



MAGNITUDE™

Gateway

Product Overview

WHITE PAPER



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Abstract

Data has never been a more crucial component for decision makers within an organization. Technological advances over the last two decades have not only vastly increased the amount of data we can gather, process and store but have also introduced easy-to-use tools to analyze this data. With these tools, data democratization puts data at everyone's fingertips. Unfortunately, the ease of connecting to these data sources has not evolved with this changing data landscape until now: Magnitude Gateway is that evolution.

Data Connectivity Standards

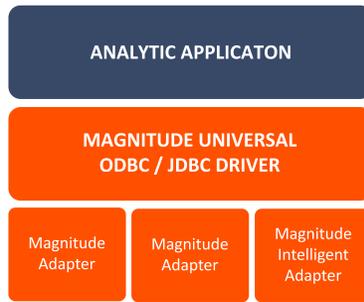
During the early 1990s, Microsoft and Simba Technologies (now part of the Magnitude Software family) collaborated on what is now the Open Database Connectivity (ODBC) API. This API provides a layer that translates SQL (the most widely used language to access data) from an application to the native format required by the data source. In doing so, an application is shielded from needing to handle the idiosyncrasies of one data source over the other. In the same way a printer manufacturer provides a driver so that an operating system can communicate with their printer, ODBC Drivers are created for a data source. ODBC has since expanded beyond the Microsoft ecosystem to Unix, Linux and MacOS.

One standard that holds true with technology is that there are always more standards. Data connectivity is no exception to this. Since the ODBC standard became widely adopted, additional standards have been created to better support applications (e.g., JDBC for applications written in Java) and new data source types (e.g., MDX query language for OLAP data sources). While a heterogeneous environment provides an opportunity to use best-of-breed analytic tools, it creates a challenge for more general-purpose applications trying to provide even a moderate level of consistent functionality across all data sources and types.

Data Source Configuration

Much like a printer driver requires information such as paper type, orientation, etc., there are requirements for connecting to a data source. Specifics about where the data source is hosted, what data in the data source is needed, and under what credentials the data can be accessed are all common requirements. For ODBC, this connection information is typically defined and persisted using the ODBC Administrator utility provided with Microsoft Windows. Other platforms have similar capabilities through open source offerings. Unfortunately, all these utilities — while functional — lack much of what we have come to expect in a modern application from a user experience perspective. Other connectivity methods, such as JDBC, lack even this level of functionality and instead require a delimited set of values to be crafted by the user.

While creating and managing data source configurations is a challenge for individual users, it becomes exponentially more problematic for an enterprise IT organization. Not only is time spent assisting users in setting up different configurations for their organization's data sources, ongoing maintenance of those configurations is needed. This includes everything from ensuring the connectivity software on each workstation is up to date to updating configurations when a data source itself changes.



Introducing Magnitude Gateway

Magnitude Gateway simplifies data connectivity by creating a single interface (Universal Driver) to a variety of interfaces (including ODBC and JDBC) for applications to access data. Configuration needed for connections is through a modern user experience that is independent of the access standard used for connectivity. Installation and management of the adapters used by the Universal Drivers to connect to a data source are similarly done through a modern environment that requires little IT involvement.

Magnitude Universal Drivers and Gateway Adapters

When it comes to connectivity with the Gateway platform, both ODBC and JDBC are treated as first-class citizens via Universal Drivers. Magnitude Gateway’s Universal Drivers become a single integration point for an application; this instead of the traditional approach, whereby an application is required to connect to a specific driver for a specific data source. This drastically reduces the amount of integration and testing work required for ISVs adding data connectivity to their applications.

Universal Drivers access data via Magnitude Adapters, which are optimized for each data source. Unlike ODBC and JDBC Drivers, adapters can be easily added to Magnitude Gateway through an easy-to-use configuration tool — reducing significantly the installation and maintenance burden usually placed on an IT organization or an ISV distributing additional data connectivity for their application.

Magnitude Intelligent Adapters

Many use cases require access to all of a data source’s tables and columns. Sometimes this is more than is required for common reporting and analysis tasks — especially when considering ERP sources like SAP and Oracle that have tens of thousands of tables. Instead a more business-like view of the data is needed that hides the source’s complexity. Magnitude Intelligent Adapters provide such a capability by exposing a virtual schema (or business representation) for the source. This schema is transparent to the application accessing the data source and thus requires no additional configuration. Instead the user is simply presented with a set of resources that represents a consolidated set of data - usually from several underlying tables in the data source.

Magnitude Gateway Data Source Configuration

With Magnitude Gateway, applications and users are provided with significant flexibility when it comes to specifying the configuration information needed to connect to a data source. A modern application environment allows users to configure Gateway Data Source Names (GDSN), which are persisted configuration definitions and can be referenced by any Universal Driver. Alternatively, an application or user can directly specify an adapter to use and any necessary configuration information.

Conclusion

Magnitude Gateway’s use of a single Universal Driver (ODBC or JDBC) to provide connectivity simplifies connection workflows for both end users as well as ISVs adding data connectivity into their applications. Definition of connection information has been modernized to empower end users to better manage their connectivity needs independently of an application’s chosen connectivity standard while still providing the flexibility for ISVs wanting to manage the entire connection workflow. Intelligent Adapters offer additional value add to data source connectivity through the layering of a business view schema on top of the data. Democratization of data is no longer hindered by the connectivity workflows of the 1990s.



What's Next?

For more insights on Magnitude Gateway, including how your organization can gain immediate value from delivering unified data access without heavy implementation and maintenance overhead, [download our fact sheets](#) and [download a free trial](#). Email connectivity@simba.com or call +1.604.633.0008 EXT 2.

About Magnitude Software

Magnitude's transformative approach to unified application data management delivers vast operational efficiencies to business application data access, management, analytics and reporting for the modern enterprise. Magnitude's portfolio of products includes: simplified application data access to any data source; data management solutions for the SAP and commerce verticals; simplified master data harmonization and governance; and packaged application analytics and reporting solutions for SAP and Oracle. The company helps thousands of business users simplify management of their data and deliver on the substantial productivity gains these applications originally promised. For more information, please visit www.magnitude.com. For additional details on our Simba connectivity solutions, visit www.simba.com; for Magnitude Gateway, www.simba.com/magnitude-gateway.



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