

Applies to:

SAP BI/BW. For more information visit the [Enterprise Data Warehousing Homepage](#)

Summary

This Article demonstrates the Steps for LO Extraction with different Update Modes

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Author Bio



Obaidullah shaikh is a SAP BI Consultant with AG Technologies. He has good skill in technical areas (ABAP) and he has experience of multiple custome reports development and has experience of Migration/upgradation projects as wel

Table of Contents

LO Extraction	3
Introduction	3
LBWE Activities	3
Update Modes	6
Direct Delta:-	7
Queued Delta:-	8
Unserialized V3 update:	9
Setup Tables:.....	10
Delete Setup Table (LBWG).....	11
Replicate DS in BI.....	11
Delta Queue.....	12
Fill Setup table (SBIW) or (OLI*BW).....	13
T-Codes to Fill setup:-	13
Extractor Checker	14
Info Package (Repairful)	15
Related Content.....	17
Disclaimer and Liability Notice.....	18

LO Extraction

Introduction

This article addresses the requirement and significance of LO extraction. This article gives you the steps how to do LO Extraction from R/3 System to BI. This will deal LBWE Activities like how to schedule the jobs in SAP R/3 to fill setup table, also a brief discussion on Update mode and extraction of Logistic data to BI as well.

LBWE Activities

The Logistics Extract Structures Customizing Cockpit (you can directly see it by transaction LBWE) represents the central tool for the administration of extract structures.

Activate the data sources if it is inactive and give a request name to transport to Production system.

Source data	Structure	DataSource	Update	Update Mode
Logistics applications				
02 : Purchasing			Job Control	Direct Delta
03 : Inventory Controlling			Job Control	Unserialized V
04 : Shop Floor Control			Job Control	Direct Delta
05 : Quality Management			Job Control	Queued Delta
06 : Invoice Verification			Job Control	Direct Delta
08 : Shipment			Job Control	Direct Delta
11 : SD Sales BW			Job Control	Direct Delta
12 : LE Shipping BW			Job Control	Direct Delta
13 : SD Billing BW			Job Control	Direct Delta
17 : Plant Maintenance BW			Job Control	Direct Delta
18 : Customer Service BW			Job Control	Direct Delta
40 : Retailing			Job Control	Direct Delta
43 : BW: Retail POS Data: Cashier			Job Control	Direct Delta
44 : BW: Retail POS Data: Cash Reg. Receipts			Job Control	Direct Delta
45 : Agency Business			Job Control	Direct Delta
Extract structures				
MC45CDDLST: Folder: Delta Update Customer Settlement	Mainten...	2LIS_45_CD	Inactive	
MC45PDDLST: Folder: Delta Update Posting List Data	Mainten...	2LIS_45_PD	Inactive	
MC45VDDLST: Folder: Delta Update Settlement Request List	Mainten...	2LIS_45_VD	Inactive	
MC45VSDLST: Ordering Party: Delta Update Vendor Settlement	Mainten...	2LIS_45_VS	Inactive	
MC45W_0HDR: Agency business extraction: Document header	Mainten...	2LIS_45_HD	Inactive	
MC45W_0ITM: Agency business extraction: Item data	Mainten...	2LIS_45_IT	Inactive	
MC45W_0LST: Agency business extraction: Remuneration list	Mainten...	2LIS_45_LS	Inactive	

Just Click on Inactive under Update

Click on Maintenance under Structure to select the fields for putting selection while Data Extraction

Source data	Structure	DataSource	Update	Update Mode
Logistics applications				
02 : Purchasing			Job Control	Direct Delta
03 : Inventory Controlling			Job Control	Unserialized
04 : Shop Floor Control			Job Control	Direct Delta
05 : Quality Management			Job Control	Queued Delta
06 : Invoice Verification			Job Control	Direct Delta
08 : Shipment			Job Control	Direct Delta
11 : SD Sales BW			Job Control	Direct Delta
12 : LE Shipping BW			Job Control	Direct Delta
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18 : Customer Service BW			Job Control	Direct Delta
40 : Retailing			Job Control	Direct Delta
43 : BW: Retail POS Data: Cashier			Job Control	Direct Delta
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45 : Agency Business			Job Control	Direct Delta
Extract structures				
MC45CDLST: Folder: Delta Update Customer Settlement	Mainten...	2LIS_45_CDLST	Inactive	
MC45PDLST: Folder: Delta Update Posting List Data	Mainten...	2LIS_45_PDLST	Inactive	
MC45VDLST: Folder: Delta Update Settlement Request List	Mainten...	2LIS_45_VDLST	Inactive	
MC45VSLST: Ordering Party: Delta Update Vendor Settlement	Mainten...	2LIS_45_VSLST	Inactive	
MC45W_QHDR: Agency business extraction: Document header	Mainten...	2LIS_45_HDR	Inactive	
MC45W_QITM: Agency business extraction: Item data	Mainten...	2LIS_45_ITM	Inactive	
MC45W_QLST: Agency business extraction: Remuneration list	Mainten...	2LIS_45_LST	Inactive	
46 : SAP Global Trade Management			Job Control	Direct Delta

Click on Data Source Name under Datasource to hide/show the extractor fields

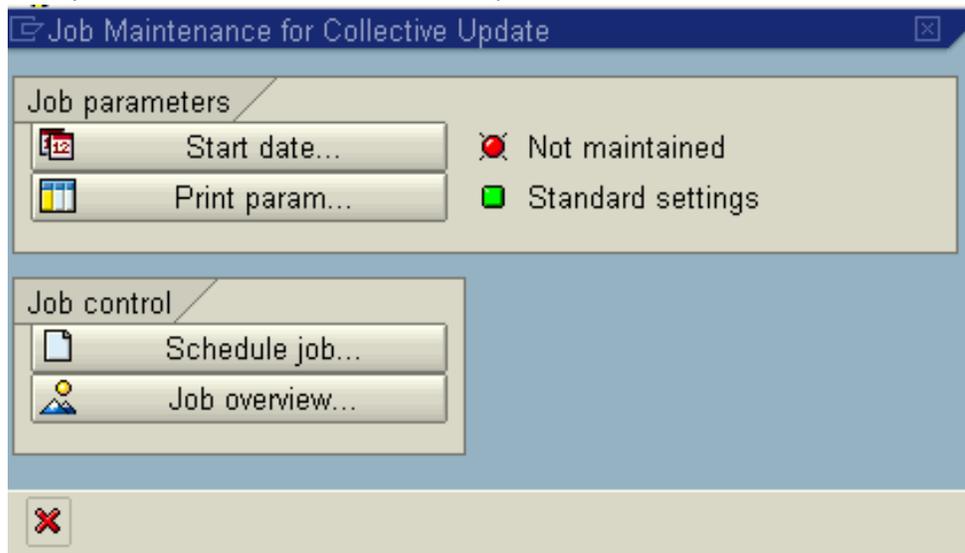
Source data	Structure	DataSource	Update	Update Mode
Logistics applications				
02 : Purchasing			Job Control	Direct Delta
03 : Inventory Controlling			Job Control	Unserialized V3 Up...
04 : Shop Floor Control			Job Control	Direct Delta
05 : Quality Management			Job Control	Queued Delta
06 : Invoice Verification			Job Control	Direct Delta
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MC45PDLST: Folder: Delta Update Posting List Data	Mainten...	2LIS_45_PDLST	Inactive	
MC45VDLST: Folder: Delta Update Settlement Request List	Mainten...	2LIS_45_VDLST	Inactive	
MC45VSLST: Ordering Party: Delta Update Vendor Settlement	Mainten...	2LIS_45_VSLST	Inactive	
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MC45W_QLST: Agency business extraction: Remuneration list	Mainten...	2LIS_45_LST	Inactive	

Click on Job Control under Update schedule the jobs in R/3 that will fetch data from base table to setup table.

The screenshot shows the SAP LO Data Extraction Cockpit interface. The title bar reads 'LO Data Extraction: Customizing Cockpit'. The main area displays a tree view of 'Logistics applications' with various sub-applications. A table on the right lists the 'Update' and 'Update Mode' for each job. A red box highlights the 'Job Control' column for several jobs, including '45: Agency Business'.

Source data	Structure	DataSource	Update	Update Mode
Logistics applications				
02 : Purchasing			Job Control	Direct Delta
03 : Inventory Controlling			Job Control	Unserialized V3 Up...
04 : Shop Floor Control			Job Control	Direct Delta
05 : Quality Management			Job Control	Queued Delta
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46 : SAP Global Trade Management			Job Control	Direct Delta
47 : 47			Job Control	Queued Delta
20 : Workflow				
09 : External Data (without SAP ref.)				

- Click on Start Date button to specify time at which job will trigger
- Click on Print Parameter to specify print parameter
- Finally click on Schedule to Schedule the job



Click on Direct Delta under Update mode to set the Update Mode

Source data	Structure	DataSource	Update	Update Mode
Logistics applications			Job Control	Direct Delta
02 : Purchasing			Job Control	Unserialized V3 Up...
03 : Inventory Controlling			Job Control	Direct Delta
04 : Shop Floor Control			Job Control	Queued Delta
05 : Quality Management			Job Control	Direct Delta
06 : Invoice Verification			Job Control	Direct Delta
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47 : 47			Job Control	Queued Delta
20 : Workflow				
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Update Modes

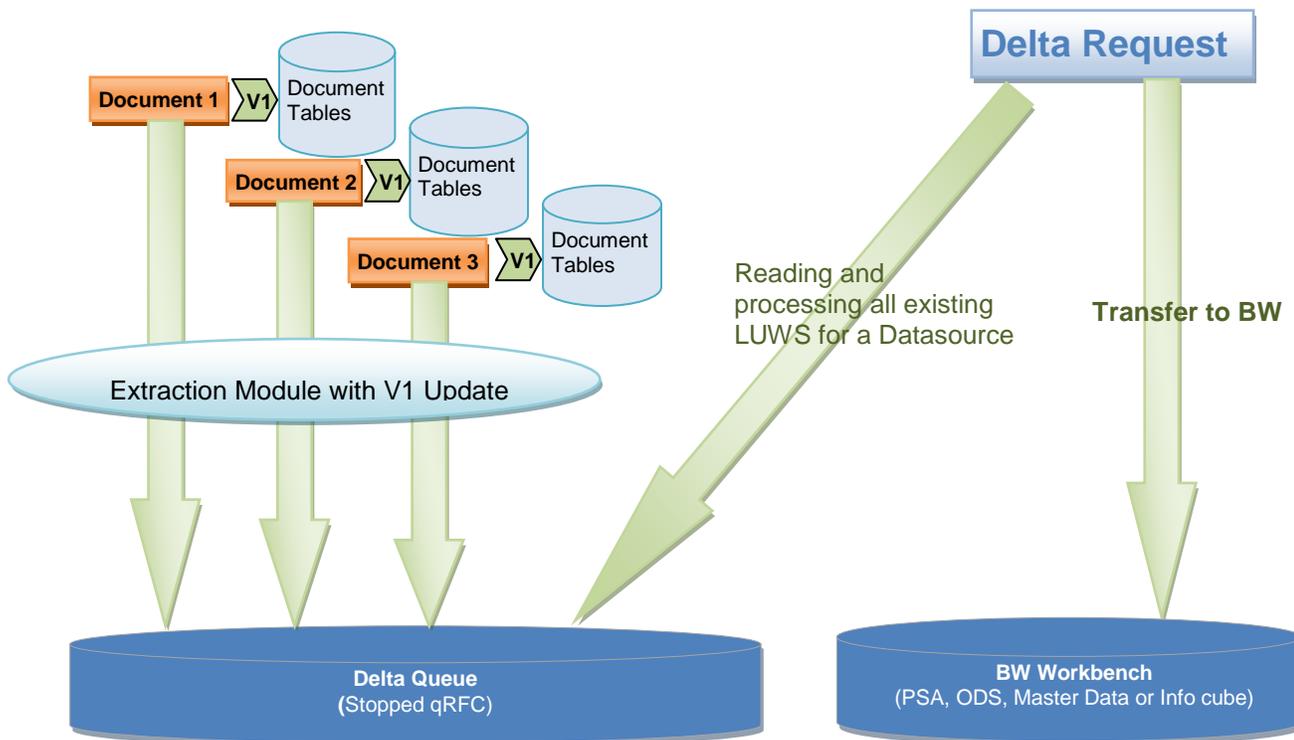
Source data	Structure	DataSource	Update	Update Mode
Logistics applications			Job Control	Direct Delta
02 : Purchasing			Job Control	Direct Delta
03 : Inventory Controlling			Job Control	Direct Delta
04 : Shop Floor Control			Job Control	Direct Delta
05 : Quality Management			Job Control	Direct Delta
06 : Invoice Verification			Job Control	Direct Delta
08 : Shipment			Job Control	Direct Delta
11 : SD Sales BW			Job Control	Direct Delta
12 : LE Shipping BW			Job Control	Direct Delta
13 : SD Billing BW			Job Control	Direct Delta

Select Update Mode

- Direct Delta
- Queued Delta
- Unserialized V3 Update

Direct Delta:-

Extraction data is transferred directly to the BW delta queues with each document posting.

Data Flow for LO Extraction with Direct Delta**Benefits :-**

- No need schedule at regular interval in order to transfer data into BW
- Serialization of documents is ensured by using the enqueue concept for applications

Limitation:-

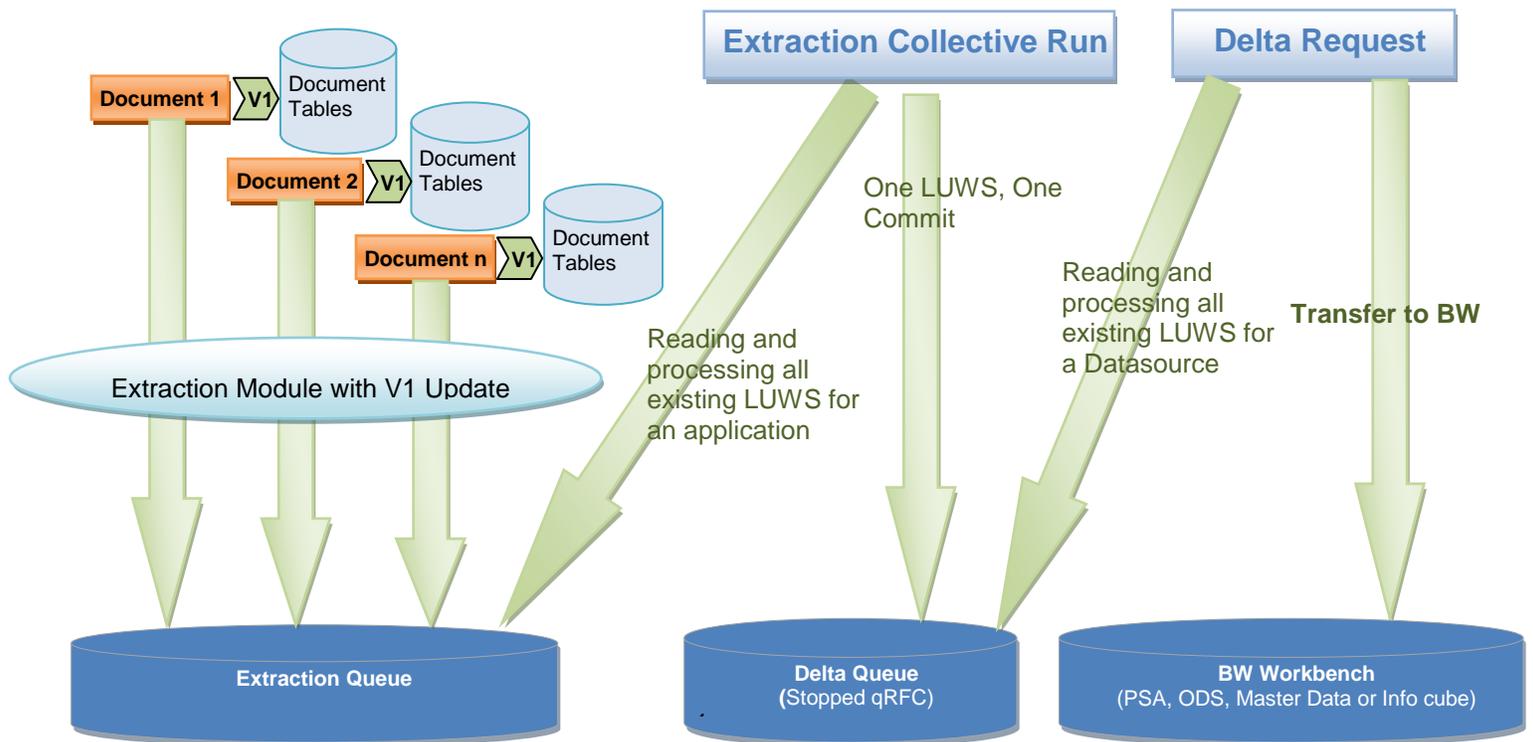
→ The number of LUWs per data source in the BW delta queues increases significantly because different document changes are not summarized into one LUW in the BW delta queues. Therefore this update method is recommended only for customers with a low occurrence of documents (a maximum of 10000 documents)

→ no documents can be posted during delta initialization procedure from the start of the recompilation run in R/3

Queued Delta:-

The extraction data (for the relevant application) is written in an extraction queue (instead of in the update data as in V3) and can be transferred to the BW delta queues by an update collective run.

Data Flow for LO Extraction with Queued Delta



Benefits:-

→ Document postings (relevant for the involved application) can be opened again as soon as the execution of the recompilation run (or runs, if several and running in parallel) ends

→ Collective run clearly performs better than the serialized V3

→ Recommended for customers with a high occurrence of documents

→ Event handling is possible here, because a definite end for the collective run is identifiable: in fact, when the collective run for an application ends, an is automatically triggered and, thus, it can be used to start a subsequent job.

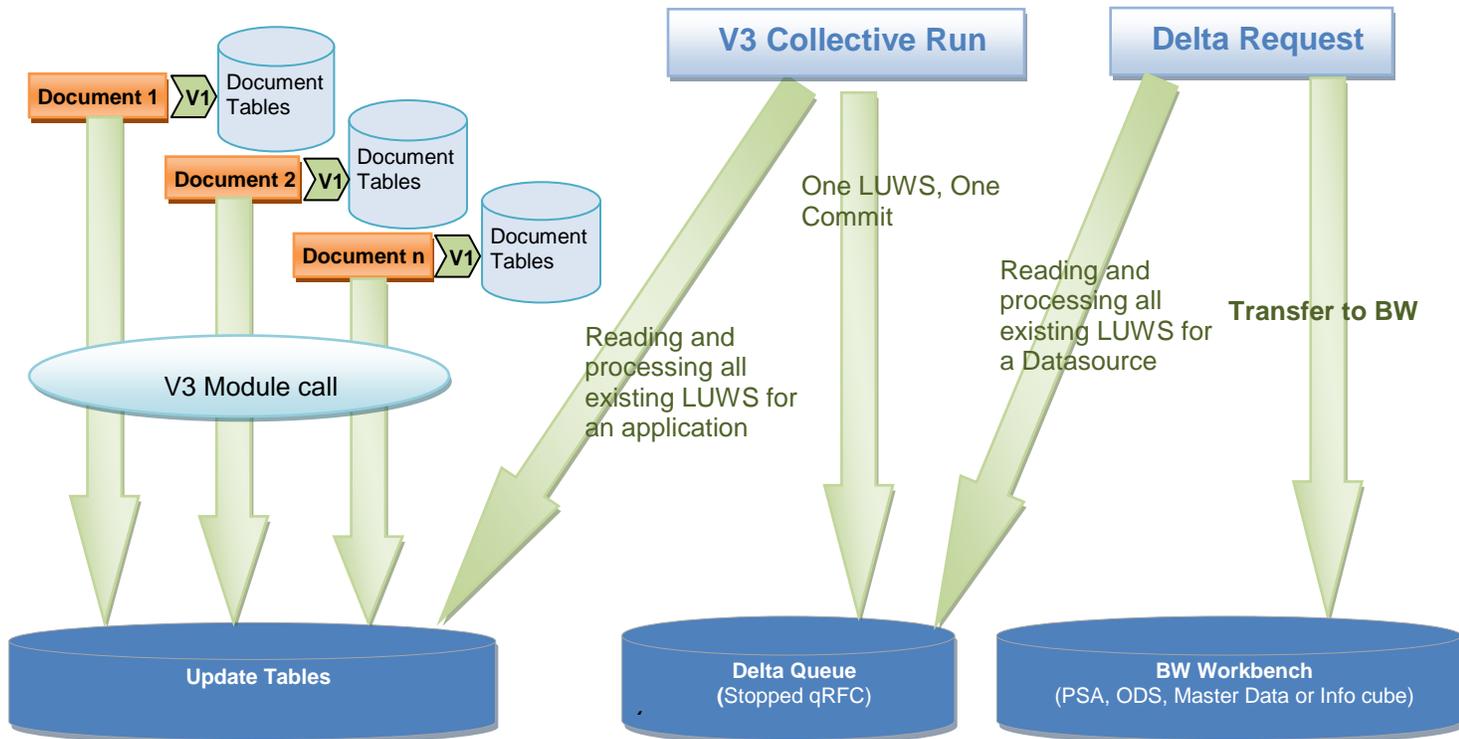
Limitations:-

→ Need schedule job at regular interval in order to transfer data into BW

Unserialized V3 update:

The extraction data continues to be written to the update tables using a V3 update module and then is read and processed by a collective update run

Data Flow for LO Extraction with Unserialized V3 Update



Data is read in the update collective run without taking the sequence into account and then transferred to the BW delta queues.

Setup Tables:

Access to application tables are not permitted, hence setup tables are there to collect the required data from the application tables.

When a load fails, you can re-run the load to pull the data from setup tables. Data will be there in setup tables. Setup tables are used to Initialize delta loads and for full load. Its part of LO Extraction scenario.

With this option, you avoid pulling from R/3 directly as we need to bring field values from multiple tables. You can see the data in the setup tables. Setup table name will be extract structure name followed by SETUP. Set up table names starts with 'MC' followed by application component '01'/'02' etc and then last digits of the Data source name and then followed by SETUP

Also we can say the communication structure (R/3 side, you can check it in LBWE also) name followed by 'setup'

example: MC13VD0HDRSETUP

- If you want to check data in set up tables you better look at the transaction NPRT here you can see the table name from which data is picking.
- Setup tables are cluster tables and are used to extract the data from R/3 Tables.(LO Extractors)
- Basically, for entire application like SD-Billing we have got it's own setup Tables...so while filling the set-up tables, we usually fill for the entire application.

Ex: OLI7BW is for filling setup Tables for SD application.

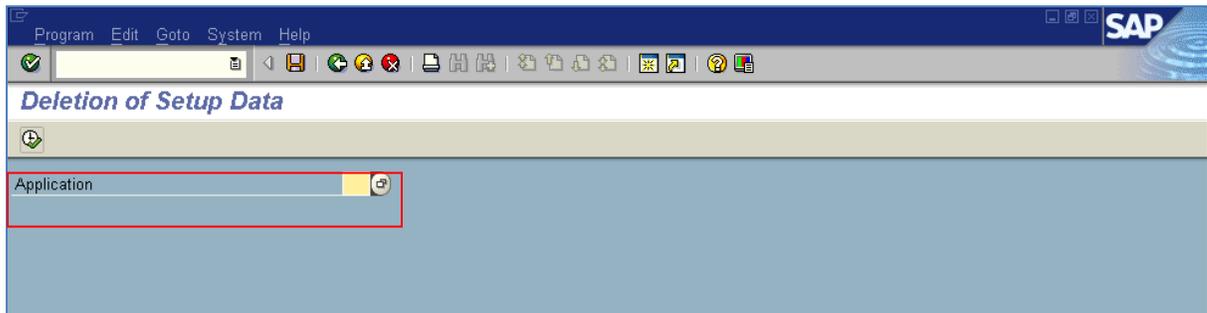
OLI9BW T-code is for Billing Application,

- When u fill the setup Tables, the data from different tables..VBAK, VBAP, VBRK, VBRP...etc will come through communication Structures and saved in Setup Tables...
- The main advantage of having setup Tables is, we can read the data in different levels..Header level as well as Item level.
- when we run init load or Full load in BW, the data will be read from Setup Tables for the first time(Entire data will be read).... and the delta records will be updated to Delta Queue once the v3 job runs... and we can extract the delta records from Delta Queue.
- Once we successfully run the init, we can delete setup Tables.
- Filling up the set up tables depends on the Datasource.

Delete Setup Table (LBWG)

Before filling the setup table we need delete it's content because it may have some garbage value.

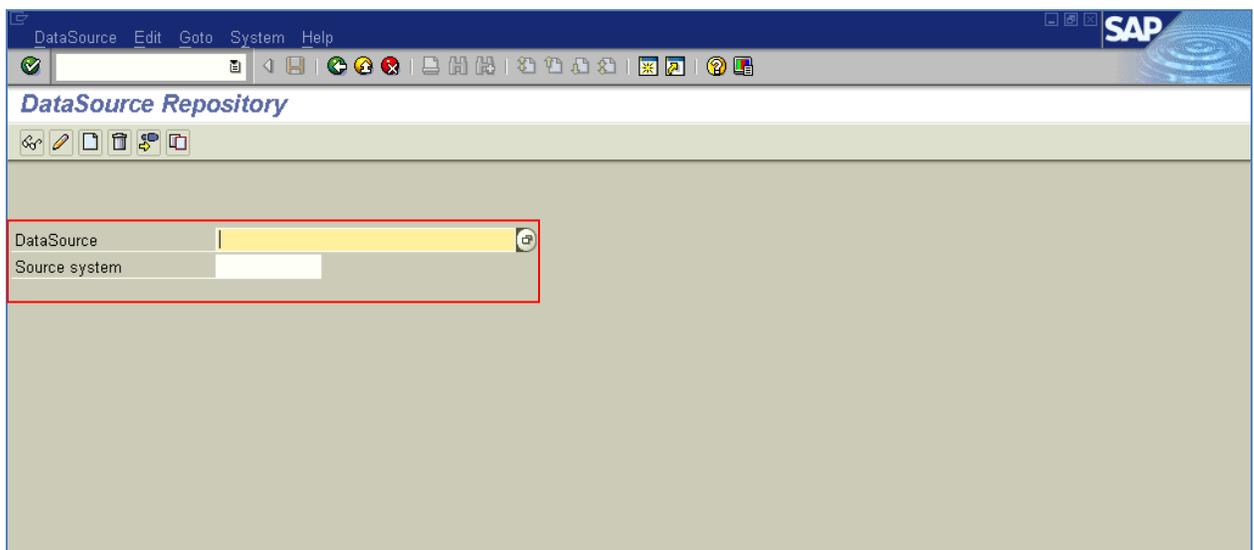
- For deletion of setup table, select application component whose setup table need to be deleted



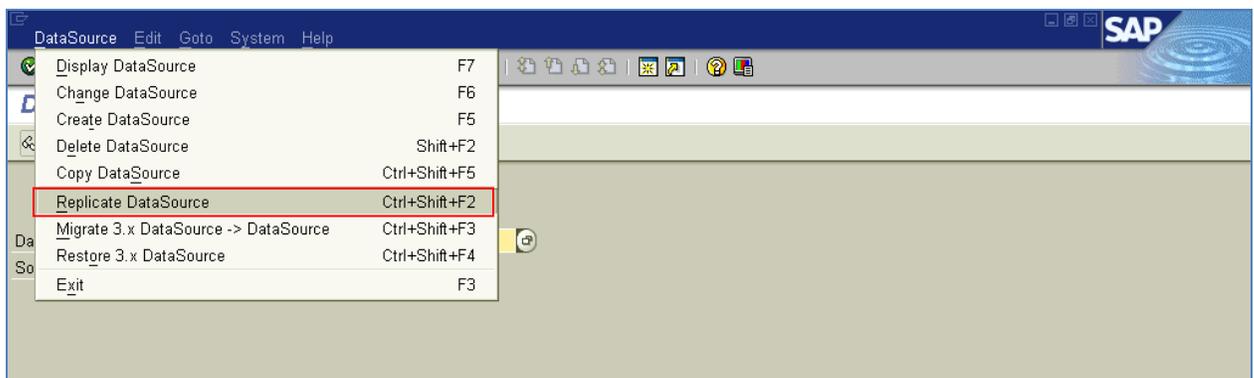
Replicate DS in BI

In BW, Replicate the data source (RSDS) & initialize the infopackage without data transfer:-

- Enter Data source name & Source system



- Data source Menu → Replicate Datasource



Create Info package on the data source & initialize it.

Scheduler (Maintain InfoPackage)

InfoPackage: OMM_PUR_VE_01(ZPAK_D7HR8BRN4AVM4NNT9F5D6F46Z)

InfoSource: Vendor evaluation data(Omm_Pur_Ve_01)

DataSource: Vendor evaluation(Omm_Pur_Ve_01)

Data Type: Transaction Dat

Source System: ID4 Client 800(ID4CLNT800)

Last Changed By: _____ Date: _____ Time: 00:00:00

Update Mode

- Full Update
- Initialize Delta Process
 - Initialization with Data Transfer
 - Initialize Without Data Transfer
 - Early Delta Initialization

Data Update Type in the Data Targets

- Always update data, even if no master data exists for the data
- Do not update data if no master data exists for a characteristic

Error handling

Request will be processed at once in the source system

Delta Queue

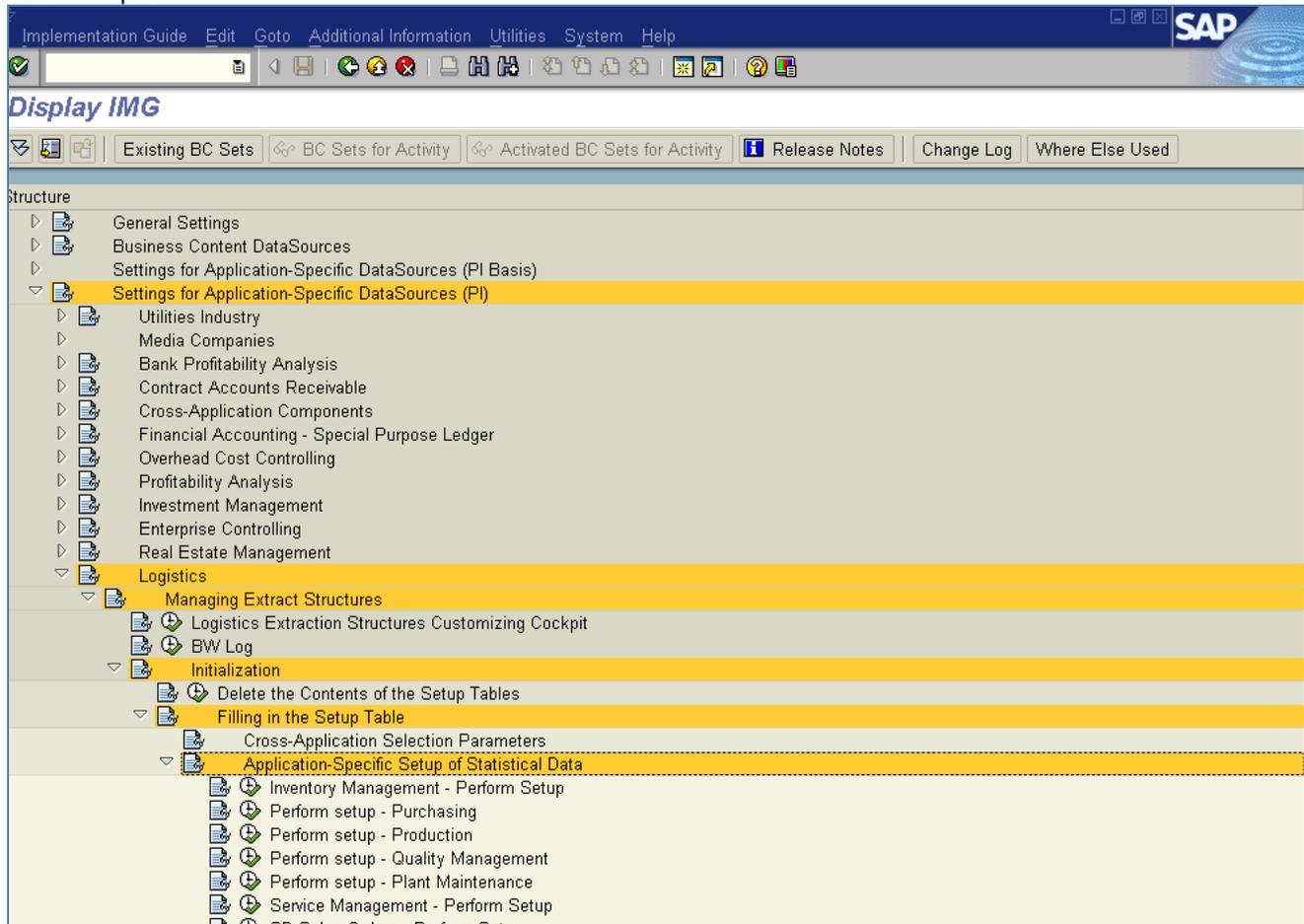
Check the Data source entry Delta Queue (RSA7)

Stat	DataSource	BW System	Total	Stat.
OO	BCO_OM_OPA_6	BW7CLNT879	0	
OO	BCO_OM_WBS_6	BW7CLNT879	0	
OO	BCUSTOMER_ATTR	BW7CLNT879	0	
OO	BFI_AR_10	BW7CLNT879	0	
OO	BFI_AR_4	BW7CLNT879	0	
OO	BFI_AR_6	BW7CLNT879	0	
OO	BFI_AR_7	BW7CLNT879	0	
OO	BFI_GL_10	BW7CLNT879	0	P
OO	BFI_GL_6	BW7CLNT879	0	
OO	BFI_GL_7	BW7CLNT879	0	
OO	BMATERIAL_TEXT	BW7CLNT879	0	
OO	BMAT_SALES_ATTR	BW7CLNT879	0	
OO	Omm_Pur_Ve_01	BW7CLNT879	0	
OO	BRT_WRF1_ATTR	BW7CLNT879	0	
OO	2LIS_03_BF	BW7CLNT879	0	
OO	2LIS_03_UM	BW7CLNT879	0	

Fill Setup table (SBIW) or (OLI*BW)

Once **init** is completed in BW and delta queue is created in SAP R/3 (RSA7) then do the setup

SBIW Steps:-



T-Codes to Fill setup:-

- OLI1BW :-Material Movements
- OLIZBW :- Invoice Verification/Revaluation
- OLI3Bw :- Purchasing Documents
- OLI4BW :- Shop Floor Information system
- OLIFBW :- Repetitive Manufacturing
- OLIQBW :- Quality Management
- OLIIBW :- Plant Maintenance
- OLISBW :- Service Management (customer Service)
- OLI7BW :- SD Sales Order
- OLI8BW :- Deliveries
- OLI9BW :- SD Billing Documents
- VIFBW :- LES-Shipment Cost

VTBW :- LES-Transport

ORISBW :- Retail

OLIABW :- Agency Business

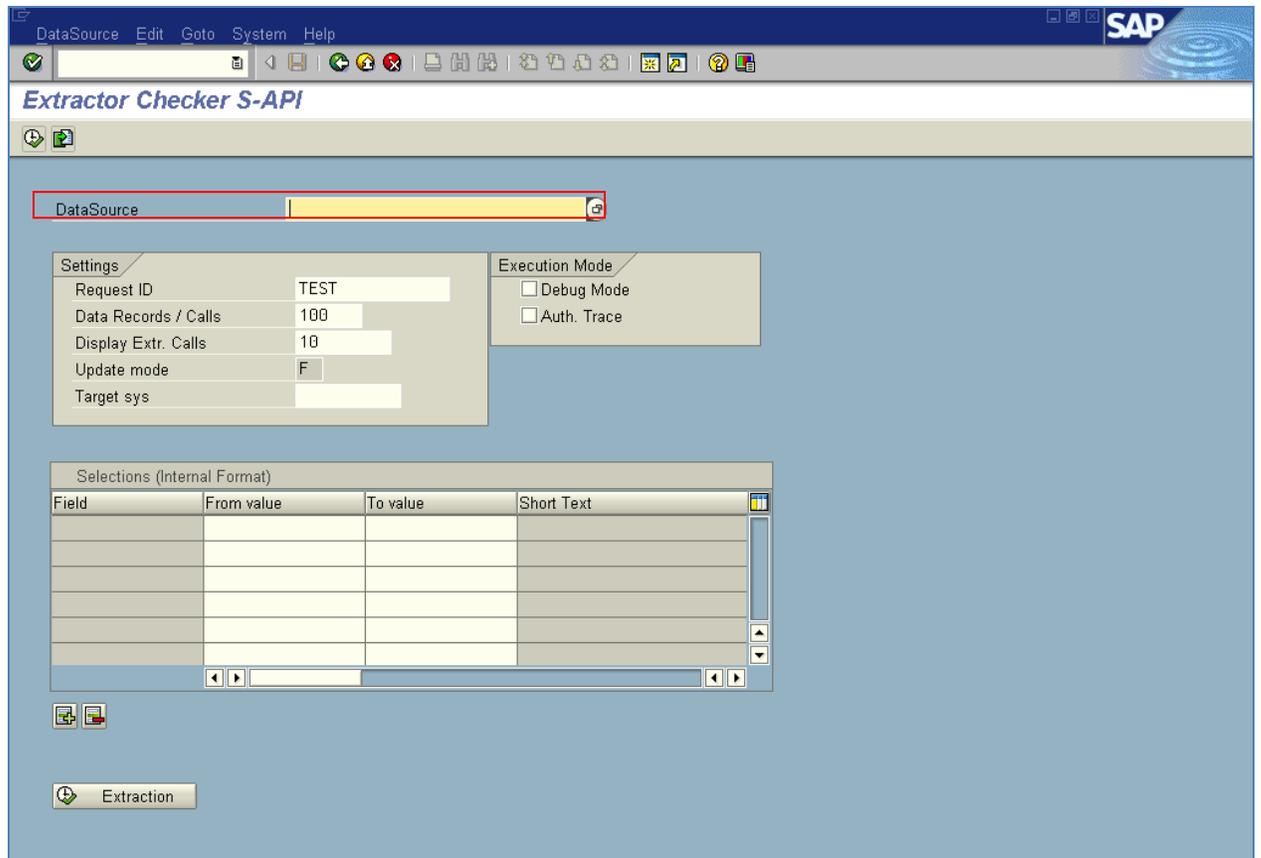
OLI6BW :- Invoice Verification

OLI4KBW :- Kanban

Extractor Checker

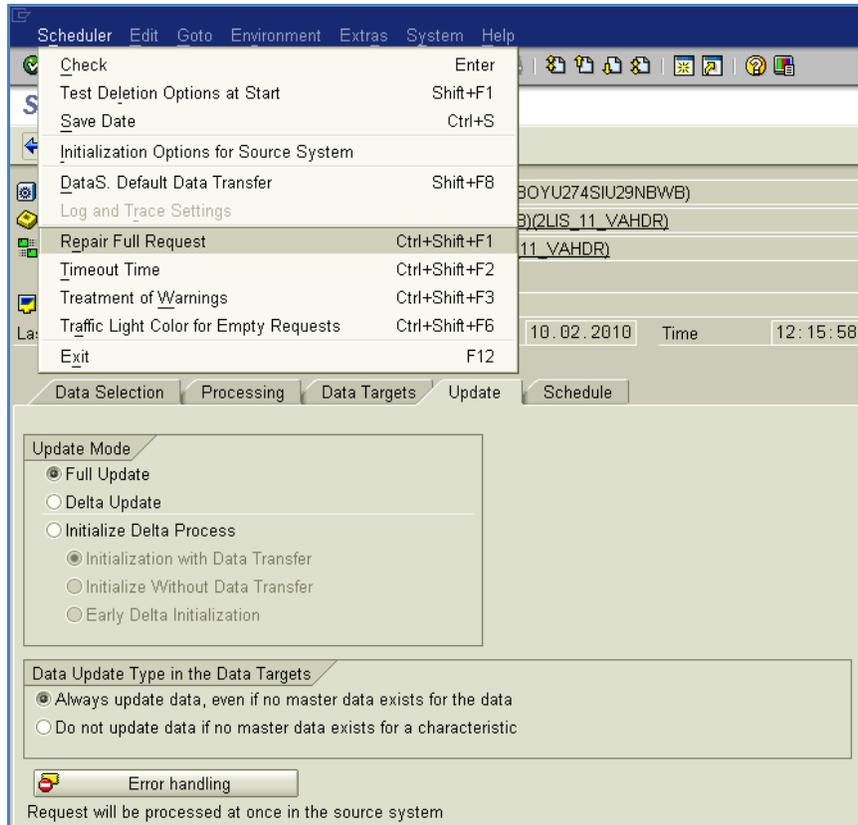
Check the Data in the Data source using RSA3 (Extractor Checker)

- Enter the **Datasource** Name and Click on **Extraction** button

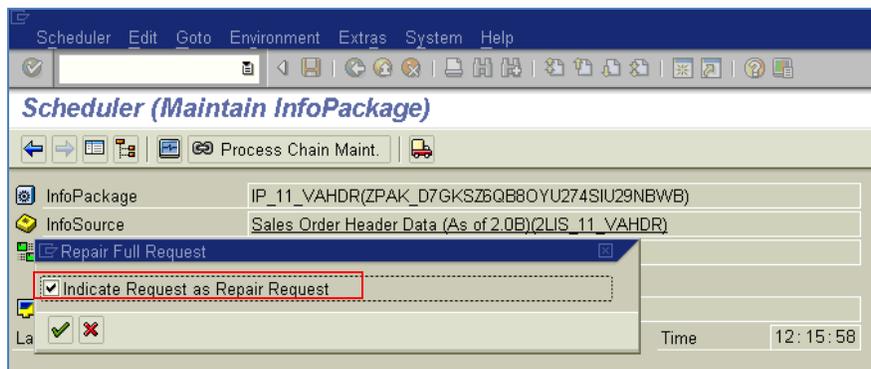


Info Package (Repairful)

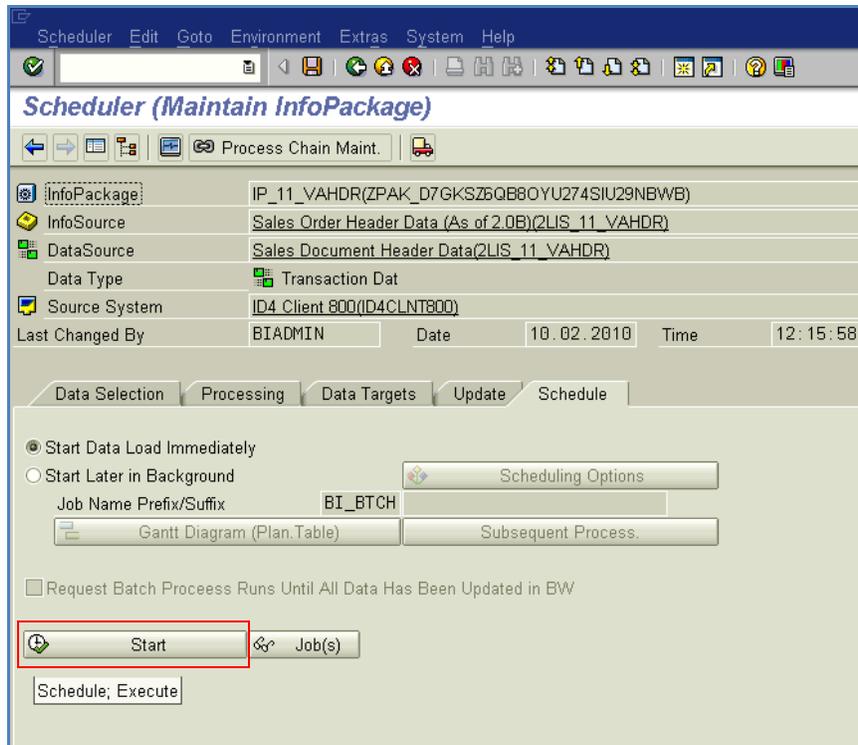
In BW, Run the Info Package as “Repairful request”



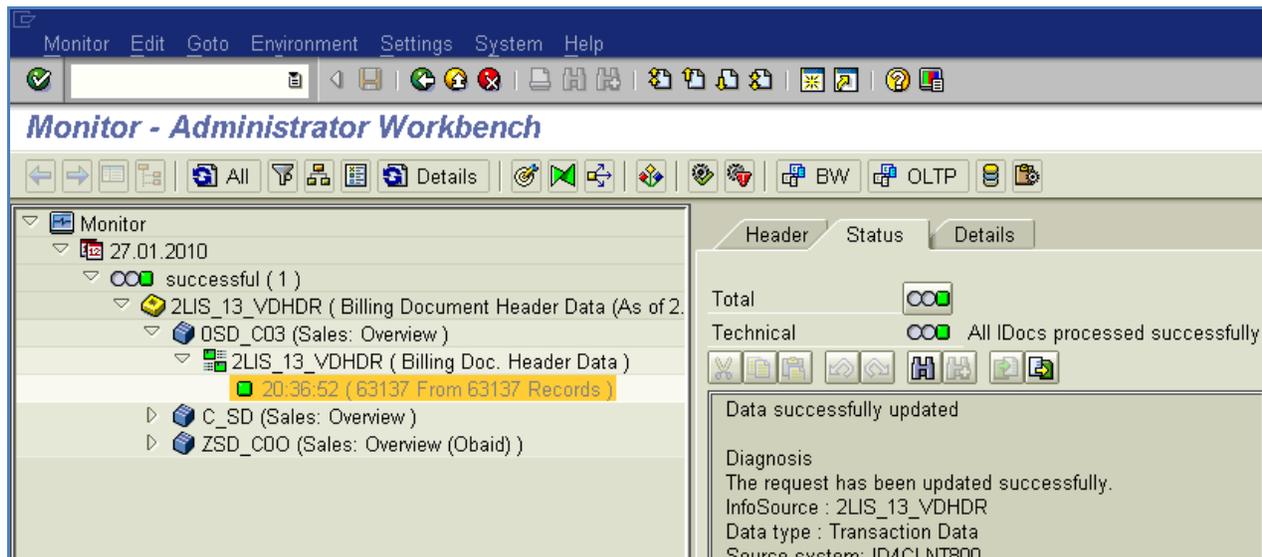
Select Check box (Indicate Request as Repair Request)



Click on Start



Finally Data is update to the corresponding target



Related Content

<http://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/d07aa007-84ab-2d10-46ba-a5a2679f0d7b?QuickLink=index&overridelayout=true>

[LO Extraction - Part 1 SD Overview](#)

<http://forums.sdn.sap.com/thread.jspa?threadID=1778957>

For more information visit the [Enterprise Data Warehousing Homepage](#)

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