

Database Connectors: a Better Bridge between COBOL and RDBMS

Manually connecting COBOL applications to RDBMS isn't easy and often results in significant application change, increased delivery time, added cost and risk. Micro Focus® Database Connectors make data modernization simple by automatically translating existing data file syntax within COBOL source code to SQL instructions operating against a modern relational database. This solution provides developers, working with COBOL applications, a seamless and secure bridge between RDBMS and COBOL. Database Connectors facilitate faster data access and bring the benefits of SQL and RDBMS to your COBOL application.

Database Connectors at a Glance:

- + Deliver the benefits of a modern RDBMS architecture without an application re-write
- + Connect COBOL applications to Microsoft SQLServer, Oracle, IBM DB2 applications and other RDBMS platforms
- + Enable data access using familiar tools such as Excel and Crystal Reports.
- + Achieve real-time BI and analytics for your application data
- + Improve application reliability, availability and scalability with modern RDBMS technology
- + Achieve faster data recovery following system failure

“Following the Database Connectors implementation, we’ve found our applications are more resilient and reliable.”

DAVID ATWOOD
Software Developer
Systems & Software

Business Challenge

Solving the legacy data access problem is not easy for most organizations. As the importance of data access increases, driven by the digital transformation of business, IT teams must provide new secure, reliable and standards-based methods of access to this valuable information. RDBMS is often seen as the ideal solution offering SQL-based data access and improved application reliability, availability and scalability. But connecting COBOL systems to RDBMS can be challenging and complex. Many organizations undertake an application re-write to realize the benefits of relational database management systems, but often experience project delays, added cost and business risk as a result.

The Solution

Database Connectors offers a better path to data modernization by delivering the benefits of modern RDBMS technology for COBOL applications without the cost or complexity of an application re-write. Developers use existing skillsets and familiar COBOL data file semantics to seamlessly connect to relational database management systems. This solution

enables fast and automated access from your existing COBOL application to modern RDBMS platforms.

Sitting beneath the application layer and integrating directly with the Micro Focus COBOL runtime system, Database Connectors re-route COBOL data file-IO requests into a relational database management system. Using special tables within your selected RDBMS, this solution preserves traditional data file attributes such as file sharing and record locking, thereby maintaining existing application behaviour without any application re-architecture.

The following are key capabilities of the Database Connectors solution:

- **COBOL to RDBMS.** Provide developers with an easy and automated path to relational database management systems--without an application re-write. Seamlessly connect COBOL applications to Microsoft SQLServer, Oracle, IBM DB2 and other database platforms
- **Enable easy data access.** Use standard tables and columns for COBOL data storage and enable easier data access

“We view Acu4GL as the behind-the-scenes magic that makes our solutions work with any relational database our customers require. It would have taken us years and years to achieve the same thing through a manual rewrite effort.”

DENNIS CHARLES

Senior Vice President
ISI-Exeter

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using familiar tools such as Excel or Crystal Reports. Take advantage of real-time BI and data analytics.

- **Re-use application logic.** Preserve traditional COBOL file-IO and record locking semantics for faster application re-use and data integration (e.g., RDBMS error conditions mapped to COBOL file status)
- **Faster application recovery.** Improve application resiliency and recovery by leveraging the benefits of RDBMS technology. Deliver higher levels of reliability, availability and scalability to your COBOL applications. Increase business continuity and accelerate data recovery during system failure.

Key Features

AUTOMATIC FIELD MAPPING

Database Connectors use data dictionaries to map COBOL data items directly to database fields. These dictionaries are also called eXtended File Descriptors (XFDs) because they're based on standard COBOL file descriptors (FDs). To generate XFDs, you specify the "CREATEXFD" directive when you compile your COBOL program. The Micro Focus compiler then generates an XFD for every data file in your program. XFDs are then used at runtime to map records and fields onto database tables and columns. XFDs can be

customized using compiler directives to give complete control over field naming and data type conversions..

APPLICATION PERFORMANCE

Database Connectors uses low-level RDBMS APIs to achieve the best application performance. Where application data storage has moved from local data files to a networked RDBMS, applications may expect to see a small reduction in I-O performance. Such overheads can be addressed by updating performance critical sections of code to reduce access times. The Database Connectors documentation includes topics to help optimize application performance. Database Connectors also includes several optional configuration parameters, such as the WHERE constraint, which can be used to limit query boundaries and defer data processing within the server.

FOR ACUCOBOL USERS

Micro Focus offers a similar RDBMS solution under the *extend*[®] portfolio. Please refer to the Micro Focus ACU4GL datasheet.

See Also

For applications where COBOL data must remain in COBOL data files but access to the data through ODBC/JDBC enabled tools is desirable, please refer to the Micro Focus Relativity datasheet.



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