What are Specifics Concerning the Creation of New Master Data?

Applies to

SAP NetWeaver Business Warehouse 7.30 (BW7.30) SP05 with SAP NetWeaver Business Warehouse Accelerator 7.20 (BWA7.20) or HANA 1.0 running as a database for SAP NetWeaver BW 7.3 SP05.

For more information, visit the Data Warehousing homepage.

Summary

This article describes some specifics concerning the creation of master data in the BW Workspace context. It addresses the Business Warehouse Administrator as well as the Business Analyst in the line of business. As a prerequisite we recommend reading the article 'What is a BW Workspace?' and 'How can Central and Local Provider easily be combined?' from this article series.

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Author Bio

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Table of Contents

Introduction

A BW Workspace is a kind of 'small sandbox' which IT defines. IT sets the boundaries, IT sets the amount of resources that a BW Workspace can consume and exposes some of the central data models to the BW Workspace (data of the models and their related semantics). The BW Workspace exposes the central data in a logical fashion only. The data is not copied over into the BW Workspace, which means that no data replication is needed.

The goal is to enable the Key Business Users to use this functionality in a dedicated and separated environment, which is deeply embedded and integrated in the existing BW landscape. The BW Workspaces bridge the gap between the architected and the departmental data marts. Therefore, Workspaces are integrated, independent and, as the usage of the SAP Business Warehouse Accelerator is mandatory, they are completely in-memory.

SID creation and Master Data

New characteristic values which are not yet known to the BW system can been introduced by uploading a file to a Local Provider in a BW Workspace.

In a BW Workspace the Administrator has the option to allow the creation of master data for this BW Workspace. This can be achieved by setting the flag 'Creation of Master Data is Allowed'.

Per default the flag is not set. This means that a CompositeProvider where a Data Provider with new master data is combined with a UNION operation cannot be activated in the BW Workspace when the field link takes place with an InfoObject where the characteristic values of the new data are not available in the BW master data table.

When adding and combining local data in a BW Workspace where the flag is set (creation allowed), SIDs are created at Query runtime for characteristic values which are not available in the master data tables of the central BW system. We can distinguish between SID creation and visibility of master data in the F4 help.

SID creation
New SIDs are always generated at Query runtime in case:
- It is explicitly allowed via the setting in the BW Workspace maintenance **AND**
- The field has been linked with a BW InfoObject **AND**
- There is no SID for these characteristic values of this InfoObject in the master data table available yet **AND**
- The binding type is UNION **AND**
- The master data has no SID convert* (SID convert happens with InfoObjects with data type 'NUMC' and with a length <= 9)

*Even in the case of master data where the SID convert takes place SIDs are created when in a query the option 'Keep Filter Value' is chosen. This behaviour cannot be avoided - also not if the creation of master data is **not** allowed in the BW Workspace maintenance.

New SIDs are always generated at Query runtime in case:

- The binding type is JOIN **AND**
- An InfoObject has been assigned to a field during upload to a Local Provider which does not represent a join condition, i.e. which is used as a dedicated field for display and navigation **AND**
- The master data has no SID convert* (SID convert happens with InfoObjects with data type 'NUMC' and with a length <= 9).

*Even in the case of master data where the SID convert takes place SIDs are created when in a query the option 'Keep Filter Value' is chosen. This behaviour cannot be avoided - also not if the creation of master data is **not** allowed in the BW Workspace maintenance.

Master Data in F4 Help

Under some circumstances also the master data is available in the F4-help (type 'M') although the flags in the SID tables (CHCKFL, DATAFL, INCFL) are not set. This is the case when the BW Accelerator is used and master data is explicitly indexed (F4 Input Help). New entries in the SID table generally lead to new entries in the RSDDTREXNEWSID table. When theses entries are indexed again automatically via the master data daemon, these master data values are visible when searching with F4-help (type 'M').

In the BW on HANA use case the values are not visible after having executed a query on the CompositeProvider (SID table flags are not set). The system in this case behaves like a database without BWA.

Creation of Master Data not allowed (UNION)

InfoObject 'Customer ID'

In this scenario example a Local Provider is linked to a MultiProvider with a UNION operation. The field link is the 'CUSTOMER ID'. The Local Provider contains Customer IDs which are not contained in the master data table. The InfoObject 'WSP_CUST' has a BWA index (F4 Input Help).
The InfoObject 'Customer ID' contains the following characteristic values/SIDs (/BIC/SWSP_CUST):

Customer ID	SID	Flag: Value in check tables	Flag: Value in dimension or available as	Flag: Value is built into all inclusion
	0	X	X	X
ABI	49	X	X	X
ALBI NORD	2	X	X	X
ALBI SUED	3	X	X	X
APEL AG	4	X	X	X
BASEL	5	X	X	X
BELDE	6	X	X	X
BERLIN	7	X	X	X
BESTEASTER	8	X	X	X
CHEAP	9	X	X	X
CHOWWAN	10	X	X	X
CUCUCULA	11	X	X	X
DAMLER	12	X	X	X
DB	13	X	X	X
FARD	14	X	X	X
FRANKFURT	15	X	X	X
GLUGGLUG	16	X	X	X
HALTON	17	X	X	X
HAMBURG	18	X	X	X
HEIDELBERG	19	X	X	X
HEXMEX	20	X	X	X
HIRSCH	21	X	X	X
HITTIAG	22	X	X	X
HOLIDAYOUT	23	X	X	X
HURNBACHER	24	X	X	X
INTERCONT	25	X	X	X
KIOSKAG	26	X	X	X
KOELN	27	X	X	X
LADL	28	X	X	X
MATRO	29	X	X	X
MAYER	30	X	X	X
MCDOLD	31	X	X	X
MENEKEN	32	X	X	X
MULTIMARKT	33	X	X	X
MUNICH	34	X	X	X
PAPSICO	35	X	X	X
PARK	36	X	X	X
REWA	37	X	X	X
SAP	38	X	X	X
SCHLUCK	39	X	X	X
SCHLUCKER	40	X	X	X
SPECHT	41	X	X	X
SPUR	42	X	X	X
STEAKS	43	X	X	X
STUTTGART	44	X	X	X
TRUESTEIN	45	X	X	X
WV AG	46	X	X	X
ZAPFLE	47	X	X	X
ZUERICH	48	X	X	X

Local Flat Files

The local flat file 'Customer_ABC' contains the key 'Customer' as well as the customer ABC Rating information.

Customer	Industry Segment
ABI	BEVERAGE
ALBI NORD	CATERING
ALBI SUED	BEVERAGE
APEL AG	CATERING
BASEL	BEVERAGE
BELDE	CATERING
BERLIN	BEVERAGE
BESTEASTER	CATERING
CHEAP	BEVERAGE
CHOWWAN	CATERING
CUCUCULA	BEVERAGE
DAMLER	CATERING
DB	BEVERAGE
FARD	CATERING
FRANKFURT	BEVERAGE
GLUGGLUG	CATERING
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HAMBURG	CATERING
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HEXMEX	CATERING
HIRSCH	BEVERAGE
HITTIAG	CATERING
HOLIDAYOUT	BEVERAGE
HURNBACHER	CATERING
INTERCONT	BEVERAGE
KIOSKAG	CATERING
KOELN	BEVERAGE
LADL	CATERING
MATRO	BEVERAGE
MAYER	CATERING
MCDOLD	BEVERAGE
MENEKEN	CATERING
MULTIMARKT	BEVERAGE
MUNICH	CATERING
PAPSICO	BEVERAGE
PARK	CATERING
REWA	BEVERAGE
SAP	CATERING
SCHLUCK	BEVERAGE
SCHLUCKER	CATERING
SPECHT	BEVERAGE
SPUR	CATERING
STEAKS	BEVERAGE
STUTTGART	CATERING
TRUESTEIN	BEVERAGE
WV AG	CATERING
ZAPFLE	BEVERAGE
ZUERICH	CATERING
REWO	BEVERAGE
CACO	CATERING

In addition to the characteristic values in the BW master data tables, the Excel contains the characteristic values 'REWO' and 'CACO'.

BW Workspace Maintenance

The first example shows the system behavior when the creation of master data in the BW Workspace is **not** allowed. In this case the 'Setting for CompositeProviders' does not allow the creation of master data.

Workspace	SID_CREATION
Description	SID creation not allowed
Object Status	🎯 Active
Last changed by	BRATZS Changed On 27.10.2011 13:18:29

Settings	Central Providers	Local Providers	CompositeProviders	Users

General Settings

Validity: Expiry Date	31.12.9999
Workspace Prefix	SID
Contact 1	BRATZS
Contact 2	BRATZS

Settings for Central Providers

MultiProvider	WSP_SAL_M
Description	WSP Sales MultiProvider

Settings for Local Providers

Maximum Memory	70 MB	🟩	0,0 MB
Maximum Number of Providers	70	🟩	0
☑ Data Backup			

Settings for CompositeProviders

☐ Creation of Master Data Allowed
☐ Non-Unique Join Columns Allowed

Folder

Folder	SB
Description	SB Folder

BWA Index

A BWA Index has been created for InfoObject 'WSP_CUST'.

BWA Index:	WSP_CUST		Status	◼	

BWA Index Settings | **Index Performance** | **Load Admin.** | **Index Info**

Display Index Joins

	Display	Table Name	Database Ta...	Index Size	Index Status
	👓	/BIC/SWSP_CUST	49	49	◼
	👓	/BIC/XWSP_CUST	49	49	◼
	👓	/BIC/TWSP_CUST	48	48	◼
	👓	/BIC/SWSP_INDU	5	5	◼
	👓	/BIC/TWSP_INDU	0	0	◼
	👓	/BIC/SWSP_COUN	12	12	◼
	👓	/BIC/TWSP_COUN	0	0	◼

CompositeProvider Check

When combining the Local Provider with the MultiProvider via the field link on 'WSP_CUST' the following error message is displayed when the CompositeProvider is checked or shall be activated.

The long text of the message reports the following:

<<<Characteristic value CACO not found for characteristic Customer ID from provider CustomerRanking_new_SID

Message no. RSDD_LM124

Diagnosis

The characteristic value does not exist in the characteristic's master data table. This value could not therefore be transformed into the internal SID.

Procedure

Check whether the value is correct. If it is correct, you need to generate the associated master data. For characteristics 0FISCPER and 0FISCYEAR, note that there must be a corresponding fiscal year variant (see table T009). There must also be units in table T006 and currencies in table TCURC.

This CompositeProvider cannot be activated.>>>

In such a case you have to decide how to proceed. Either you ask the BW Administrator if he can allow the creation of master data by setting the flag accordingly or you are in general only allowed to use master data which exists in the SAP Business Warehouse already. In this case you have to adjust your data in the flat file and upload only existing characteristic values.

Creation of Master Data allowed (UNION)

InfoObject 'Customer ID'

In this scenario example a Local Provider is linked to a MultiProvider with a UNION operation. The field link is the 'CUSTOMER ID'. The Local Provider contains Customer IDs which are not contained in the master data table. The InfoObject 'WSP_CUST' has a BWA index (F4 Input Help).

The InfoObject 'Customer ID' contains the following characteristic values/SIDs (/BIC/SWSP_CUST):

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ALBI NORD	2	X	X	X
ALBI SUED	3	X	X	X
APEL AG	4	X	X	X
BASEL	5	X	X	X
BELDE	6	X	X	X
BERLIN	7	X	X	X
BESTEASTER	8	X	X	X
CHEAP	9	X	X	X
CHOWWAN	10	X	X	X
CUCUCULA	11	X	X	X
DAMLER	12	X	X	X
DB	13	X	X	X
FARD	14	X	X	X
FRANKFURT	15	X	X	X
GLUGGLUG	16	X	X	X
HALTON	17	X	X	X
HAMBURG	18	X	X	X
HEIDELBERG	19	X	X	X
HEXMEX	20	X	X	X
HIRSCH	21	X	X	X
HITTIAG	22	X	X	X
HOLIDAYOUT	23	X	X	X
HURNBACHER	24	X	X	X
INTERCONT	25	X	X	X
KIOSKAG	26	X	X	X
KOELN	27	X	X	X
LADL	28	X	X	X
MATRO	29	X	X	X
MAYER	30	X	X	X
MCDOLD	31	X	X	X
MENEKEN	32	X	X	X
MULTIMARKT	33	X	X	X
MUNICH	34	X	X	X
PAPSICO	35	X	X	X
PARK	36	X	X	X
REWA	37	X	X	X
SAP	38	X	X	X
SCHLUCK	39	X	X	X
SCHLUCKER	40	X	X	X
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SPUR	42	X	X	X
STEAKS	43	X	X	X
STUTTGART	44	X	X	X
TRUESTEIN	45	X	X	X
WV AG	46	X	X	X
ZAPFLE	47	X	X	X
ZUERICH	48	X	X	X

Local Flat Files

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BELDE	CATERING
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BESTEASTER	CATERING
CHEAP	BEVERAGE
CHOWWAN	CATERING
CUCUCULA	BEVERAGE
DAMLER	CATERING
DB	BEVERAGE
FARD	CATERING
FRANKFURT	BEVERAGE
GLUGGLUG	CATERING
HALTON	BEVERAGE
HAMBURG	CATERING
HEIDELBERG	BEVERAGE
HEXMEX	CATERING
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HURNBACHER	CATERING
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LADL	CATERING
MATRO	BEVERAGE
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MENEKEN	CATERING
MULTIMARKT	BEVERAGE
MUNICH	CATERING
PAPSICO	BEVERAGE
PARK	CATERING
REWA	BEVERAGE
SAP	CATERING
SCHLUCK	BEVERAGE
SCHLUCKER	CATERING
SPECHT	BEVERAGE
SPUR	CATERING
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STUTTGART	CATERING
TRUESTEIN	BEVERAGE
WV AG	CATERING
ZAPFLE	BEVERAGE
ZUERICH	CATERING
REWO	BEVERAGE
CACO	CATERING

In addition to the characteristic values in the BW master data tables, the Excel contains the characteristic values 'REWO' and 'CACO'.

BW Workspace Maintenance

Workspace	SID_CREATION
Description	SID creation allowed
Object Status	🔵 Active
Last changed by	BRATZS	Changed On	27.10.2011 17:08:16

| Settings | Central Providers | Local Providers | CompositeProviders | Users |

General Settings

Validity: Expiry Date	31.12.9999
Workspace Prefix	SID
Contact 1	BRATZS
Contact 2	BRATZS

Settings for Central Providers

MultiProvider	WSP_SAL_M
Description	WSP Sales MultiProvider

Settings for Local Providers

Maximum Memory	70 MB	🟩	0,0 MB
Maximum Number of Providers	70	🟩	1
☑ Data Backup			

Settings for CompositeProviders

☑ Creation of Master Data Allowed
☐ Non-Unique Join Columns Allowed

In the following case the administrator sets the flag to 'Master Data creation allowed' see picture above.

CompositeProvider Check

Change CompositeProvider "New SID creation"

Workspace SID creation allowed

☑ Check performed on CompositeProvider SID_NEW
⚠ Characteristic value CACO not found for characteristic Customer ID from provider CustomerRanking_new_SID – Display Help
⚠ Characteristic value REWO not found for characteristic Customer ID from provider CustomerRanking_new_SID – Display Help

1	2	3	4	5	6
Select Provider	Model CompositeProvider	Edit Fields	Create Queries	Check and Save	Confirmation

◀ Previous | Next ▶ | Save Draft | Check | Repair CompositeProvider | Display Data

Selected Providers

Analysis ▲

	Description	Connection Type	Information	Details
	MultiProvider: WSP Sales MultiProvider			Details of the MultiProvider
	CustomerRanking_new_SID	Union ▼	◎	Details for Links	Generate Proposal

Table View | Graphical View

Display: CompositeProvider ▼ | Displayed Providers: 2/2 | Zoom: 75 % ▼ | Settings | Navigator | Print Graphic ▲

The same message appears as in chapter 3.3., where the creation of master data has not been allowed, but this time the message is just for information and not an error message which used to prevent the activation of the CompositeProvider.

Query Execution

My Workspace: "SID creation allowed"   Help

| CompositeProviders | Central Providers | Local Providers | Settings |

Create | Change | Delete | | Display Data | Inform Users

Description	Status	Changed by	Changed On	
New SID creation	Active	Silvia Bratz	02.11.2011	

| Table View | Graphical View | Queries |

Change Queries

Type of Query	Query	Description	Referenced Query	Active
Standard	$SID_NEW	New SID creation		Yes

Customer ID	Amount Sold	Net Sales EUR
ABI Shops	253	159.550,00
ABLI Sued	466	291.180,00
ALBI Nord	450	266.000,00
Belde Brewery	252	160.520,00
Best Eastern Hotels	289	176.080,00
Brewery GLUGGLUG	253	153.360,00
Brewery Mayer	256	153.360,00
Brewery Schluck	267	166.780,00
Brewery Specht	266	158.510,00
CACO	0	0,00
Cheap-Hotels	294	179.620,00
CHOWWAN Asia Imbiss	398	243.860,00
City of Basel	275	172.650,00
City of Berlin	313	186.690,00
City of Frankfurt	296	180.460,00
City of Hamburg	278	167.720,00
City of Heidelberg	334	208.020,00
City of Koeln	366	232.420,00
City of Stuttgart	390	248.130,00
City of Zuerich	453	286.880,00
DAMLER Cars Group	241	145.200,00
Deutsche Bahn	12	6.840,00
Halton Hotels	318	197.350,00
HEXMEX Food	428	263.140,00
Holiday Out Hotels	324	200.510,00
Hurnbacher	256	158.270,00
InterCont-Hotels	334	206.810,00
Ladl AG	559	347.140,00
McDold Chain	254	169.080,00
Multimarkt	276	171.130,00
PapsiCo	752	467.890,00
Rest. Blauer Hirsch	243	147.650,00
REWA	289	180.000,00
REWO	0	0,00
SAP AG	251	157.140,00
Schlosspark Hotel	262	160.100,00
Schlucker AG	1.034	628.210,00
Schwarzwald Zapfle	313	200.220,00
SPUR AG	271	171.280,00
The City of Munich	338	209.260,00
The CucuCula Comp.	485	291.790,00
The FARD experience	288	181.530,00

When executing a query (in this case the standard query $SID_NEW) the new customers show up with value '0'.

InfoObject 'Customer ID'

When having a look into table /BIC/SWSP_CUST (filtered to C* and R*) we can see that entries with SIDs have been created for customers 'CACO' and 'REWO'.

Characteristic Values in Query Designer

The option not to allow 'master data creation' just prevents that SIDs are created. In reverse this does not necessarily mean that master data is created in P/Q tables when the flag in the BW Workspace Maintenance is set to 'allowed' – just new SIDs are created.

Creation of Master Data allowed (JOIN)

BW Workspace Maintenance

Workspace	SID_CREATION
Description	SID creation allowed
Object Status	Active
Last changed by	BRATZS Changed On 27.10.2011 17:08:16

Settings | Central Providers | Local Providers | CompositeProviders | Users

General Settings

Validity: Expiry Date	31.12.9999
Workspace Prefix	SID
Contact 1	BRATZS
Contact 2	BRATZS

Settings for Central Providers

MultiProvider	WSP_SAL_M
Description	WSP Sales MultiProvider

Settings for Local Providers

Maximum Memory	70 MB	🟩	0,0 MB
Maximum Number of Providers	70	🟩	1
☑ Data Backup			

Settings for CompositeProviders

☑ Creation of Master Data Allowed
☐ Non-Unique Join Columns Allowed

Folder

Folder	SB
Description	SB Folder

In the following case the administrator sets the flag to 'Master Data creation allowed' see picture above.

Local Provider

When uploading the Local Provider the InfoObject ZWSP_SC has been assigned to the field 'sales channel SID'. The InfoObject ZWSP_SC contained the following characteristic values:

The file to be uploaded contains the following data with 'R' additionally:

CompositeProvider Model and Check
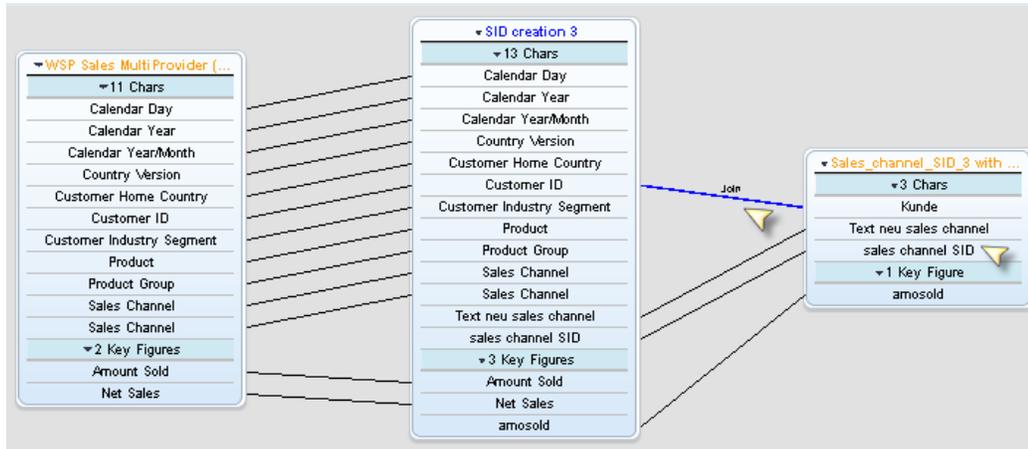
Characteristic value R not found for characteristic sales channel SID from provider Sales_channel_SID_3 with customer

Message no. RSDD_LM124

Diagnosis

The characteristic value does not exist in the characteristic's master data table. This value could not therefore be transformed into the internal SID.

Procedure

Check whether the value is correct. If it is correct, you need to generate the associated master data. For characteristics 0FISCPER and 0FISCYEAR, note that there must be a corresponding fiscal year variant (see table T009). There must also be units in table T006 and currencies in table TCURC

InfoObject 'ZWSP_SC' after Query Execution

sales channel SID	Customer ID		amosold	Amount Sold	Net Sales
A	MATRO	The MATRO AG	4	293	182.210,00 EUR
Q	LADL	Ladl AG	6	559	347.140,00 EUR
R	MATRO	The MATRO AG	2	293	182.210,00 EUR
X	BELDE	Belde Brewery	3	252	160.520,00 EUR
Y	HEXMEX	HEXMEX Food	5	428	263.140,00 EUR
Z	LADL	Ladl AG	7	559	347.140,00 EUR
Overall Result			27	1.532	953.010,00 EUR

Data Browser: Table /BIC/SZWSP_SC   8 Hits

Sales Chann...	SI...	Flag: Value in check tabl...	Flag: Value in dimension or available as	Flag: Value is built into all inclusio...
	0	X	X	X
A	6			
Q	7			
R	8			
S	2		X	X
X	3			
Y	4			
Z	5			

SID is entered in the master data table.

Related Content

http://scn.sap.com/community/netweaver-bw-accelerator

http://scn.sap.com/community/data-warehousing

http://help.sap.com/saphelp_nw73/helpdata/en/F3/8F492432354FDC913F93E8A2BED4A6/frameset.htm

For more information, visit the Data Warehousing homepage.

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