Embarcadero® ER/Studio®

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Feature Matrix

GENERAL DATA MODELING	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Standard Modeling Support			
Automatic propagation of a foreign key from parent to child entities in a logical model	X	X	X
Automatic propagation of a foreign key from parent to child tables in a physical model	X	X	X
Automatic removal of foreign key upon relationship deletion	X	X	X
Automatic propagation of PK column data type changes	X	X	X
Supports the IDEF 1X notation for both logical and physical modeling	X	X	X
Supports the Information Engineering (IE or Crows Feet) notation for both logical and physical modeling	X	X	X
Supports a unique/specific logical modeling environment	X	X	X
Supports multiple physical models and easily derives individual physical models from logical model	X	X	X
Supports dimensional modeling with ability to model star and snowflake schemas	X	X	X
Supports mappings between and within logical and physical models	X	X	X
Compare and merge changes between logical and physical models	X	X	X
Compare and merge two separate logical models	X	X	X
Compare and merge changes between physical models of the same DBMS	X	X	X
Performs common denormalization techniques like roll up, roll down, horizontal and vertical splitting, table merging and column mapping	X	X	X
Establishes a logical and physical model upon completion of reverse engineering of a database or script file	X	X	X
Performs standard validation checks for logical and physical models	X	X	X
Validation while on-screen editing indicates to the user that standard object field lengths have been exceeded while inputting entity/attribute names on screen	X	X	X
Object commenting on model objects in modeling environment to communicate workflow and object statuses	X	X	X
Supports logical, physical and Visual Data Lineage "where used" information	X	X	X
Apply different layouts to a large model to emphasize special relationships among different objects in the model	X	X	X
Subject Area Management			
Breaks down large diagrams into smaller subject areas and automatically updates changes to the main model	X	X	X
Nest subject areas within other subject areas	X	X	X
Rearrange the submodel hierarchy via drag and drop capability	X	X	X
Automatically add related objects to a submodel/subject area/package	X	X	X
Customize subject areas and submodels with different layouts, colors and font settings	X	X	X
Naming Standards Support			
Automate naming standards between logical and physical models based on a naming standard template	X	X	X
Implement customized naming standards for logical names, physical names and translation between logical and physical	X	X	X
Encapsulate a version or set of standards in a template/file so they can be reused across models	X	X	X
Includes naming standard utility to apply naming standards to an entire model	X	X	X
Override global naming standards at the entity, table, attribute or column level	X	X	X
Product must provide a way to override global naming standards on an attribute/column level	X	X	X

GENERAL DATA MODELING	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Freeze object names that cannot be changed under any circumstances (i.e., the object may be implemented in production while other portions of the model are new)	X	X	X
Native XML Schema Support			
Includes native wizard to build custom XML schemas from a logical or physical submodel/subject area	X	X	X
Translate entities into complex type or elements	X	X	X
Translate domains and attributes into elements, attributes or simple types	X	X	X
Translate reference values / allowed values into enumerations	X	X	X
Incorporate naming standards to translate names in XSD target files	X	X	X

GENERAL LOGICAL MODELING	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Logical Modeling			
Provides separate modeling environments for logical, physical and Visual Data Lineage models	X	X	X
Provides modeling of database views in the logical model in preparation of DBMS-specific model generation	X	X	X
Supports data model fundamentals in propagating foreign keys when relationships are established between entities	X	X	X
Diagrammatically hide foreign keys for conceptual presentations	X	X	X
Generate UML class structures from logical entities	X	X	X
Support logical versus physical nomenclature for objects	X	X	X
Shows how logical entities, attributes and views are represented in each physical model	X	X	X
Visually see submodel or subject area "Where Used" within entity or table editor	X	X	X
Visually see how a logical entity relates to many physical tables in physical model(s)	X	X	X
Customize logical and physical mappings between entities and tables and attributes and columns	X	X	X
Navigate between related logical and physical entities/tables	X	X	X
Data Dictionary System			
Support an ability to access and reuse common elements	X	X	X
Establishes reusable domain system across data models	X	X	X
Supports reusable user defined type system across data models	X	X	X
Supports a reusable rule/constraint system both logically and physically	X	X	X
Includes an internally managed system for allowed valued (reference or lookup data) that can be reused across the model	X	X	X
Provides the user with a simple means to display where dictionary elements have been distributed to for impact analysis	X	X	X
Meta Model Extensibility			
Product must be able to support user-defined meta model extensions simply and efficiently	X	X	X
Classify types of extended meta data by object class	X	X	X
Ability to "push" attached extended meta data to desired objects	X	X	X
Easily see where extended meta data has been bound to, object by object.	X	X	X
Product's object property editors must provide a UI to access extended meta data	X	X	X
Ability to access external source files and launch them for view/edit purposes from within the modeling product itself.	X	X	X
Data Security Management			
Easily capture security metadata	X	X	X
Provides method for classifying the security impact of data	X	X	X
Allows model objects to be mapped to compliance regulations such as SOX or HIPAA	X	X	X

GENERAL LOGICAL MODELING	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Assign privacy levels of data within a model, submodel, table or column	X	X	X

GENERAL PHYSICAL MODELING	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Physical Modeling			
Connects to datasources through 3rd party ODBC drivers	X	X	X
Connects to datasources through DBMS client software	X	X	X
General Reverse Engineering Functionality			
Provides a list of owners whose objects can be reverse engineered into a physical model	X	X	X
Filter by object type to reverse engineer into a physical model	X	X	X
Filter a list of tables/views to reverse engineer into a physical model	X	X	X
Infer primary and foreign keys during the reverse engineer process	X	X	X
Build a domain list based on columns in the database to help enforce and promote standardization and reuse	X	X	X
Connect to datasources through 3rd party ODBC drivers for forward engineering via ODBC	X	X	X
Connect to datasources through DBMS client software for forward engineering via native client connections	X	X	X
Provides a list of tables/views to reverse engineer into a physical model	X	X	X
Connect to a mobile database to reverse engineer into a physical model	X	X	X
Connect to a Unstructured Big Data Source using 3rd party drivers to reverse engineer into a physical model (Limited)	X	X	
Produce a .SQL script based upon selected objects	X	X	X
Produce separate .SQL files for each model object so that they can be place easily into source code systems	X	X	X
Forward engineer selected objects directly to database	X	X	X
Modify database structures based upon changes to model	X	X	X
Diagram updates when changes occur in the database	X	X	X
Push changes up to the logical model from the physical model/database	X	X	X
Ability to create Custom Datatypes for datatypes that are not automatically recognized during import	X	X	X
Data Movement / ETL Management			
Captures ETL mappings and data movement rules	X	X	X
Capture data movement rules to document the behavior of the data in a table when inserted, updated, archived, purged, etc	X	X	X
Capture source column mappings and transform logic/description	X	X	X
Capture target column mappings and transform logic/description	X	X	X
Capture multiple levels of source/target mapping to represent lineage of the data	X	X	X
Visual Data Lineage that visually documents source/target mapping and sourcing rules for data movement across systems	X	X	X
Capacity Planning Functionality			
Manage and estimate growth of data for a physical model	X	X	X
Store row count info for each table	X	X	X
Reverse engineer growth metrics from live database	X	X	X
Assign different growth rates for each table based on business rules	X	X	X
Allow for multiple growth rate types like "by row" or "by percent"	X	X	X
Parser-support Between Physical Model Objects			
Supports strong parsing technology to establish ties between precompiled database code (stored procedures) and the tables that may be dependent upon them	X	X	X
Automatically detect table dependency from stored procedure code	X	X	X
Provides UI to easily determine object 'dependents' for impact analysis	X	X	X

GENERAL PHYSICAL MODELING	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Propagates updates automatically to code when referenced objects are changed	X	X	X
Allows user to access object CREATE code from individual object editors before code generation utilities	X	X	X
Color coded DDL Syntax that displays database reserved words/key words in traditional color-coded syntax within the product	X	X	X
Represent physical objects like procedures, packages, functions, tablespaces and their dependencies on the model	X	X	X
Automatically link database views to tables upon reverse engineering	X	X	X
Reverse and forward engineer database security objects and permissions	X	X	X
Manage database users and roles and associated GRANT statements	X	X	X

GENERAL REPORTING	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Output model information to RTF-readable formats (like Microsoft Word)	X	X	X
Produce reports in HTML format	X	X	X
Reports allows externally 'bound' documentation to be displayed directly within the body of the HTML report through OLE technology	X	X	X
Reports include a navigable, legible, read-only version of the data model	X	X	X
Allows navigation to reported meta data by clicking on model objects in HTML data model image	X	X	X
Reports offer a list of objects contained within the report and hyperlink them to their information	X	X	X
Generate model meta data to XLS format	X	X	X
Produce W-3-C Compliant XML and DTD meta data output	X	X	X
Export model information to BI, ETL, other modeling tools, and industry-standard metadata interchange formats. Available through MetaWizard.	X		
Import model information from BI, ETL, other modeling tools, and industry-standard metadata interchange formats. Available through MetaWizard.	X		
Import model information from common modeling tools (subset of MetaWizard import bridges)		X	X

GENERAL PRODUCT USABILITY	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
N-level undo / redo	X	X	X
Provides thumbnail view to navigate large diagrams	X	X	X
Marquee lasso zoom	X	X	X
Explorer browser object navigation	X	X	X
Allows user to quickly see the number of entities, attributes, relationships, views etc that are in the model	X	X	X
Property editors conform to Windows standards and allow 1 layer deep access to properties	X	X	X
Property editors conform to Windows standards and allow expansion for ease in entering data	X	X	X
On-screen object editing (editorless via key strokes)	X	X	X
On-screen logical primary key creation (editorless via key strokes)	X	X	X
On-screen attribute copy/move function	X	X	X
Global search/report/replace utility	X	X	X
Wizard-driven task completion	X	X	X
Lasso multiple objects and access right mouse options	X	X	X
Offers simple and fast way to break down large models by lassoing desired objects and quickly establishing a subject area of them	X	X	X

GENERAL PRODUCT USABILITY	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Quick access to diagrammatic property changes to desired objects like color	X	X	X
Variety of different layout strategies for logical and physical models	X	X	X
Navigate user to desired Help section from specific property editors, etc.	X	X	X
Non-Proprietary Application Programming Interface (API)			
Provides a programming interface in a common & industry-accepted language in order to programmatically access product's object model	X	X	X
Supports VB or VB-like macro creation	X	X	X
Near-immediate accessibility to macros to ensure workflow and productivity	X	X	X
Macro editor within product provides 'keystroke access' to product's object model for quick reference and accuracy	X	X	X
Provide a reference map of the product's objects	X	X	X
Sample scripts to use as a basis for user macros included	X	X	X

REPOSITORY	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Collaboration			
Allows multiple modelers to access models concurrently	X	X	
Notifies modelers connected to Repository diagrams who is working on same objects	X	X	
Notifies modelers connected to Repository of the status of the collaboration status of an object	X	X	
Includes intelligent conflict resolution system when two or more modelers are contending to change the same object	X	X	
Implements a separate system for implementing common items (domains, extended properties etc) across diagrams stored in the Repository	X	X	
Provides an interface to see how common dictionary objects are used across the Repository	X	X	
Provides a classification system to group diagrams together in the Repository	X	X	
Version Control			
Captures periodic releases of data models	X	X	
Ability to revert to capture releases (roll back)	X	X	
Compare and merge information between diagrams in the Repository	X	X	
Supports commenting on check ins and check outs like source control system	X	X	
Agile change management to create and track tasks and view version history associated with data models	X	X	
Enterprise Data Dictionary			
Support an ability to access and reuse common elements across models	X	X	
Establishes reusable domain system across data models	X	X	
Supports reusable user defined type system across data models	X	X	
Supports a reusable Rule/Constraint system both logically and physically	X	X	
Includes an internally managed system for allowed valued (reference or lookup data) that can be reused across the model	X	X	
Provides the user with a simple means to display where dictionary elements have been distributed to for impact analysis	X	X	
Integration with Team Server glossary to display pop-up definitions for terms used in models	X		
Security & Privileges			
Implements a system to create unique Repository users and user groups with individual privilege settings	X	X	
Allows levels of security access to diagrams and objects based upon team hierarchies	X	X	
Assign security levels to imported LDAP groups and streamline administration	X	X	
Product security is able to protect diagrams against unwanted access	X	X	

REPOSITORY	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Control access to certain re-useable data elements across diagrams from unwanted access	X	X	
Allows the users to check out individual objects, not just the whole diagram by default	X	X	
Allow a user to check out and object and bar others from doing so while user has item checked out	X	X	
Change record and task UI to support Agile development methodologies	X	X	

METADATA COLLABORATION	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Inline definitions for business context with data management tools and internal web assets	X		
Alerts while viewing or modifying sensitive data	X		
Enterprise collaboration capabilities to capture and use corporate knowledge	X		
View, classify, relate and centrally manage authoritative business definitions in a personalized enterprise glossary	X		
Create tiered hierarchy structures with inheritance that correlate to organizational configuration	X		
Easily make updates to specific glossaries and terms using CSV modifications	X		
Track changes to glossaries and terms with detailed audit trail histories	X		
Enhance comprehension of business terms and data elements with custom extensions	X		
Advanced Search options for People, Glossaries, Terms, ER Objects	X		
Identify and analyze data source impacts resulting from model changes	X		
Use business terms to easily find data elements	X		
Define an integrated information map relating data models with their data sources	X		
Create a single searchable registry of all available data sources	X		
Centralized reporting with pre-defined and customizable templates	X		

SOFTWARE MODELING	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Standard with sample projects to familiarize users with features	X		
Sample cheat sheets with interactive tutorials	X		
Query/view/transformation language to transform UML, BPMN, data models and custom model types	X		
Logical and physical packages to group elements and store diagrams	X		
Model shortcuts for creating multiple shortcuts to the same element on different model diagrams.	X		
Model hyperlinking to create hyperlinks from diagrams to other system artifacts and browse them directly	X		
Interoperability is supported with various types of model import and export to MI, MDL and MDX	X		
External documentation for open projects. Output formats for RTF, HTML, TXT, PDF and SL-FO	X		
Supports UML 2.0 to visualize, specify, construct, and document the artifacts of the distributed objects systems	X		
Optional profile to support the "modeling in color" methodology with support for roles, moment-interval, Mi-detail, party, place, thing and description	X		
Supports the most frequently used diagrams and notations defined in the UML 2.0 specification, including activity, class, use, component, composite, deployment, state machine and interaction diagrams	X		
Includes pre-installed profiles and allows users to create profile definitions, including profile definition projects such as stereotypes, palette contributions, extensions and contributions	X		

SOFTWARE MODELING	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Supports two-way and three-way EMF and UML model comparisons in a tree view. Results can be exported to an EMFMI file	X		
Utilizes standard Eclipse synchronization APIs to provide integration with version control systems to compare and merge shared models	X		
Supports templates to provide the ability to show templates, template signatures, parameters and template bindings in a UML 2.0 diagram	X		
Object Constraint Language (OCL) 2.0 support for syntax highlighting, error validation, code completion and model queries	X		
Design patterns that are available in stock patterns supporting Gang of Four, J2EE Design, Fowler's EAI, and Web Services, and custom design patterns	X		
OCL-based model audits and metrics support model inspections and can be easily be defined, saved, and reused	X		
Version control systems enable multiple users to work with one modeling project. Supports version control systems that can be integrated into Eclipse	X		

BUSINESS PROCESS AND CONCEPTUAL MODELING	ENTERPRISE TEAM EDITION	DATA ARCHITECT PROFESSIONAL	DATA ARCHITECT
Support for high-level conceptual modeling using elements such as subject areas, business entities, interactions, and relationships	X		
Model links between any conceptual or process modeling elements allowing you to trace relationships between models	X		
Conceptual models can be exported to ER/Studio to become the foundation for creating ER/Studio logical data models	X		
Support for straightforward process modeling that uses standard elements such as sequences, tasks, swim lanes, start events, and gateways	X		
Optional automatic validation of process diagrams to ensure compliance with the BPMN specification and prevent the addition of non-compliant modeling elements	X		
Independent sub-processes and embedded collapsible sub-processes can be included within a business process to allow for maximum flexibility in diagramming, while still ensuring a workable visual diagram	X		
Impact analysis reports can be generated to show interrelationships between process, data, stewardship, business rules, diagram usage, heritage, connecting objects etc.	X		
Impact analysis reports can filter based on type of relationship, object type, or text strings including wildcard matching	X		
Map between and within conceptual, logical and physical model objects to view upstream or downstream and trace common objects enabling enterprise modeling	X		

* MetaWizard is included with the ER/Studio Enterprise Team edition and is an add-on option to ER/Studio Data Architect editions. A subset of MetaWizard import bridges for common modeling platforms is included in Data Architect.

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