Technical documentation - Plant Maintenance Report

Access Management

Roles & Access

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

Role Code	Role Description	Explanation
ZR_RCS_CA_M08	ZR_RCS_CA_M08	Role menu for queries
ZR_RCS_PM_A02	Maintenance Orders Applications - End User role	User role
ZR_RCS_PM_A01	Maintenance Orders Applications - Super User role	User role
ZR_RCS_PM_A03	Maintenance Orders Applications - Key User role	User role
ZR_RCS_PM_A00	Maintenance Orders Applications - RCS/APM role	User role

Authorization Objects

List of authorization objects mandatory for the application.

Authorization object	Explanation
C_PMORDER__0COMP_CODE 0COMP_CODE	Company, role: ZR_*_CA_P01
C_PMORDER__C_AUTHMA 0PLANT__C_AUTHMA	Authorization scope: ZR_*_CA_P00
C_ZSECT (Global Business Unit)	GBU role: ZR_*_CA_P05

DataFlow

Overview

Technical Rules on Workbench

Data is extracted from standard extractors from system WP1 400: 2LIS_17, 0PM_OM_OPA_1 & 2, 0CA_TS_IS_1

Dependencies:

- It shares some extractors (2LIS_17_I3OPER, 0PM_OM_OPA_2) with MECANO.
- Data is consumed by ORACLE by the broadcast of a workbook (BCAST_ORACLE_PM) with PM costs, which is integrated manually by IS PM team.
- Data is loaded in cube CUB_PM for QV dashboard RCS KPI
- Costs data from all three systems (WP1/PF1/RHO) is used in FI cubes

Functional Rules:

- Alternative Labeling is used on Functional Location in the source system. The alternative label is loaded in the master data attributes.

Transformations for CUB_PM001 CUB_PM001 IFS_0PM_OM_OPA_1:

Start routine:

Fields ABCINDIC (ABC indicator) and C_OBJTYPE (Object Type (equip)) comes from view /BI0/MEQUIPMENT if a corrspondance is foundwith the equipment, else comes from view /BIC/MC_FUNCLOC.

Infopackages are filtered on CURTYPE = 10 & 0VTYPE between [020;030] and [050;090] with differents periods.

Transformation TRSF: ODS_PMEN -> CUB_PM001:

C_FUNCLOC (functional location) / 0WAPRL (Maitenance plan) / C_WAPOS (maintenance plan item) & 0NOTIFICATN (Notification number) come from master data C_PMORDER.

C_COSTCENTER equal M if field C_MATNR is not empty.

C_EBELN (Purchase order number) if ref_doc_ct (Reference Document: Type) = 020 then field equal ref_doc_nr (Reference Document Number (External Document Number)).

C_EBELP (Item Number of Purchasing Document) if ref_doc_ct (Reference Document: Type) = 020 then field equal ref_doc_it (Reference document item).

C_DINPD (Item number purchase document description) if ref_doc_ct = 020 then field equal C_DINPD.

Fields ABCINDIC (ABC indicator) and C_OBJTYPE (Object Type (equip)) comes from view /BI0/MEQUIPMENT if a corrspondance is foundwith the equipment, else comes from view /BIC/MC_FUNCLOC.

DTP - ODS_PMEN -> CUB_PM001 : filters currency type = 10 and semantic group on CURTYPE / METYPE / VTYPE / FISCVARNT / MATL_GROUP / DB_CR_IND / CREDITOR / VTSTAT / VTDETAIL / VERSION / COSTELMNT / COMP_CODE / CO_AREA / FISCPER / /BIC/C_EKORG / /BIC /C_EKGRP.

Transformation: TRSF : 0PM_OM_OPA_2 -> ODS_PM01 (Rhodia)

Fields 0PART_CCTR (Partner Cost Center), 0PART_ACTTY (Activity Type of Partner Cost Center), 0PART_COORD (Partner Order), 0PART_WBSEL (Partner WBS Element), 0PART_ABCPR (Partner Business Process) are determined with module function CO001_BIW_PARTNER_ DECODE with input parameter rspobart (Partner (short)) & rsparobval (Partner IO val.)

DTP : 0PM_OM_OPA_2 -> ODS_PM01 (Delta): semantic group on KOKRS, BELNR, BUZEI, FISCVAR, FISCPER and CURTYPE.

Transformation RSDS 2LIS_17_I3OPER WP1_400 -> ODSO ODS_PM04:

C_PM_USST (C_PM_USST User Status.) comes from master data C_PMORDER (field ZZISTAT).

C_SYSTATS (Detailed System Status.) comes from master data C_PMORDER (field ZZESTAT).

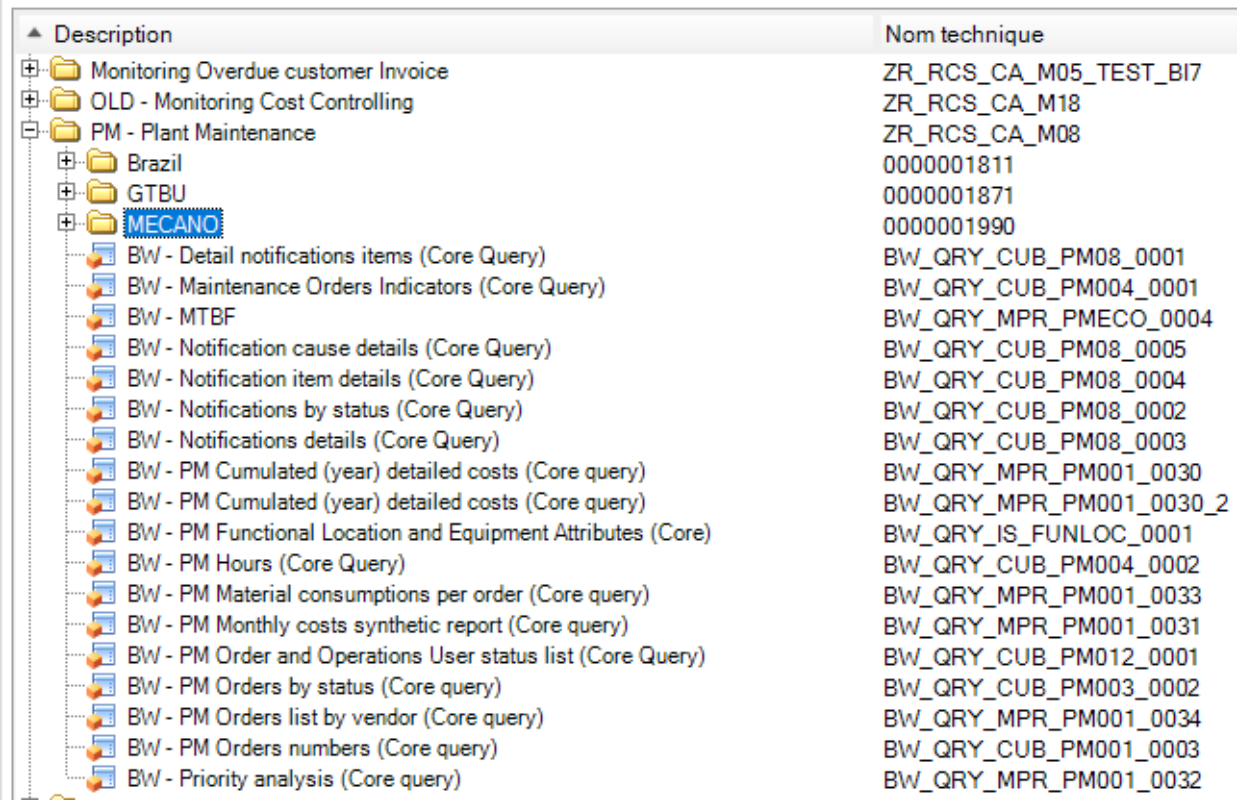
Transfer rule CUB_PM004 8ODS_PM04:

Fields ABCINDIC (ABC indicator) and C_OBJTYPE (Object Type (equip)) comes from view /BI0/MEQUIPMENT if a corrspondance is foundwith the equipment, else comes from view /BIC/MC_FUNCLOC.

Reporting

- CATALOG - Industrial & Planning Reporting (in the tab Maintenance)

Query	Descriptions
BW_QRY_MPR_PM001_0001_BCAST	BW - PM Monthly Synthetic Expenses (BROADCAST)
BW_QRY_MPR_PM001_0030	BW - PM Cumulated (year) detailed costs (Core query)
BW_QRY_MPR_PM001_0030_2	BW - PM Cumulated (year) detailed costs (Core query)
BW_QRY_MPR_PM001_0031	BW - PM Monthly costs synthetic report (Core query)
BW_QRY_MPR_PM001_0031_MPI1	MPI 1 - Maintenance Costs per ton of production
BW_QRY_MPR_PM001_0031_MPI4	MPI 4 - Structure of Maintenance Costs
BW_QRY_MPR_PM001_0033	BW - PM Material consumptions per order (Core query)
BW_QRY_MPR_PM001_0034	BW - PM Orders list by vendor (Core query)
BW_QRY_MPR_PM001_BCAST_0001	BW_QRY_MPR_PM001_BCAST_0001
BW_QRY_MPR_PM001_BCAST_0001	Extraction Oracle 2019
BW_QRY_MPR_PMECO_0001	BW - Emergency WOs
BW_QRY_MPR_PMECO_0002	BW - Past Due PM
BW_QRY_MPR_PMECO_0003	BW - MTBF Rotating Equipment
BW_QRY_MPR_PMECO_0004	BW - MTBF
BW_QRY_MPR_PMECO_0005	BW - Backlog Maintenance Metrics
MPR_PM003_QRY005	General Control of Preventive Maintenance (Quantities)
QV_BW_QRY_MPR_PM001_0030	QV-BW-PM Cumulated (year) detailed costs (QV)
QV_BW_QRY_MPR_PM001_0031	QV-BW-PM Monthly costs synthetic report (QV)



Description	Nom technique
Monitoring Overdue customer Invoice	ZR_RCS_CA_M05_TEST_BI7
OLD - Monitoring Cost Controlling	ZR_RCS_CA_M18
PM - Plant Maintenance	ZR_RCS_CA_M08
Brazil	0000001811
GTBU	0000001871
MECANO	0000001990
BW - Detail notifications items (Core Query)	BW_QRY_CUB_PM08_0001
BW - Maintenance Orders Indicators (Core Query)	BW_QRY_CUB_PM004_0001
BW - MTBF	BW_QRY_MPR_PMECO_0004
BW - Notification cause details (Core Query)	BW_QRY_CUB_PM08_0005
BW - Notification item details (Core Query)	BW_QRY_CUB_PM08_0004
BW - Notifications by status (Core Query)	BW_QRY_CUB_PM08_0002
BW - Notifications details (Core Query)	BW_QRY_CUB_PM08_0003
BW - PM Cumulated (year) detailed costs (Core query)	BW_QRY_MPR_PM001_0030
BW - PM Cumulated (year) detailed costs (Core query)	BW_QRY_MPR_PM001_0030_2
BW - PM Functional Location and Equipment Attributes (Core)	BW_QRY_IS_FUNLOC_0001
BW - PM Hours (Core Query)	BW_QRY_CUB_PM004_0002
BW - PM Material consumptions per order (Core query)	BW_QRY_MPR_PM001_0033
BW - PM Monthly costs synthetic report (Core query)	BW_QRY_MPR_PM001_0031
BW - PM Order and Operations User status list (Core Query)	BW_QRY_CUB_PM012_0001
BW - PM Orders by status (Core query)	BW_QRY_CUB_PM003_0002
BW - PM Orders list by vendor (Core query)	BW_QRY_MPR_PM001_0034
BW - PM Orders numbers (Core query)	BW_QRY_CUB_PM001_0003
BW - Priority analysis (Core query)	BW_QRY_MPR_PM001_0032

Several topics are covered by BEx reports :

- Work Orders with Maintenance Plan
- Work Orders with Equipment
- Notifications by Status and Causes
- Planned and Actual duration on Operations
- Work Orders and Operations by Status and Priority
- Monthly Costs
- Functional Location and Equipment Attributes
- Consumption of Materials on Work Orders
- Work Orders Costs by Vendor
- MTBF (Mean Time Between Failure)
- Backlog on Operations

Broadcast

- BCAST_ORACLE_PM (Weekly) : Extraction of actual costs year to date for current year send to PM IS Team for Chalampé plant, and the data is loaded manually in ORACLE Hyperion by PM Team.
- RCS_KPI_PM_ALL (Monthly) : Extraction of KPI PM. It has been unscheduled on SEP 2015 after a usage survey from IS Reporting Team and is not running anymore.

Dependencies with other applications

We should have the information where the application is sending or receiving information (e.g. APD open hub)

Data Loading

Info Providers and objects loaded

Detail of process chain, list + link between or special event done for the loading

Main Process Chain	Final Provider Loading	Frequency	Time start	Duration

RSP_PM Plant Maintenance	CUB_PM001 CUB_PM002 CUB_PM003 CUB_PM004 CRFICCS01	Daily (not saturday)	Arround 1:15 am	45 mins

Data loadings

Info providers and objects loaded

Infoproviers and Master data are grouped in the Application Area **AREA_PM.**

Process Chains included in the Global RSP_DAILY Process Chain:

- ZPC_MD_ATTR_RCS (For shared master data attributes and texts)
- RCS_PM_KPI (Load Cubes for RCS KPI application used by QV dashboard)
- RSP_PM
- RSP_PM_ACETOW (Load PM Costs data from RHO system for FI cubes)
- RSP_PM_SOLVAY (Load PM Costs data & Commitments and orders distribution rules from PF1 system for FI cubes)
- PC_PM_01

Others Process Chains:

- PC_PM_ORDER_WEEKLY
- PM_BACKLOG

Loading frequency

- Daily loadings Monday to Friday
- Weekly loadings for PC_PM_ORDER_WEEKLY & PM_BACKLOG

Average performance

The main process chain RSP_PM run in about one and a half hours.

PM Extractors (2LIS_17) are set up in delta with a delta queue. Costs on PM orders are loaded in full mode.

Historization

We keep all the data in the DSO and Cubes. Archiving is done on Source System.

Data Quality Control

Operational Documentation

Procedures

<Describe the recurring procedures needed to operate the application (eg. start/pause/terminate/restart the app processes, data preparation, data ingestion, ETL, data visualization, data export, other manual activities)>

Scheduling

<Describe the scheduling in place for the application (eg. existing jobs, trigger time/event based, dependencies)>

Monitoring

<Describe the monitoring checks to confirm the application is performing well (eg. check the overall status, check performance metrics like runtime /data volume/memory/disk/CPU, maintain and react to alerts/notifications)>

Error Handling

<Describe how to handle errors (eg. error codes, description and respective resolution, alert users)>

Known Bugs

<List the existing bugs, its criticity, workarounds and resolution plan.>

Roadmap

<List past & future evolutions for the application (including links to MED/FSD/TSD)>