

How-To Guide: Extend MDG-MARCDG in the AR Data Model

Applies to

Prometheus Group Solutions for MDG RFM

Summary

SAP Master Data Governance provides an out-of-the box solution for the central management of various master data objects such as financial objects, supplier and material. In addition, SAP Master Data Governance also provides the flexibility to customize the solution, in cases where the pre-delivered content does not fully match customer requirements. You can use this guide to extend the MDG-AR Data Model by a new attribute. The newly added attribute value will be copied to the corresponding ERP tables (reuse option) after activation of the Change Request.

Author: Balasubramanian Sankarvelu

Company: Prometheus Group

Created On: November 17, 2020

Version: 1.0

Table of Contents

Introduction.....	3
Scenario	3
High Level Requirements	3
Governance Process	3
Implementation.....	3
Data Model Extension	4
Add attributes to existing Entity Type	4
Generate MDG Data Model-Specific Structures.....	6
Enhancing Active Area Structures/Tables	8
SMT Mapping.....	9
SMT Mapping - Get Mapping names from Data Model AR.....	10
SMT Mapping - Primary Persistence to Staging	10
SMT Mapping - Staging to Primary Persistence	11
Adjust Staging Area of Linked Change Requests.....	12
Extending the UI Configuration	13
Testing the Configuration	15

Introduction

This document describes how to extend the Data Model 'AR' by adding additional attribute 'ZZUNAME' to the entity 'MARCDC'.

Scenario

High Level Requirements

The business requires the new attributes as part of the MDG Article Master (AR) data model. You want to extend the (Type 4) entity type MARCDC to include attributes: ZZUNAME. The field would be added in the Article Master -> Logistics DC UIBB section.

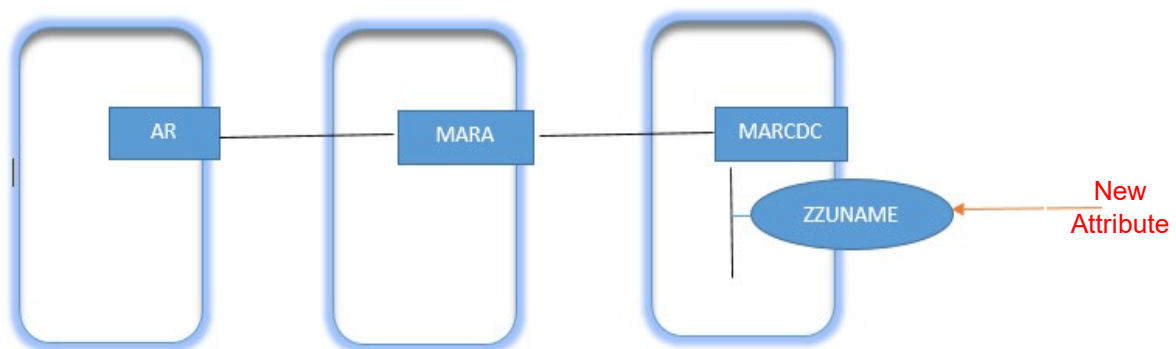


Figure: Data Model – Logistic DC (Scope of 2017 Delivery) with custom attribute 'ZZUNAME'.

Governance Process

The default governance process delivered with MDG is used. No changes to the governance process are necessary as part of this scenario.

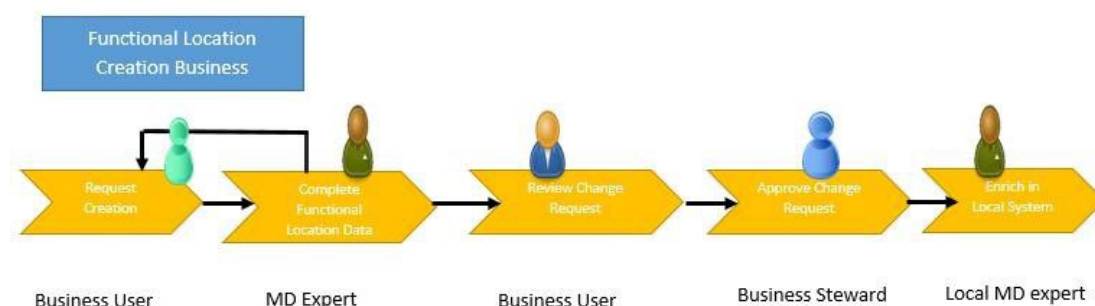


Figure: Article processing in Master Data Governance

Implementation

Two major building blocks make up the implementation of the entity type extension. In the first phase, you extend the MDG Data Model. In the second phase, you extend the user interface to include the new entity type.

The following flow diagram displays the detailed implementation steps. It is recommended that you use it as an orientation.

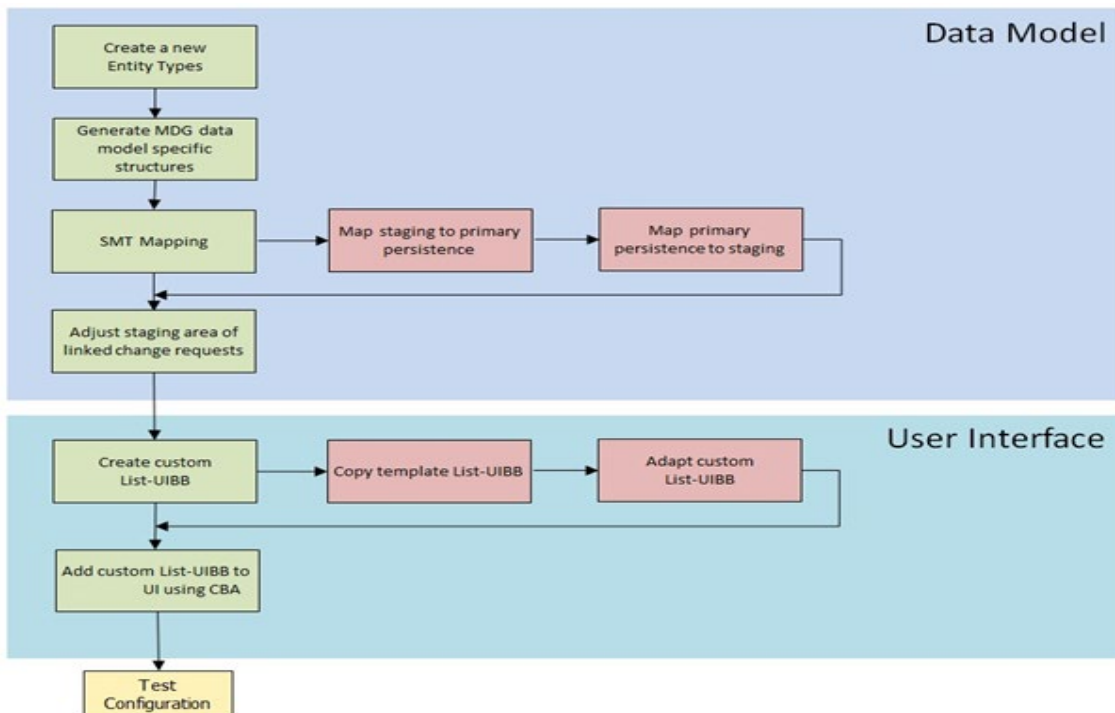


Figure: Implementation steps for re-use Entity-Type extension

Data Model Extension

This section explains the steps to extend the MDG Data Model for RFM (AR) by the additional attributes ZZUNAME to the entity MARCDC.

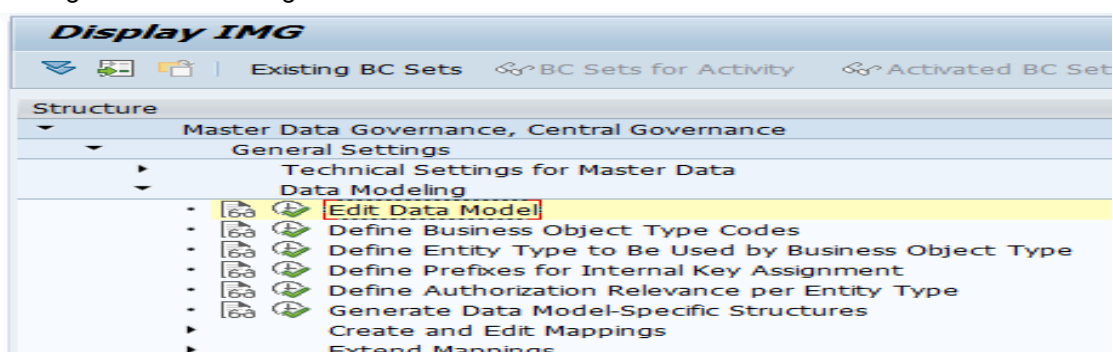
Use the following steps to extend data model:

- [Add attributes to existing Entity Type](#)
- [Generate MDG Data Model-Specific Structures](#)

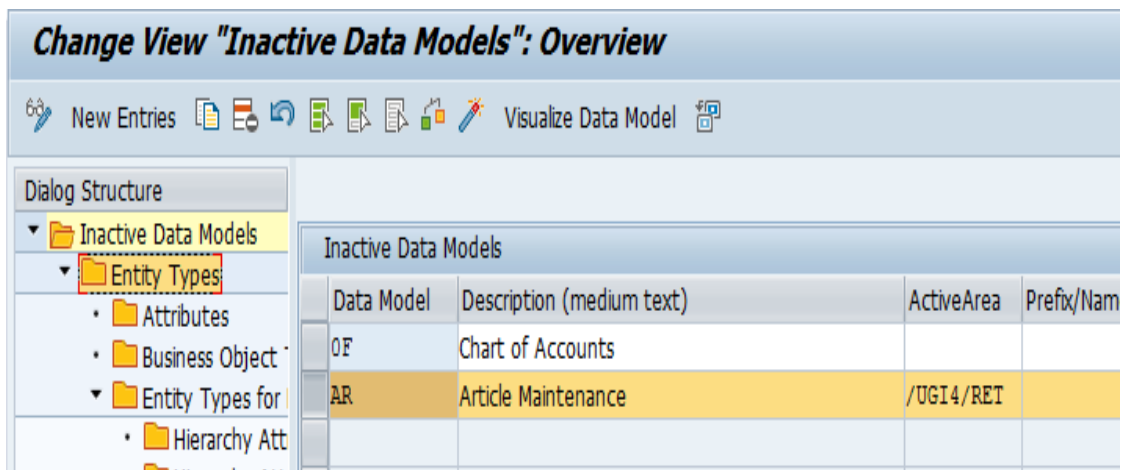
Add attributes to existing Entity Type

Use the following steps to add attributes ZZUNAME in the existing entity type MARCDC.

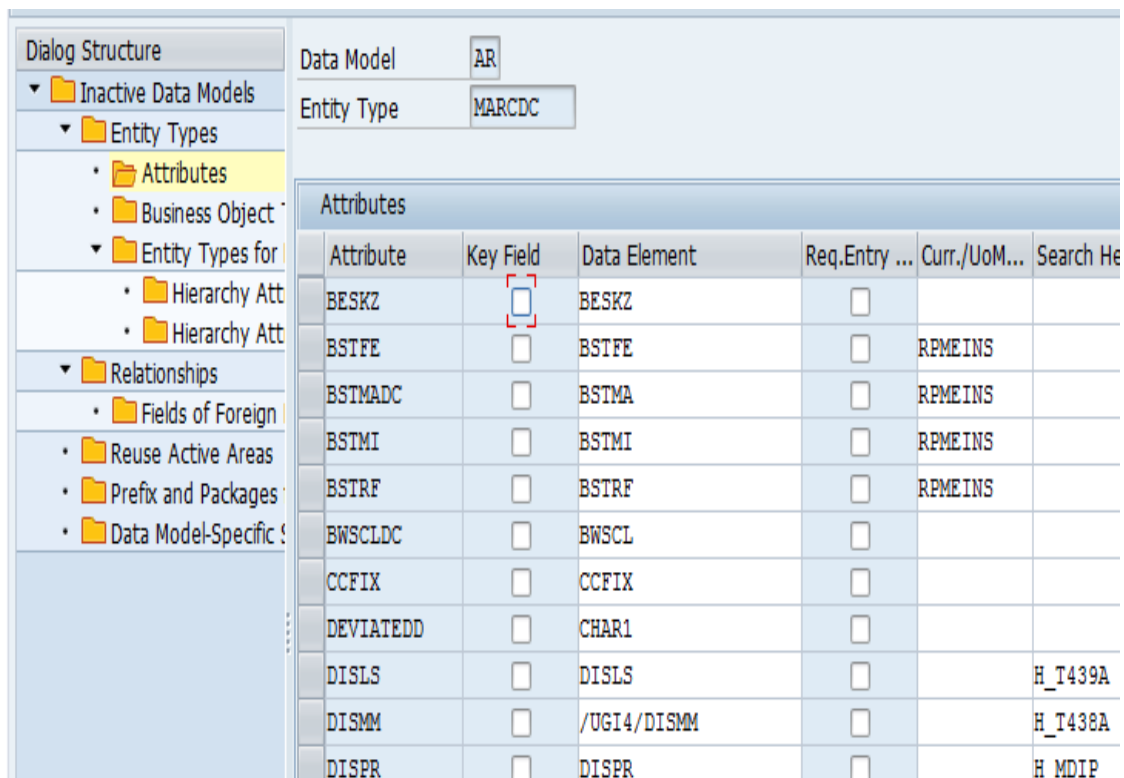
1. Log into system for cross client maintenance.
2. Start customizing for Master Data Governance (transaction code MDGIMG). Navigate to General Settings > Data Modeling > Edit Data Model.



3. Select the data model AR > Double click on Entity Types > Select the entity MARCDC > Double click on Attributes.

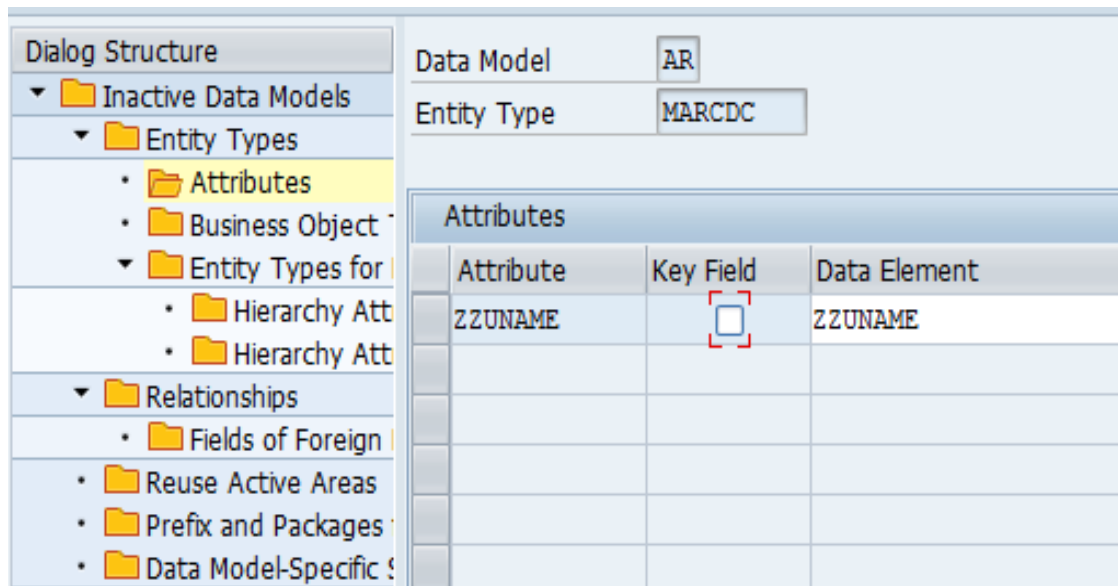


The following screen is displayed.

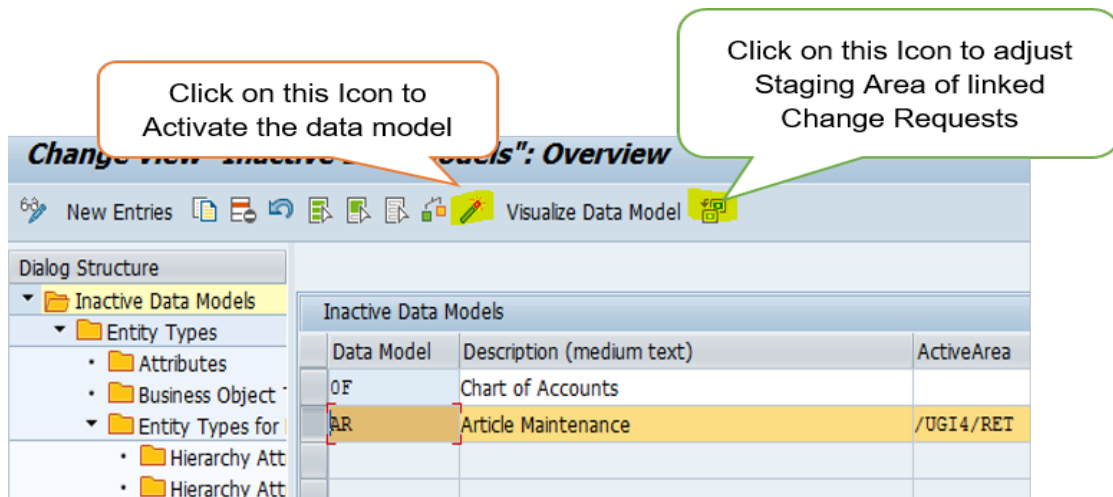


4. Add the new attributes to the entity MARCDC as displayed in the following screen and save your settings.

It is recommended to assign a Search Help to a Data Element in exceptional circumstances. If you do this, the input help executes the search help instead of reading the data in the check table or the fixed values of data element's domain.

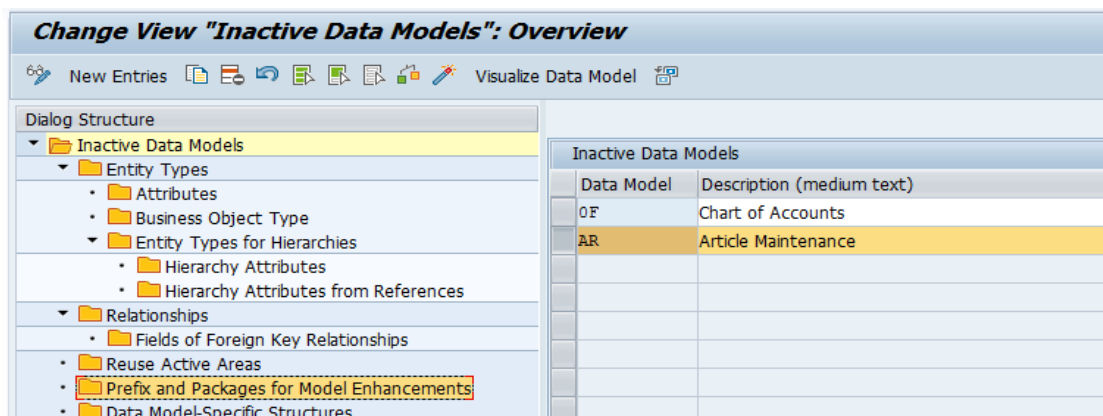


5. Adjust Staging Area of Change Requests and Activate the data model.



Generate MDG Data Model-Specific Structures

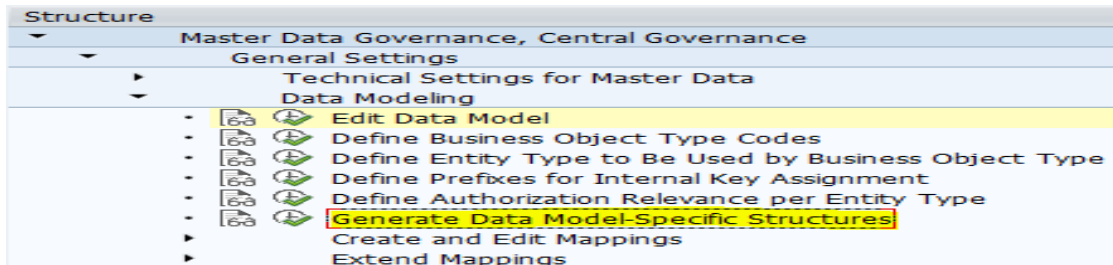
In general, if you change a data model (for example, if you change attributes of entity types or relationships) you need to regenerate the structures. You can assign a prefix and a package directly in the Data Model. The structures are generated automatically with Activation of the data model.



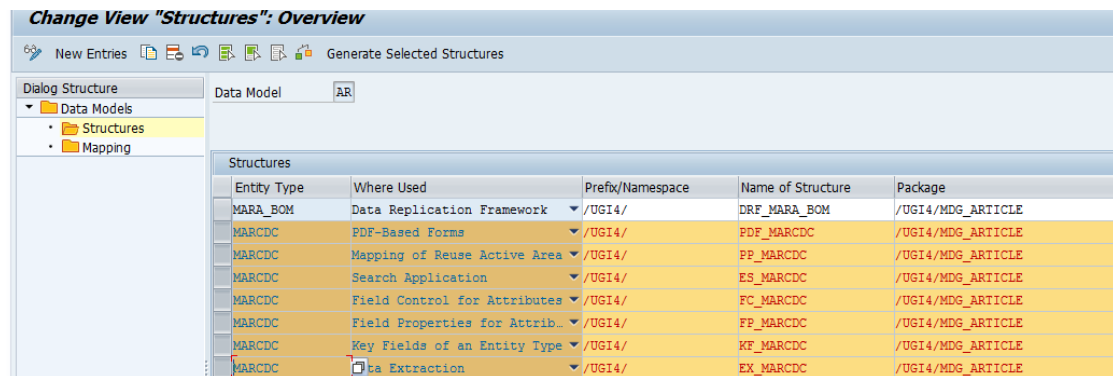
Older releases: Since the MDG Data Model was changed, you need to regenerate the tables. In this Customizing activity, for each data model and entity type you can generate technical structures and tables in the ABAP Dictionary. The system uses these structures internally for implementing the staging area. To generate these Data Model-Specific Structures use the following steps:

Use the following steps to generate Data Model Specific Structures.

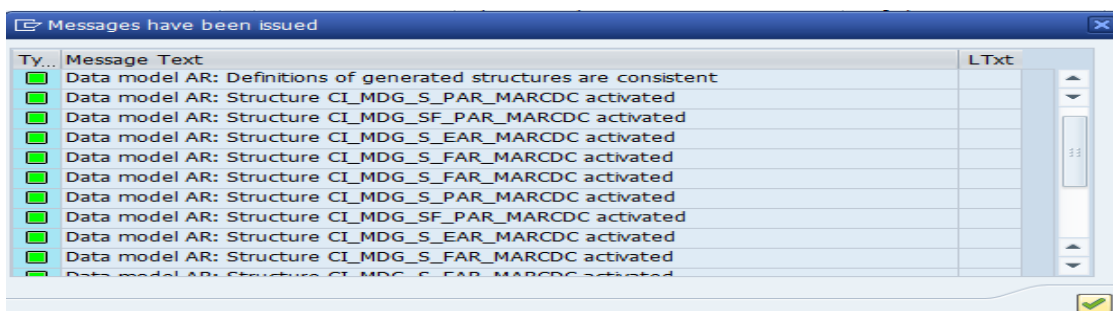
1. Start Customizing for Master Data Governance (transaction code MDGIMG). Navigate to General Settings > Data Modeling > Generate Data Model-Specific Structures.



2. Select the row with Data Model AR > Double-click Structures in the left-hand panel > Choose the "Generate Selected Structures" button.



3. Verify that the structures are generated successfully.



4. Verify that one of the Active Area mapping structures is successfully generated.
Start transaction code (t-code) SE11 > Display structure by entering the following details.

Dictionary: Display Structure

Structure: /UGI4/_S_AR_PP_MARCD Active

Short Description: Source Structure for PP Mapping

Attributes Components Input Help/Check Currency/quantity fields

Predefined Type 138 / 139

Component	Typing Method	Component Type	Data Type	Length	Deci...	Short Description
.INCLUDE	Types	CI MDG S PAR MA...		0	0	Customizing Include for Activ
<u>ZZUNAME</u>	Types	<u>ZZUNAME</u>	CHAR	20	0	user name

5. After verifying, the structures are generated with a new attribute “ZZUNAME” as displayed in the following screen.

Dictionary: Display Structure

Structure: /UGI4/MDG_BS_ART_S_MARC Active

Short Description: Logistics DC/Store

Attributes Components Input Help/Check Currency/quantity fields

Predefined Type 269 / 269

Component	Typing Method	Component Type	Data Type	Length	Deci...	Short Description
<u>ZZUNAME</u>	Types	<u>ZZUNAME</u>	CHAR	20	0	user name

Enhancing Active Area Structures/Tables

Enhance table MARC:

Enhance database table MARC by appending a structure with the following fields.

ZZUNAME TYPE Char20.

1. Run t-code SE11 > Open the database table MARC as shown.

ABAP Dictionary: Initial Screen

☒ Database table MARC

☐ View V_130F

☐ Data type

☐ Type Group

☐ Domain

☐ Search help

☐ Lock object

Display Change Create

2. Click on “Append Structure” button to append the required fields into MARC table.

Dictionary: Display Table

Transparent Table: **MARC** Active

Short Description: Plant Data for Material

Attributes | Delivery and Maintenance | **Fields** | Input Help/Check | Currency/Quantity Fields

Field | Key | Ini... | Data element | Data Type | Length | Deci... | Short Description

3. Enter the Append Name.

Dictionary: Display Table

Transparent Table: **MARC** Active

Append Name: **ZZMARC**

Object Name: /CWM/MARC Status: New Short text: CWM Fields for PME

Object Name: /CWM/MARC_COSTING Status: New Short text: Catch Weight: Additional Costing Data at Plant Le.

Create Append Structure for MARC

Append Name: **ZZMARC**

4. Add the required fields to the structure. Save and Activate the structure.

Dictionary: Display Append Structure

Append Structure: **ZZMARC** Active

Short Description: custom files

Attributes | Components | Input Help/Check | Currency/quantity fields

Component: **ZZUNAME** Typing Method: Types Component Type: ZZUNAME Data Type: CHAR Length: 20 Deci...: 0 Short Description: user name

5. Fields are appended successfully into the MARC table.

Dictionary: Display Table

Transparent Table: **MARC** Active

Short Description: Plant Data for Material

Attributes | Delivery and Maintenance | **Fields** | Input Help/Check | Currency/Quantity Fields

Field	Key	Ini...	Data element	Data Type	Length	Deci...	Short Description
REF_SCHEMA	<input type="checkbox"/>	<input type="checkbox"/>	WRF_REF_SCHEMA	CHAR	2	0	Reference Determination Schema
MIN_TROC	<input type="checkbox"/>	<input type="checkbox"/>	WRF_FRE_TROC_MIN	NUMC	3	0	Minimum Target Range of Coverage
MAX_TROC	<input type="checkbox"/>	<input type="checkbox"/>	WRF_FRE_TROC_MAX	NUMC	3	0	Maximum Target Range of Coverage
TARGET_STOCK	<input type="checkbox"/>	<input type="checkbox"/>	WRF_FRE_TARGET_...	QUAN	13	3	Target Stock
.APPEND	<input type="checkbox"/>	<input type="checkbox"/>	ZZMARC	RU	0	0	custom files
ZZUNAME	<input type="checkbox"/>	<input type="checkbox"/>	ZZUNAME	CHAR	20	0	user name

SMT Mapping

You extend mappings by creating new transformations (complex transformations, field mappings) and field checks for them or by editing them.

Important: When the mappings are saved, the system generates the corresponding coding. Make sure that all relevant structures are ready before you start.

SMT Mapping - Get Mapping names from Data Model AR

Use the following steps to get the mapping names:

1. Log into system for cross-client maintenance. Start Customizing for Master Data Governance (t-code MDGIMG). Navigate to > General Settings > Data Modelling > Generate Data Model Specific Structures > Select Data Model AR > Double click on Mapping.

Change View "Packages for Generated Structures on Model Level": Overview

New Entries | Generate Structures

Data Model	Description (medium text)	Package
AR	Article Maintenance	/UGI4/MDG_ARTICLE
BP	Business Partner	/MDGBP/MDG_BS_BP_STRUCTURES

The SMT mappings for Entity Type MARCDC are displayed in the following screen.

Change View "Mapping": Overview

New Entries

Dialog Structure: Data Models > Structures > Mapping

Data Model: AR

Entity Type	Where Used	SMT Mapping from Active Area	SMT Mapping to Active Area
MAMT	3 Mapping of Reuse Active A...	/UGI4/MDG_MAP_ARTICLE_2STA	/UGI4/MDG_MAP_ARTICLE_2PP
MARA	3 Mapping of Reuse Active A...	/UGI4/MDG_MAP_ARTICLE_2STA	/UGI4/MDG_MAP_ARTICLE_2PP
MARCDC	Mapping of Reuse Active A...	/UGI4/MDG_MAP_ARTICLE_2STA	/UGI4/MDG_MAP_ARTICLE_2PP

SMT Mapping - Primary Persistence to Staging

Use the following steps for SMT Mapping from Primary Persistence to Staging area.

1. Log into system for cross-client maintenance. Start Customizing for Master Data Governance (t-code MDGIMG). Navigate to General Settings > Data Modeling > Create and Edit Mappings > Create and Edit Mappings

Note: For new Entity Types, it is recommended to create a new mapping. When extending existing Entity Types, it is recommended to extend the existing mapping.

Structure

Master Data Governance

General Settings

Technical Settings for Master Data

Data Modeling

- Edit Data Model
- Node text not found
- Define Entity Type to Be Used by Business Object Type
- Define Prefixes for Internal Key Assignment
- Define Authorization Relevance per Entity Type
- Generate Data Model-Specific Structures
- Create and Edit Mappings
- Define Package Groups
- Create and Edit Mappings
- Check Customizing
- Extend Mappings

2. Extend mapping /UGI4/MDG_MAP_ARTICLE_2STA.

No Messages

Save Close Edit Copy Delete Mapping

Mapping

* Name: /UGI4/MDG_MAP_ARTICLE_2PP

Description: mapping from

Package Group: /UGI4/MDG

Multiple Contexts: ☐

Mapping Steps

Details Add Remove

*Mapping Step	Description	*Source Structure	*Target Structure
MAP_2_ADDITIONALS	Map to additional	/UGI4/_S_AR_PP_ADDITIONA	/UGI4/MDG_BS_ART_S_ADDITIONA
MAP_2_BASIDTEXT	Map to BASIDTEXT	/UGI4/_S_AR_PP_BASIDTEXT	/UGI4/MDG_BS_ART_S_NOTES
MAP_2_BPORDTEXT	Map to BPORDTEXT	/UGI4/_S_AR_PP_BPORDTEXT	/UGI4/MDG_BS_ART_S_NOTES

Select Mapping

* Name: /UGI4/MDG_MAP_ARTICLE_2STA

OK Cancel

3. Select the mapping step MAP_FROM_MARCDL-> Click on "Details" button to update the transformations.

Mapping

* Name: /UGI4/MDG_MAP_ARTICLE_2STA

Description: Mapping to staging for article

Package Group: /UGI4/MDG_PACKAGE_GROUP

Multiple Contexts: ☐

Mapping Steps

Details Add Remove Copy Import Change Structure Keys Additional Input Structures

*Mapping Step	Description	*Source Structure	*Target Structure
MAP_FROM_MARA	Map from Mara	/UGI4/MDG_BS_ART_S_MARA	/UGI4/_S_AR_PP_MARA
MAP_FROM_MARCDL	Map from MARCDL	/UGI4/MDG_BS_ART_S_MARC	/UGI4/_S_AR_PP_MARCDL

4. Map fields as displayed in the following screen and save the changes.

Display Mapping Step: MAP_FROM_MARCDL

Mapping /UGI4/MDG_MAP_ARTICLE_2STA > Mapping Step MAP_FROM_MARCDL

Mapping Description Mapping to staging for article Package Group /UGI4/MDG_PACKAGE_GROUP

No Messages

Save Close Edit Copy Delete Mapping

Field Checks Transformations

Add Remove Copy Move Up Move Down

Order	*Transformation Type	Conditional	Chain to Preceding	Switch	Description
00001	Field Mapping	<input type="checkbox"/>	<input type="checkbox"/>		
00002	Field Mapping	<input type="checkbox"/>	<input type="checkbox"/>		

Details for Transformation Order 00002

Field Mapping

Add Remove

*FIELD	Source Structure	Source Field	Fixed Value	Conversion Class	Reference Type	Field type	Data Type	Number of Characters	Decimal Places	Description
ZZUNAME	/UGI4/MDG_BS_ART_S_MARC	ZZUNAME			<input type="checkbox"/>	ZZUNAME	CHAR	20		user n

SMT Mapping - Staging to Primary Persistence

Use the following steps for SMT Mapping from Staging area to Primary Persistence.

1. Extend mapping /UGI4/MDG_MAP_ARTICLE_2PP.

No Messages

Save Close Edit Copy Delete Mapping

Select Mapping

* Name: /UGI4/MDG_MAP_ARTICLE_2PP

OK Cancel

Details for Transformation Order 00002

2. Select mapping step and select the “Details” button. Map the fields as displayed in the following screen.

Save Close Edit Copy Delete Mapping

Mapping

* Name: /UGI4/MDG_MAP_ARTICLE_2PP

Description: mapping from staging to active area

Package Group: /UGI4/MDG_PACKAGE_GROUP

Multiple Contexts: ☐

Mapping Steps

Details Add Remove Copy Import Change Structure Keys Additional Input Structures

*Mapping Step	Description	*Source Structure	*Target Structure
MAP_2_MARCDL	Map to Logistics DC	/UGI4/_S_AR_PP_MARCDL	/UGI4/MDG_BS_ART_S_MARCDL

3. Map fields as shown in the following screen and save the changes.

Mapping /UGI4/MDG_MAP_ARTICLE_2PP > Mapping Step MAP_2_MARCDL

Mapping Description: mapping from staging to active area Package Group: /UGI4/MDG_PACKAGE_GROUP

No Messages

Save Close Edit Copy Delete Mapping

Field Checks Transformations

Add Remove Copy Move Up Move Down

Order	*Transformation Type	Conditional	Chain to Preceding	Switch
00001	Field Mapping	<input type="checkbox"/>	<input type="checkbox"/>	
00002	Field Mapping	<input type="checkbox"/>	<input type="checkbox"/>	

Details for Transformation Order 00002

Field Mapping

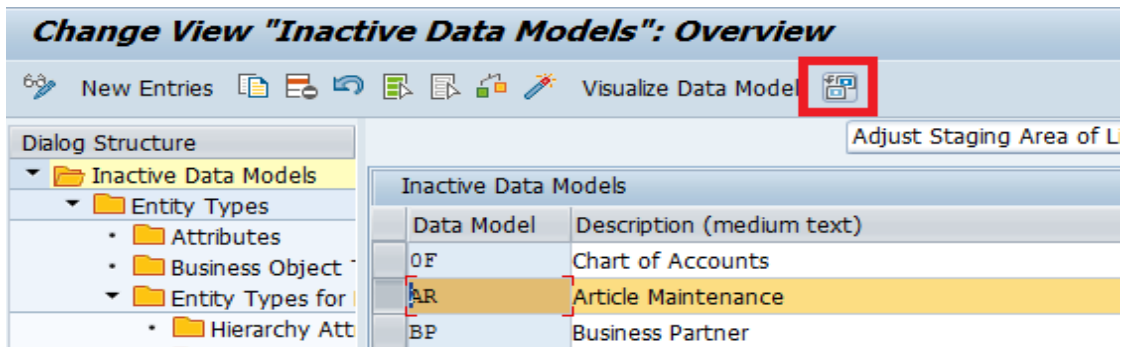
Add Remove

*FIELD	Source Structure	Source Field	Fixed Value	Conversion Class	Reference Type	Field type	Data Type	Number of Characters
ZZUNAME	/UGI4/_S_AR_PP_MARCDL	ZZUNAME			<input type="checkbox"/>	ZZUNAME	CHAR	20

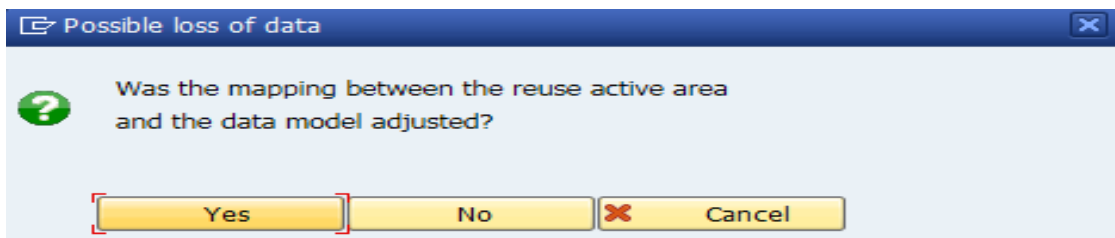
Adjust Staging Area of Linked Change Requests

Note: This step is necessary to adjust any open Change Requests after you have changed the Data Model.

1. Start Customizing for Master Data Governance (t-code MDGIMG). Navigate to General Settings > Data Modeling > Edit Data Model > Select Data Model AR > Double click on Entity Types > Select the “Adjust staging area of linked Change Requests” button.

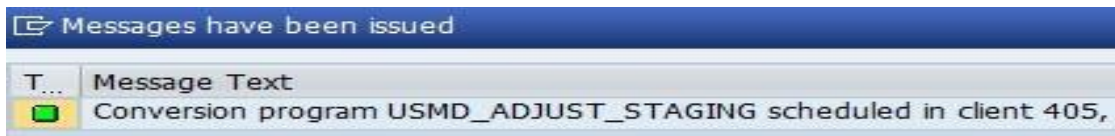


- Choose the “Yes” button.



The following message appears.

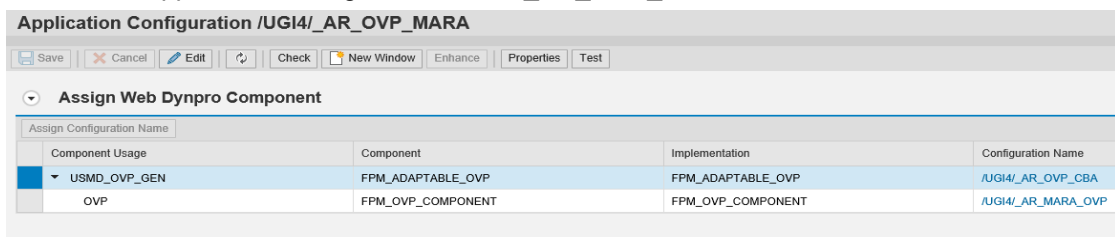
Note: Make sure that user DDIC exist in all relevant clients.



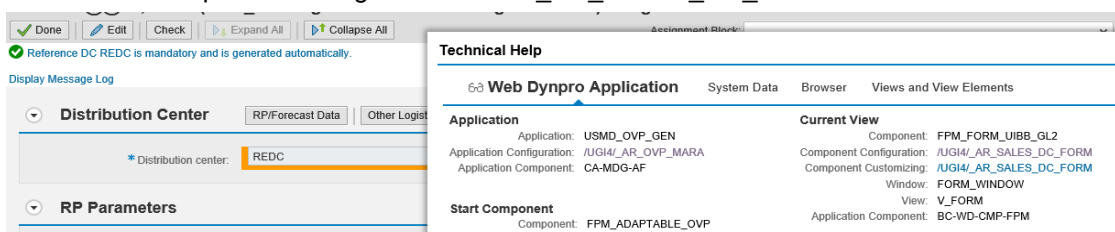
Extending the UI Configuration

You can create Customization of the application configuration of Retail Article by using the following steps.

- Launch the Application Configuration /UGI4/_AR_OVP_MARA.



- As the Business requirement is to add the New field “Username” in the “Logistics DC” section, click on the Component Configuration “UGI4/_AR_SALES_DC_FORM”.



The following is the screen is displayed.

Component Configuration /UGI4/_AR_SALES_DC_FORM

Save Cancel Edit Save Draft Load Draft Undo Redo Check Additional Functions

General Settings

Preview Element Group Line

	A	B	C	D	E	F	G	H	I	J	K	L
1	Distribution center:						<Text View>					
2												

3. Click on Additional Functions menu > Select Create Customizing option.

Component Configuration /UGI4/_AR_SALES_DC_FORM

Save Cancel Edit Save Draft Load Draft Undo Redo Check Additional Functions

General Settings

Preview Element Group Line

Additional Functions menu is open showing options: New Window, Edit Customizing, Delete Customizing, Enhance, Show Properties.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Distribution center:						<Text View>								
2															
3															

4. Add the "Username" field on the screen as displayed:

Component Customizing /UGI4/_AR_SALES_DC_FORM

Save Cancel Edit Save Draft Load Draft Undo Redo Check Additional Functions

General Settings

Preview Element Group Line

	A	B	C	D	E	F	G
1	Distribution center:						<Text View>
2							
3							
4							
5							

Attributes of Element: ZZUNAME

Element

Field Name: ZZUNAME

Explanation:

Add Fields

Field Name	Description
VRBFK	Multiplier
VRBMT	RefArt: c...
VRBWK	RefSite: c...
VRBWK_...	
VRBWK_...	
VRBWK_...	
VRMOD	Consump...
VRMOD_...	
VRVEZ	Setup time
VZWRK	Distributi...
VZWRK_T	Name 1
VZWRK_...	
VZWRK_...	
VZWRK_...	
WEBAZ	GR proce...
WZEIT	Tot. repl...
XCHPF_DC	Batch ma...
XCHPF_...	
XMCNG	Neg. stoc...
XMCNG_...	
ZZUNAME	user name

Component Customizing /UGI4/_AR_SALES_DC_FORM

Save Cancel Edit Save Draft Load Draft Undo Redo Check Additional Functions

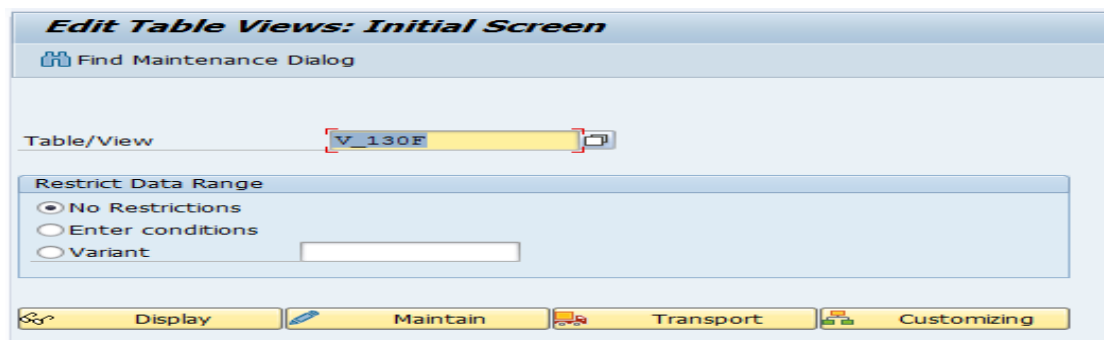
General Settings

Preview Element Group Line

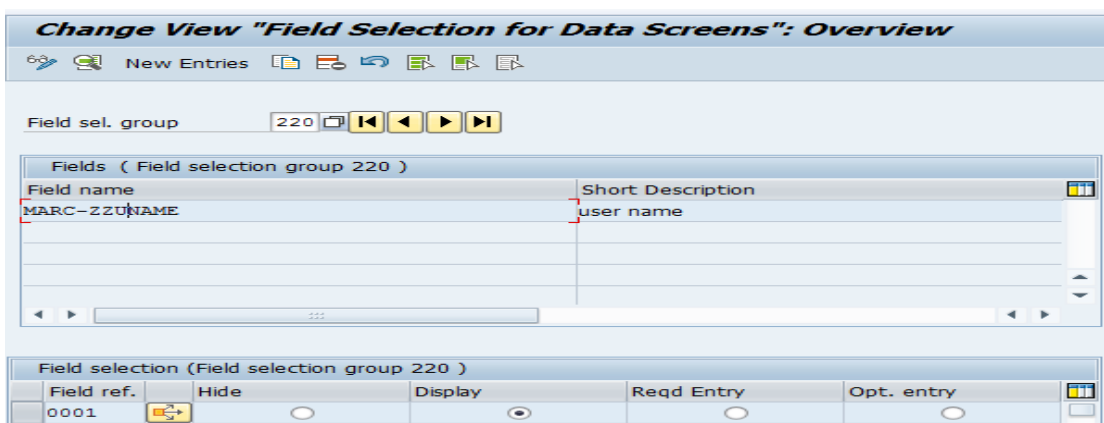
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Distribution center:						<Text View>			User Name:			

5. Save the changes.

Configuration Note: The custom field needs to be maintained in the “Field Groups” View V_130F to successfully transfer the values from MDG to ECC for the field as in the following screen.



Assign the custom field MARC-ZZUNAME to a Field Selection Group and define the field properties (Display, Hide, Req'd. Entry, etc.) based on the business requirements. (The Field Selection Groups in the range 211-240 are reserved for customers).



Field name	Short Description
MARC-ZZUNAME	user name


Field ref.	Hide	Display	Req'd Entry	Opt. entry
0001	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>












Testing the Configuration

Use the following steps to test the configuration:

1. Launch NWBC.

Launch NetWeaver Business Client

Cockpit  [/nwbc](#)

-  [/UGI4/MDGRFM DISP](#)
-  [/UGI4/MDGRFM FMS DISP](#)
-  [/UGI4/MDGRFM FMS MENU](#)
-  [/UGI4/MDGRFM FMS REQ](#)
-  [/UGI4/MDGRFM FMS SPEC](#)
-  [/UGI4/MDGRFM FMS STEW](#)
-  [/UGI4/MDGRFM MENU](#)
-  [/UGI4/MDGRFM REQ](#)
-  [/UGI4/MDGRFM SPEC](#)
-  [/UGI4/MDGRFM STEW](#)
-  [SAP MDG ADMIN](#)

Master Data Governance for RFM: Display, Master L
Governance for FMS: Requester, Master Data Govern
Master Data Governance for RFM: Display
Master Data Governance for FMS: Display
Master Data Governance for FMS: Menu
Master Data Governance for FMS: Requester
Master Data Governance for FMS: Specialist
Master Data Governance for FMS: Steward
Master Data Governance for RFM: Menu
Master Data Governance for RFM: Requester
Master Data Governance for RFM: Specialist
Master Data Governance for RFM: Steward
Master Data Governance: Administrator

2. Select Article Processing> Create Article

SAP NetWeaver Business Client

Master Data Governance for RFM Master Data Governance for FMS

Article Governance Homepage

Article Processing

Search Article
Create Article

3. Enter the required details > Submit, Approve and Activate the Change Request.

Article: 29, test - (FMS_Trading Goods / TOPS / Single material)

Save Cancel Edit Expand All Collapse All Validation Log Change Documents Workflow Log Assignment E

Change Request

General Notes Attachments

General Data

Change Request ID: 49
Description: Test
Priority:
Due Date:
Reason:

Process Data

Status: Final Check Approved
Current Workitem:
Created On/By: 30.01.2017 04:29:23
Changed On/By: 30.01.2017 04:30:53
Finalized On/By: 30.01.2017 04:30:54

Basic Data Additional Data Components Listing

Article: 29 Article Category: 00 Single material

Article: 29, test - (FMS_Trading Goods / TOPS / Single material) - Logistics DC / REDC

Done Edit Check Expand All Collapse All Assignment Block:

Distribution Center RP/Forecast Data Other Logistics Data Accounting

Distribution center: REDC REDC User Name: TEST USER

4. Verify the data from ECC.

Go to MARC table > ZZUNAME is updated with the value from the Change Request for Article 29.

Data Browser: Table MARC Select Entries 1

Check Table...

Table: MARC
Displayed Fields: 4 of 4 Fixed Columns: 3 List Width 0250

	MATNR	WERKS	PSTAT	ZZUNAME
<input type="checkbox"/>	0000000000000000029	REDC	DELBSVPQ	TEST USER

Note: If you extend the data model according to the guidelines as explained in this section, and the fields are not populated when you Activate the Data Model, refer SAP Note [1641867](#) - Values for extension field missing after CR activation.

Note: To view the field ZZUNAME on the Article Master screens in ECC, separate screen enhancements are required, and the process is not explained in this document.