

# DataDirect Connect ADO

*Oracle Provider*

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## Executive Summary

As companies strive to reduce costs and become more competitive, many departments throughout the companies are affected. Corporate IT organizations seem to be the primary target. In addition, IT is facing new pressure in dealing with issues such as migrating to intranet deployments and using emerging technology. As pressures and demands on IT organizations increase and budgets decrease (or are directed in specific areas), often, the first reaction is to use the most inexpensive software available that seems to “work.”

Total Cost of Ownership (TCO) studies show that this approach is often not the most cost-effective solution. With TCO analysis, we find that software purchasing generally accounts for less than 25% of the total cost of the product, while deployment costs can range from 25-50%. Other factors, such as administration and downtime, account for the remainder of the cost. After the first year’s purchasing cost of the software, the TCO mostly comprises administration, maintenance, and downtime costs. Intangible factors, such as functionality, increased performance, data integrity insurance, and longevity of the solution, are not measured in the TCO.

Both TCO and intangible factors often are overlooked by organizations when making a decision about purchasing data connectivity middleware. Although data connectivity middleware is sometimes viewed as a cost or commodity, it is important to realize that information access is the key to running a successful business. The data connectivity infrastructure must be secure, high performing, fully functional, and consistently available. The infrastructure that runs a business is only as strong as its weakest link.

Investing and deploying the right solution today will save companies money in both the short and long term, because the correct product can support current needs as well as future needs. Otherwise, companies are forced to incur the tremendous cost of deploying a solution that seems to work today, and then deploying a different solution when it is discovered that the first product did not keep pace with their organization.

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## DataDirect Technology Is the Right Solution

DataDirect Technologies’ products are unquestionably the industry leader among data access technology in today’s market. Our middleware technology is the data connectivity backbone for dataware applications from over 250 vendors, including Oracle, Microsoft, Sybase, Informix, CA, and IBM, and is

also the data connectivity backbone for internal applications within most Fortune 100 companies.

Built on the knowledge and technology assets DataDirect Technologies has acquired over the past 17 years, DataDirect Connect ADO/OLE DB Providers are known as the best performing, highest quality, and most functional OLE DB providers available on the market today. Millions of clients and over 250 OEMs and technology partners worldwide who have standardized on DataDirect products can attest to the quality and reliability of our technology.

The next section outlines the features and functionality of the DataDirect Connect ADO Oracle Provider, confirming our focus and commitment to standards-based connectivity.

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## Features and Functions of Connect ADO Oracle Provider

### Oracle-Specific Support

#### Connects to Oracle8i and 9i

Connects using the Oracle Net8 client version 8.0.5 or higher to remote Oracle8 servers 8.0.5 or higher and remote Oracle servers 7.3.4.x. To connect to remote Oracle9i servers, either the Oracle Net8 Client 8.1.6 or higher or the Oracle Net Client for 9i is required.

**IMPORTANCE:** Oracle9i, the latest database released from Oracle, is considered a strategic release by Oracle. Oracle has announced that it will not provide any additional bug fixes or enhancements for Oracle7.x software including the older database client SQL\*Net. DataDirect's Oracle Provider supports a full complement of both Oracle servers and clients, which allows more autonomy within organizations where upgrades or changes in the server software often are a gradual process.

#### Supports the Latest Oracle Features

Fully supports Oracle8i with features such as CLOBs, BLOBs, BFILEs, and other data type changes. In addition, both providers support Oracle9i with features such as setting the number of seconds to wait on a lock timeout, ANSI Outer Joins, and materialized views.

**IMPORTANCE:** Oracle9i is the latest release from Oracle. Oracle9i contains many new features and represents a strategic release for Oracle. The lack of full support for Oracle9i or Oracle8i data types significantly limits the future usability of a provider.

One example of a significant difference between Oracle7 and Oracle8/9 is long data type support. Oracle 7 allows only one long data type per row and it must be stored in-line. Perhaps the most highly regarded feature for Oracle customers is that Oracle8i allows multiple LOB types per row and they can be

stored inline, out of line, or in external files. Additionally, the Oracle8i LOB data types allow for objects that are twice as large as the 7.x long types.

### **Oracle Stored Procedures (PL/SQL) Returning Result Sets**

Fully supports returning result sets (including multiple result sets) generated from PL/SQL stored procedures against 7.x, 8i, and 9i servers. This implementation is:

**Flexible.** You can call any stored procedure without worrying about data integrity or the size of result sets. Stored procedures do not need to be in the package that defines the REF CURSOR. If a stored procedure returns a result set, the provider can pass literals as arguments.

**Standards-based.** Calling an Oracle stored procedure and returning a result set is done the same way it would be done for other databases, such as Informix or Sybase, and the way it would be expected by any third-party application.

**Fully functional.** Business logic written in PL/SQL is not limited to a single answer set. Multiple answer sets can be returned from a single invocation, which allows for the greatest application flexibility and performance.

**IMPORTANCE:** Organizations want to leverage PL/SQL to place optimized business logic on the server. This feature provides maximum performance and functionality using well-tuned PL/SQL routines. Using OLE DB-compliant syntax ensures application flexibility and interoperability. Investing in high quality, fully functional OLE DB products for Oracle ensures that an organization can leverage the functionality of their Oracle investments and save the long-term cost of redeployment.

## **Functionality**

### **Cursor Support**

Optimizes forward-only cursors to pre-fetch multiple records, reducing network traffic and improving performance. Two types of scrollable cursors are supported to allow maximum application flexibility:

Static cursors are ideal for applications that require high levels of concurrency on the database server and require the ability to scroll forwards and backwards through result sets. The DataDirect Oracle provider fully implements the static cursor model and provides options to fine-tune static cursor performance (for example, options allowing you to set how much long textual data is cached).

Keyset-driven cursors are the preferred scrollable cursor model when the application cannot afford to buffer the data from a static cursor and for ADO applications. The DataDirect Oracle provider implements a robust keyset-cursor model that works well with dynamic enterprise applications.

**IMPORTANCE:** Forward-only cursors allow only one pass through the data, which can severely limit application flexibility. Static scrollable cursors provide application flexibility, but they must be used judiciously because of

performance issues with caching large amounts of data. Keyset-driven scrollable cursors provide the most application flexibility (specifically for ADO applications) and are very important in building enterprise-level applications.

### **Microsoft DTC Support**

Leverages the facilities of the Microsoft DTC environment in a user-friendly and flexible manner. No separate installation packages are required and DTC is supported “straight out of the box” against multiple versions of the Oracle8i and 9i server platforms. The provider provides flexible recognition features that detect Oracle8i and 9i settings to allow for maximum performance and throughput in any Microsoft Transaction Server/DTC environment.

**IMPORTANCE:** Enterprise applications running in the Windows NT/2000/XP environment will probably use Microsoft Transaction Server and its DTC capabilities. It is essential that those DTC capabilities be exposed fully and in a manner that provides for administration and deployment flexibility within the enterprise.

### **Platforms Supported**

Windows platforms including the Microsoft Data Access Components (MDAC) for 2.6 or higher

**IMPORTANCE:** Full support for all operating environments allows for greater flexibility within an enterprise to make changes on deployment platforms at their own pace. Additionally, DataDirect Technologies has the exclusive right to port the OLE DB core components to all non-Windows platforms. As COM, ADO+, .NET and OLE DB become available on non-Windows platforms, you will have one vendor with common functionality across all platforms.

### **Full Outer Join Syntax**

Supports full outer join syntax, including extensions such as nested outer joins

**IMPORTANCE:** Full join support is very important when building queries to allow full access and usability of company data.

## **Quality and Reliability**

### **Leading Vendor of Standards-Based Data Access Technology**

DataDirect Technologies is the leading data connectivity vendor in the industry, supporting more than 130 combinations of platforms and databases. Nearly every major software vendor relies on DataDirect technology, including Oracle, Informix, CA-Ingres, Sybase, IBM, Lotus, Microsoft, Tandem, Pervasive, Seagate, Silicon Graphics, Compaq, Apple, Hewlett Packard, SUN, and over 250 other OEMs.

**IMPORTANCE:** DataDirect Technologies is considered the industry leader in standard-based data access technology (including JDBC, ODBC, and OLE DB) and is relied upon by almost all major database vendors and OEMs.

This further demonstrates our leadership position, strength and commitment in this technology. Searching through News Groups on data access or [www.dejanews.com](http://www.dejanews.com) provides better first-hand insight on the quality and reliability reputation that we have throughout the industry. Additionally, DataDirect Technologies is the only vendor of standards-based middleware that fully supports Oracle8i features across all its middleware products.

### **Certified with All Major Third-Party Applications**

DataDirect ADO providers are rigorously tested to the highest standards by our own IVS (Interface [OLE DB] Verification Suite) with all major third-party applications. Over 15 staff years of development is invested in building the IVS, which is continually updated as new OLE DB specifications and new DBMS/OS releases are available. In addition, we have extensive third-party test suites developed by DataDirect Technologies and our 250+ OEMs that ensure our technology is compatible with all major dataware applications available.

All Microsoft tests are used to verify conformance with all aspects of integrating OLE DB products into Microsoft environments, including the OLE DB conformance suite, ADO conformance suite, Microsoft IIS stress load suite, SQL Server Data Transformation Services suite, SQL Server distributed query processing suite, and SQL Server replication suite. DataDirect Technologies is the only vendor outside of Microsoft that has access to these suites.

**IMPORTANCE:** Investing in a provider that is highly tested and certified with a wide variety of applications available across the industry protects an organization against unnecessary and crippling downtime, vendor application lock-in, and increased support and maintenance costs.

## **Performance (Provider Optimizations)**

### **Performance Tuning Options**

Provider includes options such as ArraySize, LockTimeOut, PacketSize, Isolation Lock Level, and Enable Oracle Links

**IMPORTANCE:** As no two environments are alike, these options supported by DataDirect allow you to fine-tune your environment to increase performance and decrease network traffic.

### **Optimized for Third-Party Applications**

Provider offers several application specific tuning options to allow maximum performance and functionality for many of today's third-party applications.

**IMPORTANCE:** Different applications implement OLE DB differently. In fact, tuning options and workarounds sometimes need to be created to allow an OLE DB provider to function optimally with a specific application. Examples of such applications not only include all Microsoft applications, but also PowerBuilder, Lotus Suite, and many others.

## Services

### Technical Support

DataDirect Technologies' total focus is on data access middleware. Our approach is one of partnership with our customers and all DBMS vendors. DataDirect Technologies offers robust, worldwide-support through phone, interactive web, email, and fax. We have the largest knowledgebase in the industry on ODBC, applications, and middleware. Our support constantly ranks above a 95% approval rating from our customers and is one of the main reasons our data connectivity technology has become the industry standard, relied on by millions of users and 250+ OEMs.

IMPORTANCE: The TCO is generally not in the initial acquisition cost of the software. It is in the support, administration, and incurred downtime costs inherent with network architectures. Superior technical support is essential to reducing these costs, allowing applications and your business to run uninterrupted.

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## Summary

Investing in and deploying the right solution today will save companies money in both the short and long term, because the correct product can support their current needs as well as future needs. Connect ADO is the best product on the market today with regards to Oracle-specific support, functionality, quality, reliability, performance, and services such as technical support.

FOR MORE INFORMATION

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DataDirect Technologies is the leading provider of components for connecting software to data, providing standards-based technology that ensures consistent behavior and performance across diverse environments such as J2EE, .NET, Web, and client/server. With the most comprehensive support for ODBC, JDBC, ADO and XML, DataDirect Technologies provides the easiest experience connecting software to data.

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