

SDN Community Contribution

(This is not an official SAP document.)

Disclaimer & Liability Notice

This document may discuss sample coding or other information that does not include SAP official interfaces and therefore is not supported by SAP. Changes made based on this information are not supported and can be overwritten during an upgrade.

SAP will not be held liable for any damages caused by using or misusing the information, code or methods suggested in this document, and anyone using these methods does so at his/her own risk.

SAP offers no guarantees and assumes no responsibility or liability of any type with respect to the content of this technical article or code sample, including any liability resulting from incompatibility between the content within this document and the materials and services offered by SAP. You agree that you will not hold, or seek to hold, SAP responsible or liable with respect to the content of this document.

Applies To:

SAP Technology / Product

Summary

BATCH DATA COMMUNICATION

BDC is used to transfer data from SAP to SAP system or from a non-SAP system to SAP system. It uses the normal Transaction codes to transfer the data. This method is used to transfer large amount data that is available in electronic form.

By: Prabaharan.Gnanasekaran

Company: WIPRO TECHNOLOGIES

Date: 23.4.2005

BATCH DATA COMMUNICATION –Part 1

There are two types of methods offered by SAP for BDC:

Session Method

The first method uses a session to process the data. Data to be fed to the BDC program is read from a flat file and is stored in a batch-input session. Then the session is processed or executed to migrate the data to the SAP system. This can be done using the tcode **SM35**.

This method uses the function module BDC_OPEN, BDC_INSERT and BDC_CLOSE to generate the sessions

Call Transaction Method:

In the second method, BDC uses the ABAP statement CALL TRANSACTION USING statement to run a transaction. Here the entire set of input data is processed immediately without creating any session.

Advantage of Session Method:

The primary advantage of Session Method is that once a session has been created, it can be processed at any convenient time by the user. It can also be scheduled to executed in background and then the statust of the session viewed once it gets completed.

A step by step approach to BDC

Key points to be known before proceeding:

Tcodes:

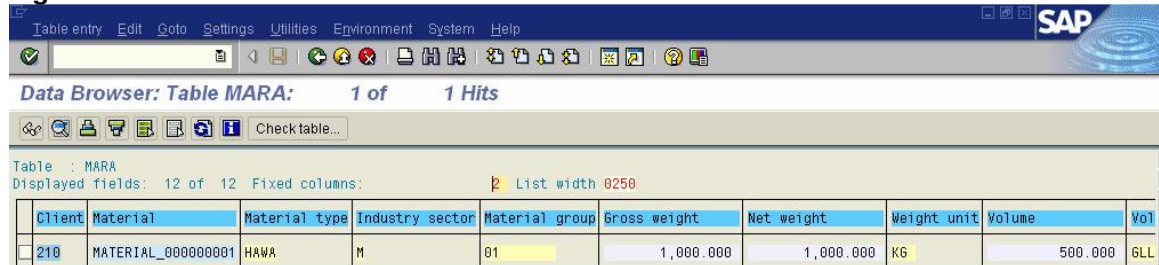
- 1) SHDB - Transaction Recorder.
- 2) SM35 - Batch Input - Session Overview.
- 3) MM01 - Create Material.

PART 1 – BDC Recording

What is a Material ?

A material may be defined as a good that is a subject of a business activity. A material in database terms is a single unique record which identifies a material.

Fig 1: A material



The screenshot shows the SAP Data Browser interface for Table MARA. The title bar indicates 'Data Browser: Table MARA: 1 of 1 Hits'. The table has 12 columns: Client, Material, Material type, Industry sector, Material group, Gross weight, Net weight, Weight unit, Volume, and Vol. The data row shows Client 210, Material MATERIAL_000000001, Material type HAWA, Industry sector M, Material group 01, Gross weight 1,000.000, Net weight 1,000.000, Weight unit KG, Volume 500.000, and Vol 6LL.

Client	Material	Material type	Industry sector	Material group	Gross weight	Net weight	Weight unit	Volume	Vol
210	MATERIAL_000000001	HAWA	M	01	1,000.000	1,000.000	KG	500.000	6LL

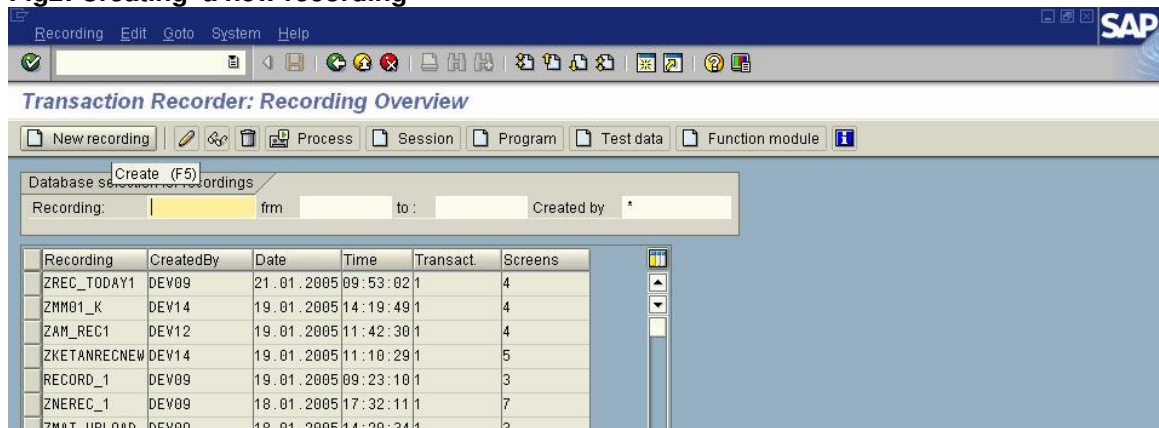
The above screen shot shows a basic material with fields client, material number, type, industry sector, material group, gross weight, net weight, unit of weight measure, volume , unit of volume. All these collectively identify a material.

Basic Procedure of BDC:

The basic procedure involves create a standard recording for creating a material master record using SHDB. Then using this standard recording new records are input for creating additional material. This standard recording once created can be processed using a session or call transaction method.

Step 1:

Fig2: Creating a new recording



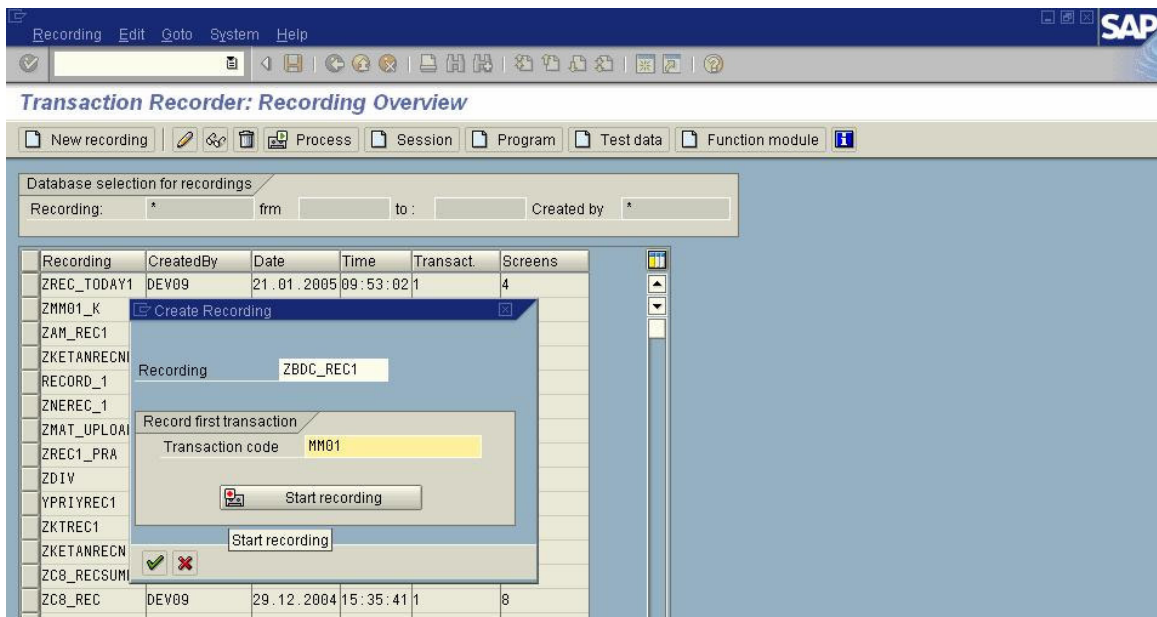
The screenshot shows the SAP Transaction Recorder: Recording Overview screen. The 'New recording' button is highlighted in the toolbar. The main area displays a table of recordings with columns: Recording, CreatedBy, Date, Time, Transact, and Screens. The table lists several recordings, including ZREC_TODAY1, ZMM01_K, ZAM_REC1, ZKETANRECNEW, RECORD_1, ZNEREC_1, and ZMAT_LIPI0AD.

Recording	CreatedBy	Date	Time	Transact	Screens
ZREC_TODAY1	DEV09	21.01.2005	09:53:02	1	4
ZMM01_K	DEV14	19.01.2005	14:19:49	1	4
ZAM_REC1	DEV12	19.01.2005	11:42:30	1	4
ZKETANRECNEW	DEV14	19.01.2005	11:10:29	1	5
RECORD_1	DEV09	19.01.2005	09:23:10	1	3
ZNEREC_1	DEV09	18.01.2005	17:32:11	1	7
ZMAT_LIPI0AD	DEV09	18.01.2005	14:20:34	1	3

Use tcode SHDB to go to transaction recorder as a first step. Once after entering the Transaction recorder click **New recording** button in the application toolbar.

Step 2:

Fig3: Naming a recording

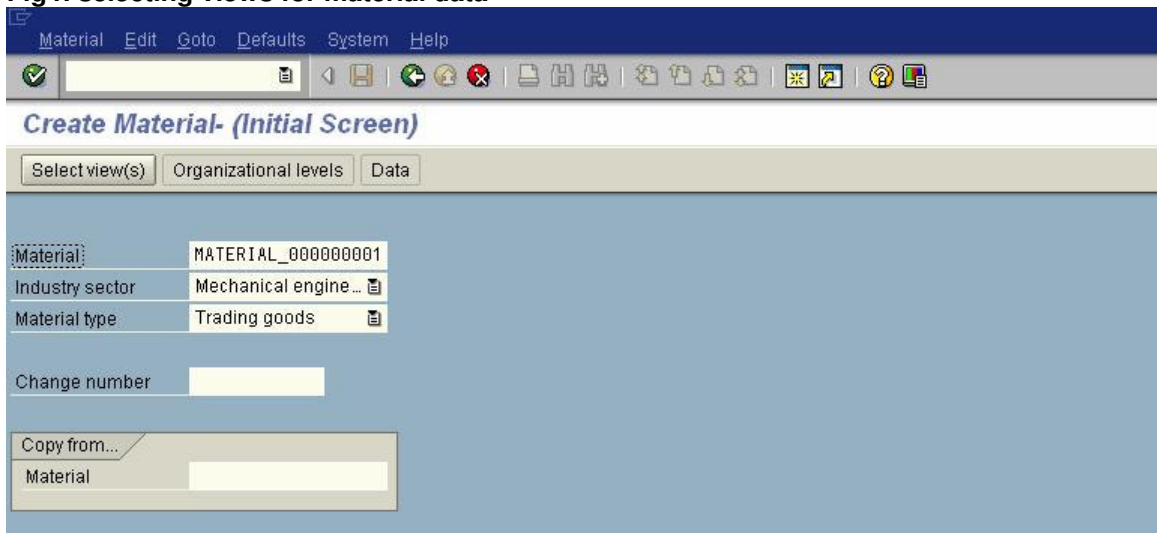


Give a name for the recording (like ZBDC_REC1) and in the transaction code , give MM01, which is the tcode for creating a material. Then click start recording.

Tip: Try Tcode MM01 in SAP Easy Access Screen.

Step 3:

Fig4: selecting views for material data



Now the Create Material (Initial Screen) appears. There give a sample material number (like material_000000001) and select any appropriate industry sector and material type values. Once after selecting them click select view(s) button in the application toolbar.

What is a view?

A view is defined as freely definable text describing the logical screen in the screen sequence.

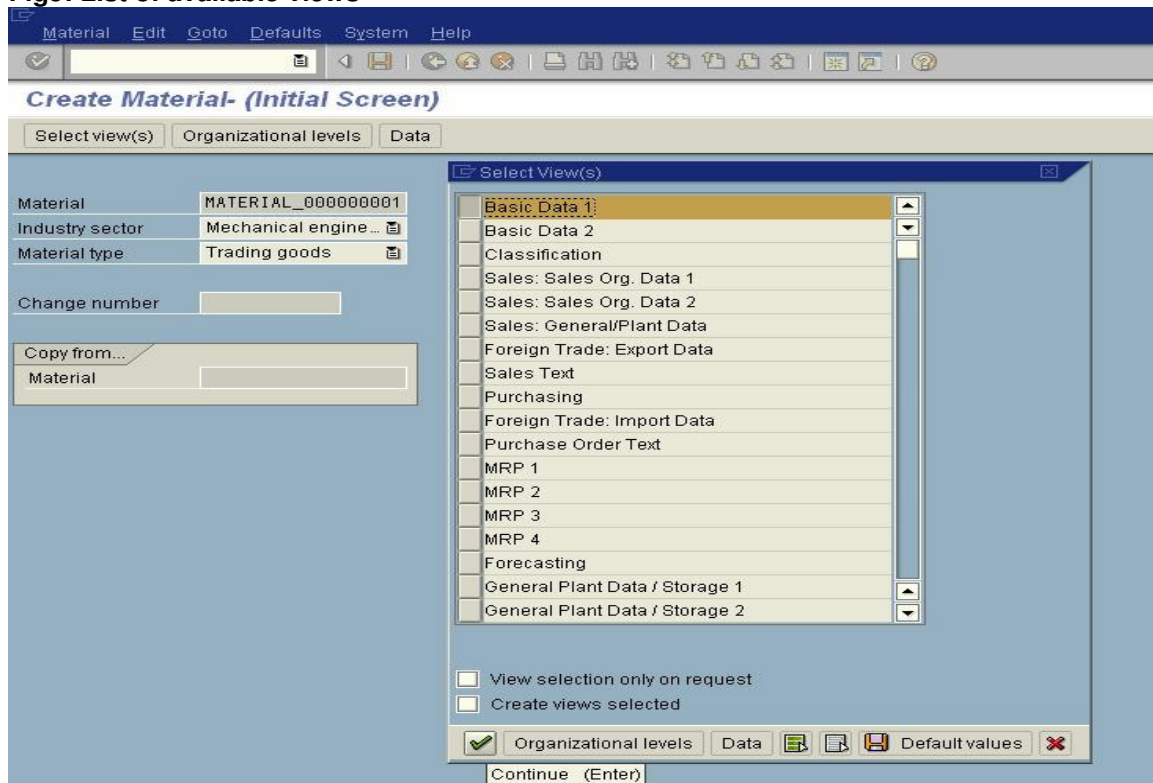
Once a particular view is selected then it has its own set of logical screen sequences to receive input for the material.

In simple words a view is a screen which consists of the field inputs for a material to be created or to be updated. Different views hold different set of input fields. Selecting a view implies selecting a particular set of fields for a material to be created.

Note: More that one view can be selected for input if the material need to be created with the combination of the fields in those views.

(see the below screen shot for better understanding)

Fig5: List of available views



Select the Basic Data 1 view and click continue.

Fig 6: A basic data 1 view showing its fields for the material

Material Edit Goto Environment System Help

Create Material- MATERIAL_000000001 (Trading goods)

Additional data Organizational levels Check screen data

Basic data 1 Basic data 2 Classification Sales: sales org. 1 Sales...

Material MATERIAL_000000001 new material creation

General data

Base unit of measure	CM	Material group	01
Old material number		Ext. matl group	
Division	10	Lab./office	001
Product allocation		Prod.hierarchy	
X-plant matl status	01	Valid from	
<input type="checkbox"/> Assign effect. vals		GenItemCatGroup	NORM Standard item

Material authorization group

Authorization group

Dimensions/EANs

Gross weight	1000	Weight unit	KG
Net weight	1000		
Volume	500	Volume unit	GAL

Here the basic data 1 view shows the fields material number, material description, base unit of measure, material group, old material number, ext.matl group, division etc.,. If the material needs to be contain all these fields then basic data 1 view is selected.

Fig 7: Basic Data 2 view.

Material Edit Goto Environment System Help

Create Material- MATERIAL_NEW_10031 (Wipro J Material)

Additional data Organizational levels Check screen data

Basic data 1 Basic data 2 Classification Sales: sales org. 1 Sales...

Material MATERIAL_NEW_10031

Other data

Ind. std desc.

☐ CAD indicator

Basic material

Environment

DG indicator profile

☐ Highly viscous

☐ Environmentally rlv

☐ In bulk/liquid

Design documents assigned

☒ No link

Drawing

Document		Document type		Doc.vers.	
Page number		Doc.ch.no.		No. sheets	

Selecting a basic data 2 view shows the above list of fields for the material creation. If the material needs a combination of fields in both the views then both of them can be selected when selecting the view initially.

Step 4:

Once a view(s) has been selected the next step is to feed input values for the initial material to be created. Fill the relevant values in the relevant fields. (Refer Fig 8). Once after feeding values to the material, it is essential to check whether the field inputs are valid. Click check screen data button in the application toolbar to check the values, and any discrepancies in field values are displayed with error messages in the status bar.(Refer Fig 8).

Fig 8 : Checking material field values.

The screenshot displays the SAP 'Create Material' interface for 'MATERIAL_000000001 (Trading goods)'. The 'Check screen data' button in the top toolbar is circled. The 'Basic data 2' tab is active, showing various input fields. The 'Base unit of measure' field contains the value '09' and is circled. At the bottom, the status bar displays an error message: 'Unit 09 is not created in language EN', which is also circled. A callout line points from this error message to the text: 'Error message displayed when wrong input value is given.'

Create Material- MATERIAL_000000001 (Trading goods)			
Additional data Organizational levels Check screen data			
Basic data 1 Basic data 2 Classification Sales: sales org. 1 Sales...			
Material: MATERIAL_000000001 new material creation			
General data			
Base unit of measure	09	Material group	01
Old material number		Ext. matl group	
Division	10	Lab./office	001
Product allocation		Prod.hierarchy	
X-plant matl status	01	Valid from	
<input type="checkbox"/> Assign effect. vals		GenItemCatGroup	NORM Standard item
Material authorization group			
Authorization group			
Dimensions/EANs			
Gross weight	1000	Weight unit	KG
Net weight	1000		
Volume	500	Volume unit	GAL

Unit 09 is not created in language EN

Error message displayed when wrong input value is given.

Disclaimer & Liability Notice

This document may discuss sample coding, which does not include official interfaces and therefore is not supported. Changes made based on this information are not supported and can be overwritten during an upgrade.

SAP will not be held liable for any damages caused by using or misusing of the code and methods suggested here, and anyone using these methods, is doing it under his/her own responsibility.

SAP offers no guarantees and assumes no responsibility or liability of any type with respect to the content of the technical article, including any liability resulting from incompatibility between the content of the technical article and the materials and services offered by SAP. You agree that you will not hold SAP responsible or liable with respect to the content of the Technical Article or seek to do so.

Copyright © 2004 SAP AG, Inc. All Rights Reserved. SAP, mySAP, mySAP.com, xApps, xApp, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world. All other product, service names, trademarks and registered trademarks mentioned are the trademarks of their respective owners.

