

# **SAP HANA-based Search - Implementation of the Access Class Interface for the Reuse Model**

Applicable Releases:  
**MDG 7.0**

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TABLE OF CONTENTS

OVERVIEW ..... 3

ACCESS CLASS INTERFACE IMPLEMENTATION ..... 3

## OVERVIEW

You can use this document to implement the access class interface for your reuse model so that the HANA-based search of master data can retrieve both active data and inactive data.

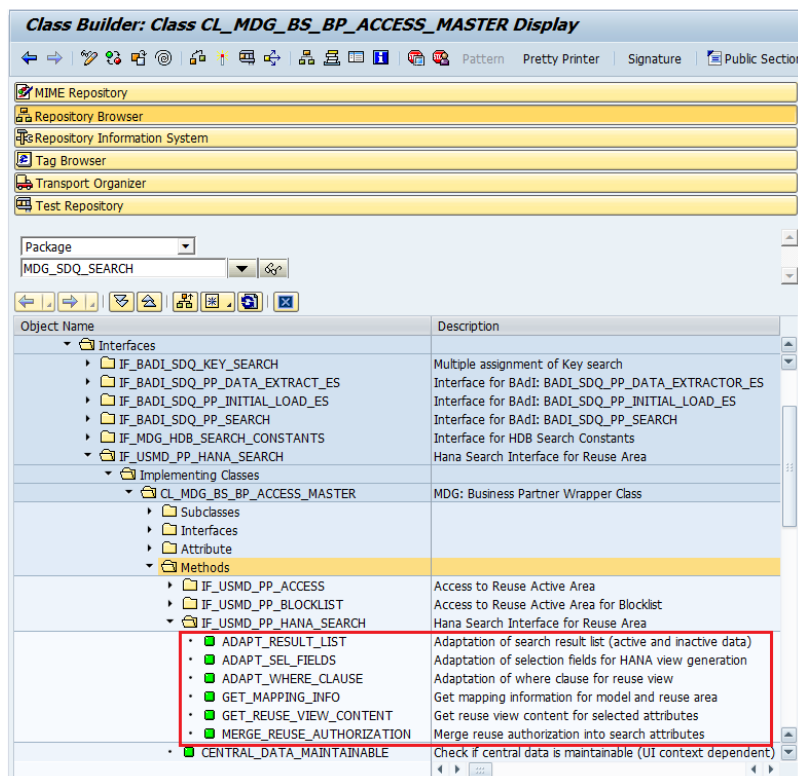
## ACCESS CLASS INTERFACE IMPLEMENTATION

The SAP HANA-based search enables you to search master data in the HANA database. Implementing the search requires completing the following steps:

1. Generate a HANA search view.
2. Configure the HANA search view to search the HANA database.
3. Ensure the access class implements the interface for the HANA-based search.

For example, the access class for BP is `CL_MDG_BS_BP_ACCESS_MASTER` and the default interface for the HANA-based search is `IF_USMD_PP_HANA_SEARCH`. You can use the default interface as a reference for your implementation of the reuse scenario.

4. Ensure the interface search implements the following methods.
  - `ADAPT_SEL_FIELDS`: Adaptation of allowed selection attributes for Search View generation.
  - `GET_REUSE_VIEW_CONTENT`: Read reuse area attribute names and join conditions for the HANA search view
  - `MERGE_REUSE_AUTHORIZATION`: Determine reuse area authorization for search
  - `GET_MAPPING_INFO`: Mapping between data model and reuse data area
  - `ADAPT_WHERE_CLAUSE`: Adapt the SELECT query WHERE clause for performing search
  - `ADAPT_RESULT_SET`: Adapt reuse area search results to MDG data model structure



5. You can maintain the reuse area metadata information that for the above mentioned methods in the view cluster `VC_HDB_PP_FMAP`. You can update the view cluster to add the field and join information for the reuse entity. The system saves the updated data in the underlying tables of the view cluster (see screenshot below).

1. Run the transaction for View Cluster maintenance (SM34) to maintain the view cluster VC\_HDB\_PP\_FMAP.
2. In the *Join Attributes* view for a BO type, you can update or insert the left tables and right tables with the cardinality, join operator, and join type.

**Display View "Join Attributes": Overview**

Dialog Structure

- Join Attributes
  - Join Fields
  - Field Mapping

BO Type	Table Name	Table Name	Cardinalit	Join Op
147	I000	ADRP	1:1 Cardinality	Equal
147	BUT000	BUT020	1:N Cardinality	Equal
147	BUT000	BUT0BK	1:N Cardinality	Equal
147	BUT000	BUT0ID	1:N Cardinality	Equal
147	BUT000	BUT0IS	1:N Cardinality	Equal
147	BUT000	BUT100	1:N Cardinality	Equal
147	BUT000	CVI_CUST_LINK	1:N Cardinality	Equal
147	BUT000	CVI_VEND_LINK	1:N Cardinality	Equal
147	BUT000	DFKKBPTAXNUM	1:N Cardinality	Equal
147	BUT000	MDG_MLT_ASSGMNT	1:N Cardinality	Equal
147	BUT020	ADR12	1:N Cardinality	Equal
147	BUT020	ADR2	1:N Cardinality	Equal
147	BUT020	ADR3	1:N Cardinality	Equal
147	BUT020	ADR6	1:N Cardinality	Equal
147	BUT020	ADRC	1:1 Cardinality	Equal
147	CVI_CUST_LINK	KNA1	1:N Cardinality	Equal
147	CVI_VEND_LINK	LFA1	1:N Cardinality	Equal
147	KNA1	KNB1	1:N Cardinality	Equal
147	KNA1	KNB5	1:N Cardinality	Equal
147	KNA1	KNBW	1:N Cardinality	Equal

3. Choose a row to add the information about the fields to be joined.

**Display View "Join Attributes": Overview**

Dialog Structure

- Join Attributes
  - Join Fields
  - Field Mapping

BO Type	Table Name	Table Name	Join Type
147	BUT000	ADRP	leftOuter
147	I000	BUT020	leftOuter
147	BUT000	BUT0BK	leftOuter
147	BUT000	BUT0ID	leftOuter
147	BUT000	BUT0IS	leftOuter
147	BUT000	BUT100	leftOuter
147	BUT000	CVI_CUST_LINK	leftOuter
147	BUT000	CVI_VEND_LINK	leftOuter
147	BUT000	DFKKBPTAXNUM	leftOuter
147	BUT000	MDG_MLT_ASSGMNT	leftOuter
147	BUT020	ADR12	leftOuter
147	BUT020	ADR2	leftOuter
147	BUT020	ADR3	leftOuter
147	BUT020	ADR6	leftOuter
147	BUT020	ADRC	leftOuter
147	CVI_CUST_LINK	KNA1	leftOuter
147	CVI_VEND_LINK	LFA1	leftOuter
147	KNA1	KNB1	leftOuter
147	KNA1	KNB5	leftOuter
147	KNA1	KNBW	leftOuter

4. Double click the *Join Fields* view, and add the field names to be joined.

**Display View "Join Fields": Overview**

BO Type	Table	Table	Field Name	Field Name
147	BUT000	BUT020	CLIENT	CLIENT
147	BUT000	BUT020	PARTNER	PARTNER

6. The information maintained in the view cluster VC\_HDB\_PP\_MAP is stored in tables MDGHDB\_PP\_FMAP, MDGHDB\_PP\_FJOIN, and MDGHDB\_PP\_TJOIN. The methods of your reuse access class use the information in these tables at the time of view generation and while the search is being performed. The tables are described below:

- Table: MDGHDB\_PP\_FMAP

This table contains the data model field names, reuse area field names, data element names, and the unique deviating field names. The deviating field names are unique names given to reuse fields to avoid name conflicts in cases where the same field names exist across tables in the view. The information in this table is read by the GET\_MAPPING\_INFO method to determine the mapping between the data model field names and reuse area field names and returns the information to the MDG HANA search application.

**Dictionary: Display Table**

Field	Key	In...	Data element	Data Type	Length	Dec...	Short Description
MODEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	USMD_MODEL	CHAR	2		0 Data Model
ENTITY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	USMD_ENTITY	CHAR	9		0 Entity Type
MODEL_FIELDNAME	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	USMD_ATTRIBUTE	CHAR	9		0 Attribute
REUSE_TABLE	<input type="checkbox"/>	<input type="checkbox"/>	USMD_TAB_SOURCE	CHAR	30		0 ABAP Dictionary Structure/Table
REUSE_FIELDNAME	<input type="checkbox"/>	<input type="checkbox"/>	USMD_PP_FIELDNA...	CHAR	30		0 Field Name in Reuse Active Area
REUSE_ROLLNAME	<input type="checkbox"/>	<input type="checkbox"/>	ROLLNAME	CHAR	30		0 Data element (semantic domain)
DEVIATING_FIELD...	<input type="checkbox"/>	<input type="checkbox"/>	USMD_PP_FIELDNA...	CHAR	30		0 Field Name in Reuse Active Area
DEVIATING_FIELD...	<input type="checkbox"/>	<input type="checkbox"/>	USMD_DESC	CHAR	60		0 Description

- Table MDGHDB\_PP\_FJOIN

This table contains information on fields that participate in mapping or that are mapped between left and right tables. This information is used while generating the HANA view for the reuse data.

**Dictionary: Display Table**

Transp. Table: MDGHDB\_PP\_FJOIN Active

Short Description: MDG join columns reuse table

Attributes | Delivery and Maintenance | **Fields** | Entry help/check | Currency/Quantity Fields

1 / 5

Field	Key	Ini...	Data element	Data Type	Length	Decl...	Short Description
OTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MDG_OBJECT_TYPE...	CHAR	10		0 Business Object Type
LEFT_TABLE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABNAME	CHAR	30		0 Table Name
RIGHT_TABLE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABNAME	CHAR	30		0 Table Name
LEFT_FIELD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	FIELDNAME	CHAR	30		0 Field Name
RIGHT_FIELD	<input type="checkbox"/>	<input type="checkbox"/>	FIELDNAME	CHAR	30		0 Field Name

- Table MDGHDB\_PP\_TJOIN

This table contains the information about how the left and right tables are joined, the cardinality, and the join type. This information is used while generating the HANA view for the reuse data.

**Dictionary: Display Table**

Transp. Table: MDGHDB\_PP\_TJOIN Active

Short Description: MDG join reuse table

Attributes | Delivery and Maintenance | **Fields** | Entry help/check | Currency/Quantity Fields

1 / 6

Field	Key	Ini...	Data element	Data Type	Length	Decl...	Short Description
OTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MDG_OBJECT_TYPE...	CHAR	10		0 Business Object Type
LEFT_TABLE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABNAME	CHAR	30		0 Table Name
RIGHT_TABLE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	TABNAME	CHAR	30		0 Table Name
CARDINALITY	<input type="checkbox"/>	<input type="checkbox"/>	MDG_HDB_JOIN_CA...	CHAR	4		0 Join Cardinality in HANA Views
JOINOPERATOR	<input type="checkbox"/>	<input type="checkbox"/>	MDG_HDB_JOIN_OP...	CHAR	15		0 Join Operator in HANA Views
JOINTYPE	<input type="checkbox"/>	<input type="checkbox"/>	MDG_HDB_JOIN_TY...	CHAR	15		0 Join Type in HANA Views

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