

Technical Documentation - Ship Pad (Aero)

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Access Management

Roles & Access

Role Code	Role Description	Explanation
ZBI_RCS_SD_A01	Application role for Global Sales project / SD data / Orderbook	Role for the application
ZR_RCS_CA_M49	SD - Sales and Distribution	Role menu for the application

Authorization Objects

List of authorization objects mandatory for the application.

Authorization object	Explanation
CPFCTR1_2	GBU
C_COMPCDE	Legal company
C_SAL_OF	Sales office

WARNING: For the PO part the notion of sales offices doesn't exist. The restriction in sales offices will not be considered for the reports PO and PO+SO.

Data flow

Overview

The ship-pad report is based on "Order Book - To be Issued (SO + PO)", that includes Sales and Transfer orders.

The scope of the report are all open orders that haven't been issued (without Actual Goods Issue date).

Rejected Order lines and Order Lines with "rest to be delivered" below the Tolerance are EXCLUDED from the report.

In order to meet ship-pad requirements. several elements were incorporated into existing Order Book.

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The data flow is based on the LSA method. The data visualization is done on the CompositeProvider CPSDAE03(Aero - Ship Pad (Multiple Deliveries)) and CPSDSO41(MP: Sales order book (Global Sales)).

Global Sales data layers:

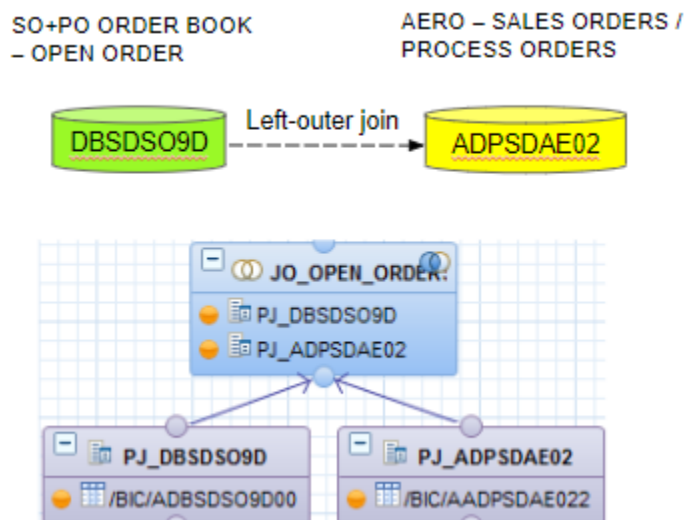
- Propagation Layer
- Business Layer
- Reporting Layer
- Virtual Layer

See the [data flow](#) of the Composite Provider CPSPDAE03(Aero - Ship Pad (Multiple Deliveries)) generated from Performer Suite.

See the [data flow](#) of the Composite Provider CPSSDSO41(MP: Sales order book (Global Sales)) generated from Performer Suite.

New Composite Provider **CPSPDAE03** is based on HANA Calculation View **CV_SD_AE_CPSPDAE03**

Initially joins DSOs below:

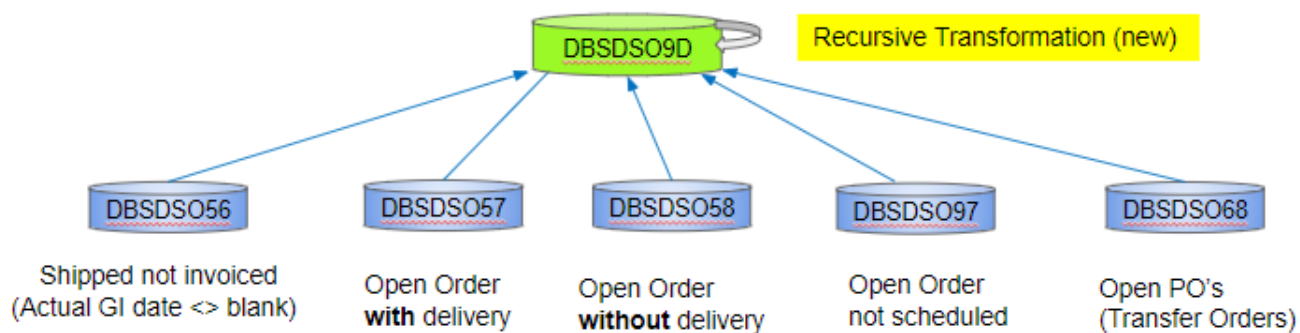


For Sales Order, the "rest to be delivered" (K_NONDEL) is stored, at delivery line level, in DBSDSO9D.

For Purchase Orders, it is calculated dynamically in the view accessing tables below:

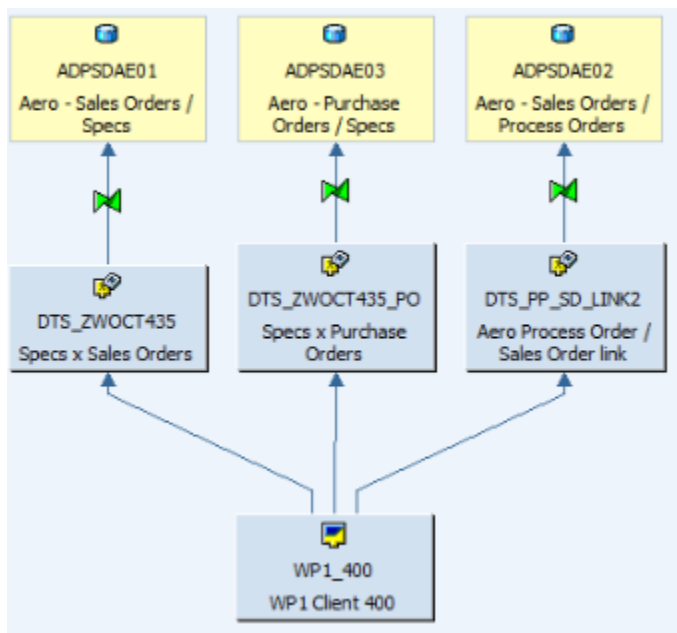
- DBSDSO66 - to get PO quantity / Confirmed quantity (by schedule line)
- DBSDSO69 - to get Delivery quantity

New fields were added to DBSDSO9D and populated in Transformations below



- Orders already shipped (DBSDSO56) are not relevant for Ship-pad. They are excluded in the query using filter "Actual GI date = blank".
- New recursive Transformation was created to populate "Passed Specs flag".

New Advanced DSOs::



Core rules

New fields Aero - Sales Order

In WP1, new fields specific for Aero were added in VBAP (tab " Additional data B ")

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They are then loaded as attributes in **C_ITM_SD** master data.

In the case of specs, which can be multiple for one order line (table ZWOCT435), they are first loaded into DSO ADPSDAE01 and then concatenated as attribute C_SPECLIS in C_ITM_SD.

New fields Aero - Purchase Order

In WP1, new fields specific for Aero were added in EKPO (tab "Aero Specific information")

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They are then loaded as attributes in **C_ITM_GS** master data.

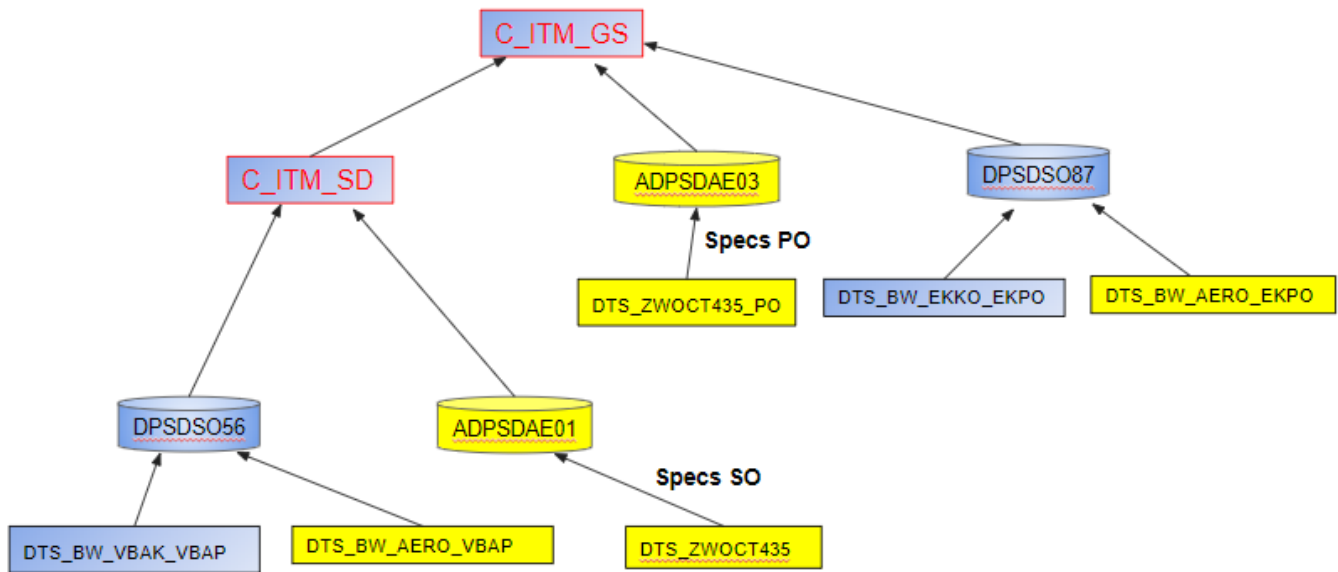
In the case of specs, which can be multiple for PO item, they are first loaded into DSO ADPSDAE03 and then concatenated as attribute C_SPECLIS in C_ITM_GS.

C_ITM_GS is the master data used in ship-pad report because it contains both Sales Order and Purchase Orders.

Data that comes from Sales Order item (VBAP) goes first to C_ITM_SD and then to C_ITM_GS.

Data that comes from Purchase Order item (EKPO) goes directly to C_ITM_GS.

New loads into order line master data (C_ITM_SD / C_ITM_GS)



(Objects in yellow were created during Solstice project)

Sales Orders x Process Orders

Some columns from ship-pad report bring production planning information (like workcenter, parent batch).

The link between Sales Orders and Process Orders comes from table **Z1C_PP_SD_LINK** in WP1 and is stored in DSO **ADPSDAE02**.

One sales order can be linked with multiple process orders .

In ship-pad report, this will generate additional lines, but the key figures from the order line are then repeated in each line of the report.

Passed Specs

New attribute **C_PASSPEC** was added to **C_BATCH2** master data and stores the passed specs (concatenated) from the batch.

Then the spec list from order line is compared against this batch attribute to generate **“Passed specs flag (Y/N)”** in ship-pad report.

Passed Specs (batch) is calculated at batch level comparing the spec list from order line with the passed specs from batch.

So you can have different values (Y or N) by batch, for the same order line, as in example below

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This is calculated in Transformation **DBSDSO57 -> DBSDSO9D**.

Passed Specs (order) is an overall flag by order line.

If any of “passed specs (batch)” is “N”, then “passed specs (order)” = ‘N’.

This is calculated in Recursive Transformation into **DBSDSO9D**.

One-time customer

For one-time customers (VBPA-XCPDK = ‘X’), same customer code can have different names, stored at sales order level.

New DSO **AASDAE03R** was created to store one-time customer name at order level. It’s used as a lookup when loading data into **DBSDSO9D**.

If customer is found in this DSO, get its name from here, else get it from customer master data.

GTS data (ECCN numbers & ITAR category)

It’s populated in **DBSDSO9D** via lookup in **DP_GTS92** with material + following filters:

EU ECCN

Legal Regulation : DUALE

Numbering Scheme: EUECCN

US ECCN

Legal Regulation : EAR

Numbering Scheme: USECCN

ITAR Category

Legal Regulation : ITAR

Numbering Scheme: USITAR

Wave 2 and 3 - Enhancements

Batch

In the first Ship Pad Version, the batch data was retrieved from Delivery level, but users wants to see the Batches before the delivery creation and its possible according to the data from SAP transaction , ZWIM023 which was loaded in BW as C_BATCH2 attributes.

Source	Target
30 Z_IM_001 Parent lot CHAR 000010	24 C_BATCH2 Batch number CHAR 000030
31 Z_IM_002 Sub-lot CHAR 000010	25 C_SALEPOT Sales POT CHAR 000004
32 Z_IM_048 Net DEC 000013	26 C_POTEDAT Sales Potential Date DATS 000008
33 Z_IM_052 Net UOM CHAR 000003	27 C_QM_TEXT Text CHAR 000030
34 Z_IM_031 Previous Creel Position CHAR 000008	28 C_QRB_ACT Action CHAR 000030
35 Z_IM_049 Length DEC 000015	29 C_BMGR BMGR Input CHAR 000030
36 Z_IM_012 Process Order Number CHAR 000012	30 C_PRINPUT Prod Input CHAR 000030
37 Z_IM_045 Production Finish Date DATS 000008	31 C_TEINPUT Tech Input CHAR 000030
38 Z_IM_046 Production Finish Time TIMS 000006	32 C_FLGCROS Flag Cross System CHAR 000001
39 Z_IM_029 Winder Number # CHAR 000008	33 C_CROSSYS Cross Source System CHAR 000010
40 Z_IM_028 Metering Pump # CHAR 000011	34 C_ZUSTD Batch in Restricted-Use Stock CHAR 000001
41 Z_IM_047 Carbon Spool Winder CHAR 000008	35 C_B_SDOC Batch Attr - Sales Document CHAR 000010
42 Z_IM_030 Creel Position CHAR 000008	36 C_B_SITM Batch Attr - Sales Item CHAR 000006
43 Z_IM_036 Doff CHAR 000011	37 OQUANTITY Quantity QUAN 000017
44 Z_IM_004 Sales Document CHAR 000010	38 OUNIT Unit of measure UNIT 000003
45 Z_IM_005 Sales doc. item NUMC 000006	39 C_PRCSORD Process Order Number CHAR 000012
46 CUOBJ_BM Int. object no. NUMC 000018	
47 CLABS Unrestricted QUAN 000013	
48 Z_IM_006 Target quantity QUAN 000013	
49 Z_IM_007 Target qty UoM UNIT 000003	

Linked Quantity

Quantity available in the SAP transaction ZWIM023.

% Linked

Formula at query level: (Linked quantity / Document Item Quantity) * 100

Estimate GI Date

New field available in order to provide always a GI date for the Order Line, because when data comes from Open Order Not Scheduled DSO (DBSDSO97) the To Be Invoiced date has a constant value 01.01.1900.

This field is based in a formula at Calculation View level where it checks if the C_FLAG is Marked, if YES then considers the Goods Issue Date (GI_DATE), otherwise keep the To Be Invoiced Date (C_TBIDAT2).

Note: C_FLAG is marked only when the data comes from Open Order Not Scheduled DSO (DBSDSO97) .

Note: The next fields have been defined in the DBSDSO9D self loop transformation (Rec DBSDSO9D -> ODSO DBSDSO9D)

Usage Decision Complete (Concatenated)

Check the batch attribute (C_LOBMUD), Y if all batches linked do the Sales Order/Transfer Order Item have 'R04 A' , if one of them is N, then N.

Unrestricted (Concatenated)

Check the batch attribute (C_ZUSTD), Y if all batches linked do the Sales Order/Transfer Order Item have Y, if one of them is N, then N.

Process Order WPX (Concatenated)

Concatenates all the Process Order documents available to the Sales Order/Transfer Order Item.

Sched Prod End (Concatenated)

Concatenates all the Schedule Production End dates available to the Sales Order/Transfer Order Item.

Sched Prod Start (Concatenated)

Concatenates all the Schedule Production Start dates available to the Sales Order/Transfer Order Item.

Parent Batch WPX (Concatenated)

Concatenates all the Parent Batches available to the Sales Order/Transfer Order Item.

Backlog

Y - Last Requested Goods Issue date (C_LSTRQGI) is less then Current day

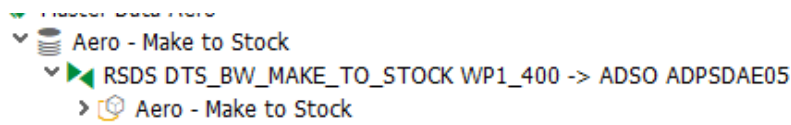
Credit block (C_CRDBLK) is empty, A or D

Delivery blockings (C_DELBLK and C_DELBLK2) are empty

N - Other conditions

Make to Stock

New extractor created to load data from SAP tables KOTH911 and KONDH.



```
ADPSDAE05
0C0YZ6LH71QSJNM3K0301PZ61UV59UK2
DTS_BW_MAKE_TO_STOCK
```

Definition:

KONDH-CHMVS	Make to Stock
913	MTO+SPEC
914	MTS
915	MTS+SPEC

Reporting

Workbook		Query	
Order Book: To be Invoiced + Aero Program & Market	BW_WBK_CPSDSO41_SD011	BW - Order book: To be invoiced Full (Core query)	BW_QRY_CPSDSO41_SD011
Ship Pad report	BW_WBK_CPSDAE03_0001	BW Aero - Ship Pad	BW_QRY_CPSDAE03_0001
Open Orders report - External	BW_QRY_CPSDAE03_0002	Open Order Report -External	BW_QRY_CPSDAE03_0002
Open Orders report - Internal	BW_WBK_CPSDAE03_0003	Open Order report - Internal	BW_QRY_CPSDAE03_0003

Data loading

Main Process Chain	Final Info Provider	Frequency	Start Time	Duration
PC_GLOBAL_SALES_MAIN	CRSDSO41, 42...	Daily	~1:30am CET	~3.5h
PC_SD_MAIN	CRSDSO01, 02...	Daily	~2:00am CET	~1h
PC_GL_SALES_MAIN_PO	CRSDSO51, 52...	Daily	~6:00am CET	~1h
PC_OBAS_TRANSFERS_MAIN	CRSDSO11, 12...	Daily	~6:00am CET	~0.5h

Data Quality Controls

Data comes from SAP system. To compare data between BW and sources systems, check propagation layers.

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 criticality, workarounds and resolution plan.>

Roadmap

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