

Metastudio DRM

Reference Data Management

Product information and functionality

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Functionality

Metastudio DRM is a solution developed by Sanmargar Team to support management of reference data such as code or value dictionaries, organisational structures, dimension hierarchies, rules and parameters of data processing processes. In short, Metastudio DRM enables responsibility to be undertaken for management of the elements mentioned above, by business analysts in IT, sales and controlling areas.

Principal aspects of functionality of the solution

Metastudio DRM is a specialised editor of reference data, operating independently from technology of the database storing the reference data. Furthermore, the programme allows management of hierarchies (organisational structures, object hierarchies, charts of accounts), analytic dimensions (customer segmentations, product classifications, sales channels, cost object codes), data conversion (mapping) rules, data validation and control rules, and processes steering parameters, and it also offers data types and data editing rules characteristic for Reference Data Management area, for example support for validity periods in various models, versioning, value domains, establishing relations between dictionaries, various types of hierarchies.

What can Metastudio DRM offer;

- Central application server for the solution, limiting technical requirements on the side of the user to website browser supporting Java technology,
- Central knowledge repository of the managed reference data, organised into a hierarchical structure of folders and objects,
- Integration with external user authentication systems such as LDAP or Windows Active Directory – also at the level of single sign-on,
- Authorization system allowing control of user access level with respect to specific folders and objects of the reference data repository,
- Editing and presentation of reference dictionaries in flat tables or hierarchical structures in parent-child layout,
- Portlets in the form of parameterisable websites embedded in the application, displaying for example reports coming from the central Business Intelligence platform,
- Layouts of related dictionaries and portlets in the form of views presenting superior data (for example Employee) connected with detailed data (for example BI platform report with work time in the recent month),
- The possibility of automatic storage of the history of changes of the managed reference data,
- Audit of actions performed by the users at the level of user accounts, objects, date and time, as well as incident type,
- The possibility of subscription of automatic notifications through e-mail about significant actions performed by the users on the indicated objects,

- Registration of the author and time of change of the reference data at the level of records,
- Mechanisms of handling validity periods for specific entries of reference data,
- The possibility of changing the default view of online dictionary by the user within the scope of: order and visibility of columns, grouping, sorting and filtering of the data,
- Export and import of reference data to CSV, TXT, XLS files.

Additionally, Metastudio DRM offers functions that are particularly useful in verifying substantive correctness of reference data such as:

- detecting conflicts in validity periods of specific records,
- detecting conflicts of business identifiers,
- detecting conflicts with the allowed field values.

It is possible to specify the following for reference dictionaries:

- preventing editing of specific columns,
- default values for specific fields,
- allowed values for specific fields – through: regular expressions, input masks, value ranges (for numbers and values of date and time), value lists (fixed and coming from other dictionaries), inclusion of requirement, specification of data identifier (key),
- predefined data selection filters (obligatory and facultative),
- layout of columns in default view: columns display order and visibility, grouping using selected column, sorting (also complex – including a few columns at the same time), blocking on the left side (freezing), font and background colour, numerical value formats, date and time formats.

Technological aspects

Metastudio DRM is a web application developed on the basis of SmartGTW components, launched at Apache Tomcat or Jetty application server. Within the areas of authentication and rights system of the application, Spring Security libraries are used. In the case of integration with Windows Active Directory service, WAFFLE libraries are additionally used, enabling authentication in Windows domain using NTLM protocol.

JDBC technology is used for communication with databases. The following databases are supported: Oracle, Microsoft SQL Server, PostgreSQL, DB2, HyperSQL.

Cooperation with other databases supporting SQL and JDBC technology is possible through generic driver.

The application may be launched at any operating system supported by Apache Tomcat or Jetty application servers – including Windows and Linux servers. Typical installations enabling simultaneous work of a few dozens of users require 8 GB RAM and 1 GB of drive space on the server.

For its own needs, Metastudio DRM uses a small database to store information about the users (roles, rights) and organisation of reference data (repository folder structure, configurations of

portlets and dictionaries). For that purpose, Metastudio DRM may use an embedded HyperSQL database or, for production purposes, one of external supported databases.

On the side of the user, the only thing the application requires is a browser – Internet Explorer, Mozilla Firefox, Google Chrome, Safari (OSX).

Key features

- The entire functionality of the application is available using a web browser,
- Presentation and management of dictionaries coming from sources functioning in heterogeneous environment (various technologies of databases),
- Wide range of functionalities adjusting the method of presenting the metadata,
- Recording of changes made by the users,
- Presentation options for dictionaries: flat table form and hierarchical parent-child,
- Extending the presented information by the so called portlets,
- Importing dictionaries from files and exporting of dictionaries to popular formats,
- Mechanisms allowing definition of e-mail notifications about changes introduced to the dictionaries,
- Supporting the following databases: Oracle RDBMS, MSSQL Server, MySQL, PostgreSQL,
- Integration with Active Directory, LDAP,
- Defining the rights at the level of folders and dictionaries.

Benefits and use cases

Key benefits

Metastudio DRM can be used in various IT projects within the area of Business Intelligence, as a complementary solution for metadata and reference data management.

Within the framework of implementation and operation of data warehouse, Metastudio DRM is used at the level of technical administrator (management of parameters and schedules of process launching, monitoring operations of data warehouse) and at the level of business operator (management of data validation and conversion rules, management of dynamic elements of data processing algorithms, management of analysis dimensions hierarchies).

In reporting and analytical systems, Metastudio DRM can be used mainly within the area of managing data aggregation hierarchies, dictionaries consolidating attributes coding and dictionaries qualifying data to specific groups or ranges.

Metastudio DRM can also be used as a control panel for quality control systems, data cleaning systems and allocation engines (correctness rules, cleaning rules, revenues/expenses allocation rules, commission division rules).

Reference applications

Metastudio DRM can be used in the following areas:

- Data warehouses (structure metadata, value dictionaries, hierarchies of dimensions),
- Analytical and reporting systems (value dictionaries, aggregation hierarchies, ratio definitions),
- Dynamic control of data processing processes (validation, mapping, allocation and aggregation rules, correctness rules, launching schedules).

Examples of projects using Metastudio

Commercial bank. Data warehouse dictionaries management centralisation project. The Metastudio solution is used for central administration of dictionaries parameterising reporting.

Commercial bank. Data quality monitoring project. Metastudio is used as a solution managing the rules of data validation and quality control.

Media corporation. Master data management centralisation project. The Metastudio solution is used for management of dictionaries and master data of analytical, transaction systems. The solution is also used for parameterisation of algorithms of calculation processes for allocation of general costs.

Mining company. Operating controlling data warehouse. The Metastudio solution is used to support business parameterisation of powering and processing processes, as well as analytical reporting.

Telecommunication corporation. The Metastudio solution is used for parameterisation of dictionaries controlling stock exchange reporting in IRS standard.

Summary of benefits and applications

- Centralisation of business dictionaries repository,
- Transparency of business dictionaries in the organisation,
- Improvement and automation of various processes connected with management of reference dictionaries,
- Elimination of management of parameters and dictionaries in local files (for example Excel),
- Maintaining and allowing use of archived dictionaries,
- Reference implementations in corporations from the financial, media and telecommunication sectors.

About Sanmargar Team

Sanmargar Team is a company which focuses on Business Intelligence and Data Integration solutions supporting client management, sales and finance at financial, power, mining and modern universal service sector corporations. Sanmargar Team is also a provider of solutions for reference data management – Metastudio DRM, address data deduplication and cleansing – Sanmargar DQS (Data Quality Studio), solutions supporting centralized management of customer data – Sanmargar CKK (Central Customer File System), and other products supporting data processing.

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