

How To Guide

SAP Business One 9.1 for SAP HANA
Document Version: 1.0 – 2014-11-04

PUBLIC

Use Stored Procedures in SAP Business One Query

All countries

Typographic Conventions

Type Style	Description
<i>Example</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.
Example	Emphasized words or expressions.
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE	Keys on the keyboard, for example, F2 or ENTER.

Document History

Version	Date	Change
1.0	2014-11-04	First version

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1 Problem description

In SAP HANA you have written a stored procedure which is using input parameters. You would like to call this procedure directly from a query inside SAP Business One.

The different steps to achieve this are:

- Write your procedure in SAP HANA
- Test your procedure in SAP HANA
- Write a special query in SAP Business One
- Test you query in SAP Business One
- Save the query for future use

Recommendation

We recommend you to consult also the note 2082431

[https://i7p.wdf.sap.corp/sap\(bD1lbiZjPTAwMQ==\)/bc/bsp/sno/ui_entry/entry.htm?param=69765F6D6F64653D3030312669765F7361706E6F7465735F6E756D6265723D3230383234333126](https://i7p.wdf.sap.corp/sap(bD1lbiZjPTAwMQ==)/bc/bsp/sno/ui_entry/entry.htm?param=69765F6D6F64653D3030312669765F7361706E6F7465735F6E756D6265723D3230383234333126)

2 Scenario

I wish to display the sales order in table ORDR which are equal or greater than a certain amount and for one customer.

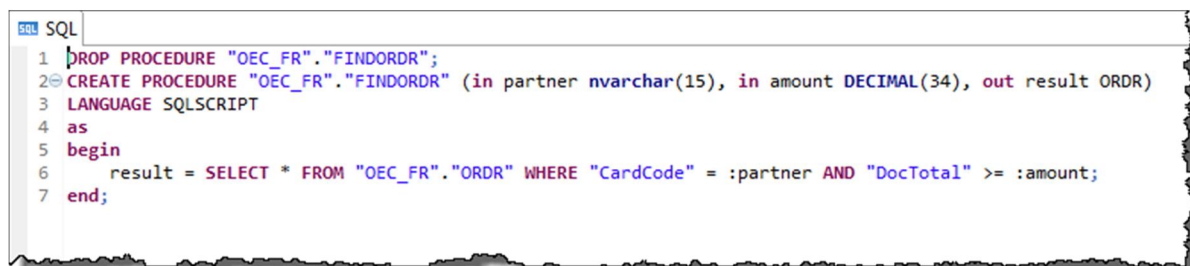
I want to be able to pass the amount and the partner when I trigger the query

3 Steps to follow

3.1 Write procedure in SAP HANA

The first thing to do is to write a procedure in SAP HANA, the way to do it can be slightly different depending on SAP HANA release.

In this example we are using SAP HANA SP07, for this reason we create the procedure through SQL query



```
SQL SQL
1 DROP PROCEDURE "OEC_FR"."FINDORDR";
2 CREATE PROCEDURE "OEC_FR"."FINDORDR" (in partner nvarchar(15), in amount DECIMAL(34), out result ORDR)
3 LANGUAGE SQLSCRIPT
4 as
5 begin
6     result = SELECT * FROM "OEC_FR"."ORDR" WHERE "CardCode" = :partner AND "DocTotal" >= :amount;
7 end;
```

Creation of procedure in SAP HANA

Below you can read the content of procedure «FINDORDR»

```
CREATE PROCEDURE "OEC_FR"."FINDORDR" (in partner nvarchar(15), in amount DECIMAL(34),
out result ORDR)
LANGUAGE SQLSCRIPT
as
begin
    result = SELECT * FROM "OEC_FR"."ORDR" WHERE "CardCode" = :partner AND
"DocTotal" >= :amount;
end;
```

This procedure has two input parameters :

- partner which is the partner code
- amount which is the minimum amount of order

The procedure has also an output parameter:

- this is the table in which result will be returned

Notice the definition of this variable «out result ORDR», out means it is an output parameter, result is the name of variable and ORDR indicates the format of this table.

I remind that ORDR is the header table for sales order.

3.2 Test the procedure

Before testing in SAP Business One, it is recommended to test the procedure directly in SAP HANA to be sure that we'll get the expected result

To do this we shall use SQL Console.

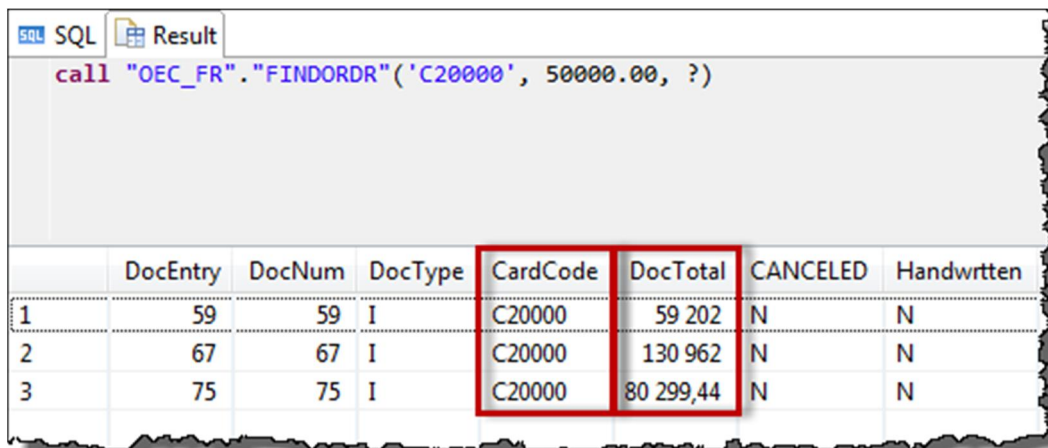


```
SQL SQL Result
1 call "OEC_FR"."FINDORDR"('C20000', 50000.00, ?);
2
```

Call the stored procedure in SAP HANA

In this example we are searching order of customer «C20000» equal or greater than «50000.00». The output parameter is materialized by the character «?»

When we run the query we get a screen as below



```
SQL SQL Result
call "OEC_FR"."FINDORDR"('C20000', 50000.00, ?)
```

	DocEntry	DocNum	DocType	CardCode	DocTotal	CANCELED	Handwritten
1	59	59	I	C20000	59 202	N	N
2	67	67	I	C20000	130 962	N	N
3	75	75	I	C20000	80 299,44	N	N

Result of Query in SAP HANA

3.3 How to call the stored procedure from SAP Business One

3.3.1 Introduction

To call the procedure from SAP Business One we have to go through several steps:

- Create a User Defined Table which will be used to pass parameters
- Create User defined fields which will contain the parameters value
- Write the query
- Test and save the query

3.3.2 Create User Defined Table (UDT)

It is necessary to define a User Defined Table which will be invoked in the query. This table will pass the parameter

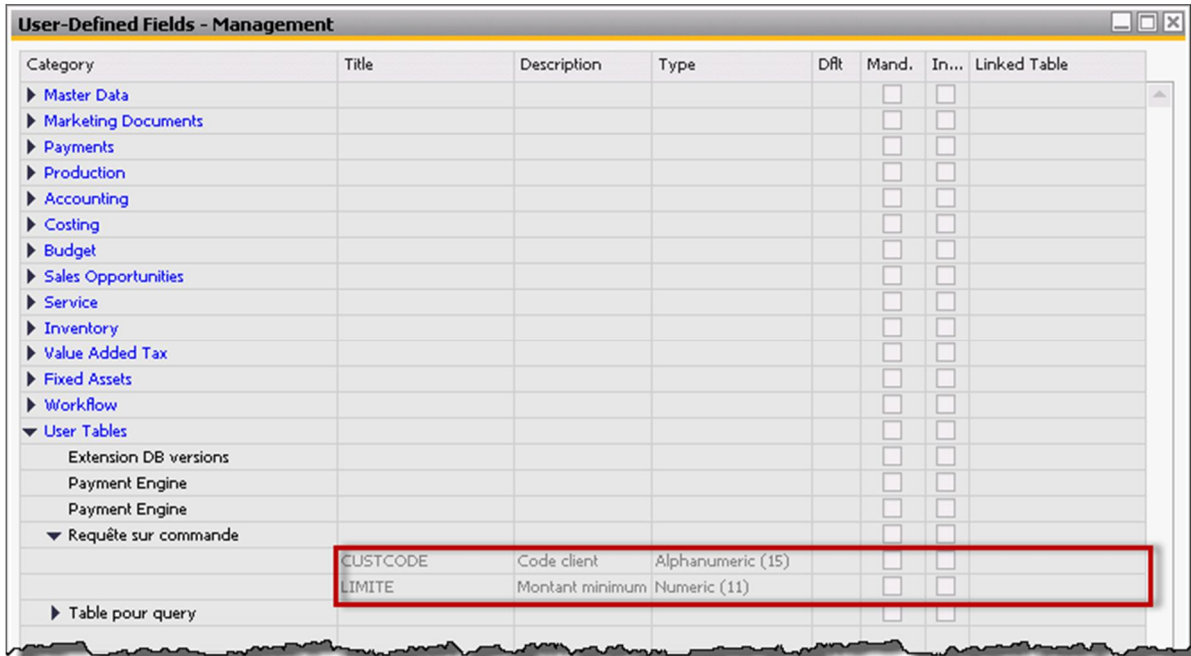
#	Table Name	Description	Object Type
1	BFEXTDBVERSION	Extension DB versions	No Object
2	BPCNTR	Payment Engine	No Object
3	BPRSTRT	Payment Engine	No Object
4	QUERYORDR	Requête sur commande	No Object
5	SPTYPE	Table pour query	No Object
6			No Object

The User Defined Table used for Query

The table «QUERYORDR» is defined, of course you can give any name to this table.

3.3.3 Create User Defined Fields (UDF)

As we have two parameters in the query, it is necessary to create two user defined fields in the table.



Category	Title	Description	Type	Dflt	Mand.	In...	Linked Table
▶ Master Data					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Marketing Documents					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Payments					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Production					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Accounting					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Costing					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Budget					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Sales Opportunities					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Service					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Inventory					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Value Added Tax					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Fixed Assets					<input type="checkbox"/>	<input type="checkbox"/>	
▶ Workflow					<input type="checkbox"/>	<input type="checkbox"/>	
▼ User Tables					<input type="checkbox"/>	<input type="checkbox"/>	
Extension DB versions					<input type="checkbox"/>	<input type="checkbox"/>	
Payment Engine					<input type="checkbox"/>	<input type="checkbox"/>	
Payment Engine					<input type="checkbox"/>	<input type="checkbox"/>	
▼ Requête sur commande					<input type="checkbox"/>	<input type="checkbox"/>	
	CUSTCODE	Code client	Alphanumeric (15)		<input type="checkbox"/>	<input type="checkbox"/>	
	LIMITE	Montant minimum	Numeric (11)		<input type="checkbox"/>	<input type="checkbox"/>	
▶ Table pour query					<input type="checkbox"/>	<input type="checkbox"/>	

User Defined Field belonging to User Defined Table

First we define a field named «CUSTCODE» which correspond to parameter «partner» in the stored procedure.

Title	CUSTCODE	Description	Code client
Type	Alphanumeric	Length	15
Structure	Regular		

Set Valid Values for Field
 Set Default Value for Field
 Mandatory Field
 Set Linked Table

OK Cancel

Definition of first UDF

The field should have the same type and length as the field defined in query, but his name could be different. Then we define the second parameter, his name is «LIMITE», it corresponds to parameter «amount» in the stored procedure.

Title	LIMITE	Description	Montant minimum
Type	Numeric	Length	11

Set Valid Values for Field
 Set Default Value for Field
 Mandatory Field
 Set Linked Table

Update Cancel

3.3.4 Write the query in SAP Business One

```
/*SELECT FROM "@QUERYORDR" TO WHERE TO.U_CUSTCODE=[%0] TO.U_LIMITE=[%1];*/  
CALL FINDORDR(['%0'], '%1', xyz);  
SELECT * FROM :xyz;
```

Query in SAP Business One

Now we analyze line by line this query.

Caution

The first line is a comment nevertheless it is essential for the query and it is impossible to suppress it.

```
/*SELECT FROM "@QUERYORDR" TO WHERE TO.U_CUSTCODE=[%0] TO.U_LIMITE=[%1];*/
```

@QUERYORDR is the name of User Defined Table we have defined previously.

TO.U_CUSTCODE=[%0] means that parameter %0 is associate to User Defined Field TO.U_CUSTCODE

TO.U_LIMITE=[%1] means that parameter %1 is associate to User Defined Field TO.U_LIMITE.

Caution

Don't forget the character ";" at the end of the command line, before the closing with character"*/".

The second line is the call to procedure.

```
CALL FINDORDR(['%0'], '%1', xyz);
```

FINDORDR is the name of stored procedure in SAP HANA, if you wish you can add the schema name ("OEC_FR"."FINDORDR").

The input parameters are **[%0]** and **[%1]** they are associated respectively to «partner» and «amount».

xyz is the returned table in the query his name is «result», as you can see it is not necessary to define it explicitly in the SAP Business One query

The last line is used only to select information from the returned table.

```
SELECT * FROM :xyz;
```

Caution

Pay attention ":" should be in front of "xyz".

Don't forget the character ";" at the end of each statement.

3.3.5 Test the Query

When you run the query, the «Query – Selection Criteria» is displayed.

Selection criteria windows

As you can see above, the descriptions given to Users Defined Field are displayed as field title

#	ieDate	CardCode	CardName	Address	NumAtCard	VatPercent	VatSum	Vat...
1	007	C20000	Les chantiers de l'Oise	25, rue de la reine 60200 COMPIÉGNE FRANCE		0.00	9,702.00	
2	007	C20000	Les chantiers de l'Oise	25, rue de la reine 60200 COMPIÉGNE FRANCE		0.00	21,462.00	
3	007	C20000	Les chantiers de l'Oise	25, rue de la reine 60200 COMPIÉGNE FRANCE		0.00	13,159.44	

Result of Query execution

Of course if you wish to display only some fields from the table it is possible, you have only to modify the SELECT as below

#	DocNum	CardCode	DocTotal
1	59	C20000	59,202.00
2	67	C20000	130,962.00
3	75	C20000	80,299.44

Query returning only some fields



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