

# TK Blue - Monthly extraction from TIERS - Talend.

Below are the list of Talend jobs which were developed as part of Global Supply Chain CO2 Emission Shipment costs detailed analysis TIERS (Core Query).

**Talend Project** : DATA\_OCEAN\_DOMAIN\_SUSTAINABILITY

**GCP Project** : prj-data-dm-sust-prod

**Schedule** : jobs are scheduled to run on 3rd of every Month.

**Talend Plan in TMC**: PL\_GSC\_CO2Emission\_Shipment

## BQ Details

BQ_Dataset	BQ_Table	CloudStorage Bucket
STG	STG_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	cs-ew1-prj-data-dm-sust-ppd-staging/CO2_Emission/Processed
ODS	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	cs-ew1-prj-data-dm-sust-ppd-staging/CO2_Emission/Processed

## Target File:

Final excel file is loaded in the below bucket folder for the User's to access and download it.

**Bucket**: cs-ew1-prj-data-dm-sust-ppd-staging/CO2\_Emission/Final.

**Filename**: YYYYMM\_TALEND\_PRE\_PROD\_CO2\_BW\_QRY\_MVSDTR01\_0010.xlsx. For example for the month of November, Data is extracted for the previous month and loaded as in below:

The screenshot shows the Google Cloud Storage interface. At the top, there's a search bar with 'prj-data-dm-sust-ppd' and a search button. Below that, a notification bar says 'Secure your account and protect your data by turning on multi-factor authentication. Add an extra layer of security today.' The main content area is titled 'Bucket details' and shows the bucket 'cs-ew1-prj-data-dm-sust-ppd-staging'. Below the bucket name, there are tabs for 'OBJECTS', 'CONFIGURATION', 'PERMISSIONS', 'PROTECTION', 'LIFECYCLE', 'OBSERVABILITY', and 'INVENTORY'. The 'OBJECTS' tab is active, showing a breadcrumb path: 'Buckets > cs-ew1-prj-data-dm-sust-ppd-staging > CO2\_Emission > Final'. There are buttons for 'CREATE FOLDER', 'UPLOAD', 'TRANSFER DATA', and 'OTHER SERVICES'. A filter bar is present with 'Filter by name prefix only' and a 'Filter' button. Below the filter, a table lists objects:

Name	Size	Created
202410_TALEND_PRE_PROD_CO2_BW_QRY_MVSDTR01_0010.xlsx	5 KB	Nov 29, 2024, 4:40:03 PM

## Job Details

Flow Name

Description

Source Table/Query

Target Table

File is the Main or the MVSDT Row which is included at a certain reference job based on the date

Automated extraction of shipment details in order to calculate their CO2 emissions

**Step 1:** Compute the Year & Previous Month and store in a variable (in the format YYYYMM).

**Step 2:** Compute meta run id using DataOcean framework job and store in a global variable

**Step3:** Build the BW query and pass the query to the Step 4.

**Step4:** Extract the data from xtract and load the csv to the cloud storage bucket.  
Job: J1000\_BW\_Query\_csv\_to\_GCS

**Step 5:** Using the Data Ocean reference jobs, process the above file in step 4 into STG & ODS tables.  
*ref to data ocean bucket to STG jobs: 2 - Move data from bucket to staging*  
*STG to ODS: 3 - Move data from staging to ods*

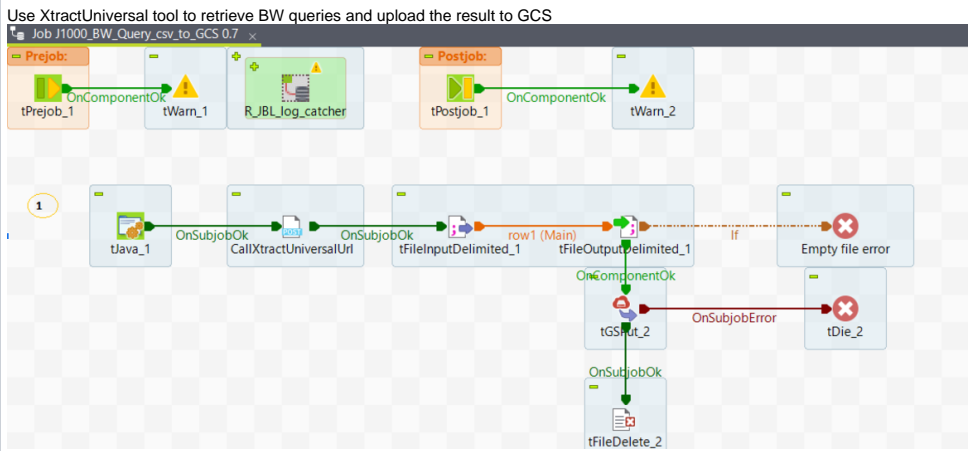
**Step6:** Extract the data from the ODS table for that batch execution  
Job: J1100\_BW\_Query\_ods\_to\_Bucket

**Step 7:** Using the Data Ocean reference jobs, Write the success logs into the log table.

Table Name < Environment > Query

cs-ew1-prj-data-dm-sust-<env>-staging/CC.xlsx

F J  
1 1  
0 0  
0 0  
0 0  
0 0  
F B  
W W  
\_ Q  
C O  
u e  
e r  
y  
\_ M  
V S  
D T  
R O  
1  
\_ G  
S  
CS  
\_ 0  
0  
10



1. Extract the data from xtract and load the csv to the cloud storage bucket. Once the csv file bucket load is completed then delete the file in local Talend server.

B W  
: D  
L B  
W  
\_ Q  
R Y  
\_ M  
V S  
D T  
R O  
1  
\_ 0  
0  
10  
T a  
l e  
n d:  
T A  
L E  
N D  
\_ <  
e n  
v >  
\_ D  
L B  
W  
\_ Q  
R Y  
\_ M  
V S  
D T  
R O  
1  
\_ 0  
0  
10

cs-ew1-prj-data-dm-sust-<env>-staging/CC



prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Leg_indicator		Leg_indicator
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Shipment_Number	if Shipment_Number is "PF1_020/4111623978" then expected is "4111623978" for example if Shipment_number contains "SF1_020/" then replace it with empty.	Shipment_Number
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Ship_Shipping_condit_Key	if contains "PF1_020/" then replace it with empty	Shipping_conditions_core_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Ship_Shipping_condit_Name		Shipping_conditions_core_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Ship_Shipping_Line_Key		Ship_Shipping_Line_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Ship_Shipping_Line		Ship_Shipping_Line_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Forward_Agent	if contains "PF1_020/" then replace it with empty	Forward_Agent_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Forward_Agent_Key		Forward_Agent_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Shipment_Number_Shipment_Type_Core_Key	if contains "PF1_020/" then replace it with empty	Shipment_Type_Core_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Shipment_Number_Shipment_Type_Core_Name		Shipment_Type_Core_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Shipment_Number_Shipping_Type_Key	if contains "PF1_020/" then replace it with empty	Main_Shipping_Type_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Shipment_Number_Shipping_Type_Name		Main_Shipping_Type_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Shipment_Number_Shipment_Vessel_name_Key		Shipment_Vessel_name_MoT_arrival_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Shipment_Number_Shipment_Vessel_name_Name		Shipment_Vessel_name_MoT_arrival_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Shipment_Number_Packaging_materials_Key	if contains "PF1_020/" then replace it with empty	Packaging_materials_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Shipment_Number_Packaging_materials_Medium_Name		Packaging_materials_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Plant_Key	if contains "PF1_020/" then replace it with empty	Plant_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Plant		Plant_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Ship_Departure_Point_Key	if contains "PF1_020/" then replace it with empty	Ship_Departure_Point_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Ship_Departure_Point		Ship_Departure_Point_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Ship_Departure_Point_Postal_Code_Key		Ship_Departure_Point_Postal_Code_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	Ship_Departure_Point_Location_Key		Ship_Departure_Point_Location

prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Departure_Point_Country_Key		Ship_Departure_Point_Country_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Departure_Point_Country_Name		Ship_Departure_Point_Country_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Departure_Point_Transportation_Zone_Key		Ship_Departure_Point_Transportation_Zone_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Departure_Point_Transportation_Zone_Name		Ship_Departure_Point_Transportation_Zone_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Departure_Point_Region_Key		Ship_Departure_Point_Region_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Departure_Point_Region_Name		Ship_Departure_Point_Region_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Destination_Poi_Key	if contains "PF1_020/" then replace it with empty	Ship_Destination_Point_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Destination_Poi		Ship_Destination_Point_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Destination_Poi_Postal_Code_Key		Ship_Destination_Point_Postal_Code
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Destination_Poi_Location_Key		Ship_Destination_Point_Location
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Destination_Poi_Country_Key		Ship_Destination_Point_Country_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Destination_Poi_Country_Name		Ship_Destination_Point_Country_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Destination_Poi_Transportation_Zone_Key		Ship_Destination_Point_Transportation_Zone_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Destination_Poi_Transportation_Zone_Name		Ship_Destination_Point_Transportation_Zone_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Destination_Poi_Region_Key		Ship_Destination_Point_Region_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Destination_Poi_Region_Name		Ship_Destination_Point_Region_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Key	if contains "PF1_020/" then replace it with empty	Ship_Route_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Medium_Name		Ship_Route_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Transportation_Key		Ship_Transportation_Mode_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Transportation		Ship_Transportation_Mode_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Pre_Shipping_Type_Key	if contains "PF1_020/" then replace it with empty	Pre_Shipping_Type_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Pre_Shipping_Type_Name		Pre_Shipping_Type_Name

prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Shipping_Type_Key	if contains "PF1_020/" then replace it with empty	Ship_Route_Main_Shipping_Type_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Shipping_Type_Name		Ship_Route_Main_Shipping_Type_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Sub_Shipping_Type_Key	if contains "PF1_020/" then replace it with empty	Sub_Shipping_Type_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Sub_Shipping_Type_Name		Sub_Shipping_Type_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Dep_Node_Point_Key	if contains "PF1_020/" then replace it with empty	Dep_Node_Point_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Dep_Node_Point_Medium_Name		Dep_Node_Point_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Dest_Node_Point_Key	if contains "PF1_020/" then replace it with empty	Dest_Node_Point_Key
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Ship_Route_Dest_Node_Point_Medium_Name		Dest_Node_Point_Name
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	Gross_W_dels		Gross_W_dels
prj-data-dm-sust-<env>	TALEND_PROD_DI_BW_QRY_MVSDTR01_010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_010	No_of_Deliveries		No_of_Deliveries

Link: [CO2 Emission\\_Talend\\_DA&AI TSD\\_WO0000000761141 - Google Sheets](#)

Link: [Scope 3 - CO2 emissions - List of dimensions](#)

Requirements Link:

## Data Validation/Troubleshoot queries

### Data Validation:

<Provide the SQL queries to validate the data or the record count in the BQ target tables>

### Logging:

Run the below query to check the meta\_status in run\_jobs table as below:

```
SELECT * FROM `prj-data-dm-sust-ppd.STG.run_jobs` WHERE job_name = 'F1000_F_W_CO_MVSDTR01_0010' ;
```

Query results Press Alt+1 for Accessibility Upt

[SAVE RESULTS](#) [EXPLORE DATA](#)

Row	meta_run_id	meta_start_date	meta_end_date	meta_status	meta_execution_id	meta_error	job_name
1	5769cdb7-51f2-439f-8da7-ef403cc0ab94	2024-11-29 11:09:35.123721 U...	2024-11-29 11:10:03.585822 U...	OK	Talend_20241129110930_b2vGq		F1000_F_W_CO_MVSDTR01_0010

or use below query:

```
select L.* , S.job_name , S.meta_status from prj-data-dm-sust-ppd.STG.log_tables L Inner Join `prj-data-dm-sust-ppd.STG.run_jobs` S on L.meta_run_id : S.meta_run_id where S.job_name = 'F1000_F_W_CO_MVSDTR01_0010'
```

w	meta_run_id	meta_source_system	meta_step	meta_num_lines	meta_error_lines	job_name
1	5769cdb7-51f2-439f-8da7-ef403cc0ab94	CO2_IT_0000_0000_F1000_20241129110932_0000_F_W_CO_MVSDTR01_0010.csv	STG_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	1	0	F1000_F_W_CO_MVSDTR01_0010
2	5769cdb7-51f2-439f-8da7-ef403cc0ab94	STG_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	ODS_BWH_0000_0000_F1000_F_W_CO_MVSDTR01_0010	1	0	F1000_F_W_CO_MVSDTR01_0010

### Troubleshoot steps:

In case of any failure, the plan can be triggered multiple times and each time, the final excel will be replaced in the Final bucket folder.