

SQL CONNECTIVITY TO MONGODB USING ODBC AND JDBC

Overview

Integrate MongoDB data into your existing IT ecosystem via the leading SQL connectivity solution that exposes MongoDB data in the way SQL applications expect—as normalized relational tables.

Don't “dumb-down” your MongoDB documents just so they can be handled by competing solutions that just flatten complex MongoDB data.

Progress Datadirect for MongoDB	Other Connectors
Normalization of MongoDB data into relational views that are natural to relational applications	Flattens MongoDB data into one massive table that is difficult and unnatural
Powerful MongoDB schema sampling and tool for perfecting your relational view of MongoDB data	No or limited mechanisms to optimize the relational view of MongoDB data
Create a long-living, stable relational view of MongoDB data that handles varying document structure and contents	Requires frequent changes to the relational view to accommodate varying document content that break relational applications
Ability to query multiple MongoDB databases from a single connection	Can only expose a single MongoDB database
Provides noticeable throughput advantages of up-to 5x for complex aggregation queries resulting in real-time access to high volumes of MongoDB data	Speed limitations result in wasted time and inadequate access to business critical data stored in MongoDB
Maximizes performance with SQL aggregation pushdown to MongoDB pipelines	Not optimized for complex aggregation work resulting in slower performance and additional processing requirements

How It Works

Progress® DataDirect® for MongoDB provides unique and robust relational connectivity to MongoDB that enables natural compatibility to your existing SQL-based applications. Instantly make MongoDB compatible with existing applications by leveraging industry accepted SQLbased ODBC and JDBC standards.

Progress DataDirect lets you map complex MongoDB JSON structures, including deeply nested documents and arrays into their most natural relational counterpart—child tables that relate to a primary parent table. In the example below, the nested address document has been mapped automatically into the **employee_adresse** table and the emails nested JSON array into the **employee_emails** child table. Progress DataDirect MongoDB ODBC and JDBC connectivity are the only solutions in the market providing this powerful capability.

Figure 1

An example of relational mapping of MongoDB data.



Our Approach

What differentiates Progress DataDirect? Three key areas:

- **Performance:** DataDirect for MongoDB is optimized for performance to ensure no noticeable latency and throughput when connecting to MongoDB systems.
- **Compatibility:** DataDirect can connect virtually any application, including BI, analytics and data warehousing projects, directly to MongoDB systems without compromising MongoDB functionality.
- **Quality:** Customers who choose Progress DataDirect appreciate great quality software. The breadth of SQL supported, the scope of testing, and the long history of enterprise data connectivity and integration are just a few of the reasons to choose DataDirect for MongoDB.

Benefits

- Ability to query, sort and/or aggregate all data stored in arrays via SQL
- Expose complex data types using relational concepts and standards (SQL) for existing staff
- Eliminate data repetition created via flatten nested data
- Simplified and narrower table definitions
- Ability to execute joins across parent/child tables via a single query to MongoDB
- Maximize MongoDB performance via optimized joins across tables
- Execute “joins” of data from different MongoDB databases
- Advanced tool for complete control of the schema exposed via the driver:connectivity and integration are just a few of the reasons to choose DataDirect for MongoDB.
 - Fine grain control of lengths for string columns, prevents ODBC apps from allocating more memory than needed
 - Detects changes in the MongoDB schema giving you full control of when and which schema changes are exposed to the ODBC/JDBC application

Features

- Support of common **RDBMS functionality** such as joins
- No performance compromised via the ability to execute joins across parent/child tables via a **single query** to MongoDB
- **SQL-92 compliant** with industry-leading breadth of SQL coverage
- Available as **ODBC** and **JDBC** interfaces
- Maximizes performance with SQL aggregation pushdown to MongoDB pipelines

Specifications

- Supports all major OS platforms including Microsoft Windows, Linux, HP-UX, AIX, Solaris and more
- Supports the latest ODBC standard, 3.52
- Supports the latest JDBC standard, 4.2
- Support MongoDB version 2.2, 2.4, 2.6, and 3.0
- Support for 32-bit and 64-bit applications
- Compatible with J2SE 5 and higher
- ANSI SQL-92 Compliant

Resources

Want to learn more about Progress DataDirect for MongoDB? Our experts are standing by to help.

To contact us by phone, call:

- In the US: **1-800-876-3101**
- In Europe: **+44 (0) 01344 360444**
- Globally: **+61 3 9805 8600**

If you would like to chat with our experts virtually, please use our [Contact Us form](#).

Visit our [blogs](#) to read about specific use cases.

About Progress

Progress (NASDAQ: PRGS) is a global leader in application development, empowering the digital transformation organizations need to create and sustain engaging user experiences in today's evolving marketplace. With offerings spanning web, mobile and data for on-premise and cloud environments, Progress powers startups and industry titans worldwide, promoting success one customer at a time. Learn about Progress at www.progress.com or 1-781-280-4000.

Worldwide Headquarters

Progress, 14 Oak Park, Bedford, MA 01730 USA Tel: +1 781 280-4000 Fax: +1 781 280-4095

On the Web at: www.progress.com

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