

# Reading Data from SAP HANA Modelling Views Using PowerCenter

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## Abstract

This article explains how to read data from SAP HANA modelling views using PowerCenter.

## **Supported Versions**

• PowerCenter 10.4.0

## **Table of Contents**

Overview
Input Types for HANA Modelling Views.
Input Parameter Types
Reading Data from SAP HANA Modelling Views.
Importing SAP HANA Modelling Views
Creating a Mapping
Creating Sessions and Workflows
Rules and Guidelines for HANA Modelling Views.

### **Overview**

Use the SAP HANA subtype in an ODBC connection to read data from SAP HANA modelling views.

You can read data from attribute views, analytical views, and calculation views. Install an SAP HANA license to read data from SAP HANA modelling views.

## **Input Types for HANA Modelling Views**

You can use the following input types when you read data from SAP HANA modelling views:

- Variables. A variable is a filter. A variable is associated with an attribute column, for example, company name, of the view. However, a variable does not appear in the source metadata in the PowerCenter Designer. Provide the variable value in the attribute column that you specified in SAP.
- Parameters. An input parameter is a placeholder to the query. You can use parameters to insert values for analytical views and calculation views. The data type for an input parameter in PowerCenter is char.
   Specify the data for input parameters in the format that you defined in SAP.

## Input Parameter Types

When you import a HANA modelling view, Informatica adds a prefix to the parameter name. The prefix is used to indicate the parameter type.

You can use the following types of parameters:

• Mandatory Parameter. A parameter for which you are required to specify a value. For example, in the field param\_M\_AENAM, param\_M is the prefix for a mandatory parameter that Informatica adds. AENAM is the parameter name that is a part of HANA modelling views.

• Optional Parameter. A parameter for which you do not need to provide a value. For example, in the field param\_O\_UNAME, param\_O is the prefix for an optional parameter that Informatica adds. UNAME is the parameter name that is a part of HANA modelling views.

## **Reading Data from SAP HANA Modelling Views**

To read data from SAP HANA modelling views, perform the following steps:

- 1. Install the SAP HANA license.
- 2. Install the 32-bit HANA ODBC driver. Use the 32-bit ODBC data source to import the SAP HANA modelling views.
- 3. Create a mapping.
- 4. Install the 64-bit HANA ODBC driver. Use the 64-bit ODBC data source in the ODBC connection.
- 5. Create the sessions and workflows.

#### Importing SAP HANA Modelling Views

Install the 32-bit HANA ODBC driver. Use the 32-bit ODBC data source to import an SAP HANA modelling view.

- 1. Click Sources > Import from Database.
- Select the 32-bit ODBC data source.
   Note: You must install the 32-bit HANA ODBC driver to use the 32-bit ODBC data source.
- 3. Enter the username and password.
- 4. Click Connect.

The Select tables list appears.

5. From the Select tables list, select \_SYS\_BIC.

Note: All the modelling views are listed under the \_SYS\_BIC schema and not under the user schema.

The following image shows the \_SYS\_BIC schema under the Select tables list:

onnect to Database			OK
ODBC data source:	HANA_32 (HDBODBC32)	~	
Use Kerberos Au	thentication		Cancel
Username: DEV_USER Owner name: <all></all>			Help
		20	
Password:	•••••	Re-connect	
elect tables			
TEST_USER		Show owners:     Default All     Search for tables named:         Search	
E SYS_REPO SYS_RT SYS_SECUR SYS_SECUR SYS_SOL A		Select all	

- 6. Click the icon next to the \_SYS\_BIC schema.
- 7. Click the Ficon next to **Views** to select the column view name in the table list.
- Select a basic view that you have created in SAP. Do not select a view name that has a hierarchy. The following image shows the ANLV\_PURCHASE\_ORDER\_USING\_PARAM\_00 view selected from the list of views:

			OK
ODBC data source:	hanasource (HDBODBC32)	<	UN
Use Kerberos Au	thentication		Cancel
Username:	DEV_USER		Help
Owner name:	<all></all>	2 <b>2</b> .	
Password:	•••••	Re-connect	
elect tables			
	A Show	v owners:	
ILV PURCHASE ORI	DER USING PARAM 00/cal Def	fault All	
IN PURCHASE OR	DER USING PARAM 00/CON	th for tables named	
ILV_PURCHASE_URI	Search	unitor tables nameu.	
ILV_PURCHASE_ORI	DER_USING_PARAM_00/CRE	RAM 00 Search	
ILV_PURCHASE_ORI	DER_USING_PARAM_00/CRE	RAM_00 Search	
ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI	DER_USING_PARAM_00/CRE DER_USING_PARAM_00/CRE DER_USING_PARAM_00/CUR DER_USING_PARAM_00/CUR	RAM_00 Search	
ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI	DER_USING_PARAM_00/CRE DER_USING_PARAM_00/CRE DER_USING_PARAM_00/CRE DER_USING_PARAM_00/CUR DER_USING_PARAM_00/Mea DER_USING_PARAM_00/olap	RAM_00 Search	
ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI ILV_PURCHASE_ORI	DER_USING_PARAM_00/CRE DER_USING_PARAM_00/CRE DER_USING_PARAM_00/CRE DER_USING_PARAM_00/CUR DER_USING_PARAM_00/Mea DER_USING_PARAM_00/olap DER_USING_PARAM_00/PLAI	RAM_00 Search	

9. Click **OK** to import the source definition for the view.

#### Creating a Mapping

After you import the HANA modelling view, create a mapping. In PowerCenter, select a source filter that you configured in SAP and specify the variables or parameters.

1. Create a mapping.

**Note:** If you use input parameters, do not connect the input parameters in the Source Qualifier to the output fields. Otherwise, the mapping fails.

2. To edit the Source Qualifier, click the Properties tab in the Edit Transformations window.

Click the **I** icon next to the **Source Filter** field.

The SQL Editor page appears.

- 4. Select the column view in which you want to apply a filter from the list of column views on the left pane.
- 5. Specify the variable name or input parameter name in double quotes. Specify the variable value or input parameter value in single quotes. When you want to specify more than one variable or parameter, separate the variables or parameters using commas.

3.

The following image shows a source filter for a variable value:

0110	Variables	SQL: 🙌 🔄 🗠 🖆	. *		C	×
	ZShan/ANLV_PURCHASE_ORDER_USING_VAR_01     PRODUCT_ID     SUPPLIER_ID     CATEGORY     PRICE     PRODUCT_NAME     SUPPLIER_NAME     PO_NUMBER     COMPANY     PO_CATEGORY     PLANT     STORAGE_LOC     CURRENCY     TAX_AMOUNT     PO_STATUS     CREATED_BY     CREATED_AT     GROSS_AMOUNT	"zShan/ANLV_PURCHASE_ORDER_USING_V 01"."COMPANY" = '1000	AR_			
nstan	ce Name: 1_ANLV_PURCHASE_ORDER_USING_VAR_01 ame: PO_CATEGORY	Connect to database: ODBC data source: HANA_32 (HDBODBC32)		Gen	OK Cancel erate	1

In the above figure, the view <code>ANLV\_PURCHASE\_ORDER\_USING\_VAR\_01</code> has a variable <code>COMPANY</code> with a value of 1000.

#### The following image shows a source filter for parameter values:

	Variables  CATEGORY  PRICE  PRODUCT_NAME  SUPPLIER_NAME  PO_NUMBER  COMPANY  PO_CATEGORY  PLANT  STORAGE_LOC  CURRENCY  CARACELOC  CURRENCY  CALATED_BY  CREATED_BY  CREATED_AT  GROSS_AMOUNT  PO_STATUS  CREATED_AT  ACal_col_4_column_type  GROSS_AMOUNT  PARAM_O_ip_param_4_category	\$QL "zS 1".' "zS 1".'	han/ANLV_PURCHASE_ PARAM_0_ip_param_4_ han/ANLV_PURCHASE_ PARAM_0_ip_param_4_	✓	K ₽ ₽	>
	<ul> <li>PARAM_O_ip_param_4_comp</li> </ul>	~				
<	PARAM_O_ip_param_4_comp ce Name:	>	nnect to database:		OK	
stan Shar	PARAM_O_ip_param_4_comp  ce Name: ANLV_PURCHASE_ORDER_USING_PARAM, ame: PARAM_O_in_param_4_comp	<b>_00_1</b>	nnect to database: DBC data source: HANA_32 (HI	DBODBC32) ~	OK	
stan stan ort Na ort Na	PARAM_O_ip_param_4_comp  Null_param_4_comp  ANLV_PURCHASE_ORDER_USING_PARAM ame: PARAM_O_ip_param_4_comp ppe: out ppe:	_00_1 0	nnect to database: DBC data source: HANA_32 (HI ] Use Kerberos Authentication	DBODBC32) ~	OK Cancel Generate S	sqi
stan Shar ort Na ort Ty ataty recisio	PARAM_O_ip_param_4_comp  Name: A_ANLV_PURCHASE_ORDER_USING_PARAM, ame: PARAM_O_ip_param_4_comp pe: OUT pe: char o 0 0	_00_1 0	nnect to database: DBC data source: HANA_32 (H Use Kerberos Authentication ername:	DBODBC32) V	OK Cancel Generate S Validate	SQL

In the above figure, the view ANLV\_PURCHASE\_ORDER\_USING\_PARAM\_00\_1 has a parameter PARAM\_0\_ip\_param\_4\_category with a value of MM. The view also has a parameter PARAM\_0\_ip\_param\_4\_comp with a value of 1000.

- 6. Click OK.
- 7. Click Apply.

The fields are mapped.

#### Creating Sessions and Workflows

Install the 64-bit HANA ODBC driver and use the 64-bit ODBC data source in the ODBC connection. Create an ODBC connection of the SAP HANA ODBC subtype. In the session, you must use a relational reader.

- 1. In the PowerCenter Workflow Manager, click **Tools > Task Developer**.
- 2. Click Tasks > Create.
- 3. Select **Session** as the task type to create.
- 4. Enter the session name and click Create.

The Mappings dialog box appears.

- 5. Select the required mapping and click **OK**.
- 6. Click **Done** in the **Create Task** dialog box.
- 7. In the workspace, double-click the session you created.
- 8. On the Mappings tab, select Sources in the Transformations pane on the left.
- 9. Select the source as Relational Reader.
- To select the source connection name in the Connections pane, click Edit. The Connection Object Definition page appears.
- 11. Enter the source connection name.
- 12. Enter the username and password.
- 13. In the **Connect String** field, specify the 64-bit ODBC data source.

Note: You must install the 64-bit HANA ODBC driver to use the 64-bit ODBC data source.

14. Select the ODBC subtype as **SAP HANA**.

Note: If you do not select the ODBC subtype as SAP HANA, the session fails.

The following image shows the ODBC subtype selected for the connection:

	uonai Con	nection Editor	
Name:	HANA_	ODBC_64	ОК
Гуре:	ODBC		Cancel
Lines Names			Help
user Name:	DEV_US	SER	
	Use P	Parameter In Password	
Password:	*****		
Connect String:	HANA_6	54	
Code Page:	MS Wind	dows Latin 1 (ANSI), supe $  imes $	
Attributes:			
Attribut	e	Value	
Connection Envir	onment		
Transaction Envi	ronment		
Connection Retry	Period	0	
		SAP HANA	~

- 15. Click **OK**.
- 16. In the Properties pane for the source connection, specify the Owner Name as \_SYS\_BIC.The following image shows the owner name for the source connection in the Properties pane:

dit Tasks					— D	×
General Properties	Config Object	t Mapping Components Metadata Extensi	ions			
Select task:	s_Map_F	or_ANLV_PURCHASE_ORDER_USING_VAR_01	L_00			~
Task type:	Session					
Start Page			MapSQ_zShan_ANLV_PURC	CHASE_ORDER_USING_VAR_01		
Pushdown	Optimization	I Readers				
Connections     Memory Properties     Files, Directories and Corr		Instance		Readers		
		SQ SQ_zShan_ANLV_PURCHASE_ORDER_	USING_VAR_01 Relational Reader			>
E Sources						
SU SQ_ZSI	han_ANLV_PUH					
SQ_zst	nan_ANLV_PUR					
Transforma	tions	- Connactions				
		Type	Value	e Connect	005	
		SQ_SQ_zShan_ANLV_PURCHASE_ORD	DER_USING_VAR_01 - DB Connection			
		Relational	HANA_ODBC_64	DB Connection		
		Properties		Show Session Le	el Properties	
		Attribute		Value		^
		Source Filter	"zShan/ANLV_PURCI	HASE_ORDER_USING_VAR_01". "COMPANY" = '1000'		
		zShan_ANLV_PURCHASE_ORD	DER_USING_VAR_01 - Source			_
		Owner Name	_SYS_BIC			
		Source Table Name				
<	>					Y
📸 Transfo	Partitions	Owner Name				
		Source owner name				

- 17. Select a target.
- 18. Click **OK** to save and close the session properties.
- 19. Create a workflow.
- 20. Run the workflow.

## **Rules and Guidelines for HANA Modelling Views**

Consider the following rules and guidelines when you read data from SAP HANA modelling views:

- You cannot use parameters with lookups.
- SAP HANA adds a row.count field when you import a view in the calculated column. If you do not create a calculated column for a view, the row.count field does not appear in the source metadata.

### **Author**

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