Denodo Tableau Exporter - User Manual

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CONTENTS

1 WHAT IS THE TABLEAU EXPORTER?

The Tableau exporter is a custom exporter designed to allow Denodo Scheduler Server to export data from different sources into a TDE file or into a hyper file according to the version of Tableau.

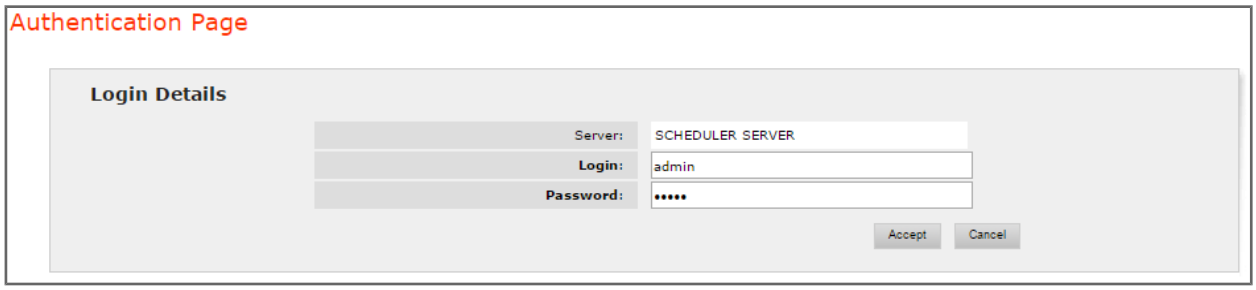
Hyper and Tableau Data Extract (TDE) are data file format used by Tableau, a business intelligence software that helps people see and understand their data.

2 HOW TO INSTALL THE TABLEAU EXPORTER

If you're using Tableau 10.4 and earlier you have to use Tableau SDK to generate .tde files. In order to install the Tableau Exporter you have to download and install the Tableau SDK. See the **How to install the Tableau SDK section**.

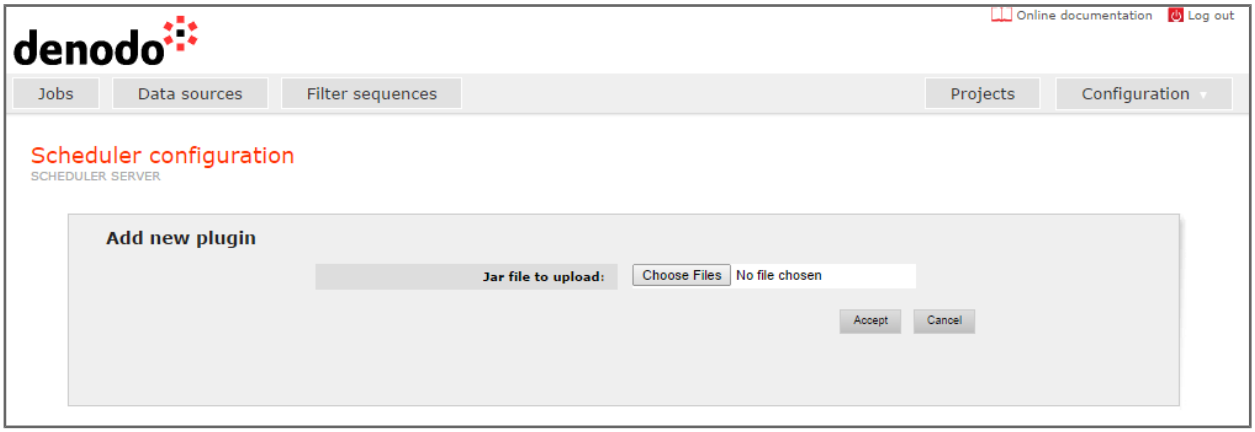
If you're using Tableau 10.5 and later you have to install Extract API 2.0. See the **How to install Extract API 2.0.**

Additionally, you have to download Tableau Exporter from the Denodo Support Site. Once uncompressed, connect to the Scheduler Server via the Scheduler WebAdmin Tool and log in.

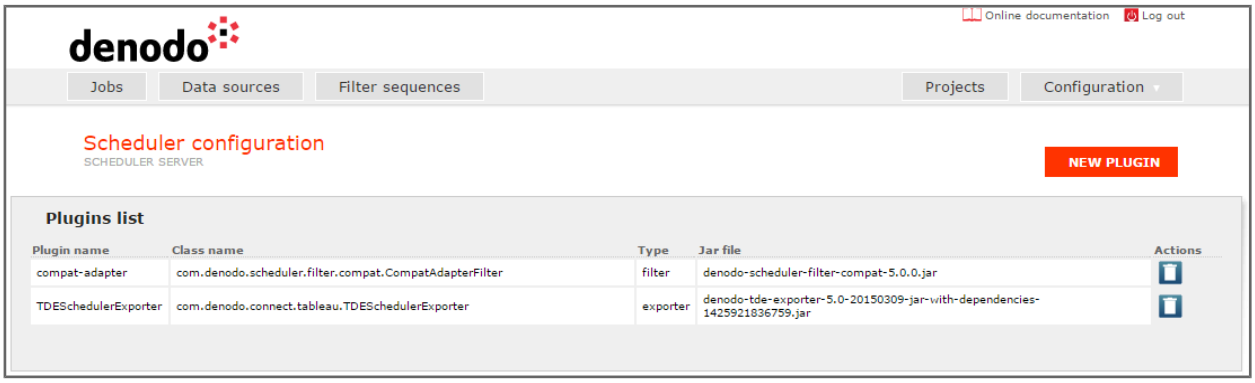


Once connected, click on `Configuration` → `Plugins` in order to access the `Plugins Configuration` section.

Click on the `New Plugin` button in order to access the new plugin input form.



Select the Tableau Exporter's **jar with dependencies** file, which will be called something similar to `denodo-tableau-exporter-[denodo_version]-[exporter_version]-jar-with-dependencies.jar` (version numbers might change), and click on the `Accept` button, and after the success page, you will see your new exporter in the `Plugins` section.



2.1 HOW TO INSTALL THE TABLEAU SDK

The Tableau SDK is available on the Tableau website. Go to the https://onlinehelp.tableau.com/current/api/sdk/en-us/SDK/tableau_sdk_installing.htm page and choose the appropriate version for your platform. The programming language must be Java.

Note that the data extract process takes part in the Scheduler Server and therefore this is the server that must be configured.

2.1.1 Windows systems

The native libraries and the `tdeserver32` file, if you are using a 32-bit architecture, or the `tdeserver64` file, if you are using a 64-bit architecture, must be on Denodo Library Path. On Windows systems, after uncompressing the downloaded file you have a `bin` folder and you may copy all its contents to a global Library Path, to a special directory such as `C:/WINDOWS/SYSTEM32`. Some native libraries may already exist in the destination directory and may be used by other programs, so the system will not let you overwrite them but you can omit the copy of these libraries. If you copy the contents in a new folder, you have to make sure that the new folder it is in the System Variable PATH.

2.1.2 Linux systems

The native libraries and the `tdeserver32` or the `tdeserver64` file, dependending on your architecture, must be on Denodo Library Path. On Linux systems, after uncompressing the downloaded file you have a `bin` folder which contains the `tdeserver32` file (32-bit architecture) or the `tdeserver64` file (64-bit architecture). The native libraries are located at `lib/tableausdk` folder, if you are using a 32-bit architecture, or at `lib64/tableausdk` folder, if you are using a 64-bit architecture, and you must copy them to `$DENODOHOME/dll/db` where Denodo Platform will search for shared libraries. Note that the `Java` folder does not need to be copied. These libraries will try to load the `tdeserver32` or the `tdeserver64` file from these relative paths:

1. `$PATH_TO_CURRENTLY_EXECUTING_LIBRARY/../bin`
2. `$PATH_TO_CURRENT_EXECUTABLE`
3. Search regular environment variable `$PATH`

Given this sequence to find the file, you can copy the `tdeserver32` or the `tdeserver64` file to `$DENODOHOME/dll/db` and add its path to the environment variable `$PATH`.

There is a less recommended alternative in order to install the Tableau SDK. This second option allows the installation copying the native libraries from `$TABLEAU_SDK/lib/tableausdk` or `$TABLEAU_SDK/lib64/tableausdk` and the `tdeserver32` or the `tdeserver64` file from `$TABLEAU_SDK/bin` to the execution directory of Denodo Platform, `$DENODOHOME/bin`.

2.2 HOW TO INSTALL THE EXTRACT API 2.0

The Extract API 2.0 is available on the Tableau website. Go to the https://onlinehelp.tableau.com/current/api/extract_api/en-us/help.htm#Extract/extract_api_installing.htm%3FTocPath%3D____3 page and choose the appropriate version for your platform. The programming language must be Java.

Note that the data extract process takes part in the Scheduler Server and therefore this is the server that must be configured.

2.2.1 Windows systems

On Windows systems, after uncompressing the downloaded file, you have to add the `bin` folder to the System Variable PATH.

2.2.2 Linux systems

For Linux, after uncompressing the downloaded file, you need to include in the System Variable PATH the folder `/bin/hyper`.

In addition, you have to copy the content of the folder *`install-dir`*`/lib[64]/tableausdk` to `$DENODO_HOME/dll/db` or you can set `LD_LIBRARY_PATH` to the *`install-dir`*`/lib[64]/tableausdk`

In this link it is also explained how to configure the installation to use Extract API 2.0.

3 USING THE TABLEAU EXPORTER

The exporter offers some configuration parameters:

Mandatory

- `Output folder` (String): It specifies the folder where the output files will be generated.

- `Output file name` (String): Name of the generated file. The extension of the file has to be .tde or .hyper according to the version of tableau and it is mandatory. It offers support for placeholders that will be filled with execution parameters. The supported parameters are:

    - `@{projectName}`: name of the project
    - `@{jobName}`: name of the particular job.
    - `@{jobID}`: id of the particular job
    - `@{jobTime}`: time of execution of the job, in the format `yyyyMMdd-HHmmss`

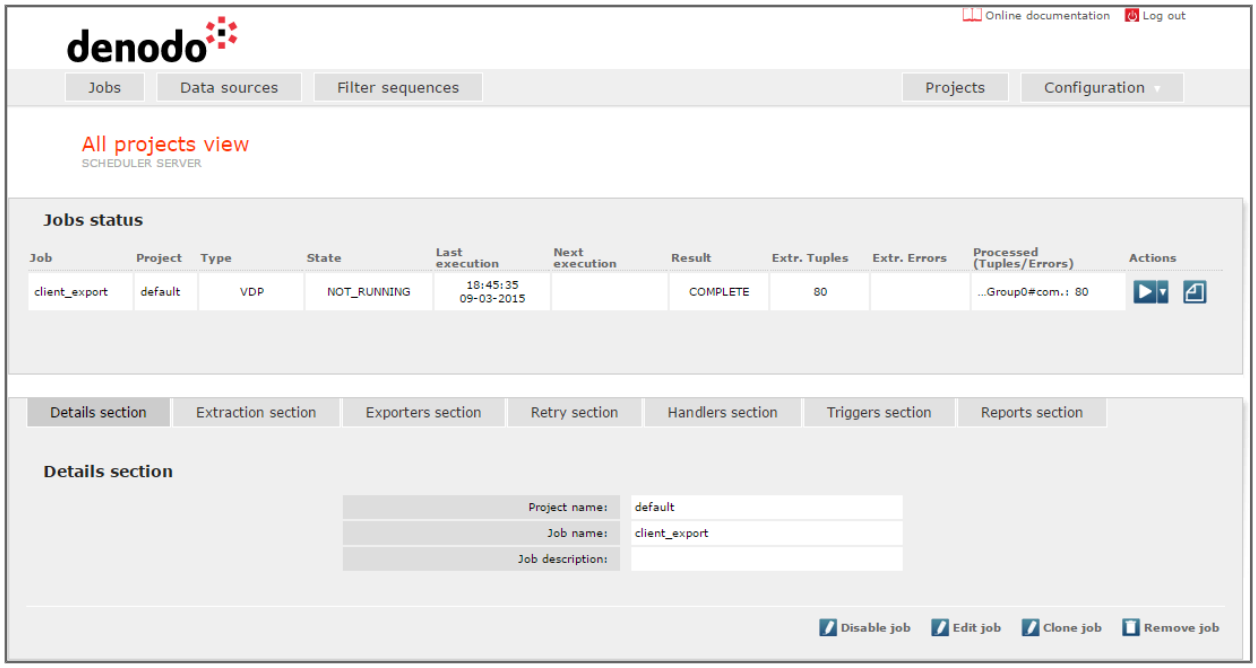
NOTE: *adding `@{jobTime}` to the output file name is normally a good idea to avoid file name collision, which might result in previous output files being deleted. For example, a useful output name could be: `@{projectName}_@{jobName}_@{jobTime}.tde` or `@{projectName}_@{jobName}_@{jobTime}.hyper`*

Optional

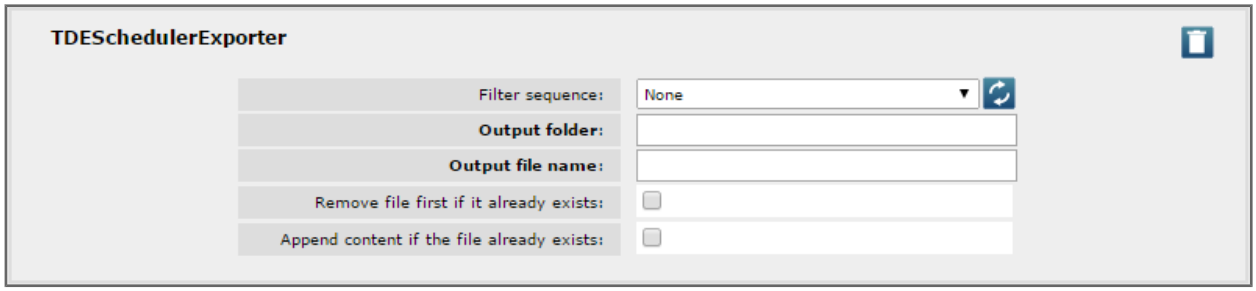
- `Remove file first if it already exists` (Boolean): If true the file specified will be removed if it already exists. Default: "false"
- `Append content if the file already exists` (Boolean): If true the new content will be added to the existing file. Default: "false"

3.1 CREATING A TABLEAU FILE

Select a job and edit it to add a new Tableau exporter.



Click on `Edit Job` → `Exporters Section` → `New Exporter` → `TableauSchedulerExporter`.



Fill, at least, the mandatory fields. For example:

- Output folder: `C:\Temp`
- Output file name: `@{jobName}_output_file.tde`

Execute the job, and the `client_export_output_file.tde` will be created into the selected folder. You can see the data by opening the file using Tableau Desktop and build views as you can see below:

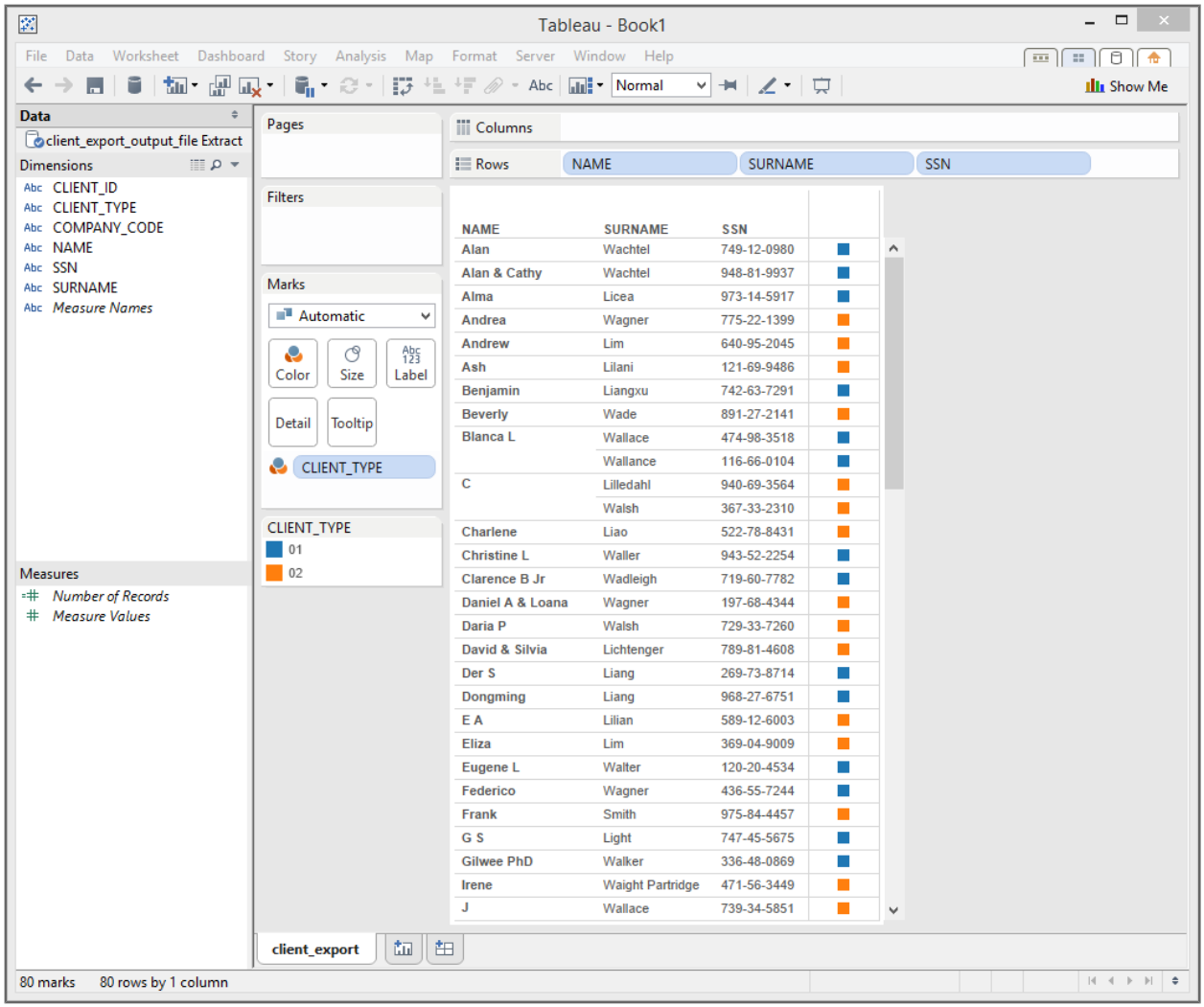


Tableau - Book1
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Normal
Show Me
Data
client_export_output_file Extract
Dimensions
CLIENT_ID
CLIENT_TYPE
COMPANY_CODE
NAME
SSN
SURNAME
Measure Names
Measures
Number of Records
Measure Values
Pages
Filters
Marks
Automatic
Color
Size
Label
Detail
Tooltip
CLIENT_TYPE
CLIENT_TYPE
01
02
Columns
Rows
NAME
SURNAME
SSN
NAME SURNAME SSN
Alan Wachtel 749-12-0980
Alan & Cathy Wachtel 948-81-9937
Alma Licea 973-14-5917
Andrea Wagner 775-22-1399
Andrew Lim 640-95-2045
Ash Lilani 121-69-9486
Benjamin Liangxu 742-63-7291
Beverly Wade 891-27-2141
Blanca L Wallace 474-98-3518
Wallance 116-66-0104
C Lilledahl 940-69-3564
Walsh 367-33-2310
Charlene Liao 522-78-8431
Christine L Waller 943-52-2254
Clarence B Jr Wadleigh 719-60-7782
Daniel A & Loana Wagner 197-68-4344
Daria P Walsh 729-33-7260
David & Silvia Lichtenger 789-81-4608
Der S Liang 269-73-8714
Dongming Liang 968-27-6751
E A Lilian 589-12-6003
Eliza Lim 369-04-9009
Eugene L Walter 120-20-4534
Federico Wagner 436-55-7244
Frank Smith 975-84-4457
G S Light 747-45-5675
Gilwee PhD Walker 336-48-0869
Irene Waight Partridge 471-56-3449
J Wallace 739-34-5851
client_export
80 marks
80 rows by 1 column

4 LIMITATIONS

- Tableau Exporter only was tested with the version of Extract API 2.0 2018-3-0.
- The export to hyper files is only supported by Denodo Platform 7.0 and later.
- Under certain circumstances, exporting Hyper files in Linux requires the server to be run by the root user. This is a requirement of certain versions of the Tableau Extract API 2.0. Please refer to your Tableau documentation or support for more detail