

ER/Studio Data Architect

MODEL AND ANALYZE YOUR ENTERPRISE DATA LANDSCAPE FOR BUSINESS VALUE

Round-trip database support gives ER/Studio Data Architect users the power to easily reverse- and forward-engineer, compare and merge, and visually document data assets across multiple platforms and data sources. ER/Studio enables data professionals to better manage data models and metadata in complex and dynamic enterprise environments.

THE CHALLENGE OF FULLY LEVERAGING ENTERPRISE DATA

As organizations grow and data proliferates, ad hoc systems for storing, analyzing, and utilizing that data start to appear. This practice results in disparate databases storing different versions and formats of the same data and an enterprise that will suffer from multiple views and instances of a single data point, along with different definitions for that piece of information. This all too-common scenario results in non-compliance with business standards and mandatory regulations, while blocking business executives from the benefit of incorporating all essential data into their decision-making process. Data management professionals face a number of challenges, including the need to:

- Reduce duplication and risk associated with multiple data sources & platforms
- Maximize data quality and reusability across the organization
- Clearly and effectively communicate data to all users

In order to address these issues, you must establish a data architecture that will leverage enterprise data as an asset, while complying with corporate and industry regulations. To manage an increasingly complex and diverse data environment, you need the ability to import and reverse-engineer content from multiple RDBMS, cloud, and big data sources and integrate the elements into reusable constructs with an enterprise data dictionary.

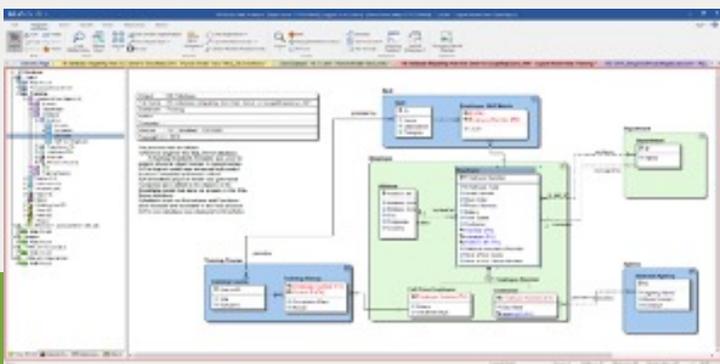
ER/Studio Data Architect documents and enhances existing databases, improves data consistency and quality, and effectively communicates models across the enterprise. A variety of database platforms, including traditional RDBMS, cloud databases on Azure, and big data technologies such as MongoDB and Hadoop Hive, can be imported and integrated into shared models and metadata glossaries. ER/Studio Data Architect includes the import bridges for common modeling tools, to easily migrate their native formats into ER/Studio.

The standard ER/Studio Data Architect edition provides an easy-to-use visual interface to reverse-engineer industry-leading database systems and allow a data modeler to compare and consolidate common data structures without creating unnecessary duplication. Data architects can also define Business Data Objects (BDOs) in the logical and physical models to represent master data and transactional concepts with multiple entities and relationships, such as products and customers. Using industry standard notations, data modelers can create a metadata hub by importing, analyzing, and repurposing metadata from data sources such as business intelligence applications, ETL environments, XML documents, and other modeling solutions.

The ER/Studio Data Architect Professional edition also includes the model repository for version control and agile change management. Data professionals can create task records to represent user stories or tasks and associate them to models, keeping data models relevant and current with fast-changing databases and applications. With a 64-bit repository, larger data models can be processed with improved performance on key operations such as compare and merge.

ER/Studio Data Architect helps data architects define and re-use common data elements and modeling components across modeling practices. By enforcing standards, and analyzing data elements, corporations can better understand and utilize their data and reduce redundancy. Data modelers can assign a naming standards template to their models, which is then applied automatically between the logical and physical models, simplifying the modeling process.

Streamlined navigational aids, diagram layout utilities, and powerful report publishing functions simplify the communication of designs between business and technical users. Metadata is stored in a central repository which helps with the transfer of knowledge among stakeholders, and allows users to easily see relationships and business rules that relate to their data. With a clear understanding of where data originated and where it is used, organizations can be assured that they know what their data actually means and how it can best be utilized.



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ER/Studio provides us with a robust methodology for creating data models and the ability to quickly generate physical data models when changes are required.

Roger Pearson IT Director for Smith & Nephew



BENEFITS

ER/Studio Data Architect provides built-in facilities to automate routine modeling tasks so data modelers and architects can analyze and optimize database and data warehouse designs faster than ever.

- Design, document and change database and file schemas
- Build a data catalog of documented assets
- Improve data consistency and quality using enterprise models
- Effectively share and communicate models to all stakeholders
- Connect and contribute to data governance programs

MODEL-DRIVEN DESIGN ENVIRONMENT

FORWARD AND REVERSE ENGINEERING Generate source code from database designs. Construct graphical models from existing database or schema, for both relational and big data platforms. Easily apply design changes with formulated alter code.

ADVANCED GRAPHICS AND LAYOUT Automatically create business friendly diagrams of information and data assets.

AUTOMATED AND CUSTOM TRANSFORMATION Streamlines the derivation of one or more physical designs from a logical one and checks for normalization and compliance with the target database.

COMMON USER INTERFACE Use a single familiar tool for designing and documenting relational and NoSQL databases, and JSON structures

EXTENSIBLE AUTOMATION INTERFACE Automate tedious, routine tasks such as coloring tables, enforcing and applying naming standards, updating storage parameters and integrate with desktop applications.

MULTIPLE REPORTING FORMATS Publish models and reports in a variety of formats including HTML, RTF, XML Schema, PNG, and JPEG output.

DATA WAREHOUSE & INTEGRATION SUPPORT

VISUAL DATA LINEAGE Visually document source/target mapping and sourcing rules for data movement across systems.

DIMENSIONAL MODELING Leverage complex star and snowflake schema designs and support importing rich dimensional metadata from BI and data warehouse platforms.

AUTOMATION Integrates with WhereScape to automate the creation of warehouse schema and pipelines with appropriate security from metadata captured in ER/Studio

DATA MODEL SECURITY

DATA CLASSIFICATION Categorize and label objects according to the level of security and privacy.

PERMISSION MANAGEMENT Enable user, role and group permissions at logical and physical level.

SECURITY CENTER GROUPS Streamline security administration with local or LDAP groups improving productivity and reducing errors

ENTERPRISE MODEL MANAGEMENT

UNIVERSAL MAPPINGS Map between and within conceptual, logical and physical model objects to trace objects upstream or downstream, and specify metadata such as definitions, notes, and attachments.

CONCURRENT MODEL AND OBJECT ACCESS Allows real-time collaboration between modelers working on data models down to the model object level with token-based check-in/check-out.

VERSION MANAGEMENT Manages the individual histories of models and model objects to ensure incremental comparison between, and rollback to desired diagrams.

AGILE CHANGE MANAGEMENT Assign and track tasks associated with data models to align changes to user stories and development workflows.

ADVANCED COMPARE AND MERGE Enable advanced bi-directional comparisons and merges of models and database structures.

BUSINESS DATA OBJECTS Represent master data and transactional concepts with multiple entities and relationships, such as products, customers, and vendors.

SUBMODEL MANAGEMENT Allow creation of multileveled submodels, merge submodel properties across existing models and synchronize submodel hierarchies.

NAMING STANDARDS Assign a naming standards template to models, submodels, entities and attributes for automatic application between logical and physical models.

DATA GOVERNANCE Build business glossaries and map to data assets to form a comprehensive data catalog. Integrate with market leading data governance tools.

QUALITY DATABASE DESIGN

MODEL COMPLETION VALIDATION Automate model reviews and enforce standards by validating for missing object definitions, unused domains, identical indexes and circular relationships.

AUTOMATIC MIGRATION OF FOREIGN KEYS Maintain foreign keys to ensure referential integrity in designs.

DATA DICTIONARY STANDARDIZATION Define and enforce standard data elements, naming standards and reference values.

"WHERE USED" ANALYSIS Display mappings between logical entities and attributes to their implementation across physical designs.