

FI-AR Line Item Data Extraction to BW using 0FI_AR_4 DataSource



Applies to:

ERP: SAP ECC 6.0 with SAP NetWeaver BI 7.0. BW: SAP NetWeaver 2004s.

For more information, visit the [EDW homepage](#).

Summary

This Document covers the details related to the use and customization of standard 0FI_AR_4 DataSource to extract FI-AR Line Items Data from your SAP ERP System to SAP BW system. This also covers the necessary settings associated with the same.

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Author Bio



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Table of Contents

Scope	3
R/3 DataSource Customization	3
Applicable SAP Notes	3
OFI_AR_4 Customization	3
Settings in R/3.....	5
R/3 Tables Used	6
BW Customization	7
InfoProviders	7
Related Content.....	8
Disclaimer and Liability Notice.....	9

Scope

As part of your requirement it was identified that you would need to extract the FI-AR Line Items data from your SAP ERP system to your SAP BW system. The standard datasource 0FI_AR_4 was identified which could address the basic extraction need.

Details on the FI-AR DataSources are available at the following URL [Customer / Vendor Analysis](#)

R/3 DataSource Customization

Applicable SAP Notes

Customizations were carried out based on the following SAP Notes.

Customizations were carried out based on the following SAP Notes.

- Note 410797 - FI line item extraction transfer to new DataSources:
If using earlier versions of FI-AR Line Item DataSources like 0FI_AR_3, this note has to be applied.
- Note 410799 - Enhancement of line item extraction FI-GL, FI-CIS, FI-CIS
Implemented for 0FI_AR_4 DataSource customization.
- Note 551044 - Detaching the extractors for the InfoSources 0FI_xx_4.pdf
Already available as part of BI 7.0
- Note 991429 - Minute Based extraction enhancement for 0FI_xx_4 extractors
Implemented to enable Minute Based Extraction. Changes are already available as part of BI 7.0, only need to enable flag and modify table Index.

0FI_AR_4 Customization

0FI_AR_4 extracts data from the underlying tables BSID (Open Items) and BSAD (Cleared Items). The Extract structure for the same is DTFIAR_3. If you want to enhance your DataSource with additional fields, unlike using Append Structure, you would need to create the structure CI_BSID in SE11 and include the additional fields. On activation, the structure will get automatically appended to the main structure DTFIAR_3.

Structure	CI_BSID	Active				
Short Description	Customer Include: 0FI_AR_4					
<div style="display: flex; justify-content: space-between;"> Attributes Components Entry help/check Currency/quantity fields </div>						
<div style="display: flex; justify-content: space-between;"> Predefined Type 1 / 19 </div>						
Component	RTy...	Component type	Data Type	Length	Decim...	Short Description
KONZS	<input type="checkbox"/>	ZKEY CUSTOMER	CHAR	10	0	Key Customer
KUKLA	<input type="checkbox"/>	KUKLA	CHAR	2	0	Customer classification
NIELS	<input type="checkbox"/>	ZNIELS	CHAR	2	0	App Sector
BRAN1	<input type="checkbox"/>	BRAN1 D	CHAR	10	0	Industry Code 1

Now for additional fields there can be 2 scenarios

- All the fields of the customer enhancement in the customer include are available in the read structure BSID
Then no additional action is required. The fields of the customer enhancement are filled automatically by the datasource from the assigned read structure via "move-corresponding".
- Fields of the customer enhancement in the customer include are not contained in the read structure BSID

In this case you have to program a function module to fill the field of the customer enhancement. To do this, there is a Business Transaction Event available (open FI interface for process 00005021). Create any function module you like and use function module SAMPLE_PROCESS_00005021 as a template for the interface (input parameter, changing parameter).

In our case we created the function module ZBWFI_FILL_CI_00005021 to fill the additional fields required from the Customer Master table KNA1.

While creating the function you would need to assign it to a Function Group. You can use the default one from the Sample or create your own function group. However check whether the type pool SBIWA is declared in the TOP include of the function group. If not, add it with the statement TYPE-POOLS: SBIWA.

The code is as below.

```

FUNCTION ZBWFI_FILL_CI_00005021.
*"-----
*"Local Interface:
*" IMPORTING
*"   REFERENCE(I_OLTPSOURCE) TYPE  SBIWA_S_INTERFACE-ISOURCE
*" CHANGING
*"   REFERENCE(C_STRUCTURE)
*"-----
*"DATA Definitions
CASE I_OLTPSOURCE.
  WHEN '0FI_AR_4'. "Customers: Line Items with Delta Extraction
    FIELD-SYMBOLS: <FS_DTFIAR_3> TYPE DTFIAR_3.
    ASSIGN C_STRUCTURE TO <FS_DTFIAR_3>.
    "Details from KNA1:General Data in Customer Master
    SELECT SINGLE KONZS KUKLA NIELS BRAN1
      INTO CORRESPONDING FIELDS OF <FS_DTFIAR_3>
      FROM KNA1
      WHERE KUNNR = <FS_DTFIAR_3>-KUNNR.
  WHEN OTHERS.
ENDCASE.
UNASSIGN <FS_DTFIAR_3>.
ENDFUNCTION.

```

Following this an addition has to be made to the table TPS31 using Transaction SM30.

- PROCS: 00005021
- LAND: Blank
- APPLK: Blank
- FUNCT: ZBWFI_FILL_CI_00005021

Note: Parked Documents & Noted Items are not extracted by 0FI_AR_4 DataSource. Noted Items can be extracted by further implementing SAP Note 411758.

Settings in R/3

Following are the settings that are maintained in R/3 for the Extraction to work properly.

Table: TPS31			
PROCS	LAND	APPLK	FUNCT
5010			FBW4_WRITE_CHANGE_QUEUE
5010		FI-C	FDM_COLL_WRITE_CHANGE_QUEUE
5010		UKM	UKM_EVENT_5010
5011			BWFIP_WRITE_AEDAT_POINTER
5021			ZBWFIFILL_CI_00005021

If you delete the last initialization selection in the source system for the InfoSources OFI_*_4 in the BW system Administrator Workbench, the entry from table TPS31 is also removed. This stops recording of changed line items in table BWFI_AEDAT. Existing data in table BWFI_AEDAT is also deleted. Before a new data request can be made in the update mode initialization of the delta method, the entry must be added again to table TPS31.

Recording of the changed line items must be started a reasonable amount of time before the first data request in update mode initialization of the data method. For this purpose, add the entry in table TPS31 using transaction SM30.

Table: BWOM_SETTINGS				
MANDT	OLTPSOURCE	PARAM_NAME	PARAM_VALUE	Format/Values
		BWFILOWLIM	19910101	YYYYMMDD
		BWFINEXT	X	<space> or X
		BWFINSAF	3600	<seconds>
		BWFIOVERLA		<space> or X
		BWFISAFETY	1	<Days>
		BWFITIMBOR	020000	<Time>
		DELTIMEST	60	<Days>
		ORGSYSONLY		<space> or X

SAP recommends that you do not change the standard value.

More details on the settings are available at [Financial Accounting: Procedure for Line Item Extraction](#).

Additionally the Index was modified for table BWFI_AEDAT as per Note 991429 as part of enabling Minute Based Extraction.

Index Name	BWFI_AEDAT	1
Short description	Index for Extractors	

Index flds				
	Field name	Short Description	DTyp	Length
	MANDT	Client	CLNT	3
	BUKRS	Company Code	CHAR	4
	AEDAT	Date of the Last Document Change by Transaction	DATS	8
	AETIM	Time of Entry	TIMS	8

R/3 Tables Used

The following R/3 tables can be typically used for the FI-AR extraction enhancements.

Data Tables	
BKPF	Accounting Document Header
BSID	Accounting: Secondary Index for Customers
BSAD	Accounting: Secondary Index for Customers (Cleared Items)
KNA1	General Data in Customer Master
KNB1	Customer Master (Company Code)
KNB5	Customer master (dunning data)
KNVP	Customer Master Partner Functions
KNVV	Customer Master Sales Data
KNKK	Customer master credit management: Control area data
T014	Credit control areas
VBRK	Billing Document: Header Data

Config Tables	
BWFI_AEDAT	List of changed documents with the change date and the document number which helps in the delta extraction. The number of days the data stored here depends on the setting in the bwom_settings table. The OFI_*_4 extractors use this table for registering change data.
BWOM_SETTINGS	Settings for the delta extraction each entry in the table signifies a special purpose. This table parameters are common to all the datasource extractors. Parameters: BWFILOWLIM, BWFISAFETY, BWFIOVERLA, ORGSYSONLY, DELTIMEST, BWFITIMBOR, BWFINEXT, BWFINSAF
BWOM2_TIMEST	Stores the delta extraction date and timestamp for reference from where the next delta extraction for the specific datasource to begin.
ROOSPRMSF	Stores the selections for the specific datasources under specific source and destination systems.
TPS31	This table contains the Process BTE: Alternative Function Modules from SAP. The function modules for the various BTEs are mapped in this table.
TPS01	This table contains the description of the BTEs.

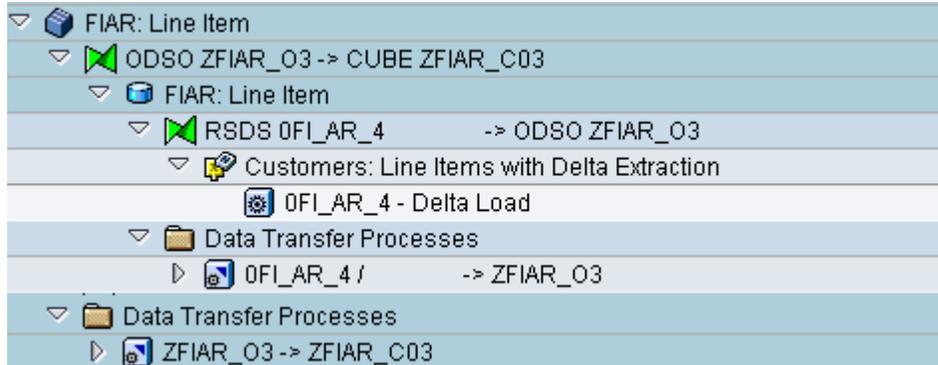
BW Customization

InfoProviders

The following InfoProviders along with the 3.5 DataFlow elements are available as part of Business Content which can be installed to start with.

- InfoSource: [0FI_AR_4] Accounts Receivable: Line Items
- DSO: [0FIAR_O03] Accounts Receivable: Line Items
- InfoCube: [0FIAR_C03] Accounts Receivable: Line Items

Using the above as templates we created the necessary dataflow in BI 7.0 as below



Routines for the following InfoObjects were applied in the Transformation of Data between DSO and InfoCube based on the routines available in the Update Rule in 3.5 Dataflow.

- Transformation: ODSO ZFIAR_03 -> CUBE ZFIAR_C03
- InfoObjects: 0NETTAKEN, 0INT_CALC_1, 0INT_CALC_2, 0INT_CALC_N, 0INT_CALC_T1, 0INT_CALC_T2, 0INT_CALC_TN

Related Content

[SAP Help: Customer / Vendor Analysis](#)

[SAP Help: Financial Accounting - Procedure for Line Item Extraction.](#)

[Forum: Datasource enhancement](#)

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