

Reference Data Management in your organization: what is the purpose of managing reference data and what are the benefits of doing so?

Proof of Concept using Metastudio DRM

We offer a personalized and customized Proof of Concept (PoC) for reference data management that can serve as a quick start for your RDM journey. The PoC will be developed using Metastudio DRM and Microsoft SQL Server, which will run in your Azure environment.

Introduction

Are you curious about how Reference Data Management actually works and what value it can bring to your organization? Are you hesitant to invest in a solution you don't fully understand yet? This offer provides a solution for one of your reference data challenges and gives you the opportunity to evaluate RDM before moving forward.

For this proof of concept, we will use Metastudio DRM, connected to an Azure SQL Database in your Azure environment.

Project

PoC tasks include:

- Preparing a dedicated PoC scenario for you, based on the sample RDM problems you provide
- Setting up a sandbox environment
- Registering several sample dictionaries along with all the necessary functionalities
- Conducting several exercises that illustrate various use cases related to maintaining reference vocabularies, such as:
 - Editing reference data using key functions that support business users: value domains, enumerations, and management of validity periods
 - Different scenarios for importing reference data into dictionaries: full, partial, and with automatic handling of validity periods
 - Defining various constraints in the dictionary to prevent business users from entering inappropriate data, such as: value range validators, regular expression-based validators, and lists of allowable values
 - Examples of propagating work products between DEV, TST, and PROD environments

Deliverables

- A prepared environment ready for carrying out the PoC and made available for a specified time for conducting your own tests
- Knowledge transfer about the prepared environment, dedicated use cases, and capabilities of the Metastudio DRM tool

Summary

The main goal of this offer is to provide your company with a functional solution that addresses a specific need, which you can continue to build upon once you are convinced of the value that reference data management brings to your organization.

- We offer a Proof of Concept (PoC) for reference data management tailored to your specific needs and challenges.
- The PoC will include various exercises illustrating different use cases related to maintaining reference dictionaries, such as editing data, importing data, and defining constraints.
- We will provide a prepared environment for carrying out the PoC and make it available for a specified time for conducting your own tests.
- We will also provide knowledge transfer about the environment, use cases, and capabilities of the Metastudio DRM tool.

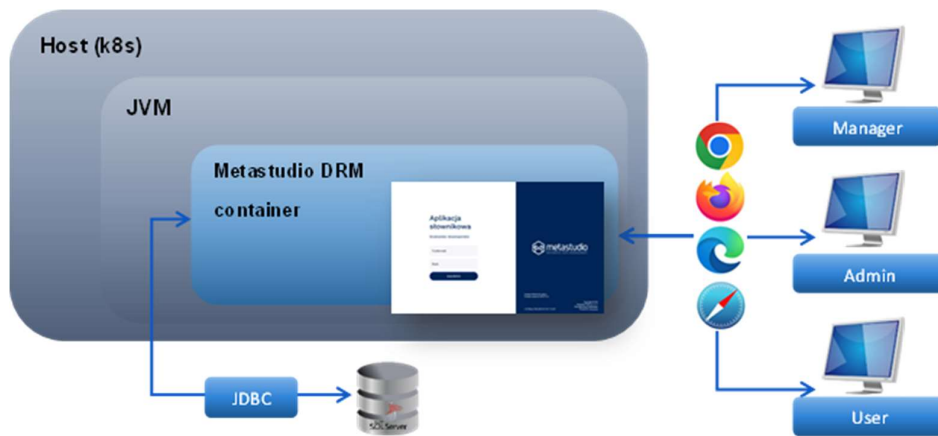


Figure 1 Metastudio architecture in Azure

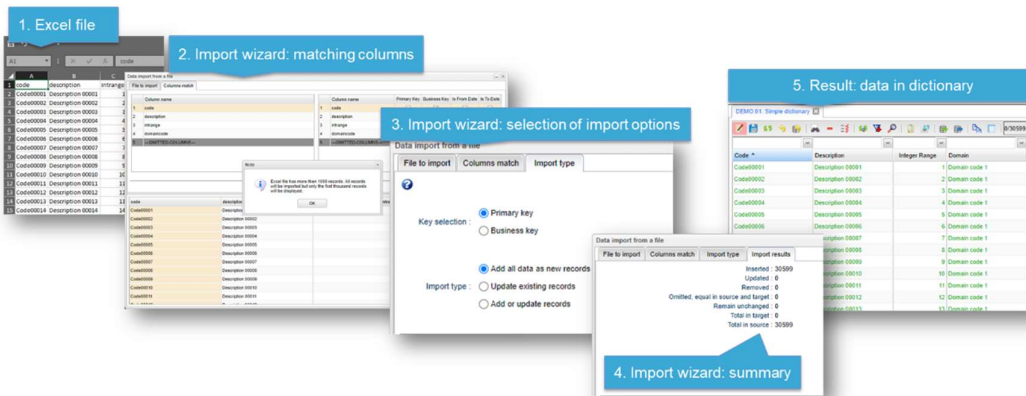


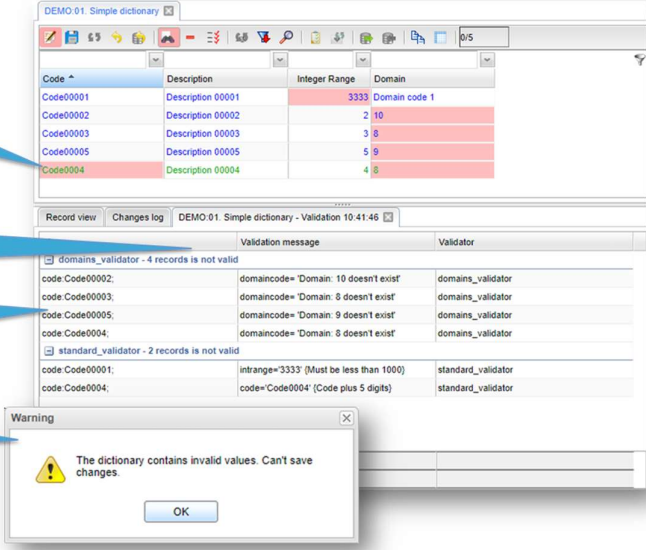
Figure 2 Importing data from Excel spreadsheet

Imported data can be automatically validated. Invalid tuples are marked in red.

A detailed report shows all the errors found:
 ✓ Record ID
 ✓ Validation message
 ✓ Validator name

It is possible to quickly go to the incorrect record by clicking on it in the validation report and then correcting the identified error.

It is possible to enable protection against saving incorrect data.



Code	Description	Integer Range	Domain
Code00001	Description 00001	3333	Domain code 1
Code00002	Description 00002	2	10
Code00003	Description 00003	3	8
Code00005	Description 00005	5	9
Code00004	Description 00004	4	8

Record ID	Validation message	Validator
domains_validator - 4 records is not valid		
code Code00002;	domaincode= 'Domain: 10 doesn't exist'	domains_validator
code Code00003;	domaincode= 'Domain: 8 doesn't exist'	domains_validator
code Code00005;	domaincode= 'Domain: 9 doesn't exist'	domains_validator
code Code00004;	domaincode= 'Domain: 8 doesn't exist'	domains_validator
standard_validator - 2 records is not valid		
code Code00001;	inrange='3333' (Must be less than 1000)	standard_validator
code Code00004;	code='Code0004' (Code plus 5 digits)	standard_validator

Warning

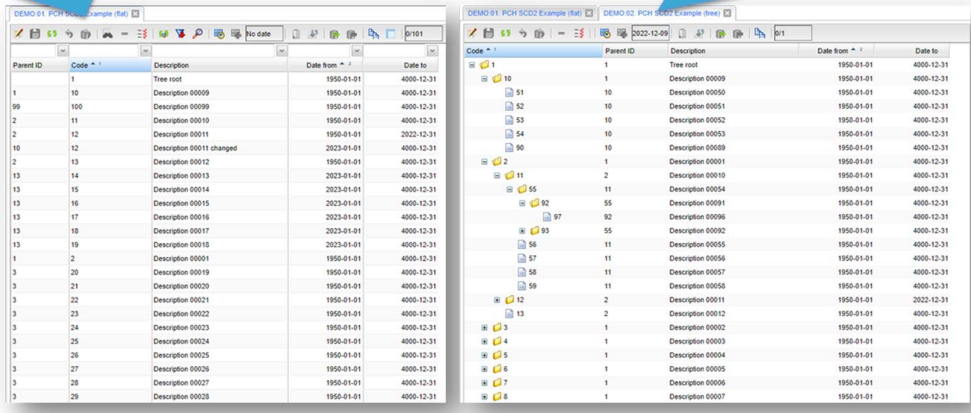
The dictionary contains invalid values. Can't save changes.

OK

Figure 3 Data editing and validation results

Flat dictionary with parent (Parent ID) and child (Code) columns...

...can be presented in a tree form.



Parent ID	Code	Description	Date from	Date to
1	1	Tree root	1950-01-01	4000-12-31
1	10	Description 00009	1950-01-01	4000-12-31
99	100	Description 00099	1950-01-01	4000-12-31
2	11	Description 00010	1950-01-01	4000-12-31
2	12	Description 00011	1950-01-01	2022-12-31
10	12	Description 00011 changed	2023-01-01	4000-12-31
2	13	Description 00012	1950-01-01	4000-12-31
13	14	Description 00013	2023-01-01	4000-12-31
13	15	Description 00014	2023-01-01	4000-12-31
13	16	Description 00015	2023-01-01	4000-12-31
13	17	Description 00016	2023-01-01	4000-12-31
13	18	Description 00017	2023-01-01	4000-12-31
13	19	Description 00018	2023-01-01	4000-12-31
1	2	Description 00001	1950-01-01	4000-12-31
3	20	Description 00019	1950-01-01	4000-12-31
3	21	Description 00020	1950-01-01	4000-12-31
3	22	Description 00021	1950-01-01	4000-12-31
3	23	Description 00022	1950-01-01	4000-12-31
3	24	Description 00023	1950-01-01	4000-12-31
3	25	Description 00024	1950-01-01	4000-12-31
3	26	Description 00025	1950-01-01	4000-12-31
3	27	Description 00026	1950-01-01	4000-12-31
3	28	Description 00027	1950-01-01	4000-12-31
3	29	Description 00028	1950-01-01	4000-12-31

Figure 4 Different forms of dictionary data presentation

Open new validity period for a record

By calling the function of opening a new validity period for a record, the validity period of its old version is automatically closed (blue color)...

...and additionally, a new record (green color) is inserted with the selected start of the validity period and modified values.

Code	Description	Date Range	Domain	Date from	Date to	Validity	Created	Modified
Code0002	Description 0002	2022-12-01	Domain code 2	1950-01-01	2022-12-08	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0002	Description 0002 (modified)	2022-12-01	Domain code 2	2022-12-08	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0003	Description 0003	2022-12-01	Domain code 3	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0004	Description 0004	2022-12-01	Domain code 4	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0005	Description 0005	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0006	Description 0006	2022-12-01	Domain code 2	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0007	Description 0007	2022-12-01	Domain code 3	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0008	Description 0008	2022-12-01	Domain code 4	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0009	Description 0009	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0010	Description 0010	2022-12-01	Domain code 2	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0011	Description 0011	2022-12-01	Domain code 3	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0012	Description 0012	2022-12-01	Domain code 4	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0013	Description 0013	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0014	Description 0014	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0015	Description 0015	2022-12-01	Domain code 2	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0016	Description 0016	2022-12-01	Domain code 2	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0017	Description 0017	2022-12-01	Domain code 3	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0018	Description 0018	2022-12-01	Domain code 4	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0019	Description 0019	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000

Figure 5 Periods of validity

Slowly changing dimensions versioned according to type 4, i.e. where the history is stored in a separate table, can be presented in the form of a layout

The main dictionary is presented in the upper part of layout. All editing features are available.

The history of changes is presented in the lower part of layout. The history is linked in the layout definition. When a record is selected in the main dictionary, the history of that particular selected record is presented.

Code	Description	Date Range	Domain	Date from	Date to	Validity	Created	Modified
Code0001	Description 0001	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0002	Description 0002 (modified)	2022-12-01	Domain code 2	2022-12-08	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0003	Description 0003	2022-12-01	Domain code 3	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0004	Description 0004	2022-12-01	Domain code 4	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0005	Description 0005	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0006	Description 0006	2022-12-01	Domain code 2	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0007	Description 0007	2022-12-01	Domain code 3	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0008	Description 0008	2022-12-01	Domain code 4	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0009	Description 0009	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0010	Description 0010	2022-12-01	Domain code 2	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0011	Description 0011	2022-12-01	Domain code 3	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0012	Description 0012	2022-12-01	Domain code 4	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0013	Description 0013	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0014	Description 0014	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0015	Description 0015	2022-12-01	Domain code 2	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0016	Description 0016	2022-12-01	Domain code 2	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0017	Description 0017	2022-12-01	Domain code 3	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0018	Description 0018	2022-12-01	Domain code 4	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000
Code0019	Description 0019	2022-12-01	Domain code 1	1950-01-01	4000-12-31	invalid	2022-12-01 09:29:18.000	2022-12-01 09:29:18.000

M	Code	Description	Date	D	Crst	Crtd	Modf	Modfcd	Opera	Operation Timestamp
1	Code0002	Description 0002	2022-12-01	2	invalid	2022-12-01 18:57:37.000	invalid	2022-12-01 18:57:37.000	UPDATE	2022-12-01 18:57:37.174
2	Code0002	Description 0002	2022-12-01	2	invalid	2022-12-01 18:57:37.000	invalid	2022-12-01 18:57:37.000	UPDATE	2022-12-01 18:57:37.328
3	Code0002	Description 0002 mod	2022-12-01	2	invalid	2022-12-01 18:57:37.000	invalid	2022-12-01 18:57:37.000	UPDATE	2022-12-01 18:57:37.718

Figure 6 History of changes