

OEE

- Description
 - Talend
 - Source to ODS (DATA_OCEAN_DOMAIN INDUSTRIAL)
 - ODS to DM
 - Access rights
- Source
 - Format
- Destination
 - Location
 - Format
 - Sizing
 - Assessment
- Loading
 - 1.1 Incremental Load
 - 1.2 Full load
 - 1.3. Reloading data
 - 1.4 Plan to schedule
 - 1.5 Timing
- Criticality
- Logging

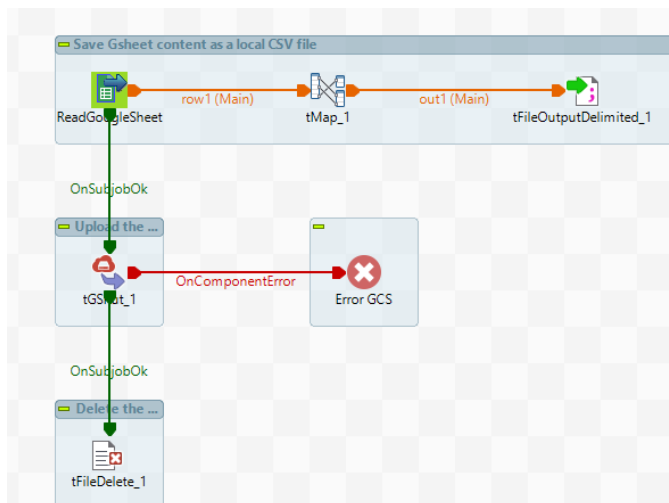
Description

The source data is the gsheet from user, we load to big query (BQ) on project prj-data-dm-industrial-[env].

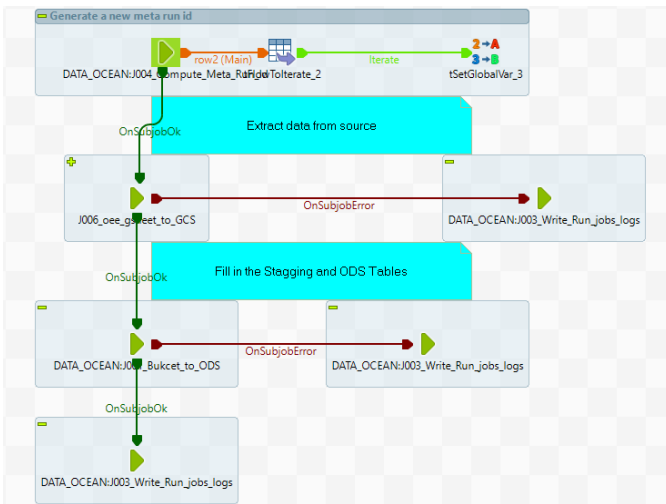
Talend

Source to ODS (DATA_OCEAN_DOMAIN INDUSTRIAL)

J006_oee_gsheet_to_GCS



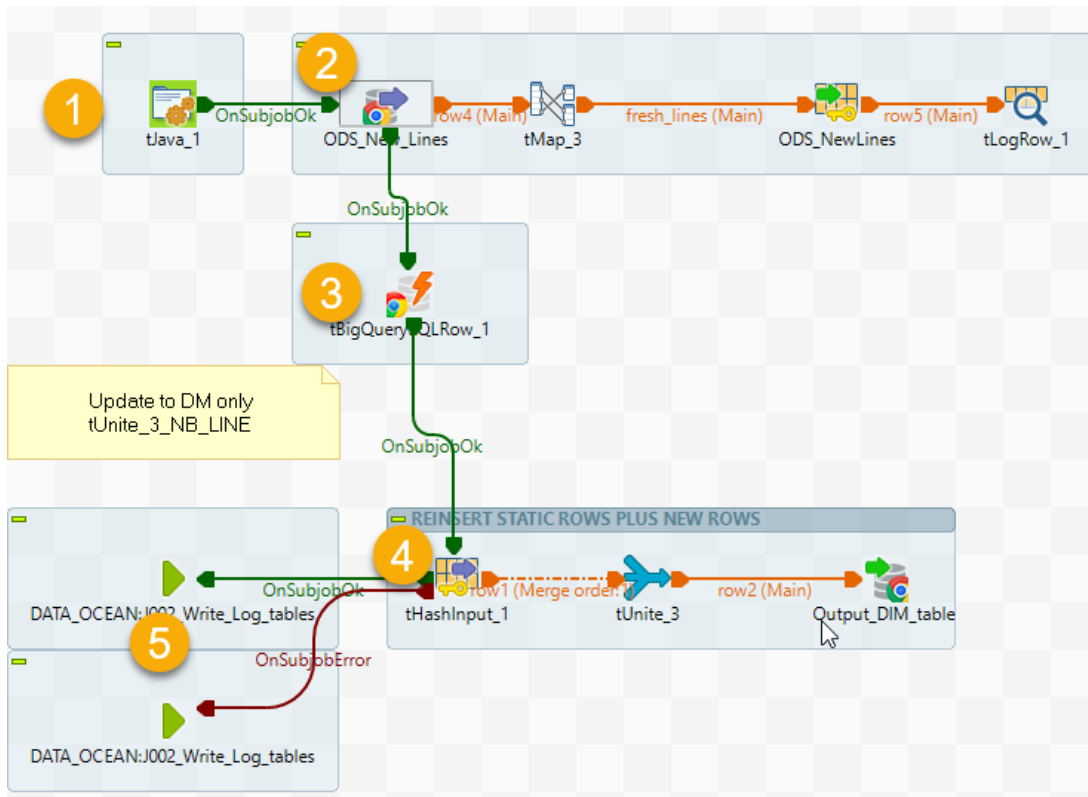
F006_Gsheet_OEE_TO_BQ



1. Read data from
 - a. gsheet I_VAR_GOOGLE_SHEET_oee_id
 - b. tablename I_VAR_GOOGLE_SHEET_oee_tab
 - c. start row I_VAR_GOOGLE_SHEET_oee_row_start = 2
 - d. end row I_VAR_GOOGLE_SHEET_oee_row_end = 0 means all rows
2. Save data to bucket cs-ew1-prj-data-dm-industrial-dev-staging/Gsheet_OEE
3. Load data to prj-data-dm-industrial-dev
 - a. STG_FIL_0000_0000_F001_F_H_oeo
 - b. ODS_FIL_0000_F001_F_H_oeo

ODS to DM

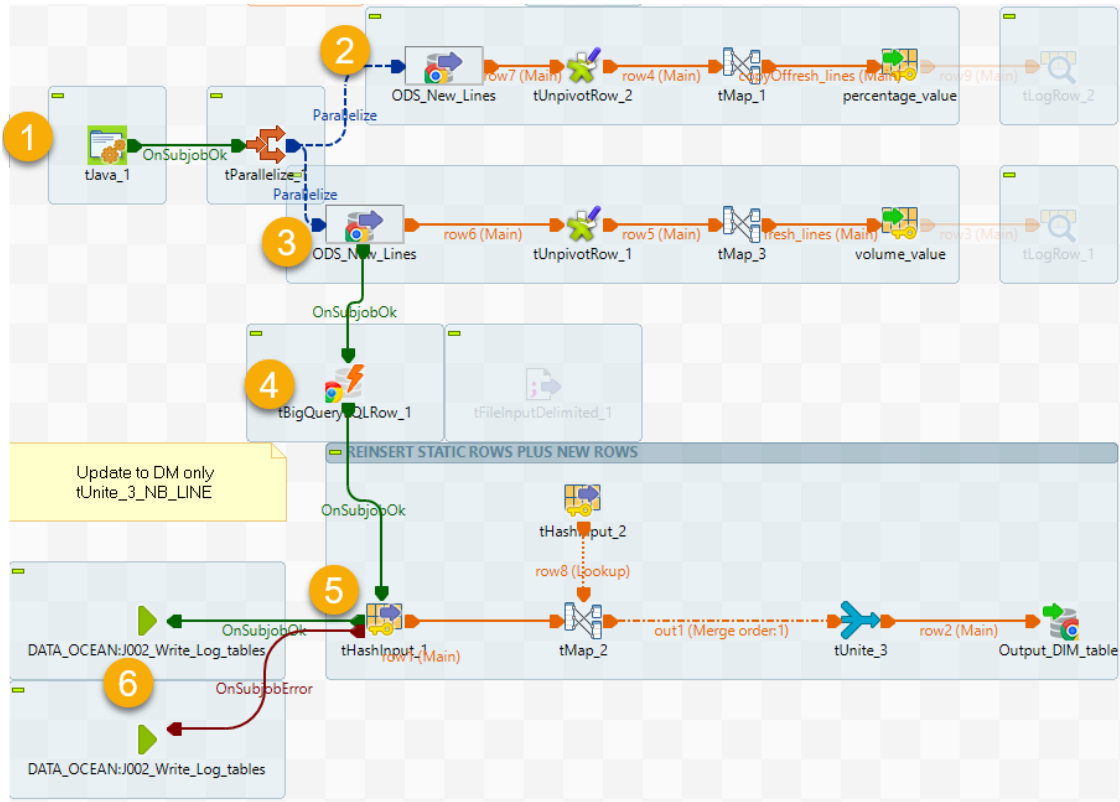
F016_FACT_oeo_main (J016_FACT_oeo_main)



1. Assigned extraction time and set the loading getting from last load from ODS_FIL_0000_F001_F_H_oeo max meta_business_date
2. Select data from ODS only the main fields regarding requirement (the rest of the measure except the column starting with number 1 - 6 are kept in losses table)
3. Delete data on DM.FACT_oeo_main before load data from ODS because there is a case that user enter date 1/1/2024 and change to 01/01/2024, which cause duplicate records

4. Load the data from point 2 to DM.FACT_oe_main
5. Write the log

F016_FACT_oe_loses (J016_FACT_oe_loses)



1. Assigned extraction time and set the loading getting from last load from ODS_FIL_0000_F001_F_H_oe max meta_business_date
2. Select data from ODS only the losses fields on percentage and unpivot the data [regarding requirement](#)
3. Select data from ODS only the losses fields on volume and unpivot the data
4. Delete data on DM.FACT_oe_loses before load data from ODS because there is a case that user enter date 1/1/2024 and change to 01/01/2024, which cause duplicate records
5. Load the data from point 2 join with point 3 to DM.FACT_oe_loses
6. Write the log

From

1. Volume External causes	1. External causes	2. Volume Planned maintenance shutdown	2. Planned maintenance shutdown	3. Volume Intercampaigns changeovers	3. Intercampaigns changeovers	4. Volume Breakdown	4. Breakdown	5. Volume Performance	5. Performance	6. Volume Quality	6. Quality
956.55724	17.28%	0	0.00%	82.42739	1.49%	101.17442	1.83%	146.55453	2.65%	5.12214	0.09%
0	0.00%	32.82276	0.60%	0	0.00%	98.46827	1.80%	339.16849	6.20%	0	0.00%
1926.21254	21.40%	45.00497	0.50%	135.0149	1.50%	117.01291	1.30%	162.01788	1.80%	0	0.00%
878.09781	21.64%	13.79636	0.34%	91.70522	2.26%	348.96678	8.60%	260.91354	6.43%	33.27358	0.82%
9.48745	0.28%	76.87526	2.29%	21.70002	0.65%	49.32128	1.47%	105.80862	3.15%	-0.87473	-0.03%
51.62664	0.75%	163.82852	2.38%	28.91092	0.42%	134.22925	1.95%	85.35604	1.24%	0	0.00%
73.89723	3.51%	606.79473	28.83%	0	0.00%	328.77478	15.62%	107.34903	5.10%	12.16109	0.58%
455.52947	11.49%	34.6309	0.87%	80.45023	2.03%	628.68394	15.86%	424.13789	10.70%	48.8601	1.23%
224.98428	13.02%	233.20352	13.50%	110.68112	6.41%	181.79844	10.52%	77.73451	4.50%	54.72859	3.17%
47.09968	0.74%	266.32728	4.18%	0	0.00%	635.41749	9.97%	802.78406	12.60%	55.62954	0.87%

To

gbu	site	unit	cluster	losses	volume_value	percentage_value
Peroxides	Longview	null	null	1_external_causes	1918.776	23.535%
Peroxides	Longview	null	null	2_planned_maintenance_shutd...	0.000	0.000%
Peroxides	Longview	null	null	3_intercampaigns_changeovers	0.000	0.0%
Peroxides	Longview	null	null	4_breakdown	0.000	0.000%
Peroxides	Longview	null	null	5_performance	0.000	0.000%
Peroxides	Deerpark	null	null	1_external_causes	1635.194	20.525%
Peroxides	Deerpark	null	null	2_planned_maintenance_shutd...	0.000	0.000%
Peroxides	Deerpark	null	null	3_intercampaigns_changeovers	0.000	0.0%
Peroxides	Deerpark	null	null	4_breakdown	93.645	1.175%
Peroxides	Deerpark	null	null	5_performance	0.000	0.000%
Peroxides	Warrington	null	null	1_external_causes	2796.789	61.000%
Peroxides	Warrington	null	null	2_planned_maintenance_shutd...	0.000	0.000%
Peroxides	Warrington	null	null	3_intercampaigns_changeovers	0.000	0.0%
Peroxides	Warrington	null	null	4_breakdown	84.821	1.850%

Access rights

Access to gsheets

Source

- [OEE Dev](#)
- [OEE Prod](#)

Format

- columnar format (Gsheet)

Destination

Location

- GCP = prj-data-dm-industrial-[env]
- STG table
 - STG_FIL_0000_0000_F001_F_H_oeo
- ODS table
 - ODS_FIL_0000_F001_F_H_oeo
- DM Table names
 - FACT_oeo_main
 - FACT_oeo_losses
- DS_industrial_dash
 - V_FACT_oeo_main
 - V_FACT_oeo_losses
- GCP = prj-data-industrial-dash-[env]
- DataOcean
 - V_FACT_oeo_main
 - V_FACT_oeo_losses
- DPL View names
 - V_FACT_oeo_losses
 - V_FACT_oeo_main

Format

- columnar format

Sizing

1,405 rows

Assessment

How to validate that the generated output is valid: Data same as gsheets

Loading

1.1 Incremental Load

N/A

1.2 Full load

PL_INDUS_OEE

Source to ODS

Variable to control:

`I_VAR_GOOGLE_SHEET_oe_id` = refer to Source session above
`I_VAR_GOOGLE_SHEET_oe_tab` = OEE (WIP)
`I_VAR_GOOGLE_SHEET_oe_row_start` = 4
`I_VAR_GOOGLE_SHEET_oe_row_end` = 0 means all the rows

ODS to DM : `I_VAR_oe_main_dm_reload_condition` = incremental or blank will load max `meta_business_date` from ODS

1.3. Reloading data

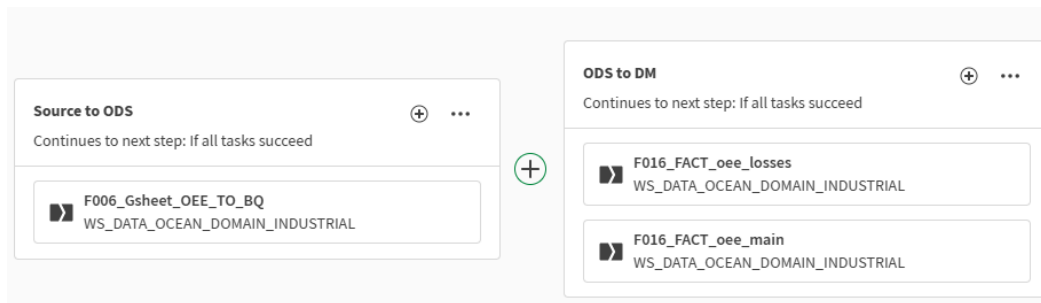
Source to ODS : just run the job again

ODS to DM : control by parameter `I_VAR_oe_main_dm_reload_condition`. This will impact both main and losses tables. To reload all ODS with latest data `I_VAR_oe_main_dm_reload_condition` =

`QUALIFY ROW_NUMBER () OVER (PARTITION BY date , gbu , site , unit , cluster ORDER BY meta_ods_insert_date DESC) = 1`

1.4 Plan to schedule

Every 30 minutes



1.5 Timing

The average time expected for loading: 10 minutes

Criticality

Low?

Logging

`select` job.job_name , job.meta_start_date , job.meta_execution_id , logs.meta_run_id , logs.meta_source_system , logs.meta_step , logs.meta_status , logs.meta_num_lines , logs.meta_error_lines `from` STG.log_tables logs `join` STG.run_jobs job `on` logs.meta_run_id = job.meta_run_id

`where` logs.meta_run_id in (`SELECT` meta_run_id `FROM` STG.run_jobs `order by` meta_start_date `desc limit` 1000)

```
and lower ( job_name ) like '%0ee%'
```

```
and meta_start_date > DATE_SUB ( CURRENT_TIMESTAMP () , INTERVAL 1 HOUR )
```

```
order by job.meta_start_date desc
```