TRACE.C	UNIXINCL.H
EVALUATE.C	TRANSACT.C	UNIXSQL.H
EXECUTE.C	UTIL.C	UTIL.H
INFO.C		
ISAM.C	BCD.H	DRDBDR.RC
ODBC30.C	DBASE.H	DRDB.ICO
OPTIMIZE.C	DRDBDR.H	
OPTIONS.C	EVALUATE.H	ODBCINST.LIB
PARSE.C	ISAM.H	
PREPARE.C	ODBC30.H	DRDBDR.DEF
	OPTIMIZE.H	

32-bit ODBC Driver (non-networked)

BCD.C	RESULTS.C	PARSE.H
CATALOG.C	SCALAR.C	SCALAR.H
COLDEFS.C	SEMANTIC.C	SEMANTIC.H
CONNECT.C	SETUP.C	SQLTYPE.H
DBASE.C	SORT.C	TRACE.H
DLL.C	SQLTYPE.C	UNIXDEFS.H
DRDBDR.C	TRACE.C	UNIXINCL.H
EVALUATE.C	TRANSACT.C	UNIXSQL.H
EXECUTE.C	UTIL.C	UTIL.H
INFO.C		
ISAM.C	BCD.H	DRDBDR.RC
ODBC30.C	DBASE.H	DRDB.ICO
OPTIMIZE.C	DRDBDR.H	
OPTIONS.C	EVALUATE.H	ODBCCP32.LIB
PARSE.C	ISAM.H	
PREPARE.C	ODBC30.H	DRDBDR32.DEF
	OPTIMIZE.H	

16-bit ODBC Driver (networked)

BCD.C	SCALAR.C	OPTIMIZE.H
CATALOG.C	SEMANTIC.C	PARSE.H
COLDEFS.C	SETUP.C	SCALAR.H
CONNECT.C	SORT.C	SEMANTIC.H
DLL.C	SQLTYPE.C	SQLTYPE.H
DRDBDR.C	TRACE.C	TRACE.H
EVALUATE.C	TRANSACT.C	UNIXDEFS.H
EXECUTE.C	UTIL.C	UNIXINCL.H
INFO.C		UNIXSQL.H
NET.C	BCD.H	UTIL.H
NETISAM.C	DBASE.H	
ODBC30.C	DRDBDR.H	DRDBDR.RC
OPTIMIZE.C	EVALUATE.H	DRDB.ICO
OPTIONS.C	ISAM.H	
PARSE.C	NET.H	ODBCINST.LIB
PREPARE.C	ODBC30.H	
RESULTS.C		DRDBDRC.DEF

32-bit ODBC Driver (networked)

BCD.C	SCALAR.C	OPTIMIZE.H
CATALOG.C	SEMANTIC.C	PARSE.H
COLDEFS.C	SETUP.C	SCALAR.H
CONNECT.C	SORT.C	SEMANTIC.H
DLL.C	SQLTYPE.C	SQLTYPE.H
DRDBDR.C	TRACE.C	TRACE.H
EVALUATE.C	TRANSACT.C	UNIXDEFS.H
EXECUTE.C	UTIL.C	UNIXINCL.H
INFO.C		UNIXSQL.H
NET.C	BCD.H	UTIL.H
NETISAM.C	DBASE.H	
ODBC30.C	DRDBDR.H	DRDBDR.RC
OPTIMIZE.C	EVALUATE.H	DRDB.ICO
OPTIONS.C	ISAM.H	
PARSE.C	NET.H	ODBCCP32.LIB
PREPARE.C	ODBC30.H	
RESULTS.C		DRDBDRCL.DEF

Server (Windows NT or Windows95)

DBASE.C	DRDBDR.H	UNIXDEFS.H
DRDBSVR.C	DRDBSVR.H	UNIXINCL.H
ISAM.C	EVALUATE.H	UNIXSQL.H
NET.C	ISAM.H	UTIL.H
SQLTYPE.C	NET.H	
TRACE.C	OPTIMIZE.H	DRDBDR.RC
UTIL.C	PARSE.H	DRDB.ICO
	SEMANTIC.H	
BCD.H	SQLTYPE.H	DRDBDRSD.DEF
DBASE.H	TRACE.H	(if a DLL)

Server (UNIX and other non-Windows)

DBASE.C	DBASE.H	UNIXSQL.H
DRDBSVR.C	DRDBSVR.H	UTIL.H
ISAM.C	ISAM.H	
NET.C	NET.H	Note: for UNIX and
SQLTYPE.C	SQLTYPE.H	other non-Windows
TRACE.C	TRACE.H	servers, compile with
UTIL.C	UNIXDEFS.H	-D_UNIX_
	UNIXINCL.H	

Appendix B: SYWARE License Agreement

Dr. DeeBee ODBC Driver Kit (Network Edition)

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Date: _____