Talend Component tGoogleSheetInput

Purpose and procedure

This component reads Google Sheets.
The component provides these capabilities:

1. Read the cells of a sheet
2. Detect the position of columns by a header row
3. Tolerant date parsing
4. Compressed data load saves bandwith

Talend-Integration

This component can be found in the palette under Cloud->Google
This component provides an input flow and several return values (depending on the operational mode).

Parameters and Usage

Parameters to establish the client and connect to Google Drive (the home of your sheets)

These settings will be used in all modes and therefore explained only once here.
Google suggest 2 different modes for authentication for backend processes and native applications:

1. Service Account: A service account is a new account and has the advantage it does not need any user interaction while the job runtime. If the job is supposed to manage real person drives, this mode does not help because the files have as owner the service account and you cannot access them directly.
2. Client-ID for native applications: A Client-Id is needed if you want managing files on real person accounts. The disadvantage is, it depends on a user interaction (only for the first time any arbitrary job using this account runs the first time, all other jobs using he same account does not need any interaction anymore).

Property	Content	Data types
Application Name	Not necessary, but recommended by Google. Simple provide the name of your application gathering data. ***Required***	String
Use existing client	Choose here the tGoogleDrive component which client do you want to reuse in this component instance.	Boolean
Authentication Method	Choose the method to authenticate: Service Account or OAuth Client-ID (for native applications)	

Properties to use the service account

Property	Content	Data types
Service Account Email	The email address of the service account. Google creates this address within the process of creating a service account. Only for service accounts! ***Required***	String
Key File (p12)	The Service Account Login works with private key file for authentication. In the process of creating a service account you download this file. Only for service accounts ***Required***	String

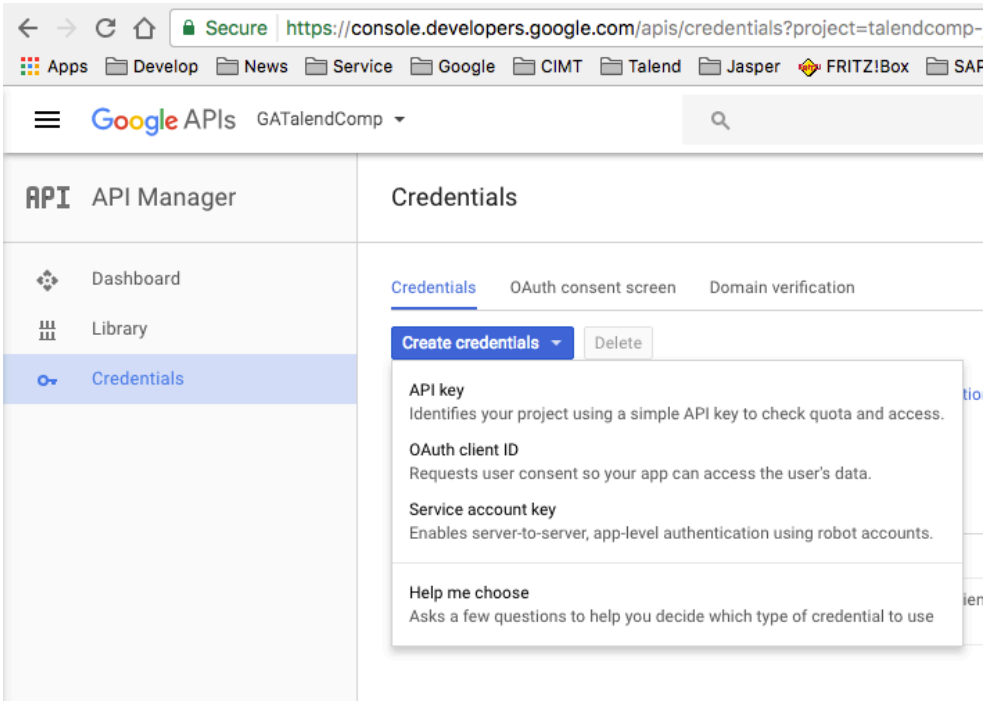
Properties to use the OAuth Client-ID authentication

Property	Content	Data types
User Account Email	Email of the user account or the Client-ID	String
Client secret file (json)	This json file downloaded for the Client-ID	String

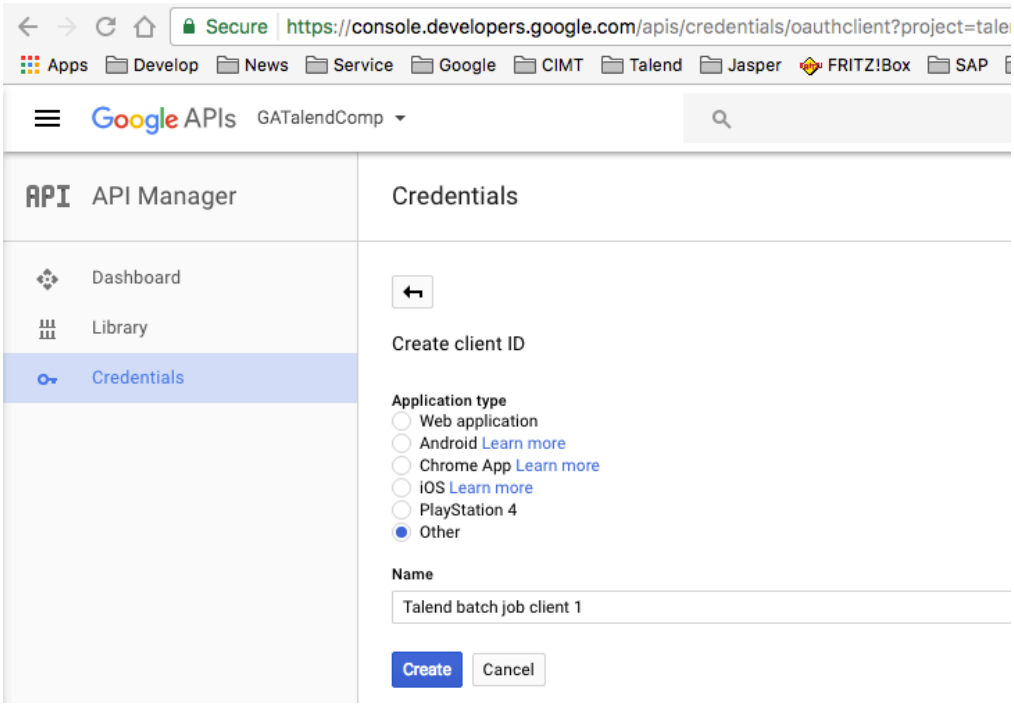
The usage of the “OAuth Client-ID” expects on the first run a user interaction with the Google web page and after finishing the form to approve the access right you need to close the browser to let the component continue, otherwise the authentication process will not complete.

How to enable and authenticate the drive client

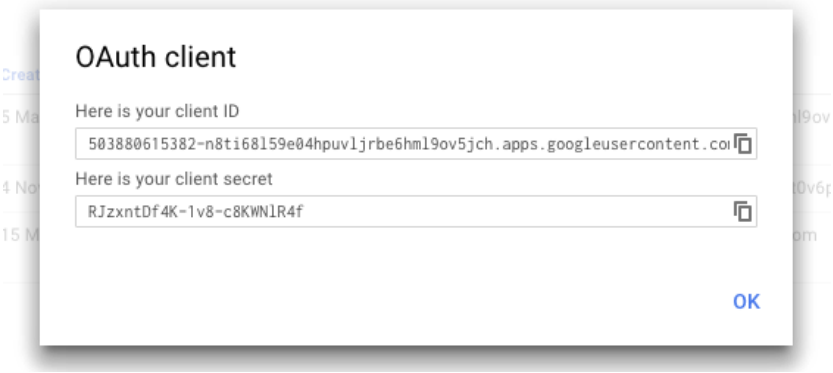
1. Create credentials to allow you job to get access to your files
Go to the Google API console: https://console.developers.google.com/apis/dashboard
And enable here the Google Drive API and the Google Sheet API.



… now choose the application type:



Ok, here the essentials of the new credentials. But you do not need to memorize that here.



Download the credentials as json file (click on the download icon)

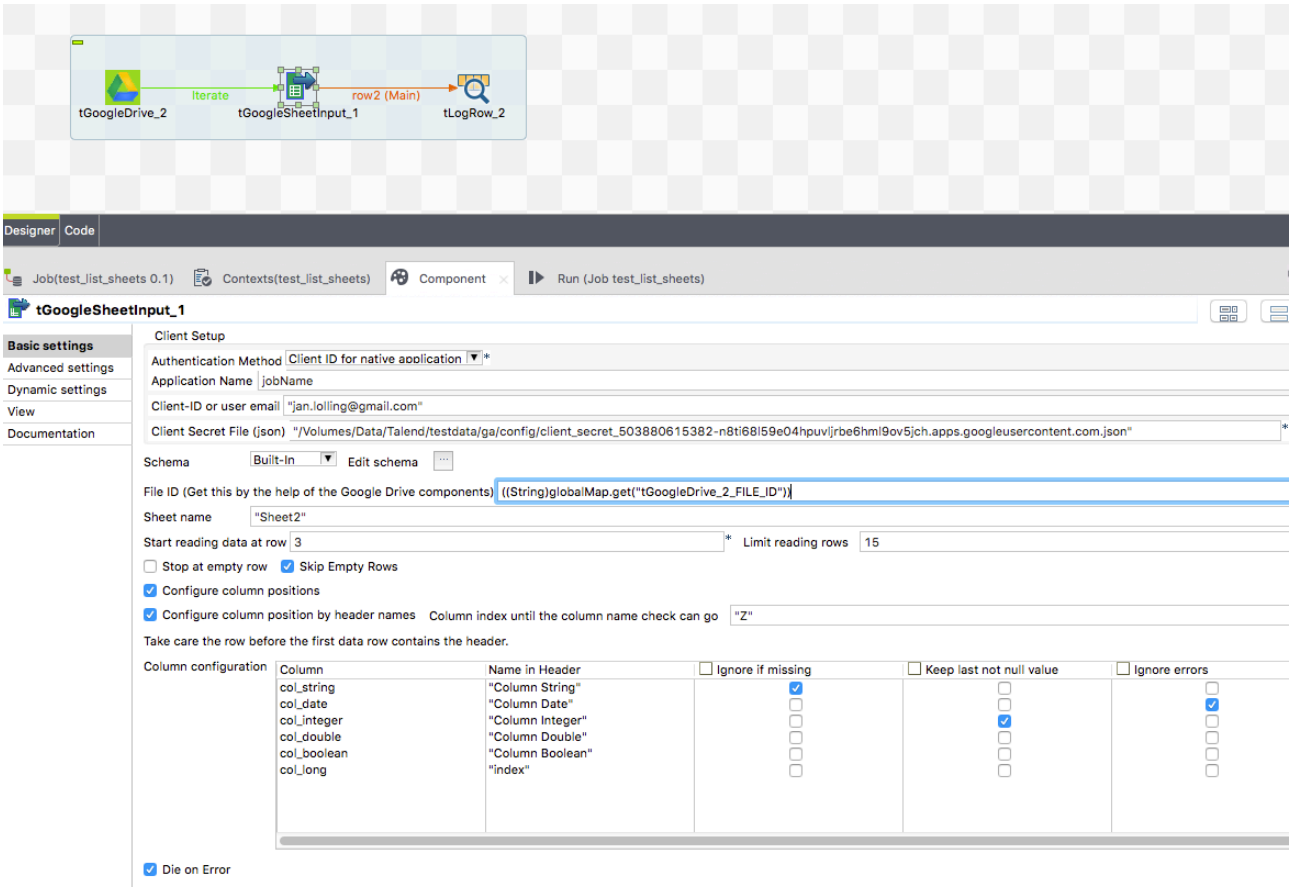
You will get a json file. This file is what you need in the component.
If you start yur job first time the component opens a browser and you must approve the access of the application (the Client-ID) to your data. After you have approved the access and have closed the browser(!!), the component creates a directory with the name of the json file (without the extension).
If you want to relocate your job, simple take care the created directory is next to the json file and the component points to this json file.

Basic settings
(Settings to work with Sheets)

Property	Content
Schema	The schema of the component data flow
File-ID	The ID of the sheet. A sheet is simply a file in your Google Drive and has an ID (alfa-numeric String)
Sheet name	The name of the sheet you want to read.
Start reading data at row	The first row of the data (without the header line). In case we expect a header line, the component takes the row above)
Limit reading rows	You can specify a limit of data rows to read.
Stop at empty row	If the component detects an empty row (it takes only the columns in account you are about to read) it stops the reading
Skip empty rows	Skip over empty rows. The return value CURRENT_ROW_INDEX is always correct and shows the real row index.
Configure column positions	This option enables the individual column positioning. This is the default option.
Configure column position be header names	The component tries to find the header names in the header row and takes their position as new position. If you want to see the result of this discovery, switch on the debug mode.
Column Configuration	**Column**: the schema column **Name in header** (alternative to Index or Name): Name of the column in the header row **Ignore if missing:** Ignore missing columns (the component nulls the values of missing columns)

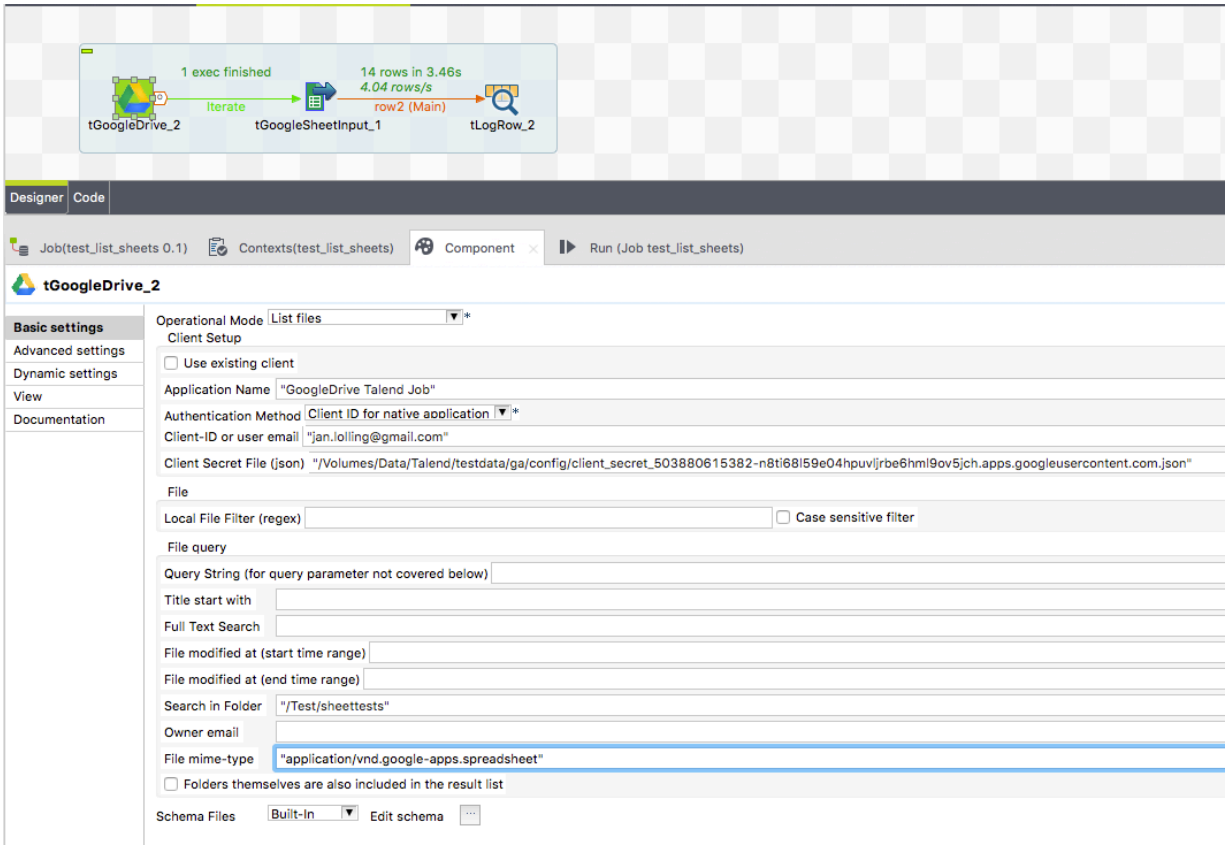
	Index of Name: Name ("A" or "Z") or index (starts with 0) of the column in the sheet Keep last not null value: The component uses the last not-null value for null values of the next row **Ignore errors:** In case of transformation errors (like exceptionally a text instead of a date or numeric value) this value will be ignored and set to null
Die on error	In case the component detects an error, the job will fail.

Basic settings in the example job:



To get the id of the Sheet the best way is to use the tGoogleDrive component.
To get only Sheets you must filter the list of files in your Google Drive by the mime-type:
"application/vnd.google-apps.spreadsheet"

Here the settings of the tGoogleDrive component: (next page)
In the tGoogleDrive component you can use exactly the same authentication settings as in tGoogleSheetInput.



Advanced Settings

The advanced settings only apply to clients. If a component uses an existing client they do not apply.

Property	Content
Timeout in s	How long should the component wait for getting the first result and fetching all result with one internal iteration
Static Time Offset (to past)	Within the process of login, the component requests an access token and use the local time stamp (because these tokens will expire after a couple of seconds) Google rejects all requests to access tokens when the request is in the future compared to the timestamp in Google servers. If you experience such kind of problems, this options let the requests appear to be more in the past (5-10s was recognized as good time shift)
Reuse Client for Iterations	If you use this component in iterations it is strongly recommended to set this option. It saves time to authenticate unnecessary often and avoids problems because of max amount of connects per time range.
Distinct Name Extension	The client will be kept with an automatically created name: Talend-Name-Component name + job name. In case this is not distinct enough, you can specify an additional extension to the name.