

BW - CO - Integrated Margin

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General presentation

Objective of the application

Functional Specification:

Integrated margin is originally calculated only in WBP side.

The goal is to calculate the integrated margin in CPX (like it's done in WBP with program Z_M_INT) with data from WPX and WBP and after this calcul, we must send back the data in WBP.

So, instead calculate Integrated Margin only in WBP, we will use data in WBP and in CPX.

In CPX, program ZBW_M_INT & ZBW_M_INT_ANALYSIS are a replication and adaptation (in name of tables for example) to programs Z_M_INT & ZBW_M_INT_ANALYSIS in WBP.

Apart differences on name of sources tables and internals tables, in program Z_M_INT (WBP) we make the calculation for key figures Integrated Duty (/bic/k_intdut) and Integrated Freight (/bic/k_intfrg) and not in program ZBW_M_INT (CPX) because with use data from CPX in WBP to calculate these keys figure.

Z_INT_COST is a transaction to see the result of integrated margin (she is linked to program **ZBW_M_INT_ANALYSIS**).

In program ZBW_M_INT_ANALYSIS, the calculation of integrated margin is done in module function ZBW_M_INT_READ:

ABCOMM02	ODS_PCP2
ABCOMM03	ODS_PCP3
ABCOMM04	ODS_PCP5
ABCOMM05	ODS_PCP6
ABCOMM06	ODS_PCP4
ABCOPA01	DBCOPA24
ABMARM01	ODS_MARM

Functional and Technical rules on Workbench + Reporting

Rules & Explanations

In CPX, program ZBW_M_INT is a replication and adaptation (in name of tables for example) to program Z_M_INT in WBP.

We must pay attention to table TVARVC for Z_PERIOD_IM_HIST name: if LOW field is empty, the calculation of integrated margin will be done on current and current period - 1.

If the LOW field is filled (format MMMYYY), the chain will use this period to calculate the integrated margin (to be used in case of recalculation) (same rules in WBP system).

In DTP: ABCOMM06 (Vault) -> OH_COMM01 - Delta, we have a filter to load only data with WX Source of data (to load only data who come from WPX system).

Dependencies with other applications

Data loadings

Info providers and objects loaded

See data flow.

Loading frequency

Monthly, after the execution of process chain RSP_COPCP_MONTHLY in WBP system (second day of workday).

Process chains:

PC_CO_PC_MM_04 - MM: META - M - Integrated Margin

To calculate the Integrated Margin in WPX, we need some informations for WBP. To do that, in WBP we splitted chain RSP_COPCP_MONTHLY in two:

One chain in WBP: RSP_COPCP_MONTHLY load data in WBP and trigger the chain in CPX (PC_CO_PC_MM_04).

The chain PC_CO_PC_MM_04 will load data from WPX and WBP (calculated in chain RSP_COPCP_MONTHLY) and calculate the integrated margin for Vault plant.

After that the data will be sent in WBP with help of webmethods and the chain PC_INT_MARGIN (WBP) will calculate the integrated margin with data from WBP and CPX.

[blocked URL](#)

Step 1: RSP_COPCP_MONTHLY (WBP)

Step 2: PC_CO_PC_MM_04 (CPX)

Step 3: PC_INT_MARGIN (WBP)

Document for changes in process chain in WBP side.

PC_CO_PC_MM_04 - MM: META - M - Integrated Margin is composed by three sub chains:

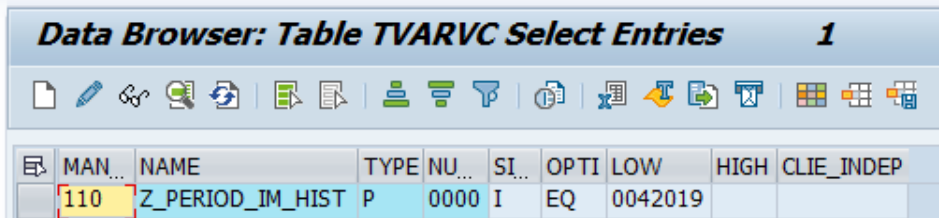
1. **PC_CO_PC_MM_01 - MM: TD - M - Acquisition Layer - Integrated Margin (Vault)**

Chain to load acquisitions DSO (by default with current month and current month -1):

- AACOMM01 - IM - Product Cost Items - Acquisition (source = WPX)
- AACOMM07 - IM - Product Cost Items - Acquisition (WB) (source = WBP)
- AACOMM02 - IM - Cost Element Matrix - Acquisition (source = WBP)
- AACOMM03 - IM - Released Costs Estimates - Acquisition (source = WBP)
- AACOMM04 - IM - Plant transfert Cost Transport - Acquisition (source = WBP)
- AACOPA01 - PA - Transport Costs & Duties - Acquisition (source = WBP)

In case where we need to reload previous month, a sub chain is used: **PC_CO_PC_MM_05 - MM: TD - M - Acquisition Layer - Integrated Margin Hist**

This chain will be executed only in case where in table TVARVC, for Z_PERIOD_IM_HIST the LOW field is not empty, the process chains will use this month to calculate the integrated margin.



MAN...	NAME	TYPE	NU...	SI...	OPTI	LOW	HIGH	CLIE_INDEP
110	Z_PERIOD_IM_HIST	P	0000	I	EQ	0042019		

Be careful, if we don't want reload specific month, the low field for TVARVC table (name Z_PERIOD_IM_HIST) must be empty.

2. **PC_CO_PC_MM_02 - MM: TD - M - Propagation Layer - Integrated Margin (Vault)**

- APCOMM01 - IM - Product Cost Items - Propagation
- APCOMM02 - IM - Cost Element Matrix - Propagation
- APCOMM03 - IM - Released Cost Estimates - Propagation
- APCOMM04 - IM - Plant Transfert Cost Transport - Propagation
- APCOPA01 - PA - Transport Cost & Duties - Propagation

3. **PC_CO_PC_MM_03 - MM: TD - M - Business Layer - Integrated Margin (Vault)**

- ABCOMM01 - IM - Product Cost Items - Business
- ABCOMM02 - IM - Cost Element Matrix - Business
- ABCOMM03 - IM - Released Cost Estimates - Business
- ABCOMM04 - IM - Plant Transfert Cost Transport - Business
- ABCOPA01 - PA - Transport Cost & Duties - Business

After these three sub chains, we use program ZBW_TVAVVC_ZPERIOD to update TVARVC table for Z_PERIODE, Z_PERIODE-1 and Z_PERIODE-2.

Then:

If in TVARVC LOW field is empty for Z_PERIODE_IM_HIST, we execute program ZBW_M_INT with Z_PERIODE1 variant (Z_PERIODE-1 in tvarvc) and Z_PERIODE_M variant (Z_PERIODE in tvarvc).

Else, if in TVARVC LOW field is not empty for Z_PERIODE_IM_HIST, we execute program ZBW_M_INT for the period defined in TVARVC low field.

Program ZBW_M_INT will calculate the integrated margin and load the result in DSO ABCOMM05.

Data from DSO ABCOMM05 will be loaded in DSO ABCOMM06 and then in open hub destination OH_COMM01.

When the open hub is finished, the chain execute the program ZBW_REST_SERVICE_IM to sent information to give the go to webmethods to transfert the file OH_COMM01.CSV (in directory /exploit/BW/integrated_margin) from CPX to WBP.

PC_GLOBAL_ATTR_04 - Global: MD - D - Material unit of quantity (DSO)

This chain needs to be lauched before the caulation of integrated margin to have last version of material unit quantity in DSO ABMARM01.

Normally this chain is launched every day.

Program ZBW_REST_SERVICE_IM:

The goal of this program is to transfert some information (directory, hostname of source an target server...) to webmethod to trigger the transfert of flat file from CPX to WBP.

For that it's need to hafe an RFC destination "RFC_MFT_REST" (transaction sm59) where we defined the target host:

RFC Destination RFC_MFT_REST

Connection Test

RFC Destination:

Connection Type: HTTP Connection to External Serv Description

Description

Description 1:

Description 2:

Description 3:

Administration Technical Settings Logon & Security Special Options

Target System Settings

Target Host: Service No.:

Path Prefix:

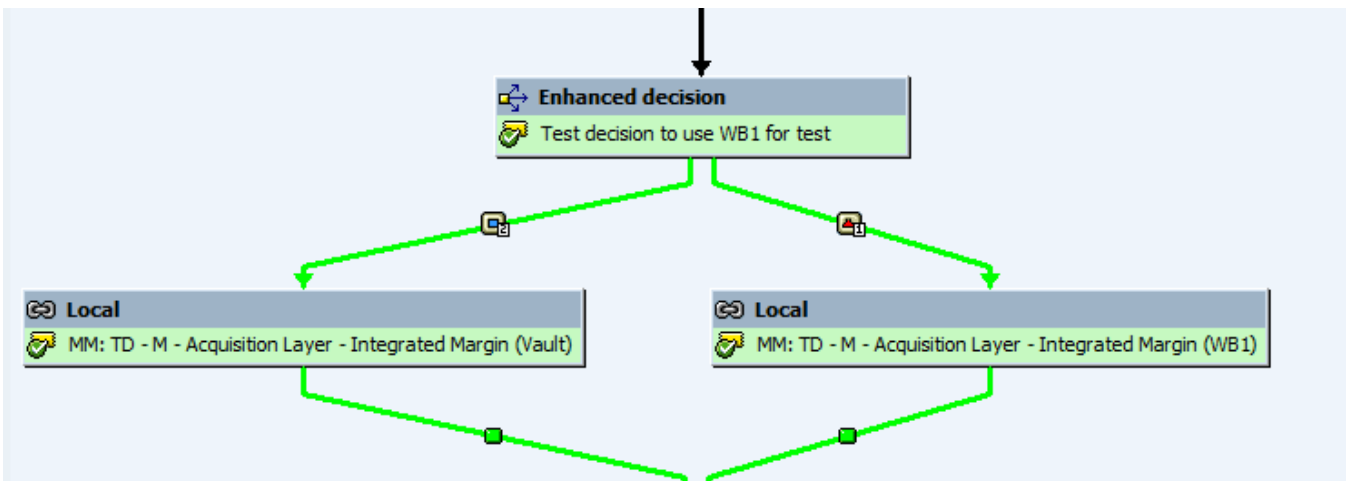
After in program ZBW_REST_SERVICE_IM (inspired by program in [this](#) documentation) we defined the informations to send to Webmethods like:

- User and Password for webmethods
- Target host: defined in master data global filter (stream HOSTNAME) to have the good hostname in function of system (development, quality, production)
- SourceHost: defined directly in the program in function of system.
- Source FileName: '/exploit/BW/integrated_margin/OH_COMM01.CSV'.
- Source Archive: '/exploit/BW/archive/'.
- Target Dirrectiry: '/exploit/BW/Integrated_Margin/'.

Tests in WB1 system:

The tests will be done with WB1 system instead WBQ.

To load data from WB1 instead WBQ in process chain PC_CO_PC_MM_04 there is a decision process where the program will be read the master data global filter:



Data Browser: Table /BIC/PC_GLBFLT Select Entries 16

Global Filter Stre...	Global Filter Ru...	Global Filter V	Change flag (1 inserted / D deleted)	Global Filter Descri	Global Filter Si...	Global Filter Opti...	Low	Global Filter High V	Global Filter Active
TEST_WB1	IM	0001 A		Variable to load data from WB1 (if low = yes) or WBQ	I	EQ	YES		Y

If low field = YES, the process chain will use DTP with WB1 source system instead WBQ.

This variable from mmaster global filter is also used in program ZBW_REST_SERVICE_IM to define the target host:

```
117 | "change target host if we need to test with WB1 system.
118 | SELECT SINGLE /BIC/C_LOW FROM /BIC/PC_GLBFLT INTO C_LOW
119 | WHERE /BIC/C_STREAM = 'TEST_WB1'
120 | AND objvers = 'A'
121 | AND /BIC/C_RULE = 'IM'
122 | AND /BIC/C_ACTIVE = 'Y'.
123 |
124 | IF C_LOW = 'YES'.
125 |     v_targethost = 'wb1sapr3_WB1_20'.
126 | ENDIF.
```

After the test and the transport in production, it will be necessary to at least put the LOW at NO. And if possible remove the decision process and sub chain WB1 from process chain PC_CO_PC_MM_04 to make it clearer and avoid mistakes (and comment the code in program ZBW_REST_SERVICE_IM).

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

Main functionalities

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