

# SAP BW to Bucket

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## SAP connection

We need to fill following parameter in order to connect BW on component tSAPConnection. Default context is already created for all BW systems.


**tSAPConnection\_1**

**Basic settings**  
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Property Type
Built-In

SAP API Version
talend sap api

Connection configuration

Server Type
Application Server

Client
context.sapClient

Userid
context.sapUser

Password
context.sapUserPwd

Language
"EN"

Host name
context.sapHost

System number
context.sapSystemNumber

Shared destination  
This option only applies when deploying and running in the Talend Runtime  
☐ Specify a shared destination

SAP Properties

| Property                      | Value  |
|-------------------------------|--------|
| "api.use_z_talend_read_table" | "true" |

The user to connect must be RFC\_TAL\_WBP, which is the RFC user for Talend (DE team). It already save in global context g\_CNX\_SAP\_WBP

| Variable        | SBX                                                        | DEV                                                        | QAS                                                        | PRE                                                        | PRD                                                        |
|-----------------|------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|
| sapClient       | 400                                                        | 110                                                        | 400                                                        | 400                                                        | 400                                                        |
| sapUser         | RFC_TAL_WBP                                                | RFC_TAL_WBP                                                | RFC_TAL_WBP                                                | RFC_TAL_WBP                                                | RFC_TAL_WBP                                                |
| sapHost         | <a href="http://wb1.eua.solvay.com">wb1.eua.solvay.com</a> | <a href="http://wbd.eua.solvay.com">wbd.eua.solvay.com</a> | <a href="http://wbq.eua.solvay.com">wbq.eua.solvay.com</a> | <a href="http://wbv.eua.solvay.com">wbv.eua.solvay.com</a> | <a href="http://wbp.eua.solvay.com">wbp.eua.solvay.com</a> |
| sapSystemNumber | 20                                                         | 48                                                         | 32                                                         | 85                                                         | 00                                                         |
| sapUserPwd      | get it from Keypass                                        |                                                            |                                                            |                                                            |                                                            |

To run the test, DE can select the system that you want to run, it will automatically connect to that system and get the result

Component ▶ Run (Job J025\_BW\_ADSO\_to\_GCS) Contexts(J025\_BW\_ADSO\_to\_GCS) Properties

|    | Name                                           | Type          | Comment                                  | WB1 Value                                               |
|----|------------------------------------------------|---------------|------------------------------------------|---------------------------------------------------------|
| 1  | g_CNX_SAP_WBP (from repository context)        |               |                                          |                                                         |
| 2  | sapClient                                      | String        |                                          | 400                                                     |
| 3  | sapUser                                        | String        |                                          | RFC_TAL_WBP                                             |
| 4  | sapUserPwd                                     | Password      |                                          | *****                                                   |
| 5  | sapHost                                        | String        |                                          | wb1.eua.solvay.com                                      |
| 6  | sapSystemNumber                                | String        |                                          | 20                                                      |
| 7  | I_PATHDIR_GCS_CSV_TO_STAGING_SERVICE_ACCOUNT_P | String        |                                          | C:/Talend_workspace/bi-gcp-sandbox-cdbad79e9534.json    |
| 8  | I_VAR_GCS_CSV_TO_STAGING_BUCKETNAME            | String        |                                          | "test_ank2"                                             |
| 9  | I_VAR_FILE                                     | String        |                                          | "C:/DATA/SBOX/REFERENCE/SANDBOX_REFERENCE/InOut/bw_ADSO |
| 10 | g_CNX_FTP_BW (from repository context)         |               |                                          |                                                         |
| 11 | ftpHost                                        | String        | host of the ftp server                   | wbq.eua.solvay.com                                      |
| 12 | ftpFolder                                      | String        | Path of the folder in the ftp server     | /exploit/BW/test/                                       |
| 13 | ftpPort                                        | int   Integer | Port number of the ftp server used to co | 22                                                      |
| 14 | ftpUser                                        | String        | ftp user used to connect                 | sftpbw                                                  |
| 15 | ftpPwd                                         | Password      | ftp user's password                      | *****                                                   |

Default context environment: QAS, WB1, DEV, QAS, PRE, PRD

## FTP Connection

It is required when FTP-Batch is used. This is required when we load a huge volume of data (more than 10,000 records), it is required to split the data and temporarily save to the folder. To connect to RFC, we can use QAS folder to keep the file

It also already save in global context g\_CNX\_FTP\_BW

| Variable  | Value               |
|-----------|---------------------|
| ftpHost   | wbq.eua.solvay.com  |
| ftpFolder | /exploit/BW/test    |
| ftpPort   | 22                  |
| ftpUser   | sftpbw              |
| ftpPwd    | get it from Keepass |

This function is available only some component

CRQM03(tSAPInfoCubeInput\_1)

Basic settings: ☒ Use FTP-Batch Options

FTP Batch

|                      |                     |
|----------------------|---------------------|
| File Protocol        | SFTP *              |
| Host                 | context.ftpHost *   |
| Port                 | context.ftpPort     |
| User                 | context.ftpUser *   |
| Password             | context.ftpPwd      |
| Directory            | context.ftpFolder * |
| Data filename prefix | "current_data_file" |

## GCP Connection


**tGSPut\_1**

Basic settings

Advanced settings

Dynamic settings

View

Documentation

Connection

☐ Use an existing connection

Credential type

Service account

Service account key

context.I\_PATHDIR\_GCS\_CSV\_TO\_STAGING\_SERVICE\_ACCOUNT\_PATH

Bucket name

context.I\_VAR\_GCS\_CSV\_TO\_STAGING\_BUCKETNAME

Local directory

context.I\_VAR\_FILE

Google Storage directory

""

☐ Use files list

☐ Die on error

| Variable                                          | Meaning                                                    |
|---------------------------------------------------|------------------------------------------------------------|
| I_VAR_GCS_CSV_TO_STAGING_BUCKETNAME               | Bucket Name in GCS                                         |
| I_VAR_FOLDER                                      | Local path                                                 |
| I_VAR_FILE                                        | Local filename                                             |
| I_VAR_LIMITROW                                    | Limit number of row per file. Required only tSAPTableInput |
| I_PATHDIR_GCS_CSV_TO_STAGING_SERVICE_ACCOUNT_PATH | Location path and file of service account (JSON file)      |

💡 [More detail how to get GCP service account](#)

## Component to Connect BW

| OBJECT                                                                   | Talend component                | COMMENT                                                    |
|--------------------------------------------------------------------------|---------------------------------|------------------------------------------------------------|
| <a href="#">SAP Tables</a><br><a href="#">InfoObject</a> (master data)   | tSAPTableInput                  | Delta No<br>Filter Yes<br>FTP-Batch Yes                    |
| <a href="#">DSO</a><br>(old model)                                       | tSAPDSOInput                    | Delta No<br>Filter Yes<br>FTP-Batch Yes                    |
| <a href="#">InfoCube</a><br><a href="#">MultiProvider</a><br>(old model) | tSAPCubeInput                   | Delta No<br>Filter Yes<br>FTP-Batch Yes                    |
| <a href="#">ADSO</a><br><a href="#">Composite Provider</a>               | tSAPADSOInput                   | Delta Yes<br>Filter Yes<br>FTP-Batch No                    |
| <a href="#">BW Queries</a>                                               | tHttpRequest is used for Xtract | The best solution for query is Xtract and use tHttpRequest |

### 1. SAP Table

It is the same as ECC SAP Table just to connect to BW

## 2 InfoObject (Master data)

Although Talend has the component to get data from infoObject but it is better to get it from table since the tSAPInfoobjectInput can't have filter and there is no FTP batch or load by starting row like tSAPTableInput. Therefore, it is better to use tSAPTableInput

## 3 DSO

## 4. InfoCube

## 5. ADSO

## 6. MultiProvider

## 7. Composite Provider

## 8. BW Query

There are 3 main servers that we need to setup

### 8.1 BW Server

The query that will be available on Xtract program need to mark flag Remote Access "By OLE DB for OLAP"

The query that mark this flag should have the technical name starting with

QV\_ for Qlik

DO\_ for Talend that load to GCP for the new concept of data ocean

The flag must NOT be flagged in the cored query for BW, which name starting with BW\_QRY\_ xxxx

**General: DO\_BW\_QRY\_CPCOBOM1\_0001 - WP1 BOM explosion for PCF (DE)**

**General**

Technical Name: DO\_BW\_QRY\_CPCOBOM1\_0001  
Description: WP1 BOM explosion for PCF (DE)  
InfoProvider: CPCOBOM1  
Key Date: <default>

**Output Settings**

☒ Adjust Formatting after Refreshing  
☐ Suppress Repeated Key Values  
☐ Show Scaling for Measures  
Sign Format: Before, for example -1  
Zero Format: With Currency/Unit  
Custom Zero Format:

**Remote Access**

☐ By Easy Query  
☒ By OLE DB for OLAP  
☐ By OData  
☐ External SAP HANA View

**Result Location**

Rows: ☐ Above ☒ Below  
Columns: ☐ Left ☒ Right

**Zero Suppression**

Applies to: ☐ Rows ☐ Columns  
Condition: Only result value must be zero

**Universal Display Hierarchy**

☐ Active on rows  
Expand to Level: 0  
☐ Active on columns  
Expand to Level: 0

**Variables Order**  
**Extended**  
**Planning**

It has to be done by BW developer and transport from WBD to WBP

### 8.2 Xtract

1. Open Xtract Designer in a virtual machine having this application like bgsoa-wks116. Connect to the Xtract sever (XU server : ACEW1DXTRAXUS01:8082)

Connect to Xtract Universal Server

**Xtract Universal**

XU Server: ACEW1DXTRAXUS01:8082

Authentication: Windows credentials (current user)

Username:

Password:

☐ Remember password

Target principal:  Show

**THEOBALD SOFTWARE**

2. Create a job in Xtract ( No need to create connection since all connection should have been already created so you will only have to decide which one to use)

Xtract Universal Designer

Designer Extraction Server Security Help

**Xtract Universal**

**1**

| Name                             | Type   |
|----------------------------------|--------|
| CURR_NG                          | Table  |
| CUST_NG                          | Table  |
| DD03L_NG                         | Table  |
| DEV_ZTEST_BW_QRY_CPIMMM01_0004   | BWCube |
| DE_BW_QRY_CPCOBOM1_0001_dataocce | BWCube |
| DE_BW_QRY_MVCOPP01_0021          | BWCube |
| DE_BW_QRY_MVCOPP01_0021_Dataocce | BWCube |
| DI_BW_QRY_CPDYN13_0001           | BWCube |
| MATERIAL_NG                      | Table  |
| MCPFCTR1_NG                      | Table  |
| PLAN_NG                          | Table  |
| PROD_BW_QRY_MVFIWC01_0013_BY_GB  | BWCube |
| PROD_BW_QRY_MVSDSO45_SD0001      | BWCube |
| PROD_CRM_QVBW_QRY_MVSDSO57_00    | BWCube |

**Create Extraction**

Source: WBD\_TALEND **2**

Name: DEV\_DE\_BW\_QRY\_MVCOPP01\_0021 **3**

Type:

- ☐ BAPI **4**
- ☐ BW Cube
- ☐ BW Hierarchy
- ☐ DeltaQ
- ☐ ODP
- ☐ Open Hub Services (OHS)
- ☐ Query
- ☐ Report
- ☐ Table
- ☐ Table CDC ( preview )

2.1 Click on New (or Edit then go to 3.5)

2.2 Select **BW server**. DE should use connection which use user **RFC\_TAL\_WBP**, which is dedicate for Talend and DE team not sure the one for Qlik

2.3 Enter the job name. The **naming convention = TALEND\_<Landscape>\_<QueryName>** such as TALEND\_PRD\_DO\_BW\_QRY\_XXXX (Query name to connect via Talend must starting with DO (data ocean), therefore, it can differentiate with Qlik query that have starting name with QV)

<Landscape>

- PRD = Production
- PRE = Pre-production
- QAS = Quality
- DEV = Development

2.4 To connect with BW query, it is required to select BW Cube

3. Define data source

Xtract Cube - MDX

**Define data source for SAP Cube**

[General settings](#) [Extraction Settings](#) [Edit Runtime Parameters](#)

Cube or Query Preview

☐ Key Figures

**Cube and Query Lookup**

Extractor

☒ MDX ☐ BICS (Beta)

Datasource type

☐ InfoCube ☒ Query

Extractor settings

☒ Only structures

Direct Load

| Name                             | Description                            |
|----------------------------------|----------------------------------------|
| CPCOBOM1/DO_BW_QRY_CPCOBOM1_0001 | WP1 BOM explosion for PCF Talend (DE)  |
| MVCOPP01/DO_BW_QRY_MVCOPP01_0021 | MEP - WP1/PF1 data for PCF Talend (DE) |

Load Cancel

For Xtract jobs that will be used by Talend please use WBD\_TALEND, WBQ\_TALEND, WBP\_TALEND. Avoid using *bw\_qlikview*.

3.1 Click on search and

3.2 Select MDX (or BICS) and enter the Query name to search

## MDX versus BICS (beta)

|                                    | MDX                                                                                                                                                           | BICS (beta)                                            |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Syntax in lookup for BEx Queries   | [tech. name of InfoProvider]/[tech. name of BEx Query]<br>example: OSD_C03/OSD_C03_Q0018                                                                      | [tech. name of BEx Query]<br>example:<br>OSD_C03_Q0018 |
| Syntax in lookup for InfoProviders | \$(tech. name of InfoProvider]<br>example: \$OSD_C03                                                                                                          | [tech. name of InfoProvider]<br>example: OSD_C03       |
| Wildcards in lookup                | supported<br>example: *OSD_C03_Q0018 instead of<br>OSD_C03/OSD_C03_Q0018                                                                                      | not required and therefore not supported               |
| Supported InfoProviders            | InfoCubes, Multiproviders, Composite Providers                                                                                                                | InfoCubes, MultiProviders, Composite Providers, DSOs   |
| Setting in BEx Query               | Setting "Allow External Access to this Query" is required. If not set, BEx Query won't appear in the lookup, see <b>Allow External Access to BW Queries</b> . | not required                                           |

3.3 Select the query

### 3.4 Click on Load

3.5 It will get Metadata of the query. Select the characteristics and key figures that required. Default value at the parent node is the text. If we need the key of the characteristic, we need to select at the properties

Define data source for SAP Cube

General settings Extraction Settings Edit Runtime Parameters

Cube or Query MVCOPP01/DE\_BW\_QRY\_MVCOPP01\_0021

Preview

Key Figures

- ☒ Actual Qty [04B98B0HZDMR7NNBU4L0MMNH]
- ☒ Std Qty [04B98B0HZDMR7NNBU4L0MMNH]
- ☒ Actual Qty - Util [04B98B0HZDMR7NNBU4L0A]
- ☒ Cost Element [0COSTELMNT]
- ☒ XCS-ALL CE Grp Level 6 [0COST\_MNT\_C\_CELTHX]
- ☒ CO Area [0CO\_AREA]
- ☒ Source Syst. [0LOGS]
- ☒ BFC GBU [CPFCTR1\_2]
- ☒ Company Code [C\_COMPDE]

Properties

- ☒ Key [2C\_COMPDE]
- ☒ Medium Name [2C\_COMPDE]
- ☐ Key (Not Compounded) [8C\_COM]
- ☐ Chart of accounts (Key) [20CHRT]
- ☐ Chart of accounts (Long Name) [4]
- ☐ Company (Key) [20COMPANY]
- ☐ Company (Medium Name) [50C]
- ☐ Country (Key) [20COUNTRY]
- ☐ Country (Name) [10COUNTRY]
- ☐ Currency (Key) [20CURRENCY]
- ☐ Currency (Name) [10CURRENCY]
- ☐ Currency (Medium Name) [50C]
- ☐ Credit Control Area (Key) [20CCT]
- ☐ Credit Control Area (Long Name) [4]
- ☐ Fiscal Year Variant (Key) [20FISCV]
- ☐ Fiscal Year Variant (Medium Name) [50FISCV]
- ☐ Source system ID (Key) [20SOURS]
- ☐ Source system ID (Medium Name) [50SOURS]
- ☐ Open Fiscal Year (Key) [20OFYEAR]
- ☐ Open Fiscal Year (Medium Name) [50OFYEAR]

Edit variables for MVCOPP01/DE\_BW\_QRY\_MVCOPP01\_0021

| Name               | Caption                                         | Sel. Type | Sign | Option  | Value [from] | Value [to] | Complex Edit |
|--------------------|-------------------------------------------------|-----------|------|---------|--------------|------------|--------------|
| V_OFISCPER_0020    | Fiscal Year/Period (Selection Option, Optional) | Complex   |      | Between | K42015004    | K42015004  | Edit         |
| V_CPFCTR1_2_0008   | BFC GBU (Selection Option, Optional)            | Complex   |      | Between |              |            | Edit         |
| V_AUT_C_PLANT_0001 | Plant (Selection Option, Optional, Auth)        | Complex   |      | Between |              |            | Edit         |

Load live preview Refresh metadata Edit Variables Show MDX

OK Cancel

Edit the variable to filter if required. Be careful that MDX and BICS input can be different in some fields like date format

Edit variables for CPCOBOM1/DE\_BW\_QRY\_CPCOBOM1\_0001

| Name              | Caption                               | Sel. Type | Sign    | Option  | Value [from] | Value [to] | Complex Edit |
|-------------------|---------------------------------------|-----------|---------|---------|--------------|------------|--------------|
| * V_OFISCPER_0004 | Fiscal Period                         | Single    | Include | Equal   | 2020012      |            | Edit         |
| V_CPFCTR1_2_0006  | GBU (Select Optional, Optional, Auth) | Complex   |         | Between |              |            | Edit         |
| VPLANT01          | Plant (Selection option, Optional)    | Complex   |         | Between |              |            | Edit         |
| MATNR1_1          | Material (Select option, Optional)    | Complex   |         | Between |              |            | Edit         |

Edit variables for CPCOBOM1/DE\_BW\_QRY\_CPCOBOM1\_0001

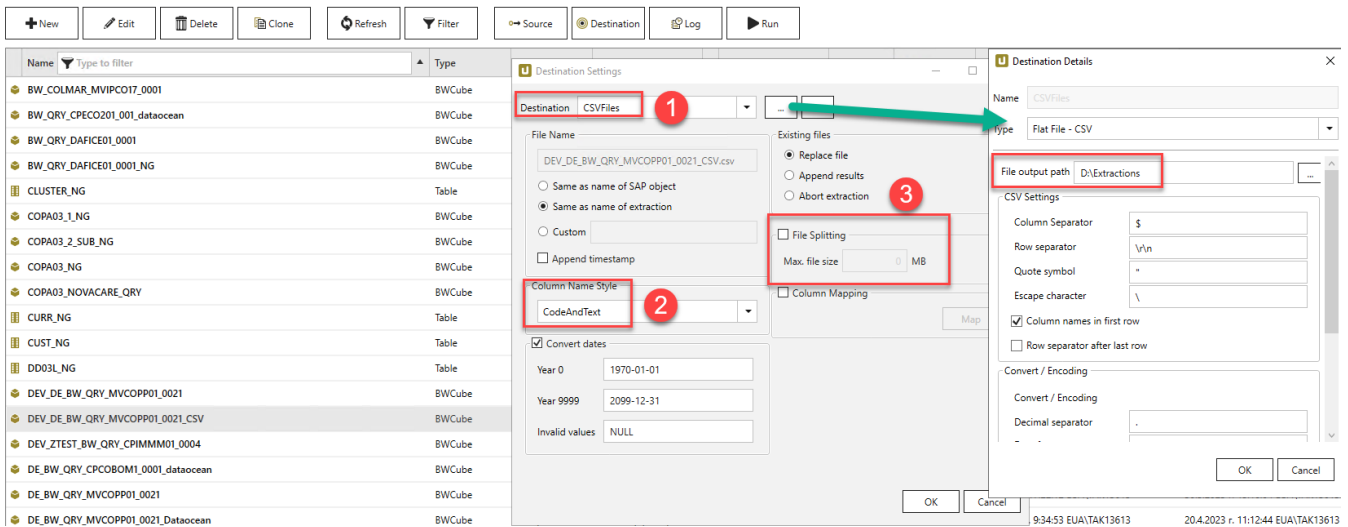
MDX

| Name              | Caption                               | Sel. Type | Sign    | Option  | Value [from] | Value [to] | Complex Edit |
|-------------------|---------------------------------------|-----------|---------|---------|--------------|------------|--------------|
| * V_OFISCPER_0004 | Fiscal Period                         | Single    | Include | Equal   | K42020012    |            | Edit         |
| V_CPFCTR1_2_0006  | GBU (Select Optional, Optional, Auth) | Complex   |         | Between |              |            | Edit         |
| VPLANT01          | Plant (Selection option, Optional)    | Complex   |         | Between |              |            | Edit         |
| MATNR1_1          | Material (Select option, Optional)    | Complex   |         | Between |              |            | Edit         |

⚠ In case you can't find the query in MDX, then select BICS(Beta). BICS will not possible to select key and text for the characteristics on this version

Click on "Load live preview" to check the setup is OK

### 3.6 Click on Destination to configure output and header of the column.



3.6.1 The destination is **http-csv** (this will work with talend component tFileOutputDelimited) The result from BW query will go to Talend directly.

The destination is **CSVFiles** (this will work with talend component tFileInputDelimited) **Recommended option**. This option will load data from BW query and save to Xtract server.

3.6.2 The column name should be "Code and Text". We need code to create a field in google big query and text to explain the DA and DE what they are

Column by default will be "Code"

|   | A            | B                      | C          | D         |
|---|--------------|------------------------|------------|-----------|
| 1 | [0COSTELMNT] | [0COSTELMNT_C_CELTHX5] | [0CO_AREA] | [0LOGSYS] |
| 2 |              |                        |            |           |
| 3 |              |                        |            |           |

"Code and Text" will be:

| A                         | B                                             | C                  | D                      |
|---------------------------|-----------------------------------------------|--------------------|------------------------|
| [0COSTELMNT]_Cost Element | [0COSTELMNT_C_CELTHX5]_XCS-ALL CE Grp Level 6 | [0CO_AREA]_CO Area | [0LOGSYS]_Source Syst. |

The field name in BQ should be the one in []

3.6.3 File Splitting: It is required when the output from BW is too huge and it is required to split the files. This option will available only when select destination = CSV files. If this option select, the FileInput component has to get all the files. It may add to specific folder in Xtract server and use component tFileList.

3.7 Click on Run on the top menu. The detail job will appear and the URL that is required for Talend will appear

+ New Edit Delete Clone Refresh Filter Source Destination Log **Run**

| Name                        | Type   | Source     | Destination | Last Run | Rows | Duration | Last Change                     | Created On                      |
|-----------------------------|--------|------------|-------------|----------|------|----------|---------------------------------|---------------------------------|
| DEV_DE_BW_QRY_MVCOPP01_0021 | BWCube | WBD_TALEND | http-csv    |          | 0    |          | 9.6.2023 r. 8:09:07 EUA\TH30085 | 9.6.2023 r. 7:59:52 EUA\TH30085 |

**Run Extraction**

**General info**

Extraction name: DEV\_DE\_BW\_QRY\_MVCOPP01\_0021

Source: WBDTALEND

Destination: http-csv

Execution start:

Rows extracted: 0

Status: Not started

Duration:

**Runtime parameters**

| Name        | Value                          | Type | Description                      |
|-------------|--------------------------------|------|----------------------------------|
| clearBuffer | <input type="checkbox"/> False | Flag | Clear/keep the result buffer     |
| preview     | <input type="checkbox"/> False | Flag | Enable/disable preview mode      |
| source      | WBD_TALEND                     | List | Sets the name of the source      |
| destination | http-csv                       | List | Sets the name of the destination |

URL: http://ACEW1DXTRAXUS01:8085/?name=DEV\_DE\_BW\_QRY\_MVCOPP01\_0021

xu.exe -s ACEW1DXTRAXUS01 -p 8085 -n DEV\_DE\_BW\_QRY\_MVCOPP01\_0021

Log xu.exe Output

| Elapsed time | Level | Source | Message |
|--------------|-------|--------|---------|
|              |       |        |         |

Run
Abort
Close

3.7 Click on Run again (Optional) at the below screen to test that the job is OK.

Now the job is running and ready for Talend to get the data

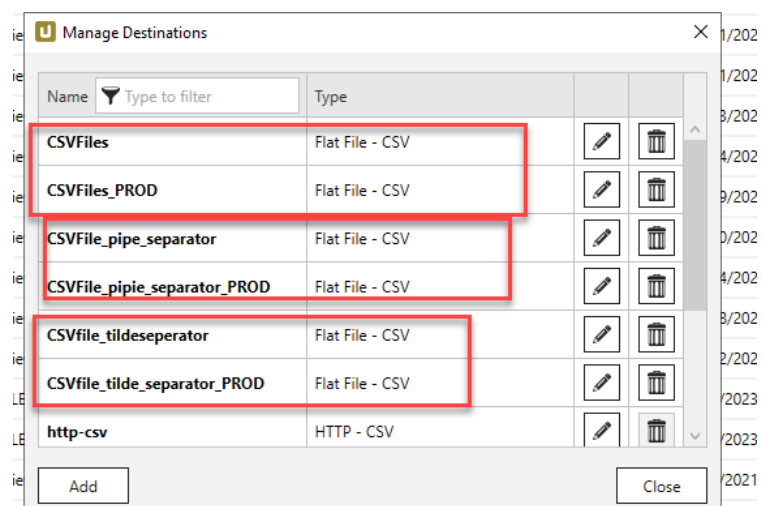
+ New Edit Delete Clone Refresh Filter Source Destination Log Run

| Name                        | Type   | Source     | Destination | Last Run                                                 | Rows  | Duration     | Last Change                     | Created On                      |
|-----------------------------|--------|------------|-------------|----------------------------------------------------------|-------|--------------|---------------------------------|---------------------------------|
| DEV_DE_BW_QRY_MVCOPP01_0021 | BWCube | WBD_TALEND | http-csv    | <span style="color: green;">✔</span> 9.6.2023 r. 8:12:23 | 36421 | 00:00:15.568 | 9.6.2023 r. 8:09:07 EUA\TH30085 | 9.6.2023 r. 7:59:52 EUA\TH30085 |

## Move to prod

Differentiate the Xtract that will be used in DEV, TEST, PRE-PROD from the one used in PROD. For production you can

- Duplicate the Xtract query and well specify the prod environment (**name must start with TALEND\_PROD**)
- Switch the Destination to point to the corresponding production one



- If needed adjust the file name to have the sam prefix as dev

## 8.3 Talend

[Copy the job J028\\_BW\\_Query\\_csv\\_to\\_GCS to the new job](#)