Control and Connect Your Data with OpenAccess SDK

WHITEPAPER

BI Tools and Better Business Decisions

Today's businesses are turning to data to drive intelligent decision making. Regardless of whether they aim to reduce costs, accelerate innovation or improve product quality, being able to harness their data is critical to their success.

Analytics and business intelligence support data-driven decision making by providing businesses with fresh insights. Modern analytics and business intelligence platforms have evolved to support the entire analytics workflow, from data preparation to visualization, helping companies understand their businesses' complexities.

As BI and analytics platforms have been iterated and improved upon over the years, self-service has emerged as a key competitive differentiator. Business intelligence has shifted from IT-led reporting to self-service solutions that empower business users who know the data best to create their own reports.

This innovation came about in part because tools could easily connect to various data sources. Standardization is what makes that possible. SQL is still the standard language that enables BI, reporting and analytics tools to query different types of data, including big data, NoSQL, operational databases and data warehouses.

However, there are obstacles to keeping up with the proliferation and widespread adoption of self-service business intelligence.

Keeping Up with Never-Ending Data Connector Requests

Business users need access to their data to extract the most value from their analytics and business intelligence efforts. But creating new connectors for every data source simply isn't economical or scalable.

Software vendors must be able to quickly create and deploy custom connectors on the fly to their customers. This helps them provide more value to their end customers by reducing friction and ensuring they have access to the data they need to make better decisions.

Meanwhile, a similar problem exists at mid-market enterprise companies. Their internal users need access to data from enterprise APIs or legacy systems to build analytical reports without constantly leaning on IT for support.

Some companies will attempt to overcome these challenges by trying to enhance the connectivity of native connectors or by building a set of connectors themselves. Frequently, native drivers lack the ability to bridge apps and data sources using different protocols, or they just aren't offered for specific or proprietary data sources.

There are also compliance concerns, as opening data sources to SQL access often means opening all data to users. That even includes highly sensitive, highly regulated data that contains personally identifiable or confidential information.

Lastly, for businesses whose main concern isn't data connectivity, building and implementing a custom in-house driver is expensive in terms of resources and time to market. Plus, there are ongoing maintenance costs to consider as well.
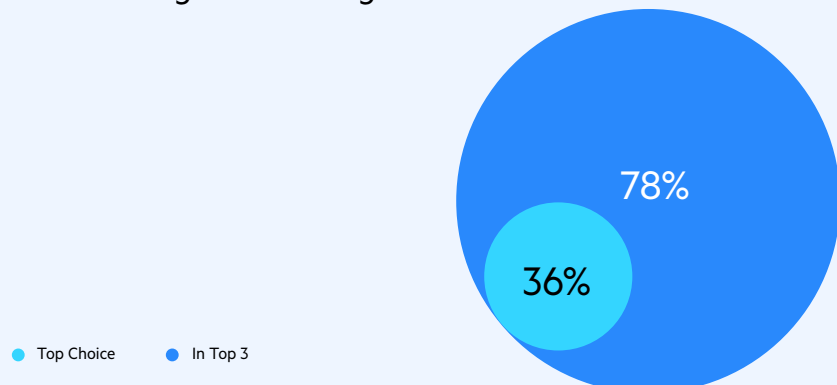
How Have BI Solutions Evolved?

According to the market share analysis in the 2021 Gartner Magic Quadrant for Analytics and Business Intelligence, "revenue in the modern BI platform market grew by 19% in 2019," and while "spending on [analytics and business intelligence] is growing more slowly than in the 2010s, the number of people using ABI platforms is accelerating massively into the millions."

How did we get here?

Business intelligence has evolved from IT-led reporting to business-led, self-service solutions as businesses realize the importance of giving end users access to the data they need to make timely and frequent business decisions. Even now, in the wake of the COVID-19 pandemic, business leaders see analytics as the technology most likely to influence their company's operations.

Analytics Are Expected To Emerge as
Game Changer Technologies from Covid-19 Crisis

78%

36%

● Top Choice ● In Top 3

Gartner, Data & Analytics During Covid-19 (2020)

The usefulness of BI and analytics tools came about in part because they could easily connect to various data sources using the connectivity of ODBC, JDBC and REST. SQL is still the standard language that enables BI, reporting, and analytics tools to query different types of data, whether big data, NoSQL, operational databases or data warehouses, and data drivers create the connections.

Why Use an SDK?

Customers of software vendors and enterprise IT business users want to use analytical and data integration tools from vendors like Microsoft, Tableau, Informatica, MicroStrategy, IBM, Oracle and more. They need SQL-enabled connectors that are guaranteed to be compliant with ANSI-SQL standards and compatible with these reporting tools.

If the perfect connector doesn't already exist and a business doesn't have the financial or time-to-market resources to build their own from scratch, a software development kit (SDK) may be the best fit. SDKs handle much of the code required to build a driver with SQL support. An SDK should include everything a developer needs—libraries, documentation, code samples, processes and guides—to easily create their own ANSI-SQL complaint ODBC, JDBC, or ADO.NET driver.

Why Use OpenAccess SDK?

Progress® DataDirect® OpenAccess™ SDK can help a user create the connections they need to allow others the full use of their preferred BI and analytics tools. OpenAccess is an SDK for developers that handles 99% of the code required to produce a standards-based driver with SQL support.

How OpenAccess SDK Provides Users Full Control of Their Data

- Personally identifiable information that shouldn't be seen by all users can be hidden or exposed only on a need-to-know, per user basis. This creates safeguards around the data, helping enterprises stay compliant with privacy and security regulations.

- Native connectors and those not built by DataDirect can be tailored—altering content, scanning queries or augmenting data—to the needs of the end user with minimum code changes. This dramatically speeds go-to-market.

- If ODBC or JDBC connectivity is needed where none is available, OpenAccess SDK can easily bridge the technology gap between the analytics and data integration tools and the available connectivity solution.

- As a low-code and easy to implement solution, OpenAccess SDK helps enterprises reach the goals of their business without needing to specialize in data connectivity. DataDirect can provide the tools needed for the SDK as well as offer award-winning support.

Enterprises and software vendors alike rely on OpenAccess SDK to custom build compliant, performant drivers for ODBC, JDBC, ADO.NET or OLE DB standards. OpenAccess SDK provides direct SQL access from BI tools while leveraging features such as:

- Customizations for users to integrate their security and privacy rules in the data governance without touching the backend data source.
- Integration with existing connectors from any source to create enhanced functionality.
- The ability to completely white label the driver, including the driver's name, error message prefix and configuration dialog box.
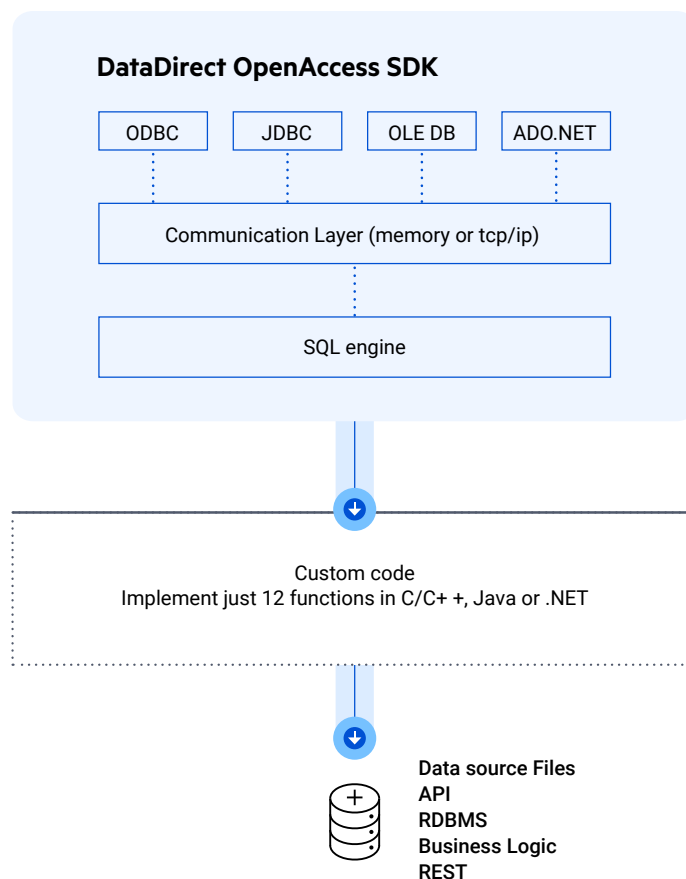- Support for all popular operating systems and 32-bit and 64-bit architecture.

OpenAccess SDK takes care of most of the development work, providing the majority of the code required to SQL-enable a data source. The developer only needs to generate a small amount of code (IP) that is specific to the data source. This includes 12 functions that can be written in C, C++, Java or .NET. This same IP code can be re-used for any type of driver—no code changes required. By using a language your team is proficient in, you can go to market faster and improve driver maintenance.

Deliver your own fully branded, open connectors built on a codebase that is certified across the most third-party BI and analytics applications. OpenAccess SDK even includes run-time installers for ease of distribution to your data analytics teams as well as external developers and customers.

Key Features

- Connectors built with OpenAccess SDK are guaranteed to be compliant with SQL standards and with popular analytical and data integration tools from vendors like Tableau, Informatica, MicroStrategy, IBM, Oracle, and Microsoft

- Powerful SQL Engine allows complex queries to be efficiently executed in cooperation with your data engine

- Data security ensured with numerous advanced authentication choices including Kerberos, Active Directory, Proxy Authentication and SSL/TLS encryption

- Broad platform support allows the query processing to occur on any platform, including Windows, Linux and Unix, and allows client applications to run on any of these platforms

- Supports all popular operating systems and 32-bit and 64-bit architecture

- Support for C, C++, Java or .NET for integration with your existing API

- SQL 92 compliant to allow queries with joins, unions, nested query, stored procedures, insert, update, delete, group by, order by, and other SQL syntax to be executed over any data source

- Optimized query execution allows the work to execute the query to be done all by the OpenAccess SQL engine, or it can be selectively pushed down to the data source for the best performance

- Create an obfuscation layer between the application and backend data, which you can safely migrate, test the new upgraded/migrated data source and then make an easy switch to the new data source.

- White label support for distribution with your software solution

DataDirect OpenAccess SDK

| ODBC | JDBC | OLE DB | ADO.NET |

Communication Layer (memory or tcp/ip)

SQL engine

Custom code
Implement just 12 functions in C/C+ +, Java or .NET

Data source Files
API
RDBMS
Business Logic
REST

Progress®

Why Progress DataDirect?

Empowering applications with enterprise data is our passion at Progress DataDirect. We offer cloud and on-premises data connectivity solutions across Relational, NoSQL, Big Data and SaaS data sources. Performance, reliability and security are at the heart of everything we design.

That is why Progress DataDirect is the trusted vendor of connectivity for the leading vendors in analytics, BI and data management and 10000+ enterprises for all their analytics, integration and data management needs.

Progress DataDirect OpenAccess SDK lets you quickly create a standards-based, ASNI-SQL compliant ODBC, JDBC or ADO.NET driver for your unique requirements without the domain expertise and heavy lift of full code development. Keep up with the demand for new data connectors and get the full value of BI and analytics tools with OpenAccess SDK.

→ **Try OpenAccess SDK for free today**

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