



Denodo Custom Wrapper for SAS

Revision 20230609

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1 INTRODUCTION

[SAS](#) is a statistical software suite developed by SAS Institute for advanced analytics, multivariant analysis, business intelligence, criminal investigation, data management, and predictive analytics. It can mine, alter, manage and retrieve data from a variety of sources and perform statistical analysis on it.

The SAS software suite has more than 200 components. Some of the SAS components include:

- Base SAS - Basic procedures and data management
- SAS/STAT - Statistical analysis
- SAS/GRAPH - Graphics and presentation
- SAS/OR - Operations research
- SAS/ETS - Econometrics and Time Series Analysis
- SAS/IML - Interactive matrix language
- SAS/AF - Applications facility
- SAS/QC - Quality control
- SAS/INSIGHT - Data mining
- SAS/PH - Clinical trial analysis
- Enterprise Miner - data mining
- Enterprise Guide - GUI based code editor & project manager
- SAS EBI - Suite of Business Intelligence Applications
- SAS Grid Manager - Manager of SAS grid computing environment

The SAS7BDAT file format is the main format used to store SAS datasets, which are files of binary encoded data. So, in order to access and read the information included in these files, we need to parse properly this binary encoded data to extract the values stored in them. The Denodo Custom Wrapper for SAS will read your sas7bdat binary files and will create base views that are able to access this data.

2 ARCHITECTURE AND FEATURES

The SAS7BDAT files only support two generic data types: number and character. They will be represented in the Denodo base views as double and text, respectively.

Note, also, that SAS7BDAT files may have some type of compression (uncompressed, CHAR-compressed or BINARY-compressed), but the Denodo Denodo Custom Wrapper will read properly the content of all SAS7BDAT files no matter if they are compressed or not.

3 INSTALLATION

The Denodo Denodo Custom Wrapper for SAS distribution consists of:

- /dist:
 - denodo-sas-customwrapper-`{denodo-version}`-`{version}`.jar. The custom wrapper.
 - denodo-sas-customwrapper-`{denodo-version}`-`{version}`-jar-with-dependencies.jar. The custom wrapper plus its dependencies. This is the wrapper we recommend to use, as it is easier to install in VDP.
 - denodo-sas-customwrapper-`{denodo-version}`-`{version}`-sources. The custom wrapper source code.
- /lib: All the dependencies required by this wrapper in case you need to use the denodo-sas-customwrapper-`{denodo-version}`-`{version}`.jar.

4 USAGE

4.1.1 Import the Custom Wrapper

To import the custom wrapper, follow these steps:

1. In the VDP Administration Tool, go to:
 - Denodo 6.0: File → Jar management
 - From Denodo 7.0: File → Extension management
2. Click on “Create” button and select the “denodo-sas-customwrapper-
{denodo-version}-{version}-jar-with-dependencies.jar” file, located in the dist folder of the Denodo Custom Wrapper for SAS distribution, downloaded from the [Denodo Support Site](#).

4.1.2 Create the SAS data source for reading SAS7BDAT files

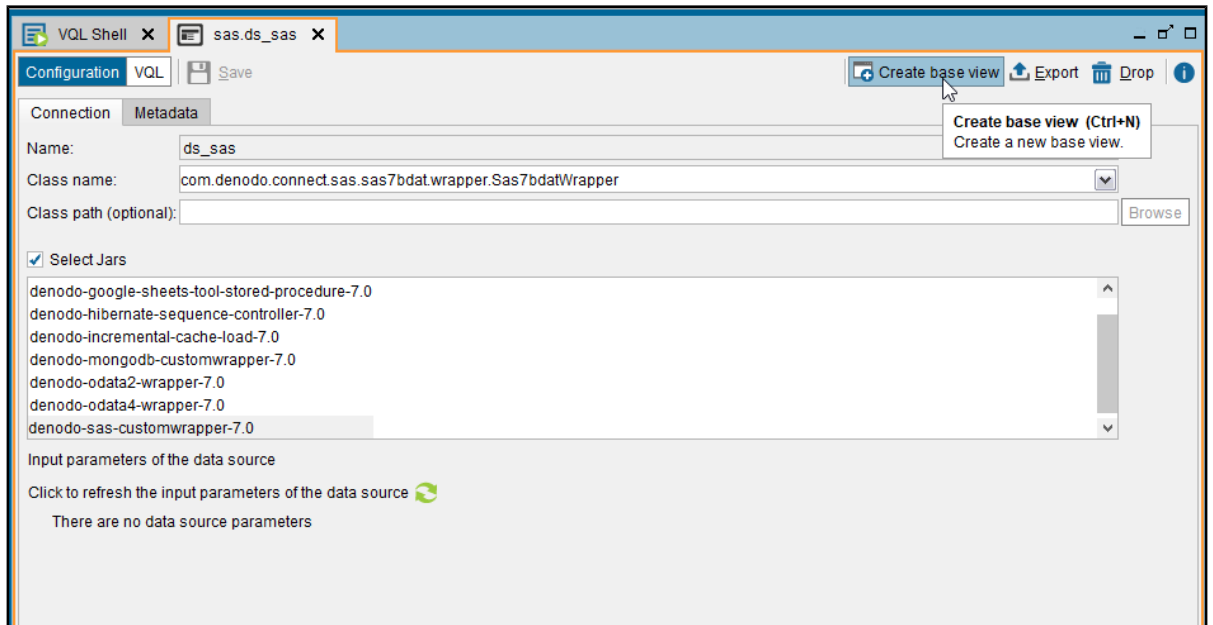
To create a new SAS custom data source:

1. In the VDP Administration Tool, go to: File → New... → Data source → Custom
2. In the “Create a New Custom Data Source” window, do the following:
 - Set a name for the new SAS data source in the “Name” field.
 - Click on “Select Jars” and select the file imported in the previous section.
 - The “Class name” field must be filled with:
`com.denodo.connect.sas.sas7bdat.wrapper.Sas7bdatWrapper`
3. Click on “Save” button.

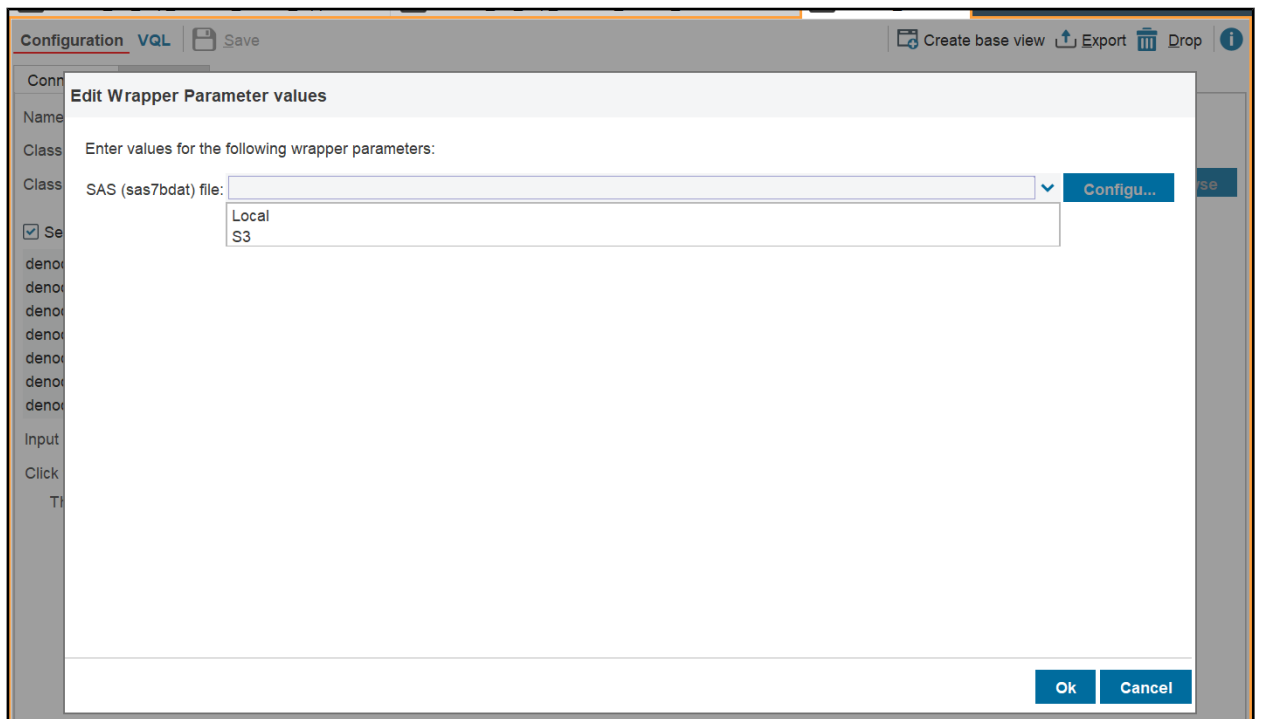
4.1.3 Create the base view

To create a new base view using the SAS data source:

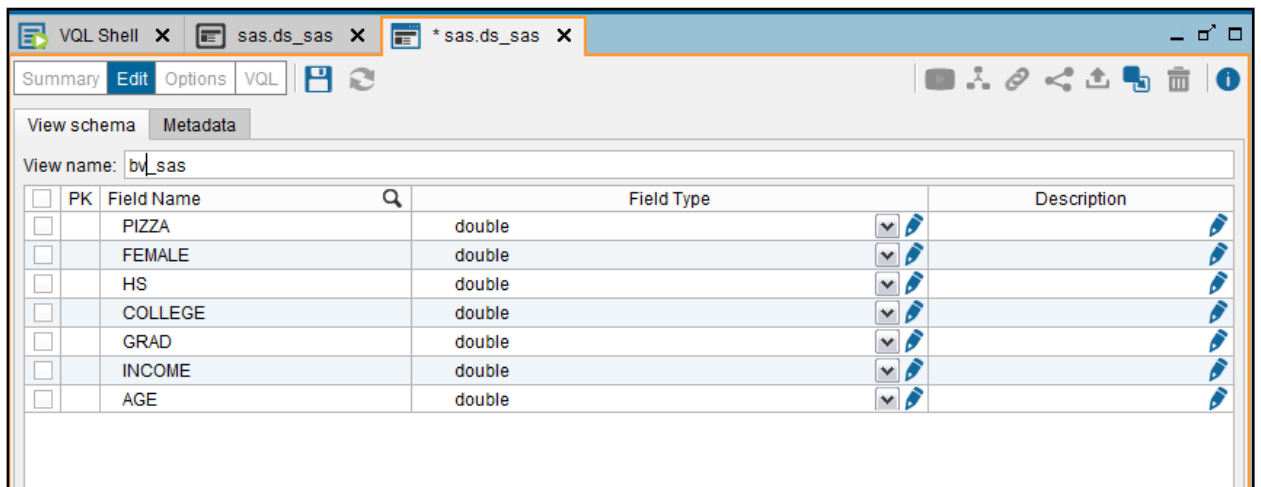
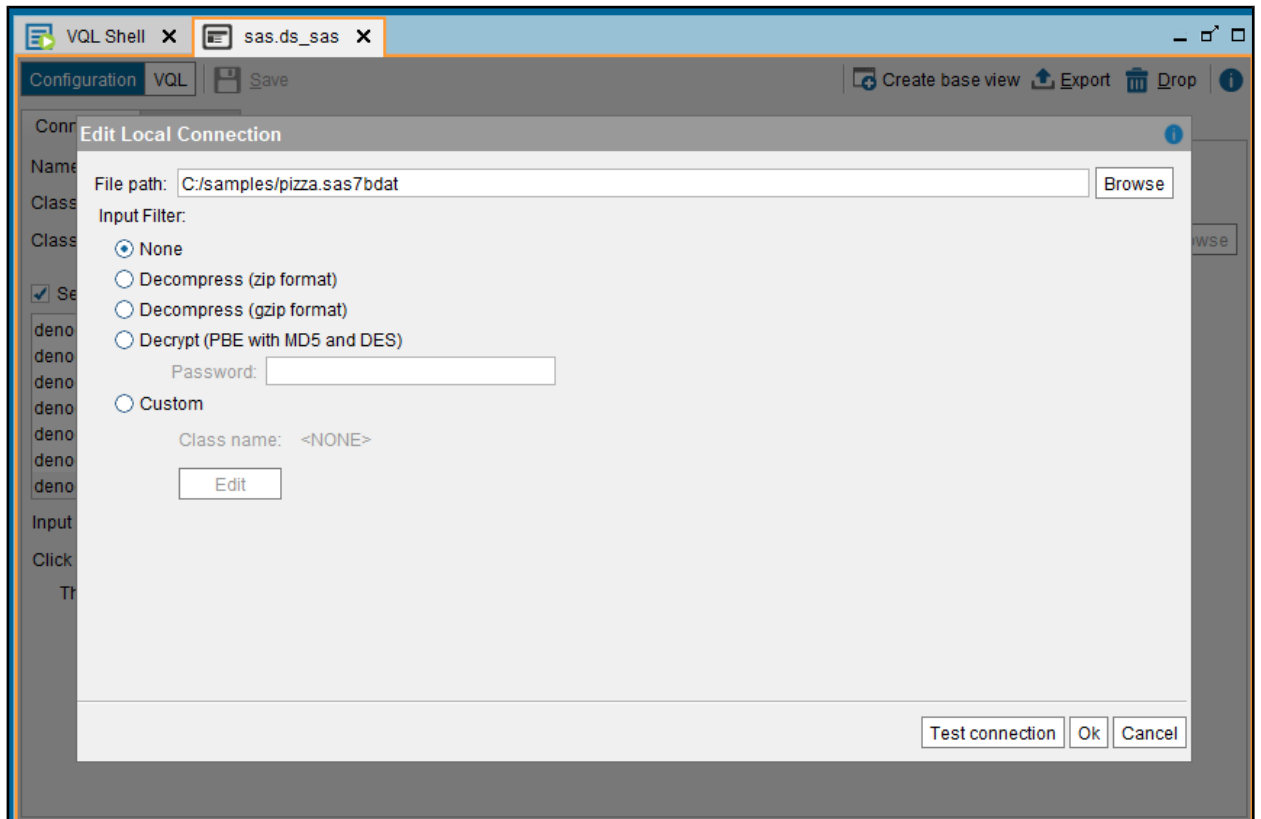
1. Double-click on the SAS data source and then click on “Create base view”.



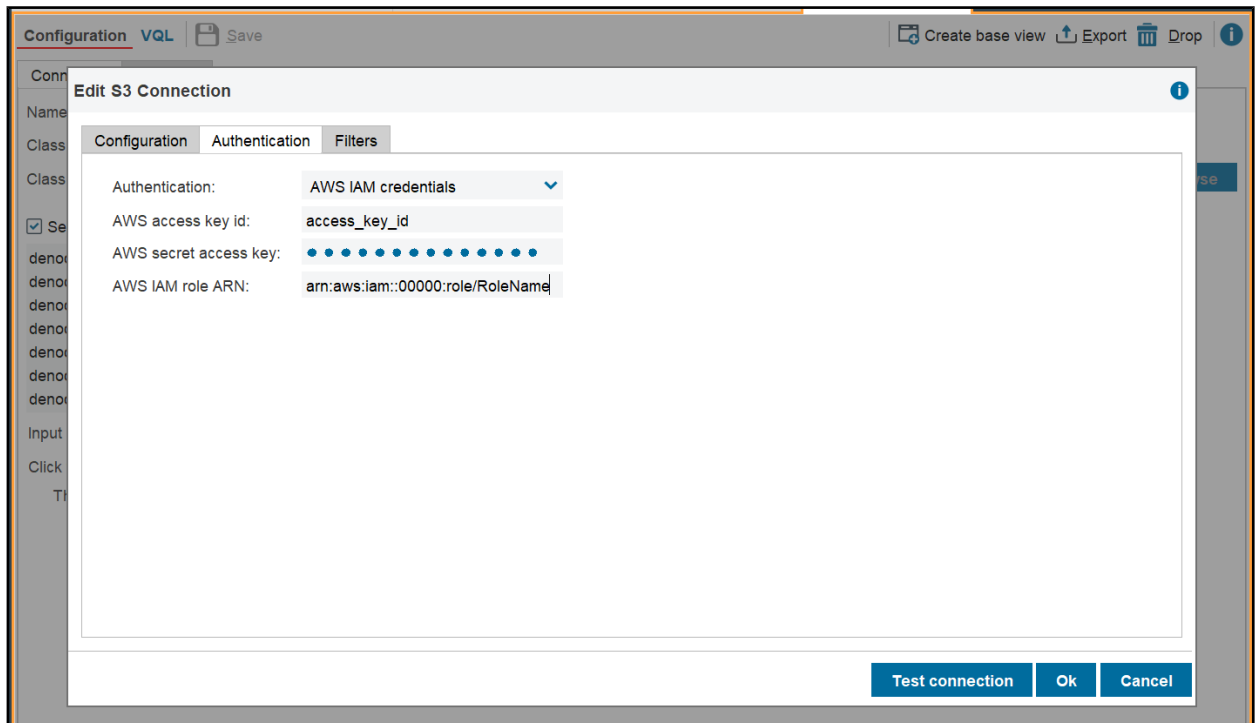
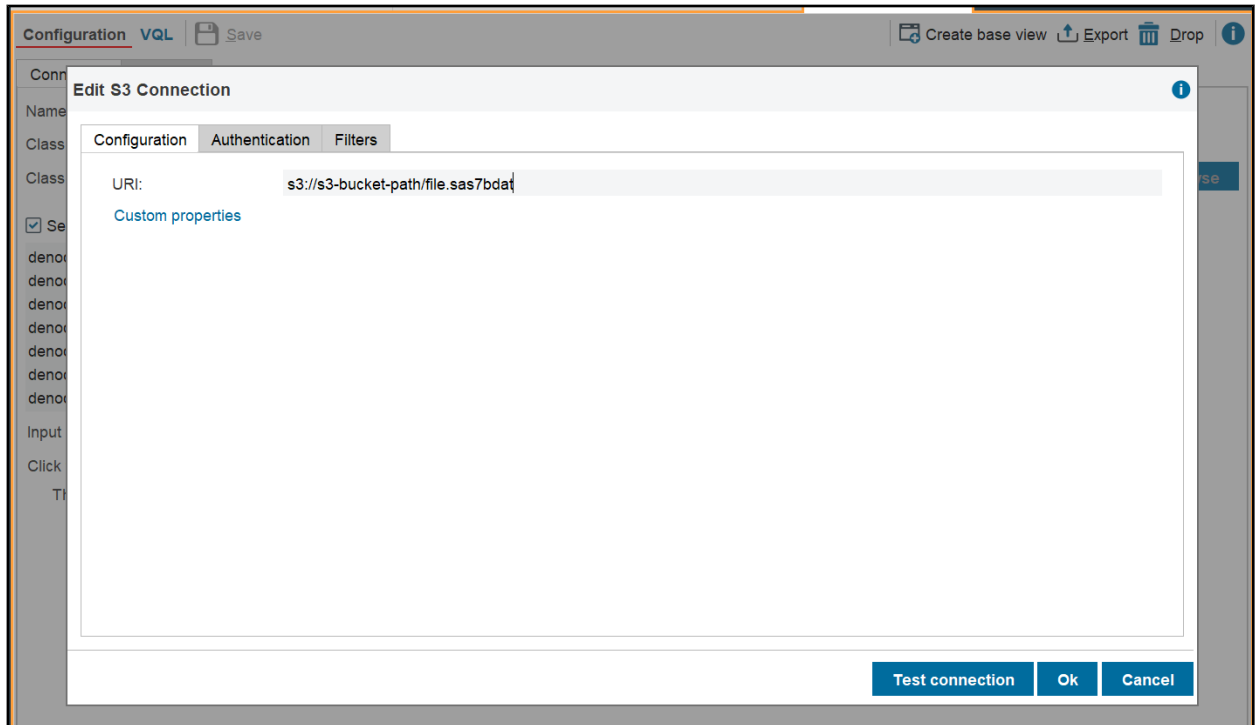
2. Here you can specify where the SAS7BDAT file is located (on your local machine or in Amazon S3).



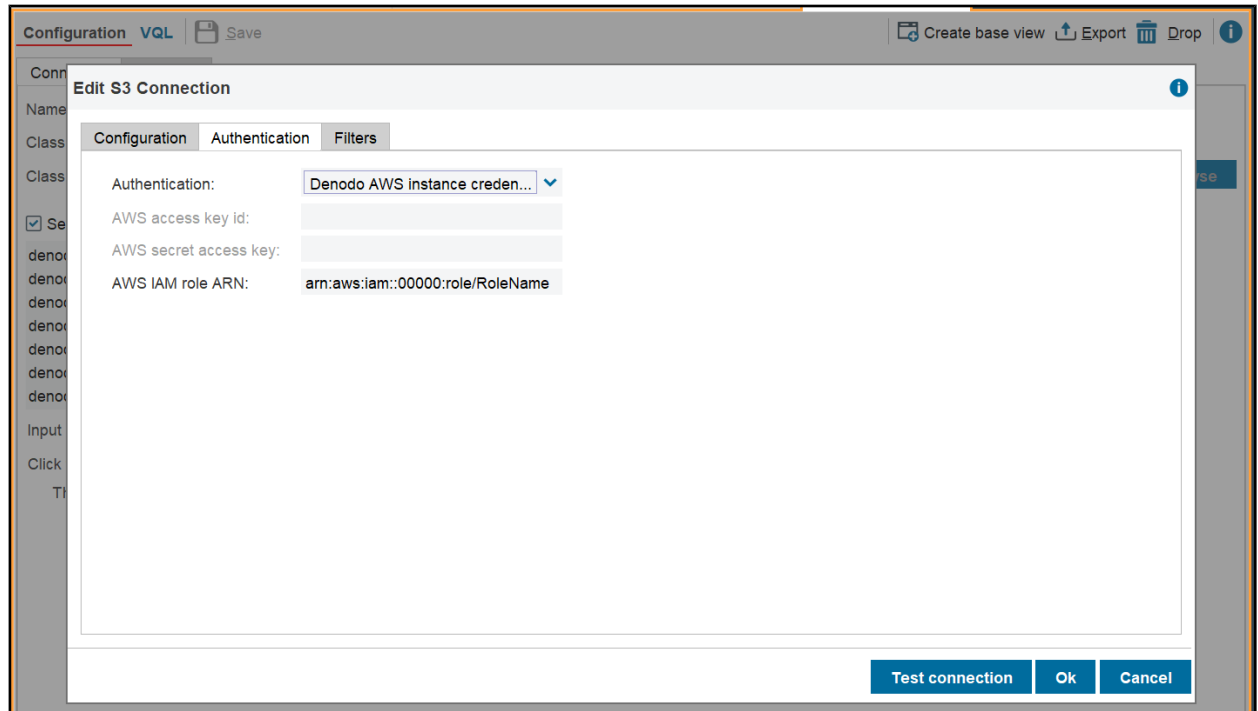
If your file is in your local machine, just select the path of your SAS7BDAT file and click on “OK”. The base view will be created.



If the file is located in an Amazon S3 bucket, you need to specify the path to the SAS7BDAT file and the authentication parameters: AWS Access Key Id, AWS Secret Access Key and AWS IAM role ARN (optional).



You can also authenticate with Denodo AWS Instance Credentials, adding an AWS IAM role ARN if necessary.



3. Now you can make queries over the new base view.

