

# Limitation in BAPI Scheduling Agreement (SA) Create or Change



## Applies to:

SAP ECC 6.0. For more information, visit the [ABAP homepage](#).

## Summary

The article describes the limitations in standard SAP BAPIs to create or change Scheduling Agreements with multiple line items, each of which having multiple conditions.

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## Author Bio



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## Business Requirement

Create or change Scheduling Agreement with multiple line items, each of which is having multiple conditions, using function module/BAPI.

### 1. Issue

Multiple SA conditions for multiple line items are not created at a time using BAPIs 'BAPI\_SAG\_CREATE' / 'BAPI\_SAG\_CHANGE'.

### 2. Function Module

"BAPI\_SAG\_CREATE" enables you to create a scheduling agreement. The BAPI uses the technology behind the SA creation transaction (ME31L).

"BAPI\_SAG\_CHANGE" enables you to change a scheduling agreement. The BAPI uses the technology behind the SA change transaction (ME32L).

### 3. Data

#### 4.1 Header

HEADER		
NUMBER		
COMP_CODE	XY91	
DOC_TYPE	ZLP	
DELETE_IND		
STATUS		
CREAT_DATE		
CREATED_BY		
ITEM_INTVL	00010	
VENDOR	19000002	
LANGU		
LANGU_ISO		
PMNTTRMS	T002	
DSCNT1_TO	0	
DSCNT2_TO	0	
DSCNT3_TO	0	
DSCT_PCT1	0.000	
DSCT_PCT2	0.000	
PURCH_ORG	X001	
PUR_GROUP	015	
CURRENCY	EUR	
CURRENCY_ISO		
EXCH_RATE		
EX_RATE_FX		
DOC_DATE	04.08.2009	
VPER_START	04.08.2009	
VPER_END	31.12.9999	
WARRANTY		
QUOTATION		
QUOT_DATE		
REF_1		
SALES_PERS		
TELEPHONE		
SUPPL_VEND		
CUSTOMER		
AGREEMENT		
GR_MESSAGE		
SUPPL_PLNT		
INCOTERMS1	FOB	
INCOTERMS2	CINCINNATI	
ACUM_VALUE		0.00
COLLECT_NO		
DIFF_INV		
OUR_REF		
LOGSYSTEM		
SUBITEMINT	00000	
PO_REL_IND		
REL_STATUS		
VAT_CNTRY		
VAT_CNTRY_ISO		
REASON_CANCEL	00	
PROCSTAT		
MAST_COND		
RETENTION_TYPE		
RETENTION_PERCENTAGE		0.00

Set flag in HEADERX table.

## 4.2 Item

Item 00010 and 00020

ITEM_NO	00010	ITEM_NO	00020
DELETE_IND		DELETE_IND	
SHORT_TEXT	DAVID TEST	SHORT_TEXT	MATERIAL FOR NMR TEST -5 160308
MATERIAL	10001111	MATERIAL	99008698
MATERIAL_EXTERNAL		MATERIAL_EXTERNAL	
MATERIAL_GUID		MATERIAL_GUID	
MATERIAL_VERSION		MATERIAL_VERSION	
EMATERIAL		EMATERIAL	
EMATERIAL_EXTERNAL		EMATERIAL_EXTERNAL	
EMATERIAL_GUID		EMATERIAL_GUID	
EMATERIAL_VERSION		EMATERIAL_VERSION	
PLANT	XX01	PLANT	XX01
STGE_LOC		STGE_LOC	
SUPPL_STLOC		SUPPL_STLOC	
TRACKINGNO		TRACKINGNO	
MATL_GROUP	DUMMY	MATL_GROUP	460010000
INFO_REC		INFO_REC	
VEND_MAT		VEND_MAT	
TARGET_QTY	10.000	TARGET_QTY	20.000
RELORD_QTY	0.000	RELORD_QTY	0.000
PO_UNIT	KG	PO_UNIT	BOT
PO_UNIT_ISO		PO_UNIT_ISO	
ORDERPR_UN	KG	ORDERPR_UN	BOT
ORDERPR_UN_ISO		ORDERPR_UN_ISO	
CONV_NUM1	0	CONV_NUM1	0
CONV_DEN1	0	CONV_DEN1	0
NET_PRICE	4.000000000	NET_PRICE	8.000000000
PRICE_UNIT	1	PRICE_UNIT	1
GR_PR_TIME	0	GR_PR_TIME	0

Set respective flags for both the line items in ITEMX table.

## 4.3 Condition Validity:

ITEM	SERIAL_ID	PLAN	VALID_FROM	VALID_TO
00010			04.08.2009	31.12.9999
00020			04.08.2009	31.12.9999

Set respective flags for both the line items in ITEM\_COND\_VALIDITYX table.

#### 4.4 Conditions:

Item 00010:

-ITEM_NO	00010	-ITEM_NO	00010
-SERIAL_ID		-SERIAL_ID	
-COND_COUNT	01	-COND_COUNT	02
-DELETION_IND		-DELETION_IND	
-COND_TYPE	PB00	-COND_TYPE	ZHC3
-SCALE_TYPE		-SCALE_TYPE	
-SCALE_BASE_TY		-SCALE_BASE_TY	
-SCALE_UNIT		-SCALE_UNIT	
-SCALE_UNIT_ISO		-SCALE_UNIT_ISO	
-SCALE_CURR		-SCALE_CURR	
-SCALE_CURR_ISO		-SCALE_CURR_ISO	
-CALCTYPCON		-CALCTYPCON	
-COND_VALUE	4.00000000	-COND_VALUE	10.00000000
-CURRENCY	EUR	-CURRENCY	EUR
-CURRENCY_ISO		-CURRENCY_ISO	
-COND_P_UNIT	1	-COND_P_UNIT	1
-COND_UNIT	KG	-COND_UNIT	KG
-COND_UNIT_ISO		-COND_UNIT_ISO	
-NUMERATOR	1	-NUMERATOR	1
-DENOMINATOR	1	-DENOMINATOR	1
-BASE_UOM		-BASE_UOM	
-BASE_UOM_ISO		-BASE_UOM_ISO	
-LOWERLIMIT	0.00	-LOWERLIMIT	0.00
-UPPERLIMIT	0.00	-UPPERLIMIT	0.00
-VENDOR_NO		-VENDOR_NO	
-CHANGE_ID	I	-CHANGE_ID	I

Item 00020:

-ITEM_NO	00020	-ITEM_NO	00020
-SERIAL_ID		-SERIAL_ID	
-COND_COUNT	01	-COND_COUNT	02
-DELETION_IND		-DELETION_IND	
-COND_TYPE	PB00	-COND_TYPE	ZHC3
-SCALE_TYPE		-SCALE_TYPE	
-SCALE_BASE_TY		-SCALE_BASE_TY	
-SCALE_UNIT		-SCALE_UNIT	
-SCALE_UNIT_ISO		-SCALE_UNIT_ISO	
-SCALE_CURR		-SCALE_CURR	
-SCALE_CURR_ISO		-SCALE_CURR_ISO	
-CALCTYPCON		-CALCTYPCON	
-COND_VALUE	8.00000000	-COND_VALUE	5.00000000
-CURRENCY	EUR	-CURRENCY	EUR
-CURRENCY_ISO		-CURRENCY_ISO	
-COND_P_UNIT	1	-COND_P_UNIT	1
-COND_UNIT	BOT	-COND_UNIT	BOT
-COND_UNIT_ISO		-COND_UNIT_ISO	
-NUMERATOR	1	-NUMERATOR	1
-DENOMINATOR	1	-DENOMINATOR	1
-BASE_UOM		-BASE_UOM	
-BASE_UOM_ISO		-BASE_UOM_ISO	
-LOWERLIMIT	0.00	-LOWERLIMIT	0.00
-UPPERLIMIT	0.00	-UPPERLIMIT	0.00
-VENDOR_NO		-VENDOR_NO	
-CHANGE_ID	I	-CHANGE_ID	I

Set respective flags for both the line items and its respective conditions in ITEM\_CONDITIONX table.

#### 4. Observation:

At the time of SA creation/change, if multiple line item data along with its respective (multiple) conditions were passed to BAPI\_SAG\_CREATE, only 'PB00' condition was added to first line item. For the rest of the line items conditions were not added.

#### 5. Analysis:

On debugging the BAPI, to check the point where conditions data was added / created for the SA, it was observed that for multiple line items, the ID number [ID\_KONH] was the same. See snapshot below:

Main Program: SAPLMEKO  
Source code of: LMEKOU40

```

FUNCTION ME_CREATE_TIME_DEP_COND_EXT
  CHECK e_subrc IS INITIAL. " =====
  * Check the consistency of the optional tables:
  → PERFORM check_given_tables
      USING   it_konh[]
            cht_konp[]
            it_konm[]
            it_konw[]
      CHANGING e_subrc.
  
```

Internal table: cht\_konp

1	ID_KONH	KOPOS	KSCHL	STFKZ	KZBZG	KONMS	KONWS	KRECH	KBETR	KONWA
1	1 01	PB00								4.00  EUR
2	1 02	ZHC3								10.00  EUR
3	1 01	PB00								8.00  EUR
4	1 02	ZHC3								5.00  EUR

Annotations:  
 - "First two records for conditions are for the first record" (points to rows 1 and 2)  
 - "Last two records for conditions are for the second record" (points to rows 3 and 4)

Due to this, when code was checking the data consistency between corresponding, at that time due to same ID number, it was switching to 'Duplicate number' error and exiting from conditions creation after executing first condition (PB00) for first line item.

Main Program: SAPLMEKO  
Source code of: LMEKOF19

```

FORM CHECK_XREF_TABLES
  LOOP AT p_it_konp[] TRANSPORTING NO FIELDS
    FROM   p_from
    WHERE  id_konh = <p1w_konp>-id_konh
    AND    kopus   = <p1w_konp>-kopus.
  EXIT.
  ENDLLOOP.

  IF sy-subrc = 0.
    " Duplicate line number found:
    → mmpur_message 'E' 'MEOUT' '115' 'KONP'
      <p1w_konp>-id_konh <p1w_konp>-kopus space.
    p_g_subrc = 0.
  
```


Field names: 1 - 4

Field names	Field contents
p_it_konp[]	Table[4x76]
p_from	2
<p1w_konp>-id_konh	1
<p1w_konp>-kopus	01

```



FUNCTION ME_CREATE_TIME_DEP_COND_EXT
  CHANGING e_subrc.

  CHECK e_subrc IS INITIAL. " =====

  * Check the consistency between the corresponding tables:
   PERFORM check_xref_tables
    USING   it_konh[]
           cht_konp[]
           it_konm[]
           it_konw[]
    CHANGING e_subrc.

  CHECK e_subrc IS INITIAL. " =====
  
```

Exit from conditions creation at this point

Field names 1 - 4    
 e\_subrc 8


## 6. Output:











Go to transaction ME33/ME33L to check SA.

### 7.1 Header Data:

Agreement: 5500004396		Company Code: XY91		Purchasing Group: 015	
Vendor: 19000082		PURCHASING VENDOR 007		Purch. Organization: X001	
Administrative Fields					
Agreement Date: 02.09.2009		Item Number Interval: 10		Subitem Interv.: 1	
Validity Start: 02.09.2009		Validity End: 31.12.9999		Language: EN	
<input type="checkbox"/> GR Message					
Terms of Delivery and Payment					
Payt Terms: T002		Targ. Val.: 0.00		EUR	
Payment in: 0 Days		0.000 %		Exch. Rate: 1.00000 <input type="checkbox"/> Ex.Rate Fx	
Payment in: 0 Days		0.000 %		Incoterms: FOB cincinnati	
Payment in: 0 Days Net					
Reference Data					
Quotation Date:		Quotation:			
Your Reference:		Salesperson:			
Our Reference:		Telephone:			
Suppl. Vendor:		Invoicing Party:		19000082	

### 7.2 Item Data:

 **Display Scheduling Agreement : Item Overview**

          Account Assignments

Agreement: 5500004396		Agreement Type: ZLP		Agmt Date: 02.09.2009								
Vendor: 19000082		PURCHASING VENDOR 007		Currency: EUR								
Outline Agreement Items												
Item	I	A	Material	Short Text	Targ. Qty	O...	Net Price	Per	O...	Mat. Grp	Plnt	St
10			10001111	DAVID TEST		10	KG	4.00	1	EA	DUMMY	XX01
20			99008698	MATERIAL FOR NMR T...		20	BOT	0.00	1	BOT	460010000	XX01

### 7.3 Condition Data:

**Item 00010:** Only first condition of PB00 added to line item condition. Second condition for ZHC3 is not added.

#### Display Gross Price Condition (PB00) : Condition Supplements

Variable key	
Purchasing Doc.	Item Description
5500004396	10 DAVID TEST

Validity	
Valid From	Valid to
02.09.2009	31.12.9999

Condition supplements									
CnTy	Name	Amount	Unit	per	U...	Deletion	ID	Scales	Texts
PB00	Gross Price		4.00	EUR	1 EA			<input type="checkbox"/>	<input type="checkbox"/>

#### **Item 00020:**

No conditions added to Item 00020. Net price is '0' in item level.

## 7. Conclusion:

We can create one SA line item with multiple conditions at a time.



## Related Content

[http://help.sap.com/saphelp\\_erp60\\_sp/helpdata/EN/75/ee1fa755c811d189900000e8322d00/frameset.htm](http://help.sap.com/saphelp_erp60_sp/helpdata/EN/75/ee1fa755c811d189900000e8322d00/frameset.htm)

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