

Product Brief

MGRID® Healthcare Data Platform



MGRID® HEALTHCARE DATA PLATFORM



HEALTHCARE DATA OPPORTUNITIES

The increasing ability to electronically maintain healthcare data carries with it the enormous potential to also improve overall healthcare. Collecting and analyzing data opens possibilities to further share knowledge, improve patient outcomes, optimize coordinated care processes and support evidence-based medicine. This is accomplished by comparing the effectiveness of treatments and detecting treatment trends. A data-driven solution is a key component in providing this necessary knowledge for better care, lower cost and improved efficiency. MGRID offers such a solution.

HEALTHCARE DATA CHALLENGES

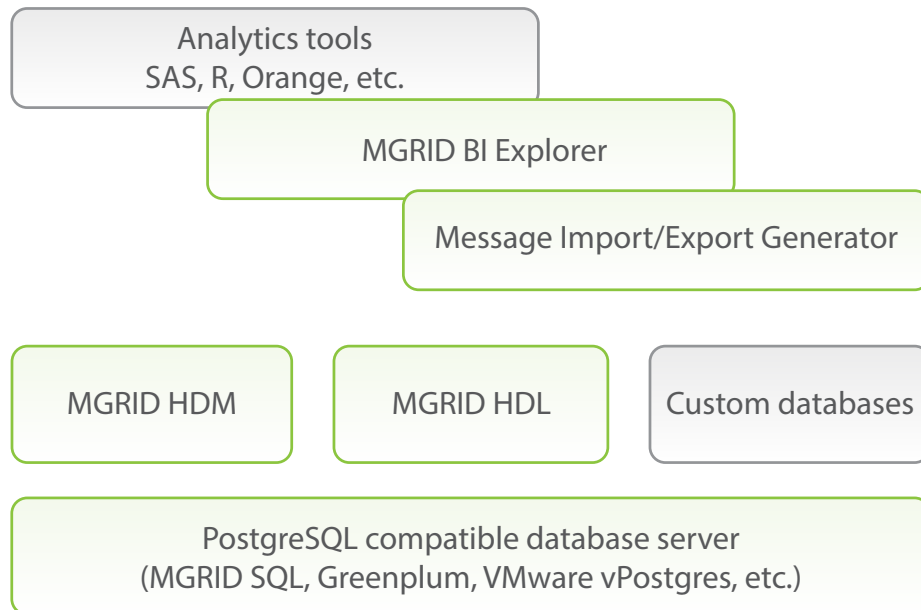
To populate a healthcare data warehouse with data from academic data partners, it is necessary to translate source data into a standardized and normalized model. The best candidate model is the HL7v3 Reference Information Model (RIM), since this model is designed to capture all kinds of healthcare related data. However, implementing a RIM database is a challenge. System integrators that implement a RIM database are faced with a steep learning curve. Moreover, the idiosyncrasies of the particular database system might prevent a proper implementation.

THE MGRID SOLUTION

To bridge the gap between HL7v3 and SQL, MGRID has created the Healthcare Datatype Library (HDL) and Healthcare Data Model (HDM), which is the RIM implemented as database model. On this pure HL7v3 database implementation, MGRID has developed applications that aid in data loading and exporting, as well as cohort selection and analysis. The modules and applications of MGRID follow the HL7v3 and SQL standards and are well-suited and intended to be used as components in software stacks for the medical vertical. MGRID's healthcare data platform makes medical research simplified and more efficient, taking the next step toward improved data analysis, and consequently, overall healthcare.

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HEALTHCARE DATATYPE LIBRARY (HDL)

MGRID HDL is a database implementation of the ISO Healthcare Datatypes. With HDL, data items such as measured physical quantities, terminology codes or time specifications, can be inserted and queried without translations or mappings. Databases and applications that make use of the HDL can be developed faster, and perform better due to specialized healthcare datatype indexes. MGRID HDL includes robust medical vocabulary support, to increase data quality, and to make storing and querying data more efficient. Choose from a number of popular vocabularies, or add a customized vocabulary for more specific or localized use. Analysts can query information based on a hierarchy of terms, providing easier and more precise data analysis.

HEALTHCARE DATA MODEL (HDM)

MGRID HDM includes RIM database models generated directly from the HL7v3 standards, supporting all normative editions. As such, they are well suited as the canonical data model for HL7v3 message integration. The HDM fully supports inheritance and context conduction, leading to a reduction in query complexity and increased performance. The HDM is supplied as a ready to use data model, and can be easily deployed.

MESSAGE IMPORT/EXPORT GENERATOR

Most RIM databases require outside interaction via HL7v3 messaging. MGRID provides an advanced Import/Export generator that can generate message importer/exporters directly from the standard documents that detail the message type. The generated importer can be used as a module by customer code, or used straight away to read, parse, convert and feed messages to the HDM. The other way around is also possible, so you can generate HL7v3 message from the RIM database. A CDA R2 parser and generator is provided out-of-the-box. The generator aids in the agile development of new parsers / exporters, with the goal to facilitate seamless message-to-database, database-to-message transitions.

BI EXPLORER

The MGRID BI Explorer is a web-based tool that enables analysts to easily search, filter, aggregate and pivot data in a healthcare datawarehouse. The BI explorer facilitates cohort selection, and building extracts for data marts, reporting and data mining, such as SAS, R, Orange, etc.

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MGRID SQL

The complete line of MGRID database products is compatible with PostgreSQL, the most advanced open-source database management system in the market. Commercial versions of PostgreSQL are available from several vendors. MGRID SQL is a commercial PostgreSQL compatible database server that supports scaling out large databases over multiple machines. The scaled-out database is compatible with standard PostgreSQL by design and supports all applications using or running on PostgreSQL. A specialized scale out configuration for MGRID HDM databases is included.

For more information visit the MGRID homepage at www.mgrid.net, or contact us at info@mgrid.net.

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