Tech Note

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Metadata Overview
ER/Studio and Team Server

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WHAT IS METADATA?

The term "Metadata" arises frequently when discussing Data Architecture. In short, it is "data about data." However, interpretation can be rather ambiguous, since it is used in different contexts. The most common context is known as structural metadata, which describes the design and specifications of data structures such as tables, columns, constraints and indexes. However, this is evolving to incorporate unstructured data as well.

Another interpretation is descriptive metadata (also known as meta-content), which describes the content of specific instances of data. For example, who created it and why, when it was created, and where it was created. An example of this is the cataloging information that is captured with photographs using modern digital cameras: date, time, exposure settings, GPS coordinates etc. This adds context to the unstructured data object.

For the purpose of this discussion, we will be focusing on structural metadata. Metadata is typically stored in a repository, which is usually a database structure itself. A variety of modeling, data integration, business intelligence and service oriented architecture tools utilize metadata repositories, which are sometimes called registries.

ER/STUDIO AND METADATA

As a modeling and collaboration platform, ER/Studio is a very capable environment to define, manage and organize metadata effectively. This allows business and data consumers understand how data is used across the organization. Some features of ER/Studio Data Architect and ER/Studio Team Server are particularly well-suited for handling metadata.

ER/STUDIO DATA ARCHITECT

ER/Studio is a very powerful, repository-based data architecture and modeling suite that supports top-down and bottom-up metadata creation, cataloging and sharing for the majority of industry leading database platforms. Top-down allows data models to be designed, elaborated and created as physical database specifications, facilitating collaboration at every step. Metadata includes, but is not limited to tables, columns, relationships, permissions, definitions, notes, security information and data lineage. Logical and physical layers are supported.

Bottom-up metadata creation is enabled through the powerful reverse engineering capabilities for most database platforms, as well as the ability to transform metadata to/from many data integration, business intelligence, big data and other 3rd party platforms. ER/Studio is the custodian of vital corporate metadata that can be shared

with those other platforms. The metadata can be easily extended to support virtually limitless characteristics through the use of the built-in attachments functionality. This power is extended significantly through other built in automation capabilities, macros, naming standards and universal mappings which transcend across models. Business process modeling is also supported in the Business Architect tool.

ER/STUDIO TEAM SERVER

ER/Studio Team Server adds powerful collaboration capabilities to metadata management. All stakeholders ranging from technical staff and business analysts through business subject matter experts and data stewards are able to work as a team, with views of the metadata that are appropriate to specific roles. ER/Studio Team Server is centered on an enterprise glossary of business definitions and data elements. This glossary is integrated with the data management tools, allowing users across the enterprise to access a single repository of business definitions and data sources with each term that is linked to the metadata.

This social collaboration paradigm allows users to have meaningful discussions regarding specific areas of interest, with a full audit trail. Thus, it is not only the decisions recorded, but also the process that led to those decisions. This capability allows all participants to reach a much higher level of knowledge and understanding. This is critical for both data creation and data consumption.

The capabilities of Team Server are continually being enhanced to provide even greater capabilities in the future.

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