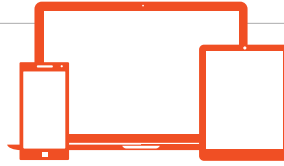


# ANATOMY OF A DATADIRECT DRIVER


























## APPLICATION

Robust language, platform & architecture support

## DATA ENCRYPTION AND SECURITY ACROSS THE NETWORK

STANDARDS-BASED API ODBC - JDBC - ADO.NET

DEVELOPER INTERFACE SUPPORT	CONVERSION AND MAPPING SUPPORT	DB AND NETWORK COMMUNICATION
 Schema Discovery / Mgmt	 NoSQL and JSON Data Normalization	 Intelligent Pushdown
 Codeless Configuration	 Standard Error Handling	 Socket Management
 Emulation for Missing DB Functionality	 Consistent Meta Data Support	 Network Wire Management
 SQL Upleveling	 International Code Page Support	 Throughput Optimization
 Connection Management	 Data Conversion Support	 Bulk Data Load
 Thread Protection	 Single Sign-on	 Failover Support
 Statement Pooling	 Cloud Data Adapters	 Load Balancing
		 Data Caching
		 Distributed Transaction Support










## DBMS

DB vendor & version interoperability








## WHAT IT IS

## WHY IT'S IMPORTANT

### DEVELOPER INTERFACE SUPPORT

	Schema Discovery / Mgmt	Data sampling to discover schema and a schema tool to edit and manage	SQL needs a schema to operate on. Without that, it isn't relational
	Codeless Configuration	Control and change behavior via connect options, not code changes	Allows behavior to be easily optimized for third party applications
	Emulation for Missing DB Functionality	Absent or inconsistent source functionality is made consistent by the driver	Provides for a consistent experience across different data sources
	SQL Upleveling	Smooths out differences in source-specific SQL syntax for outer joins, dates, functions, and stored procedures	Provides for a consistent experience across different data sources
	Connection Management	Driver maintains and manages a pool of connections to the source transparently to the application	Fast connect times
	Thread Protection	Driver ensures proper behavior for a multi-threaded applications	Maximizes utilization of multi-threaded hardware and simplifies app dev
	Statement Pooling	Driver pools and reuses resources when querying the data source	Better performance










### CONVERSION AND MAPPING SUPPORT

	NoSQL and JSON Data Normalization	Powerful mapping of nested data into a relational views	Provides a more natural relational representation than flattening
	Standard Error Handling	Maps data source specific errors to ANSI standard error messages	Consistent error handling across many sources with a single implementation
	Consistent Meta Data Support	Common metadata interface across diverse data sources with varying levels of and approaches to metadata	Consistent approach to discovering and consuming metadata across sources
	International Code Page Support	Support for and conversion between all ANSI and ISO character sets	Simplifies construction of internationalized applications
	Data Conversion Support	Conversion of proprietary data types to and from standard ODBC & JDBC types	Simplifies application development regardless of source specific differences
	Single Sign-on	Support for authentication standards such as Kerberos and NTLM	Enables participation in single-sign on and improves app security compliance
	Cloud Data Adapters	Connectors supporting cloud-based data sources	Connecting to more up and coming cloud-based data sources

## WHAT IT IS

## WHY IT'S IMPORTANT

DB AND NETWORK COMMUNICATION




 Intelligent Pushdown	Decisions about what the source does best and what must be done in the driver	Pushing operations to the source whenever possible translates into better performance
 Socket Management	Intelligent utilization of wire protocol communication with the data source	Minimizes network round trips and contention to maximize performance and data throughput
 Network Wire Management		
 Throughput Optimization		
 Bulk Data Load		
 Failover Support	Connect and select level failover when communication with the connected instance fails	Simplifies application logic and maximizes application up-time
 Load Balancing	Client-side algorithms to distribute work across database instances	Simplifies application logic and maximizes database utilization
 Data Caching	Built-in data cache for high-latency sources	Improves select performance for SaaS sources with relatively slow networks
 Distributed Transaction Support	Built-in distributed transaction coordination	Simplifies application development

### PROGRESS

Progress (NASDAQ: PRGS) is a global software company that simplifies the development, deployment and management of business applications on-premise or in the cloud, on any platform or device, to any data source, with enhanced performance, minimal IT complexity and low total cost of ownership.

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