

# Step by Step Guide to Extract Batch Master Data via Generic and Classification Datasource to BW



## Applies to:

SAP ECC 5.0 and above releases and BW 7.0

## Summary

This paper gives a detail understanding on how to extract Batch master data (Batch Attributes and Batch Classification) from ECC to BW. This document would provide step by step guide to create a generic (view based) datasource and Batch Classification datasource.

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## Author Bio



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## Introduction

Batch master data attributes is frequently required for data modeling in BW. Batch data is also sometime configured as Classification data based on project needs. In our example, Batch management is Cross-Plant.

There is no standard business content datasource available for batch master data attributes extraction.

For us to extract Batch Classification data, we need to first create a generic datasource (either View based or Function module) which would extract Batch master data attributes. Using this generic datasource as Basis datasource, we would generate Batch Classification datasource.

This document is focused on creation of generic datasource (View based) to extract batch master data attributes datasource and batch classification datasource and its load to custom infoobject in BW.

### Basic understanding of where Batch master data resides in ECC

- Batch master data (Cross-Plant) is stored in table MCH1.
- Class Type for Batch is 023. If there is a batch class created in ECC, then that is visible via transaction CL03. The characteristics are seen in the 'Char' tab of the class.

The screenshot shows the 'Display Class' (CL03) interface in SAP. The class type is 023 (Batch). The 'Basic data' tab is selected, showing the following fields:

- Class: MCH1MATERIALMANAGEMENT
- Class type: 023 Batch
- Change Number: [Empty]
- Valid from: 12/06/2010
- Validity: [Button]
- Description: [Redacted]
- Status: 1 Released
- Class group: [Empty]
- Organizational area: YZ
- Valid From: 12/14/2009
- Valid to: 12/31/9999
- Local class: [Unchecked]

Additional sections include:

- Same classification:** Radio buttons for 'Do not check', 'Warning message', and 'Check with error'.
- Authorizations:** Checkboxes for 'Class maintenance', 'Classification', and 'Find object'.
- Administrative data:** Checkboxes for 'Assignments', 'Created by', 'Changed by', 'Created on', and 'Changed on'.

### Overview of Batch Datasources – Generic View Datasource and Classification Datasource

1. We would be first creating a generic datasource based on a custom view on MCH1 (Batches (if Batch Management Cross-Plant)) table to extract batch master data attributes.
2. As a second stage, we could be generating a classification datasource based on Batch Class created in ECC.
3. Data extracted via generic view based datasource and Batch Classification datasource loads Custom Batch Infoobject in BW as attributes.

## Step By Step Procedure

1. Create a view ZV\_MCH1. Include all fields from table MCH1. Save and Activate the view. Goto SE11 transaction. Enter technical name of the view (ZV\_MCH1) in 'View' field. Click Create.

**ABAP Dictionary: Initial Screen**

Database table  
 View **ZV\_MCH1**  
 Data type  
 Type Group  
 Domain  
 Search help  
 Lock object

Enter table as MCH1 in 'Tables / Join Conditions' tab.

**Dictionary: Display View**

Database view: **ZV\_MCH1** Active  
 Short Description: View on MCH1 Table

Attributes | **Table/Join Conditions** | View Flds | Selection Conditions | Maint.Status

Table	Field name	=	Table
MCH1	Field name	=	Table

Enter description for view. Include all fields from MCH1 table in 'View Flds' tab.

**Dictionary: Display View**

Database view: **ZV\_MCH1** Active  
 Short Description: View on MCH1 Table

Attributes | Table/Join Conditions | **View Flds** | Selection Conditions | Maint.Status

View field	Mod	DTyp	Length	Short description
MANDT	<input type="checkbox"/>	CLNT	3	Client
MATNR	<input type="checkbox"/>	CHAR	18	Material Number
CHARG	<input type="checkbox"/>	CHAR	10	Batch Number
LVORM	<input type="checkbox"/>	CHAR	1	Deletion Flag for All Data in a Batch
ERSDA	<input type="checkbox"/>	DATS	8	Created On
ERNAM	<input type="checkbox"/>	CHAR	12	Name of Person who Created the Object
AENAM	<input type="checkbox"/>	CHAR	12	Name of Person Who Changed Object
LAEDA	<input type="checkbox"/>	DATS	8	Date of Last Change
VERAB	<input type="checkbox"/>	DATS	8	Availability date
VFDAT	<input type="checkbox"/>	DATS	8	Shelf Life Expiration or Best-Before Date
ZUSCH	<input type="checkbox"/>	CHAR	1	Batch status key
ZUSTD	<input type="checkbox"/>	CHAR	1	Batch in Restricted-Use Stock
ZAEDT	<input type="checkbox"/>	DATS	8	Date of last status change
LIFNR	<input type="checkbox"/>	CHAR	10	Vendor Account Number
LICHA	<input type="checkbox"/>	CHAR	15	Vendor Batch Number
VLCHA	<input type="checkbox"/>	CHAR	10	Original batch number (deactivated)
VLWRK	<input type="checkbox"/>	CHAR	4	Original plant (deactivated)
VLMAT	<input type="checkbox"/>	CHAR	18	Original material (deactivated)

Save and activate the structure. Ignore warnings (if any).

Create generic datasource ZDS\_BATCH using RSO2 transaction.

Enter technical name of datasource as ZDS\_BATCH. Click Create.

**Maintain Generic DataSources**

DataSource

Transaction data  
 Master Data Attributes  
 Texts

DataSource: ZDS\_BATCH

Select 'Extraction from View' and fill the required description and View ZV\_MCH1. Click Save.

**Display DataSource for Master data attribs: ZDS\_BATCH**

Generic Delta

DataSource: ZDS\_BATCH

Applic. Component: MM-IO

Data Reconciliation:

Obj. status: Saved

**Texts**

Short description: Batch

Medium description: Batch Datasource

Long description: Batch Datasource

**Extraction from DB View**

View/Table: ZV\_MCH1

ExtractStruct.: ZOXDE10107

**Extraction frm SAP Query**

InfoSet:

**Extraction by Function Module**

Function Module:

Extract.Struct.:

Select 'Selection Fields' as CHARG, ERSDA, LAEDA and MATNR. Save datasource.

Field Name	Short text	Selection	Hide field	Inversion	Field only
AENAM	Name of Person Who Changed Object	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BATCH_TYPE	Type of Batch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CHAME	Unit of issue for batch (deactivated)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CHARG	Batch Number	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CUOBJ_BM	Internal object no.: Batch classification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DEACT_BM	Batch is no longer active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ERNAM	Name of Person who Created the Object	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ERSDA	Created On	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FVDT1	Date for unrestricted use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FVDT2	Date for unrestricted use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FVDT3	Date for unrestricted use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FVDT4	Date for unrestricted use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FVDT5	Date for unrestricted use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FVDT6	Date for unrestricted use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HERKL	Country of origin of the material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HERKR	Region of origin of material (non-preferent)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HSDAT	Date of Manufacture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Test datasource extraction via RSA3 transaction.

Field	From value	To value	Short Text
CHARG			Batch Number
ERSDA			Created On
LAEDA			Date of Last Change
MATNR			Material Number

Verify the results.

Extractor Checker S-API

Batch (CHAR)	Material (MATNR)	By (AENAM)	B	Bat	Int. obj. no (CUOBJ_B)	B	Created (ERNA)	Created (ER)	Date (FVDT1)	Date (FVDT2)	Date (FVDT3)	Date (FVDT4)	Date (FVDT5)	Date (FVDT6)	Orf	Reg	Manuf.	Dt
000000001	6000881	RHAL0103			1983	X	SBAJ0442	03/05/2010										03/05/201
000000001	120	RHAL0103				X	AGAN0056	10/20/2009										10/20/200
000000023	44	NDES0091			1167		SJAS0299	10/07/2009										09/03/201
000000025	44	RHAL0103				X	SJAS0299	10/07/2009										
000000026	45						AMUR0072	10/07/2009										
000000026	48	RHAL0103				X	PSHR0034	11/09/2009										
000000027	44	RHAL0103				X	SJAS0299	10/07/2009										11/10/200
000000028	45	RHAL0103				X	AMUR0072	10/07/2009										
000000029	44	RHAL0103				X	AMUR0072	10/07/2009										01/05/201
000000030	45	GBRA2683			1683		AMUR0072	10/07/2009										02/11/201
000000031	44	GBRA2683					AMUR0072	10/07/2009										01/25/201
000000033	45	GBRA2683					AMUR0072	10/07/2009										02/11/201
000000034	44	GBRA2683					AMUR0072	10/07/2009										01/01/201
000000035	45						AMUR0072	10/07/2009										
000000038	44	GBRA2683			3040		RHAL0103	10/07/2009										04/01/201
000000038	47						CPER0305	06/18/2010										06/18/201
000000038	45				5680		AGAN0056	06/07/2010										04/01/201
000000039	45						AMUR0072	10/07/2009										
000000040	45						MRAT0300	10/07/2009										
000000042	47	TEST_4714U					RHAL0103	10/07/2009										04/09/201
000000043	48						RHAL0103	10/07/2009										
000000044	46						RHAL0103	10/07/2009										
000000045	47						RHAL0103	10/07/2009										
000000046	45	RHAL0103			2048	X	AMUR0072	10/07/2009										
000000046	45						AMUR0072	10/07/2009										
000000049	45						AMUR0072	10/06/2009										
000000050	45						AMUR0072	10/06/2009										
000000051	44	GBRA2683			1986		SJAS0299	10/12/2009										03/01/201
000000052	44						RHAL0103	10/13/2009										
000000055	44						SJAS0299	10/13/2009										
000000056	45						AMUR0072	10/14/2009										10/13/200

2. Goto transaction CTBW to create Batch Classification datasource.

Enter generic view based datasource created above in 'Basis Datasource' column. Enter ECC Client, Class Type = 023, Obj Table = MCH1, Datasource Type = ATTR  
The classification datasource generated will have a technical name starting with 1CL\_ODS\*.

Change View "Data Sources": Overview

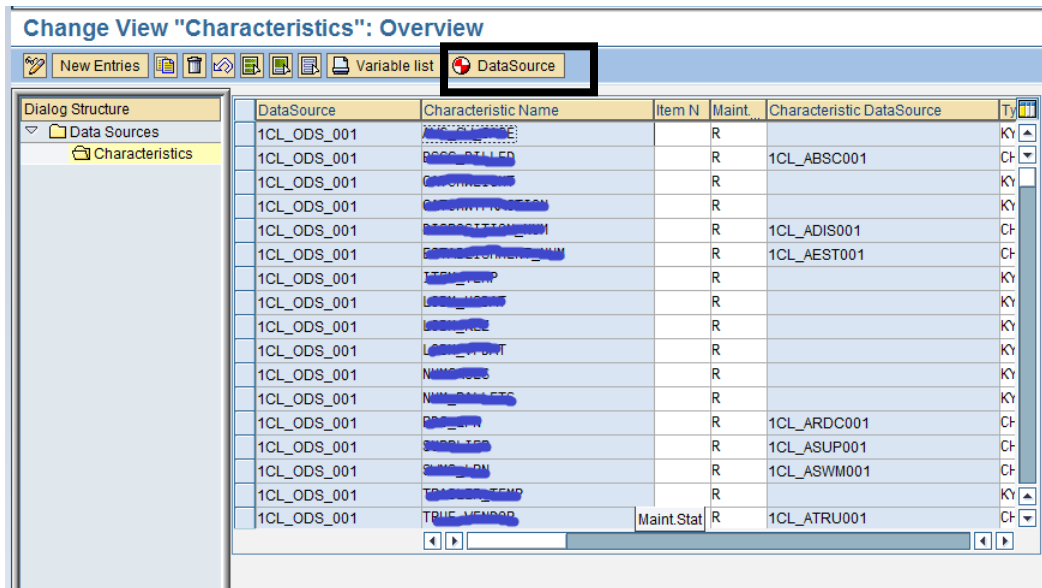
Basis Datasource	Client	Class Type	Obj. table	Datasource T.	Datasource
OAU_WTY_MASTER	120	039	BGMK	ATTR	1CL_OAU_001
ZDS_BATCH	023	023	MCH1	ATTR	1CL_ODS_001

Double Click on 'Characteristics' folder to enter characteristics of Batch class that you want to extract.

In Type column enter either 'CHA' for characteristic fields or 'KYF' for key figure fields.

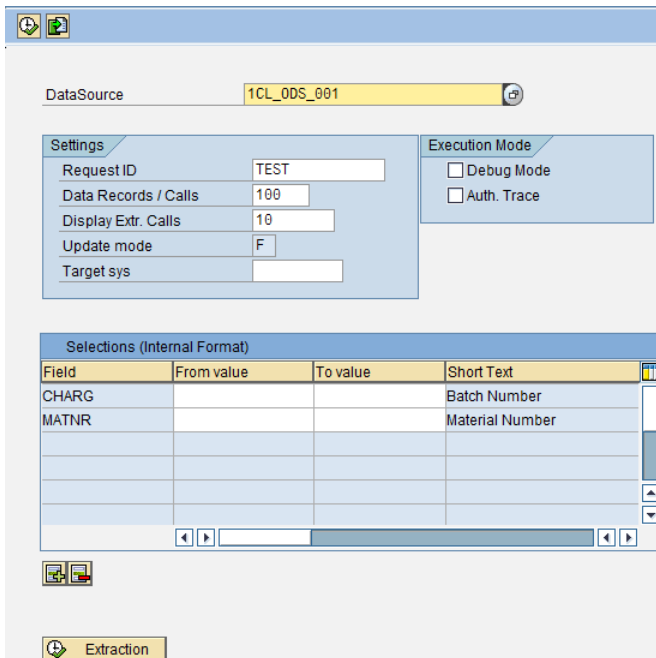
Initially when the datasource is being created the column 'Maint' will have value 'N'. The 'R' status indicates that the classification datasource is ready and is achieved after generation. If one changes a characteristic, then we must reset the status to 'N' before generation.

Generate Datasource.



Test datasource extraction via RSA3 transaction.

### Extractor Checker S-API





Verify the results.

**Extractor Checker S-API**

DataSource: 1CL\_ODS\_001  
Struktur: ZOXDE10110

Batch(CHAR)	Material (MATNR)	(MATERIAL)	(MATERIAL)	(MATERIAL)	(MATERIAL)	(MATERIAL)	(MATERIAL)
0000000064	44	0.000	0.000	0.000000000000000			10/14/2009
0000000065	44	0.000	0.000	0.000000000000000			10/15/2009
0000000066	44	0.000	0.000	0.000000000000000			10/15/2009
0000000076	44	0.000	0.000	0.000000000000000			10/18/2009
0000000077	44	0.000	0.000	0.000000000000000			10/20/2009
0000000086	44	0.000	0.000	0.000000000000000			03/18/2010
0000000094	44	0.000	0.000	0.000000000000000			10/29/2009
0000000100	44	0.000	0.000	0.000000000000000			10/14/2009
0000000023	44	0.000	0.000	0.000000000000000			09/03/2010
0000000306	1	0.000	38.000	0.000000000000000			0.000
0000000425	ZSNC1234	0.000	0.000	0.000000000000000			12/10/2009
0000000426	ZSNC1234	0.000	0.000	0.000000000000000			12/01/2009
0000000427	ZSNC1234	0.000	0.000	0.000000000000000			11/19/2009
0000000507	49	0.000	0.000	0.000000000000000		70.000	12/15/2009
0000000509	49	0.000	0.000	0.000000000000000		70.000	12/15/2009
0000000509	49	0.000	0.000	0.000000000000000		70.000	12/15/2009
0000000496	44	0.000	0.000	0.000000000000000			12/15/2009
0000000529	44	0.000	0.000	0.000000000000000			0.000
0000000523	51	0.000	0.000	0.000000000000000			12/16/2009
0000000548	6000289	0.000	0.000	0.000000000000000			0.000
0000000545	44	0.000	0.000	0.000000000000000			12/15/2009
0000000543	44	0.000	0.000	0.000000000000000			12/15/2009
0000000562	6000608	0.000	0.000	0.000000000000000			01/01/2010

3. Create a custom infoobject ZBATC in BW and assign relevant infoobjects as attributes (which map to fields of datasource ZDS\_BATCH and 1CL\_ODS\_001). Assign 0MATERIAL as the compounded infoobject (as in our example Batch management is Cross-Plant).

**Display Characteristic ZBATC: Details**

Version Comparison | Business Content

Characteristic: ZBATC

Long description: Batch

Short description: Batch

Version:  Active  Saved

Object Status:  Active, executable

General | Business Explorer | Master data/texts | Hierarchy | Attribute

Dictionary

Data element: /BIC/OIZBATC

Data Type: CHAR CHAR - Character

Length: 10

Lowercase letters:

Convers. Rout: ALPHA

Output length: 10

SID table: /BIC/SZBATC

Other

Attribute Only

Person Respons.:

Content release:

Characteristic Is Document Property

Constant:

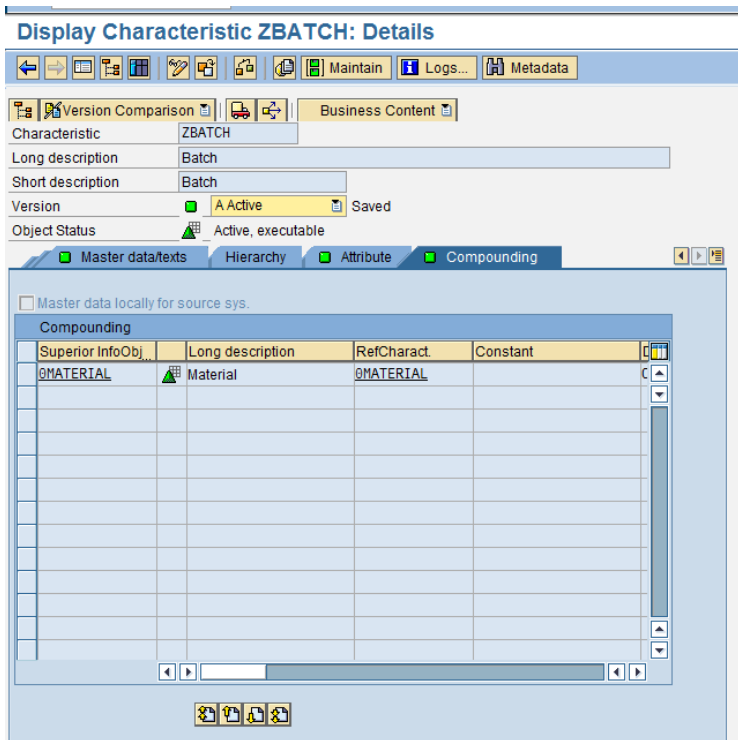
Transfer Routine

Transfer routine exists

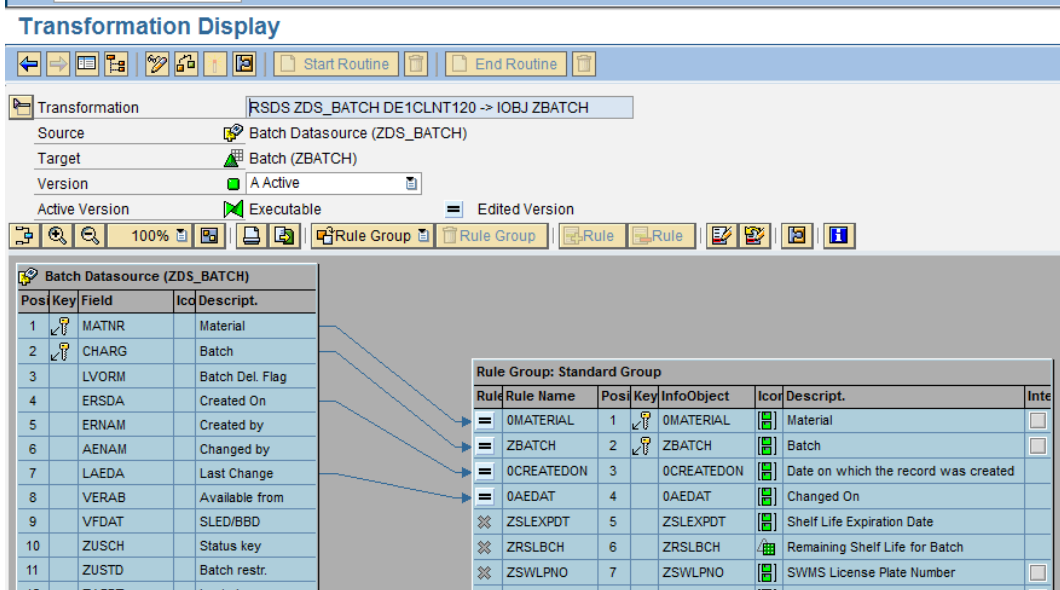
Last change

By:

On:



Create two transformations. One from RSDS ZDS\_BATCH -> IOBJ ZBATCH and second RSDS 1CL\_ODS\_001 -> IOBJ ZBATCH with relevant direct mapping between fields of datasource and attribute infoobjects of ZBATCH.  
 Make sure that you map fields MATNR, CHARG, ERDSA and LAEDA are assigned from datasource ZDS\_BATCH.



To extract delta for Batch datasource (ZDS\_BATCH), we would need to load data from two infopackages. One infopackage will load new data based on ERDSA field (Created On) and another infopackage will load changed records based on field LAEDA (Changed On).

Both infopackages have update mode as 'Full' Update. However, we generate pseudo delta by writing a small ABAP routine for fields ERDSA and LAEDA in different infopackages to extract data for the current day based on system date.

**Scheduler (Maintain InfoPackage)**

InfoPackage: ZECC: ZDS\_BATCH : Created On Date(ZPAK\_4J6QRJ6HQFG7HI8CK7ZZSE)  
 DataSource: Batch Datasource(ZDS\_BATCH)  
 Data Type: Master Data  
 Source System: DE1 Client 120(DE1CLNT120)  
 Last Changed By: ALEREMOTE Date: 12/01/2010 Time: 13:35:02

Load master data from source system

Enter Selections (Optional):

InfoObject	Technical	Description	From Value	To Value	Ty	D	Type (Varia	R>Data	Field	Conve
	MATNR	Material Number							CHAR 18	MATN1
	CHARG	Batch Number							CHAR 10	
	ERDSA	Created On			8		ABAP Routine		DATS 8	
	LAEDA	Date of Last Chang							DATS 8	

Check  Use Conversion Routine

**Scheduler (Maintain InfoPackage)**

InfoPackage: ZECC: ZDS\_BATCH : Last Change Date(ZPAK\_4GWI2KPSJ32C0GYGK9NZ)  
 DataSource: Batch Datasource(ZDS\_BATCH)  
 Data Type: Master Data  
 Source System: DE1 Client 120(DE1CLNT120)  
 Last Changed By: ALEREMOTE Date: 12/01/2010 Time: 13:35:02

Load master data from source system

Enter Selections (Optional):

InfoObject	Technical	Description	From Value	To Value	Ty	D	Type (Varia	R>Data	Field	Conve
	MATNR	Material Number							CHAR 18	MATN1
	CHARG	Batch Number							CHAR 10	
	ERDSA	Created On							DATS 8	
	LAEDA	Date of Last Chang			8		ABAP Routine		DATS 8	

Check  Use Conversion Routine

The second transformation is between datasource RSDS 1CL\_ODS\_001 and ZBATCH infoobject. Make necessary direct mappings between datasource fields (batch class fields) and attribute infoobjects of characteristic ZBATCH.

### Transformation Display

Transformation: RSDS 1CL\_ODS\_001 DE1CLNT120 -> IOBJ ZBATCH

Source: ZDS\_BATCH Client: 120 Class type: 023 (1CL\_ODS\_001)

Target: Batch (ZBATCH)

Version: Active

Active Version: Executable

100%

Rule Group: Standard Group

Pos	Key	Field	InfoObject	InfoObject	Descr.	Inte
1		MATNR	0MATERIAL	0MATERIAL	Material	<input type="checkbox"/>
2		CHARG	ZBATCH	ZBATCH	Batch	<input type="checkbox"/>
3		0CREATEDON	0CREATEDON	0CREATEDON	Date on which the record was created	<input type="checkbox"/>
4		0AEDAT	0AEDAT	0AEDAT	Changed On	<input type="checkbox"/>
5		ZSLEXPDT	ZSLEXPDT	ZSLEXPDT	Expiration Date	<input type="checkbox"/>
6		ZRSLBCH	ZRSLBCH	ZRSLBCH	Responsible Info. for P. No.	<input type="checkbox"/>
7		ZSWLPNO	ZSWLPNO	ZSWLPNO	Storage Location Number	<input type="checkbox"/>
8		ZRDLPNO	ZRDLPNO	ZRDLPNO	Responsible Plant Number	<input type="checkbox"/>
9		ZESTNO	ZESTNO	ZESTNO	Responsible Vendor	<input type="checkbox"/>
10		ZDISPNO	ZDISPNO	ZDISPNO	Responsible Number	<input type="checkbox"/>

The classification datasource automatically generates delta and hence we load this data via a single infopackage with Delta update. We need to perform Initialize Delta load the first time and then followed by Delta loads daily.

### Scheduler (Maintain InfoPackage)

Scheduler Edit Goto Environment Extras System Help

InfoPackage: ZECC: 1CL\_ODS\_001->ZBATCH Delta(ZPAK\_4GWI2HAW3PEZQGB9YWMJ)

DataSource: ZDS\_BATCH Client: 120 Class type: 023(1CL\_ODS\_001)

Data Type: Master Data

Source System: DE1 Client 120(DE1CLNT120)

Last Changed By: ALEREMOTE Date: 12/01/2010 Time: 13:34:39

Data Selection Extraction Processing Update Schedule

Update Mode

Full Update

Delta Update

Initialize Delta Process

Initialization with Data Transfer

Initialize Without Data Transfer

Early Delta Initialization

Request will be processed at once in the source system

## Related Content

<http://help.sap.com/printdocu/core/Print46c/en/data/pdf/LOBM/LOBM.pdf>

<http://wiki.sdn.sap.com/wiki/display/ERPLO/Batch+Management>

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