



INTEGRATE IBM DB2 DATA THROUGH ODBC

INTRODUCTION

Many organizations are using the power of products like IBM DB2 to implement a federated data management solution where data can reside in various sources but be exposed as a virtual database for querying by client applications.

A DB2 federated system is a special type of distributed database management system (DBMS). A federated system consists of a DB2 instance that operates as a federated server, a database that acts as the federated database, one or more data sources, and clients (users and applications) that access the database and data sources. With a federated system, you can send distributed requests to multiple data sources within a single SQL statement. For example, you can join data that is located in a DB2 Universal Database table, an Oracle table, and your custom application data in a single SQL statement.

IBM DB2 allows access to data sources through the various pre-built wrappers and by allowing the implementation of custom wrappers. The use of the pre-built ODBC wrapper allows the DB2 to pass portions of a SQL query down to an ODBC/SQL enabled data source for processing.

The use of Progress® DataDirect® OpenAccess™ to implement a custom ODBC driver with full SQL capability is a viable solution for implementing efficient federated database management systems based on IBM DB2.

HOW TO QUICKLY IMPLEMENT A DB2 FEDERATED SYSTEM

OpenAccess SDK provides the framework and pre-built components to quickly allow the implementation of a virtual SQL layer with ODBC support over any data source using C, C++, Java, or .NET development environment (Figure 1).

For example, to integrate a Java object-based application with DB2, all that is required is the implementation of glue code in Java (< 500 lines of code) to tie in the application to the OpenAccess SQL engine to support schema and data access requests. The Java application can be on the same system as the DB2 or on any other system supported by OpenAccess. OpenAccess includes client/server support to allow the ODBC driver and the server to reside on separate systems.

HIGHLIGHTS:

- ▶ Up and running in less than 3 weeks
- ▶ Use pre-built components and add no more than 500 lines of code
- ▶ Code in C, C++, Java or .NET

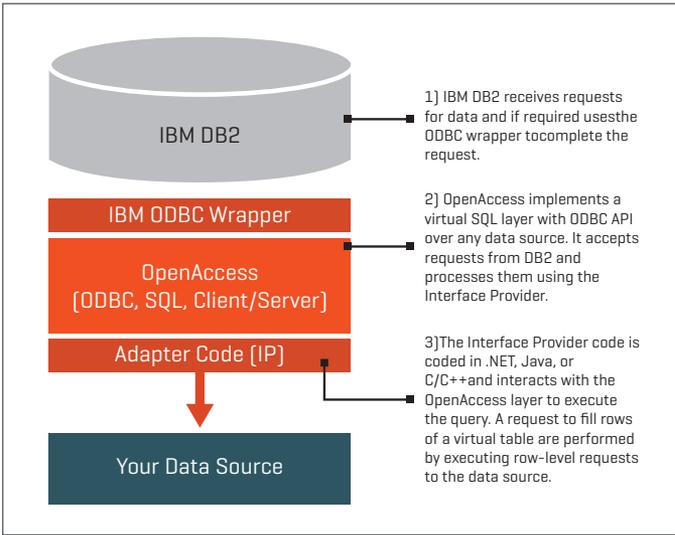


Figure 1: OpenAccess Based Solution

OpenAccess is supported on IBM AIX, Sun Solaris, Microsoft Windows, Linux, HP HP-UX, HP OpenVMS, HP Tru64, SCO Unix, IBM OS/390, and others.

ODBC enabling a data source has value even if you are not implementing a federated data store but want to be able to put business logic into the DB2 as stored procedures and have those stored procedures invoke requests to your data source.

YOUR DEVELOPMENT EFFORT

1. Design and code the adapter code in either C, C++, Java, or .NET [14 days]
2. Do your QA [4 days]
3. Package up for distribution [2 days]

Expected time of completion: **20 man days**

CONCLUSION

The ability to expose any data source as a virtual SQL database with an ODBC API allows IBM DB2 to access it for processing distributed queries. Use of OpenAccess allows you to implement an enterprise quality custom ODBC driver by leveraging the OpenAccess platform, which includes 99% of what you need and allows you to code in the language of your choice to tie in the specific data source.

PROGRESS SOFTWARE

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