INTERSOLV

DataDirect ODBC InterBase Driver

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About the InterBase Driver

The InterBase driver supports InterBase version 5 for Windows NT/95.
The driver file name is IBINT13.DLL.

System Requirements

To access a InterBase database, you must have installed the InterBase client software, and an InterBase database server must be locally or on the network you are using.

If you attempt to configure a data source and you do not have the InterBase client libraries on your path or in your Windows NT\SYSTEM32 or Windows 95\SYSTEM directory, the following message appears:

```
The setup routines for the INTERSOLV 3.00 32-bit INTERBASE ODBC driver could not be loaded due to
system error code 126.
```

When you click **OK**, the following message appears:

```
Could not load the setup or translator library.
```

Configuring Data Sources

To configure a InterBase data source, do the following:

1 Start the ODBC Administrator to display a list of data sources.

2 If you are configuring an existing data source, select the data source name and click **Configure** to display the ODBC InterBase Driver Setup dialog box.

If you are configuring a new data source, click **Add** to display a list of installed drivers. Select INTERSOLV InterBase and click **Finish** to display the ODBC InterBase Driver Setup dialog box.

3 Specify a data source name, database and, optionally, a database description. Click **Apply**.

4 Click **Translate** to display the Select Translator dialog box, which lists the translators specified in the ODBC Translators section of the system information. INTERSOLV provides a translator named INTERSOLV OEM ANSI that translates your data from the IBM PC character set to the ANSI character set.

Select a translator, then click **OK** to close this dialog box and perform the translation.

5 Click **OK** or **Cancel**. If you click **OK**, the values you have specified become the defaults when you connect to the data source. You can change these defaults by using this procedure to reconfigure your data source. You can override these defaults by connecting to the data source using a connection string with alternate values.

Connecting to a Data Source Using a Connection String

If your application requires a connection string to connect to a data source, you must specify the data source name that tells the driver which section in the system information to use for the default connection information. Optionally, you can specify *attribute=value* pairs in the connection string to override the default values stored in the system information. These values are not written to the system information.

You can specify either long or short names in the connection string   The connection string has the form:

```
DSN=data_source_name[;attribute=value[;attribute=value]...]
```

An example of a connection string for InterBase is:

```
DSN=INTERBASE FILES;DB=EMP;UID=JOHN;PWD=XYZZY
```

The paragraphs that follow list the long and short names for each attribute, as well as a description. The defaults listed are initial defaults that apply when no value is specified in either the connection string or in the data source definition in the system information. If you specified a value for the attribute when configuring the data source, that value is your default.

DataSourceName (DSN): String that identifies a InterBase data source configuration in the system information. Examples include "Accounting" or "InterBase Files."

Database (DB): Directory in which the InterBase database files are stored. These files must exist to connect with the driver. In order to connect to a database remotely, the information about the protocol, remote host, and path to the database can be specified in Database. For example, to connect to a server on a machine named "Test" using TCP/IP, the syntax would be "Test:c:\testbed\database.gdb", where Test is the server machine and c:\testbed\ database.gdb is the InterBase database. Refer to the InterBase Operations Guide for a complete description of specifying remote databases.

DriverCompatibility (DC): Instructs the driver to take behavioral characteristics of previous Visigenics drivers.

LogonID (UID): Default logon ID used to connect to your InterBase database. A logon ID is required only if security is enabled on your database. If so, contact your system administrator to get your logon ID.

Password (PWD): Password that you must enter if your Scalable SQL data dictionary files have security restrictions imposed.

LockTimeOut (LTO): LockTimeOut={0 | 1}.   This attribute specifies whether InterBase waits for a lock to be freed before raising an error when processing a Select...For Update Of statement. LockTimeOut=-1 means wait forever (the initial default). LockTimeOut=0 means no waiting for locks (return error).

BinarySegmentSize (BSS): An integer value that determines the segment size used to create a binary blob. The size of the segment specifies how many bytes the segment can hold. However, this value does not reflect the maximum size of the blob. The default is 80.

CharacterSegmentSize (CSS): An integer value that determines the segment size used to create a text blob. Blobs are stored in segments. The size of the segment specifies how many bytes the segment can hold. However, this value does not reflect the maximum size of the blob. The default is 80.

CharacterSet (CS): The character set value used to connect to the database. If no character set is specified, then the value is not used during connection.

Role (RL): The name of the SQL role that the user adopts when connected to the InterBase database. Refer to the InterBase documentation for a complete description of SQL roles.

Data Types

The following table shows how the InterBase data types map to the standard ODBC data types.

InterBase	ODBC
Blob(SegmentSize,0)	SQL_LONGVARBINARY
Blob(SegmentSize,1)	SQL_LONGVARCHAR
Char	SQL_CHAR
Date	SQL_DATE
Decimal	SQL_DECIMAL
Double Precision	SQL_DOUBLE
Float	SQL_REAL
Integer	SQL_INTEGER
SmallInt	SQL_SMALLINT
VarChar	SQL_VARCHAR

Isolation and Lock Levels Supported

InterBase supports isolation levels 1 (read committed), 3 (serializable, the default), and 4 (versioning). InterBase implements row-level locking in all cases.

InterBase performs optimistic locking. Your transaction does not attempt to lock a record until you issue an update operation that affects that record.   This means that it is possible, though rare, for your update to fail because another client has locked the record, even if you started your transaction before that other client.

InterBase uses a unique versioning engine to achieve a granularity finer than that provided by traditional row-level locking. By virtue of the versioning engine, any number of clients can read a consistent copy of any given record, even if at the same time another client is updating that same row. Readers and writers never block one another, and the InterBase engine maintains these record versions transparently to the client interface.

ODBC Conformance Level

The API functions supported are listed in "Supported ODBC Functions," found in the General Help on DataDirect ODBC Drivers. The InterBase driver also supports the Level 2 functions SQLPrimaryKeys, SQLProcedureColumns, and SQLProcedures.

Number of Connections and Statements Supported

InterBase files support a single connection and multiple statements per connection.

ODBC InterBase Driver Setup Dialog Box

Use the ODBC InterBase Driver Setup dialog box to create new InterBase data sources or configure existing data sources.

Data Source Name: A string that identifies this InterBase data source configuration in the system information. Examples include "Accounting" or "InterBase Files."

Description: An optional long description of a data source name. For example, "My Accounting Database" or "InterBase files in C:\ACCOUNTS."

Database Name: The name of the database to which you want to connect.

Advanced tab
Displays the Advanced Tab, where you can configure additional options for this data source.

OK

Cancel

Apply

Advanced Tab, ODBC InterBase Driver Setup Dialog Box

Use the Advanced Tab on the ODBC InterBase Driver Setup dialog box to specify optional settings when you create new InterBase data sources or configure existing data sources.

Database List: A colon-separated list of InterBase databases you wish to connect to.

Default User Name: The default User Name used to connect to your InterBase database. Your ODBC application can override this value or you can override this value in a connection string.

Lock Time Out: LockTimeOut={0 | 1}.   This attribute specifies whether InterBase waits for a lock to be freed before raising an error when processing a Select...For Update Of statement. LockTimeOut=-1 means wait forever (the initial default). LockTimeOut=0 means no waiting for locks (return error).

BinarySegmentSize: An integer value that determines the segment size used to create a binary blob. The size of the segment specifies how many bytes the segment can hold. However, this value does not reflect the maximum size of the blob. The default is 80.

CharacterSegmentSize: An integer value that determines the segment size used to create a text blob. Blobs are stored in segments. The size of the segment specifies how many bytes the segment can hold. However, this value does not reflect the maximum size of the blob. The default is 80.

CharacterSet: The character set value used to connect to the database. If no character set is specified, then the value is not used during connection.

Application Using Threads: A setting that ensures that the driver works with multi-threaded applications. You can clear this check box when using the driver with single-threaded applications. Turning off this setting avoids additional processing required for ODBC thread safety standards.

Role: The name of the SQL Role that the user adopts when connected to the InterBase database. Refer to the InterBase documentation for a complete description of SQL roles.

Translate Button
Displays the Select Translator dialog box, where you can translate your data from one character set to another. Choose the INTERSOLV OEM ANSI translator to translate your data from the IBM PC character set to the ANSI character set.

OK

Cancel

Apply

Apply Button

Writes the settings you have specified to the system information. These settings remain in effect until you change them in this dialog box. Clicking **Cancel** does not affect settings that have been applied.

OK Button

Writes the settings you have specified to the system information and closes the dialog box.

Cancel Button

Closes the dialog box without saving settings that have not been applied.