

# Introduction Custom Excel Components

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# Basic Concept

- The Workbook is the internal data store of Excel
- tFileExcelWorkbookOpen holds a workbook
- All other tFileExcel\* components are dealing with this workbook
  - Read or write into sheets/cells with various methods
  - Create, copy or list sheets
  - Write to file
- tFileExcelWorkbookSave stores a workbook as new Excel file to the local filesystem
- The concept of the central hold workbook makes jobs much more efficient and easier to build

# Input Components



tFileExcelWorkbookOpen – Core component read and hold the workbook



tFileExcelSheetList - List of the sheets of the current workbook



tFileExcelSheetInput – Read the cells of a sheet



tFileExcelSheetInputUnpivot – Read the cells of a sheet with un-pivot function



tFileExcelReferencedCellInput – Read cells addressed by a concrete address



tFileExcelNamedCellInput – Read cells addressed by a name

# Output Components



tFileExcelSheetOutput – Writes cells in a sheet row by row



tFileExcelReferencedCellOutput – Write in a cell addressed by an excel address



tFileExcelNamedCellOutput – Write in a cell addressed by a name



tFileExcelWorkbookSave – Writes the workbook as file to the file system

# tFileExcelWorkbookOpen

- Is the central component and mandatory
- Reads Excel files as template
- Can create an empty workbook
- Detects the file format (OLE or OpenXML) automatically
- Can open password secured files
- Can establish a memory saving workbook (only for writing)
- Can read a workbook from a byte array

# tFileExcelSheetList

- List all sheets of the referenced workbook
- Can filter the list of sheets with multiple regex expressions

# tFileExcelSheetInput

- Reads cells row by row from a sheet
- Individual or automatic column configuration
  - Allows individual columns per schema column (allows gaps)
  - Organize the columns automatically based on header row and regex
- Can read cell styles, comments, hyperlinks
- Can autofill missing values by former values
- Automatically detection of date formats (can ignore errors)
- Can skip empty rows or stop at them
- Find sheet tolerant (ignores whitespaces and cases)
- Can convert types automatically

# tFileExcelSheetInputUnpivot

- Based on tFileExcelSheetInput (use its functions to read)
- Convert pivotal data into normalized records
- Can automatically detect the number columns and rows
- Provides beside the values and dimensions also the value cell address



# tFileExcelReferencedCellInput

- Reads the cell value from absolutely addressed cells
- Use as cell address sheet+row+column
- Can take the address from an incoming flow or configuration in the component

# tFileExcelNamedCellInput

- Reads the cell value from absolutely addressed cells
- Use as cell address the name
- Iterates through all named cells

# tFileExcelSheetOutput (1) – Write Values

- Write cells of a sheet from an incoming schema
- Free addressable cells (gaps allowed)
- Can write not only cell values
  - Links
  - Comments
- Can append rows to existing rows
- Can create sheets and also as copy of sheets (templates)
- Can shift rows and insert new rows above
- Can write formulas (also dynamic using {row} placeholder)
- Can take care of protected cells

# tFileExcelSheetOutput (2) – Formatting

- Can reuse existing styles from the 1. or 1.+2. written row (alternating)
- Can reuse existing conditional styles (also alternating)
- Can use explicit format settings per column
- Can reuse data validations
- Can update tables automatically
  - Allows this way update of charts or pivot sheets
- Can write header with self defined values
- Can freeze rows and columns
- Can adjust column size automatically

## tFileExcelNamedCellOutput

- Write into the cell addressed by absolut address
- Use as cell address sheet+row+column
- Can take the address and value from an incoming flow or configuration in the component

## tFileExcelReferencedCellOutput

- Write cell value addressed by name

# tFileExcelWorkbookSave

- Writes the workbook to the file system
- Can encrypt the file
- Can complete the file name according to the workbook type
- Can re-calculate all formulas
- Can delete template sheets

# Resources

- Talend Exchange (all components in one package):  
<https://exchange.talend.com/#marketplaceproductoverview:marketplace=marketplace%252F1&p=marketplace%252F1%252Fproducts%252F542&pi=marketplace%252F1%252Fproducts%252F542%252Fitems%252F3037>
- Github: [https://github.com/jlolling/talendcomp\\_tFileExcel](https://github.com/jlolling/talendcomp_tFileExcel)