

BW RTR - CBS Invoicing PAPM flat file loading /!\ Obsolete /!\



The new wiki link for this data flow is here:

[Technical Documentation - PAMP/CBS invoicing](#)

Please update the new doc there and no longer here.



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General presentation

List of contacts

- Charlotte ROLLIER : Finance Reporting Leader
- Guillaume Thevenet (SBS Information Services) : BW Coordinator

Objective of the application

Background:

The inter-company service charges and cost allocation process for Solvay's Corporate and Business Services (CBS) is time consuming, manually maintained, lacks appropriate technology enablement and is controlled across multiple functions.

We need a process to automate the data loading process to remove the drawback of manual process.

Objective

The objective of application is to allow users loading data from excel files with validation of content.

Tool Leader + IT leader of the application:

Usage information

Around 4 users worldwide.

History

The project was started in May/2016 and was in go-live in June/2016. It was requested by CBS project manager Nathalie Delahousse and approved by Sandrine Micollet,

Link about the specifications :

CBS Database - support for inter-company invoicing

Roles & Access

Roles and access

Toe Be Confirmed

List of application role + menu role and explanation if we have several applications role with special rules.

Role Code	Role Description	Explanation
TBC		

Authorization objects

List of autorisation objects mandatory for the application.

Authorization object	Explanation
TBC	

Dataflow overview

[blocked URL](#)

<https://drive.google.com/drive/folders/0B0qn89R0RGdqYkZZOFZyYXlXVke>

Exemple of dataflow overview :

Template Application name DataFlow

Functional and Technical rules on Workbench + Reporting

We can create authorization object to restrict access to users for Transaction code ZBW_PAPM.

We can also restrict access at granular level for all users, example at company code or controlling are etc..

For driver data available for PaPM, we can display data available in BW in the screen.
We control the content of the file to be sure that there is no error (missing field or incorrect values).

Once data is loaded:

- The file is saved as csv in /exploit/BW/PaPM in BW server
- The previously loaded data in BW staging is deleted
- The info-packages are executed to load the new flat file previewed and checked by user in respective PSAs.
- The process chains are executed
 - By schedule (hourly with abap condition looking time in global filter).
 - Manage "delta queue" is several loadings at the same time
- Three other process chains to load from PSA to BW Info provider
 - For all 3 driver data
 - Loads data in respective ADSOs
 - Process chain runs twice a day (managed in Global filter master data)

An ABAP program was developed to help user loading flat file for all three driver data required for PaPM application.

We have created a specific transaction : **Z BW_PAPM** to run the ABAP program

The program technical name is : **ZBW_CBS_INT_COMP_INV**

The program title/description is : **Load CBS PaPM Data - 3 Drivers and Transactional source**

With this transaction, user can load excel file for

- CBS-PAPM-Driver1-Amount.
- CBS-PAPM-Driver2-Head Count
- CBS-PAPM-Driver3-Cadre and All

The transaction is available in SOLIA portal. For information, it's better to use IE and not Chrome

The screenshot shows the SAP transaction interface with the following components and annotations:

- Display BW Driver data**: A section with three buttons: Amount, Head Count, and Cadre.
- Choose the type of data**: A section with three radio buttons: PaPM Driver 01 - Amount (selected), PaPM Driver 01 - HeadCount, and PaPM Driver 03 - Cadre and All.
- Choose the file to load**: A section with a text field containing the file path: C:\Users\TMUTHU\Documents\CBS\CBS-PAPM-Driver1-Amount.xls.
- Buttons**: A row of five buttons: Preview, Check file, Load file, History, and Exit.

Annotations (blue boxes) point to the following elements:

- Display data Loaded in BW**: Points to the 'Display BW Driver data' section.
- Select Type of data to (1) preview, (2) check, (3)load and (4)display history of data loads**: Points to the 'Choose the type of data' section.
- Choose the flat file from local drive to preview, check and load**: Points to the 'Choose the file to load' section.
- Preview data**: Points to the 'Preview' button.
- Check data**: Points to the 'Check file' button.
- Load data to staging**: Points to the 'Load file' button.
- display history of data loads**: Points to the 'History' button.
- EXIT App**: Points to the 'Exit' button.

Rules & Explanations

Below there is a list of entries in global filter used to support the program to do several activities, like: check authorizations, upload flat file, check company code, run process chain, etc.

Global Filter Stream (Application)	Global Filter Rule	Global Filter	Global Filter Description	Global Filter Sign	Global Filter Option	Global Filter Low Value	Global Filter Hight Value	Global Filter Active
PAPM	AMNT	1	FILE NAME			CBS-PAPM-Driver1-Amount.xls		Y
PAPM	AMNT	2	DELTA QUEUE			0		Y
PAPM	AMNT	3	COUNTER OF LOADING			19		Y

PAPM	AUTHGR	1	Authorization	I	EQ	ZR_CBS_PAPM_FILE_UPLOAD	Y	
PAPM	AUTHGR	2	Authorization	I	EQ	ZR_CBS_PAPM_FILE_UPLOAD_TCODE	Y	
PAPM	CADR	1	FILE NAME			CBS-PAPM-Driver3-CADRE.xls	Y	
PAPM	CADR	2	DELTA QUEUE			0	Y	
PAPM	CADR	3	COUNTER OF LOADING			9	Y	
PAPM	COAREA	1	Controlling area	I	EQ	ZCYT	Y	
PAPM	COMPCode	1	Company Code	I	EQ	7008	USD	Y
PAPM	COMPCode	2	Company Code	I	EQ	7764	EUR	Y
PAPM	HDCN	1	FILE NAME			CBS-PAPM-Driver2-HC.xls	Y	
PAPM	HDCN	2	DELTA QUEUE			0	Y	
PAPM	HDCN	3	COUNTER OF LOADING			17	Y	
PAPM	LOGSYS	1	Source System	I	EQ	ZCBSPAPMUPLD	Y	
PAPM	PAPM_RUN	1	Identify current run for CY process chain (11,..., 15)	I	EQ	12	Y	
PAPM	PAPM_STIME	1	START TIME ALLOWED for PAPM Loading	I	EQ	11	LOAD	Y
PAPM	PAPM_STIME	2	START TIME ALLOWED for PAPM Loading	I	EQ	15	LOAD	Y
PAPM	SENDMAIL	1	Send email	I	EQ	Thanga.Muthu-ext@solvay.com	Y	
PAPM	TIME	1	REFERENCE TIME FOR PAPM LOAD	I	EQ	12	Y	
PAPM	TYPE	1	REFERENCE TYPE FOR PAPM LOAD	I	EQ	NO_LOAD	Y	
PAPM	UNIXAMNT	1	Unix for Driver 1- Amount	I	EQ	/exploit/BW/PaPM/Driver_1_Amount	Y	
PAPM	UNXCADR	1	Unix for Driver 3 for cadre	I	EQ	/exploit/BW/PaPM/Driver_3_Cadre	Y	
PAPM	UNIXHDCN	1	Unix for Driver 2 for HeadCount	I	EQ	/exploit/BW/PaPM/Driver_2_HeadCount	Y	

WBD: Change Master Data of InfoObject C_GLBFLT

Save New Delete Keys Application Log Most Recent Versions Display Values without Master Data

master data

Time Independent

Add Line Withdraw Changes Change all records Details Where-Used Document Browser

Global Filter Stream (Applica...	Global Filter Rule	Global Filter	Global Filter Description	Global Filter Sign	Global Filter Option	Global Filter Low Value	Global Filter High Value	Global Filter Active
PAPM	AMNT	001	FILE NAME			CBS-PAPM-Driver1-Amount.xls		Y
PAPM	AMNT	002	DELTA QUEUE			0		Y
PAPM	AMNT	003	COUNTER OF LOADING			15		Y
PAPM	AUTHGR	001	Authorization	I	EQ	ZR_CBS_PAPM_FILE_UPLOAD		Y
PAPM	AUTHGR	002	Authorization	I	EQ	ZR_CBS_PAPM_FILE_UPLOAD_TCODE		Y
PAPM	CADR	001	FILE NAME			CBS-PAPM-Driver3-CADRE.xls		Y
PAPM	CADR	002	DELTA QUEUE			0		Y
PAPM	CADR	003	COUNTER OF LOADING			7		Y
PAPM	COAREA	001	Controlling area	I	EQ	ZCYT		Y
PAPM	COMPCode	001	Company Code	I	EQ	7008	USD	Y
PAPM	COMPCode	002	Company Code	I	EQ	7764	EUR	Y
PAPM	HDCN	001	FILE NAME			CBS-PAPM-Driver2-HC.xls		Y
PAPM	HDCN	002	DELTA QUEUE			0		Y
PAPM	HDCN	003	COUNTER OF LOADING			15		Y
PAPM	LOGSYS	001	Source System	I	EQ	ZCBSPAPMUPLD		Y
PAPM	SENDMAIL	001	Send email	I	EQ	Thanga.Muthu-ext@solvay.com		Y
PAPM	UNIXAMNT	001	Unix for Driver 1- Amount	I	EQ	/exploit/BW/PaPM/Driver_1_Amount		Y
PAPM	UNXCADR	001	Unix for Driver 3 for cadre	I	EQ	/exploit/BW/PaPM/Driver_3_Cadre		Y
PAPM	UNIXHDCN	001	Unix for Driver 2 for HeadCount	I	EQ	/exploit/BW/PaPM/Driver_2_HeadCount		Y

There is an ABAP condition ZBW_UPDATE_GLB_FILTER used to define the hours that the process should be executed based on global filter rule PAPM_STIME, twice a day @11 Hours and 15 Hours.

WBD: Change Master Data of InfoObject C_GLBFLT

Save and Activate New Delete Keys Application Log Most Recent Versions Display Values without Master Data

Selection

Master Data

Time Independent

Add Line Withdraw Changes Change all records Details Where-Used Document Browser

Global Filter Stream (Applicat...	Global Filter...	Global Filter	Global Filter Description	Global Filter Sign	Global Filter Option	Global Filter Low V...	Global Filter High Value	Global Filter Active
PAPM	PAPM_STIME	001	START TIME ALLOWED for PAPM Loading	I	EQ	11	LOAD	Y
PAPM	PAPM_STIME	002	START TIME ALLOWED for PAPM Loading	I	EQ	15	LOAD	Y

Lay-out of files

CBS-PAPM-Driver 1-Amount

Flat file driver 01 structure : Advanced DSO APCOPA01

Info-Object	Description	Type	Size	Key	Business rules and Comment
0FISCVARNT	Fiscal year variant	CHAR	2	Y	Always K4
0FISCPER	Fiscal year / period	NUMC	7	Y	YYYYMMM
0LOGSYS	source system	CHAR	10	N	check against global filter
C_COMPPCDE	Company code	CHAR	4	N	check with C_COMPPCDE
C_CCDR01	PAPM Company Code Driver 01	CHAR	250	N	Free Description
K_CCDR01	PAPM Value Company code driver 01	AMNT	23	N	length 17, decimals 3,',' for decimals, with sign(Unit 0CURRENCY)
0CURRENCY	Currency key	CUKY	5	N	Check against Currency key table /BI0/SCURRENCY

CBS-PAPM-Driver 2- HeadCount

Flat file driver 02 structure : Advanced DSO APCOPA02

Info-Object	Description	Type	Size	Key	Business rules and Comment
0FISCVARNT	Fiscal year variant	CHAR	2	Y	Always K4
0FISCPER	Fiscal year / period	NUMC	7	Y	YYYYMMM
0LOGSYS	source system	CHAR	10	N	check against global filter
C_COMPPCDE	Company code	CHAR	4	N	check with C_COMPPCDE
C_SITEDR2	PAPM Site driver 2	CHAR	250	N	Free Description
C_CCDR02	PAPM Company code Driver 02	CHAR	250	N	Free Description
K_HCDR02	PAPM Nb Headcount per company Driver 02	NUMB	23	N	length 16, decimals 16,',' for decimals, with sign

CBS-PAPM-Driver 3-Cadre and All

Flat file driver 03 structure : Advanced DSO APCOPA03

Info-Object	Description	Type	Size	Key	Business rules and Comment
0FISCVARNT	Fiscal year variant	CHAR	2	Y	Always K4
0FISCPER	Fiscal year / period	NUMC	7	Y	YYYYMMM
0LOGSYS	source system	CHAR	10	N	check against global filter
C_COMPPCDE	Company code	CHAR	4	N	check with C_COMPPCDE
K_CDDR03	PAPM Value Company code driver 03	NUMB	23	N	length 16, decimals 16,',' for decimals, with sign
K_ALLDR03	PAPM All Head count cadre and no cadre diver 03	NUMB	23	N	length 16, decimals 16,',' for decimals, with sign

Dependencies with other applications

Data loadings

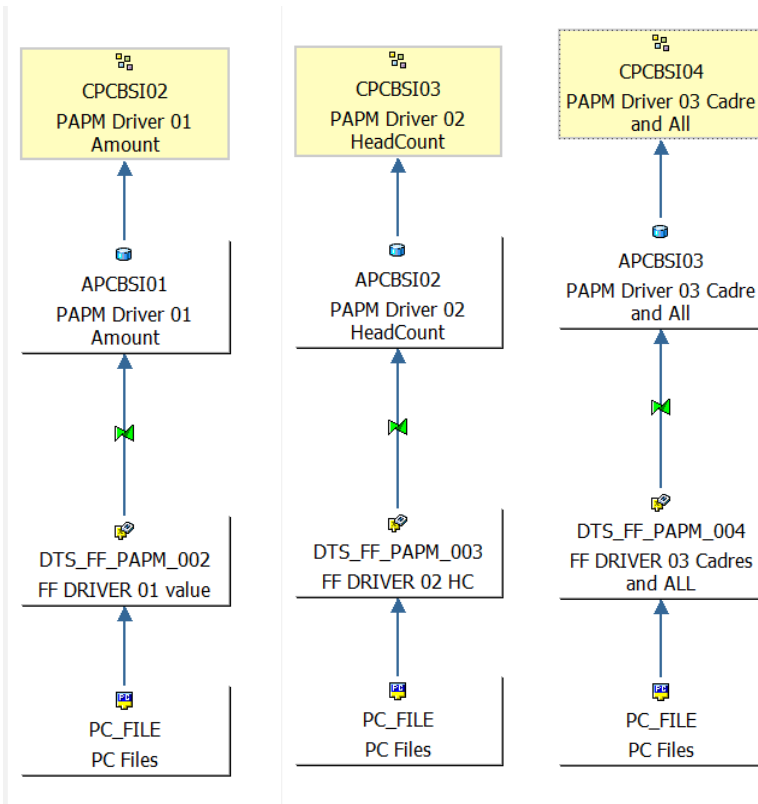
Info providers and objects loaded

Data Load process Steps and Process Chains

Step 1: Initializing/Deleting Data from previous loads through application(PCs triggered thro' event trigger)

1. **PC_CBS_PAPM_001A** - PC CBS PaPM - Driver 1 Amount Del PSA - Event Triggerred - **PC_CBS_PAPM_001A**
2. **PC_CBS_PAPM_002A** - PC CBS PaPM - Driver 2 Head Count Del PSA - Event Triggerred - **PC_CBS_PAPM_002A**
3. **PC_CBS_PAPM_003A** - PC CBS PaPM - Driver 3 Cadre Del PSA - Event Triggerred - **PC_CBS_PAPM_003A**

Step 2: Flat File loading for New Driver KPIs and data-flows



Step 3 : Load data to aDSOs through main process chain

The main process chain to load all three driver data on a daily basis from PSA to ADSO is as below

1. PC_CBS_PAPM - CBS: Global PC PaPM PC_CBS_PAPM Change

142 - PROJECT - CBS PaPM	COMP_PC_CBS_PAPM
<ul style="list-style-type: none"> CBS: Global PC PaPM PC CBS PaPM - Driver 1 Amount PC CBS PaPM - Driver 2 Head Count PC CBS PaPM - Driver 3 Cadre 	<ul style="list-style-type: none"> PC_CBS_PAPM PC_CBS_PAPM_001 PC_CBS_PAPM_002 PC_CBS_PAPM_003

Local Process chains to load all three driver data through the application to PSA and Events

1. PC_CBS_PAPM_001 - PC CBS PaPM - Driver 1 Amount
2. PC_CBS_PAPM_002 - PC CBS PaPM - Driver 2 Head Count
3. PC_CBS_PAPM_003 - PC CBS PaPM - Driver 3 Cadre

Loading frequency

1. Data Loading to PSA by user :

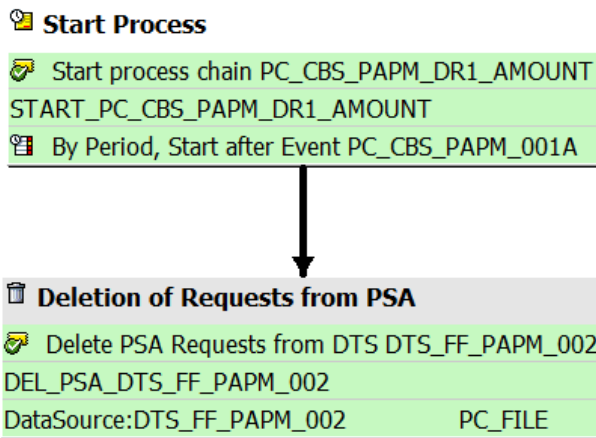
Adhoc when users use the application

2. Data Loading to PSA for reporting:

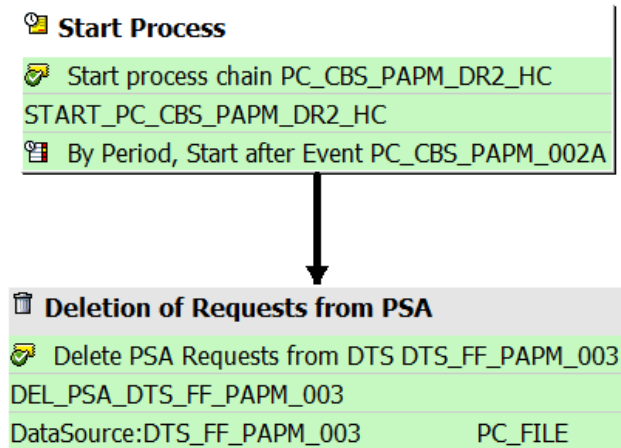
Twice daily at 11 hours and 15 hours

Process Chain Details

1. PC_CBS_PAPM_001A - PC CBS PaPM - Driver 1 Amount Del PSA - Event Triggerred - PC_CB
S_PAPM_001A



2. PC_CBS_PAPM_002A - PC CBS PaPM - Driver 2 Head Count Del PSA - Event Triggerred - PC_CBS_PAPM_002A



3. PC_CBS_PAPM_003A - PC CBS PaPM - Driver 3 Cadre Del PSA - Event Triggerred - PC_CBS_PAPM_003A

Start Process

- Start process chain PC_CBS_PAPM_DR3_CADRE
- START_PC_CBS_PAPM_DR3_CADRE
- Start after Event PC_CBS_PAPM_003A



Deletion of Requests from PSA

- Delete PSA Requests from DTS DTS_FF_PAPM_004
- DEL_PSA_DTS_FF_PAPM_004
- DataSource:DTS_FF_PAPM_004 PC_FILE

4. PC_CBS_PAPM_001 - PC CBS PaPM - Driver 1 Amount - run in main Process chain

Start Process

- Start process chain PC_CBS_PAPM_DR1_AMOUNT_TD
- START_PC_CBS_PAPM_DR1_AMOUNT_T
- Start using Meta Chain or API



Data Transfer Process

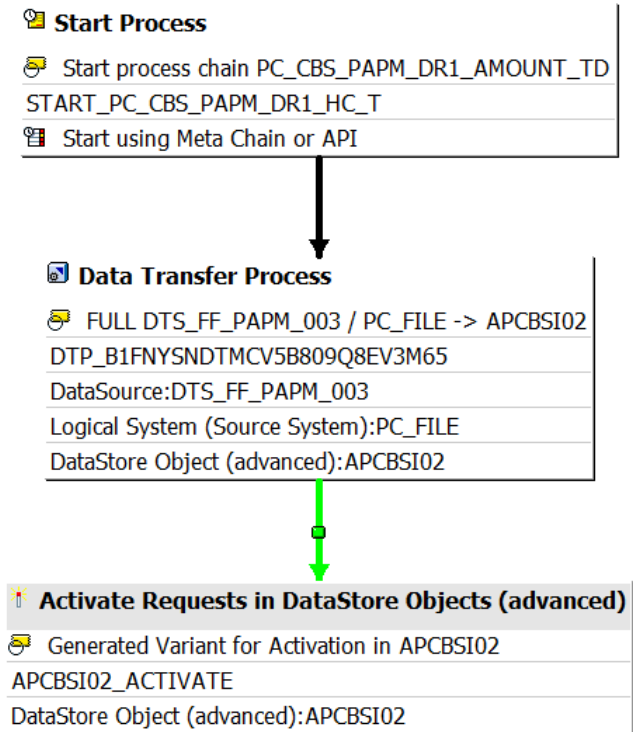
- FULL DTS_FF_PAPM_002 / PC_FILE -> APCBSI01
- DTP_B1FNYSNDTMCV5B80ANEO2H80Q
- DataSource:DTS_FF_PAPM_002
- Logical System (Source System):PC_FILE
- DataStore Object (advanced):APCBSI01



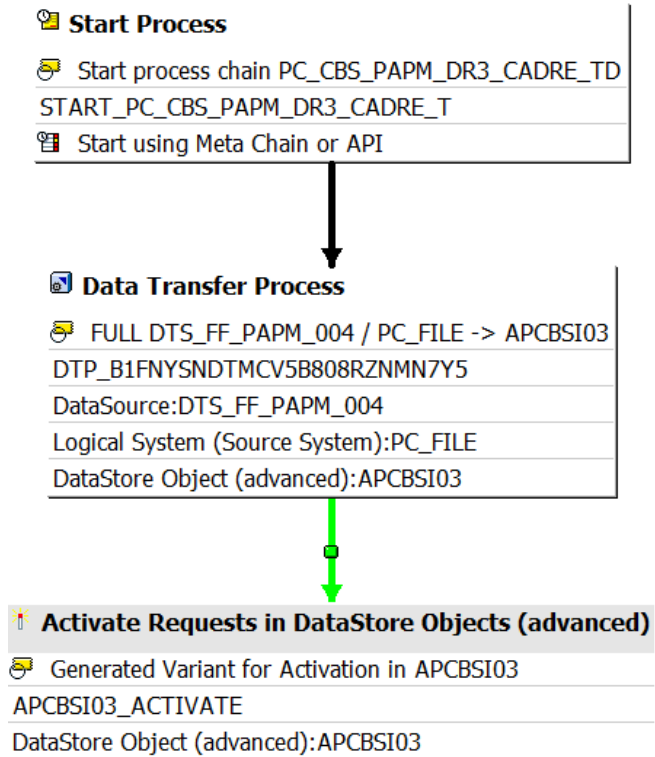
Activate Requests in DataStore Objects (advanced)

- Generated Variant for Activation in APCBSI01
- APCBSI01_ACTIVATE
- DataStore Object (advanced):APCBSI01

5. PC_CBS_PAPM_002 - PC CBS PaPM - Driver 2 Head Count - run in main Process chain



6. PC_CBS_PAPM_003 - PC CBS PaPM - Driver 3 Cadre - run in main Process chain



Main Chain

Transformation: RSDS DTS_FF_PAPM_003 PC_FILE -> ADSO APCBSI02 | Runtime Status: Only ABAP runtime is supported

Source: FF DRIVER 02 HC (DTS_FF_PAPM_003)
 Target: PAPM Driver 02 HeadCount (APCBSI02)
 Version: Active
 Active Version: Executable | Edited Version

Pos	Kd	Field	Id	Descript.	Data	Lngh
1		FISCVARNT		Fiscal Year Variant	CHAR	000002
2		FISCPER		Fiscal year/period	NUMC	000007
3		LOGSYS		Source System	CHAR	000010
4	/BIC/C_	COMPDE		Company code	CHAR	000004
5	/BIC/C_	SITEDR2		PAPM Site driver 2	CHAR	000250
6	/BIC/C_	CCDR02		PAPM Company code Dr	CHAR	000250
7	/BIC/K_	HCDR02		PAPM Nb Headcount pe	FLTP	000008

Rule Name	Pos	Kd	InfoObject	Id	Descript.	Data	Lngh	In
0FISCVARNT	1		0FISCVARNT		Fiscal year variant	CHAR	000002	
0FISCPER	2		0FISCPER		Fiscal year / period	NUMC	000007	
0LOGSYS	3		0LOGSYS		Source System	CHAR	000010	
C_COMPDE	4	/BIC/C_	C_COMPDE		Company code	CHAR	000004	
C_SITEDR2	5	/BIC/C_	C_SITEDR2		PAPM Site driver 2	CHAR	000250	
C_CCDR02	6	/BIC/C_	C_CCDR02		PAPM Company code Driver 02	CHAR	000250	
201901	8		C_VERSION		Version	NUMC	000006	
K_HCDR02	9	/BIC/K_	K_HCDR02		PAPM Nb Headcount per company Driver 02	FLTP	000016	

3. DTS_FF_PAPM_004 PC_FILE -> ADSO APCBSI03

Transformation: RSDS DTS_FF_PAPM_004 PC_FILE -> ADSO APCBSI03 | Runtime Status: Only ABAP runtime is supported

Source: FF DRIVER 03 Cadres and ALL (DTS_FF_PAPM_004)
 Target: PAPM Driver 03 Cadre and All (APCBSI03)
 Version: Active
 Active Version: Executable | Edited Version

Pos	Kd	Field	Id	Descript.	Data	Lngh
1		FISCVARNT		Fiscal Year Variant	CHAR	000002
2		FISCPER		Fiscal year/period	NUMC	000007
3		LOGSYS		Source System	CHAR	000010
4	/BIC/C_	COMPDE		Company code	CHAR	000004
5	/BIC/K_	CDDR03		PAPM Nb Cad Driver 0	FLTP	000016
6	/BIC/K_	ALLDR03		PAPM All Head count	FLTP	000016

Rule Name	Pos	Kd	InfoObject	Id	Descript.	Data	Lngh	In
0FISCVARNT	1		0FISCVARNT		Fiscal year variant	CHAR	000002	
0FISCPER	2		0FISCPER		Fiscal year / period	NUMC	000007	
0LOGSYS	3		0LOGSYS		Source System	CHAR	000010	
C_COMPDE	4	/BIC/C_	C_COMPDE		Company code	CHAR	000004	
201901	6		C_VERSION		Version	NUMC	000006	
K_CDDR03	7	/BIC/K_	K_CDDR03		PAPM Nb Cadre Driver 03	FLTP	000016	
K_ALLDR03	8	/BIC/K_	K_ALLDR03		PAPM All Head count cadre and no cadre diver 03	FLTP	000016	

Average performance

Key Figure	Estimation
~ Average Process Chain Runtime	
~ Average nb of rows loaded per load	
~ Total nb of rows loaded (if full)	
~ Average Runtime for 10k lines	

Record Keeping

Reporting

Queries End User Documentation

Main queries

BW_QRY_CPCBSI01_0001 PAPM BW Transactional data with version

Main functionalities

Broadcast

Maintenance

Known bugs

Recurring procedure

Planned Evolution