



Connecting to Denodo from Tibco Spotfire

Revision 20210528

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Goal

This document describes how to connect to a Denodo Virtual DataPort server from Tibco Spotfire. The document explains how to configure these connections using both JDBC and ODBC, the JDBC alternative is recommended over ODBC.

Important note: Since Tibco Spotfire version 10.3 a Custom Connector to connect to Denodo is available. The recommendation is to use this Custom Connector instead of the alternative described in this document. You can get more information in this [Tibco Community section](#).

Connecting to Denodo using the JDBC Driver

To allow the Tibco Spotfire client application to use JDBC data sources, the data source needs to be configured first in the Tibco Spotfire Server.

In the [Spotfire Server Installation and Configuration Manual](#), section **Data Source Templates**, the procedure needed to configure data sources is explained. Those data sources will be available when creating Information Links.

As Denodo's JDBC driver is not pre-installed as part of the Spotfire Server installation, the driver must be manually installed on the Spotfire Server. The driver file can be copied from the folder <DENODO_HOME>/tools/client-drivers/jdbc of a Denodo installation to the <SPOTFIRE_HOME>/tomcat/lib folder of the Spotfire Server. After adding the JDBC driver, the Spotfire Server must be restarted.

Note: Spotfire does not provide a means to isolate classloading per data source, so a single installation can not simultaneously have different versions of the same drivers loaded.

Once the JDBC driver is added to the Spotfire installation, to add a new data source, an XML template with the data source configuration will be used. The complete list of available configuration settings and default values can be consulted in the XML Settings section of the Spotfire manual. This example can be used as a basic configuration to connect to Denodo Virtual DataPort:

```
<jdbc-type-settings>
  <type-name>Denodo</type-name>
  <display-name>Denodo</display-name>
  <driver>com.denodo.vdp.jdbc.Driver</driver>
  <connection-url-pattern>
    jdbc:vdb://server:port/database?autoCommit=true
  </connection-url-pattern>
  <supports-catalogs>>false</supports-catalogs>
  <supports-schemas>>false</supports-schemas>
  <column=alias=pattern>$$name$$</column=alias=pattern>
  <use-ansii-style-outer-join>>true</use-ansii-style-outer-join>
  <metadata-provider>
    com.spotfire.ws.im.ds.sql.BasicJDBCMetadataProvider
  </metadata-provider>
  <supports-procedures>>true</supports-procedures>
  <ping-command>Select 1</ping-command>
</jdbc-type-settings>
```

To connect to a database configured with the Unicode charset for identifiers, the template must include the ` character for the alias and name patterns:

```
<jdbc-type-settings>
  <type-name>Denodo</type-name>
  <display-name>Denodo</display-name>
  <driver>com.denodo.vdp.jdbc.Driver</driver>
  <connection-url-pattern>
    jdbc:vdb://server:port/database?autoCommit=true
  </connection-url-pattern>
  <supports-catalogs>>false</supports-catalogs>
  <supports-schemas>>false</supports-schemas>
  <column▯alias▯pattern>`$$name$$`</column▯alias▯pattern>
  <column▯name▯pattern>`$$name$$`</column▯name▯pattern>
  <table▯name▯pattern>`$$name$$`</table▯name▯pattern>
  <use-ansii-style-outer-join>>true</use-ansii-style-outer-join>
  <metadata-provider>
    com.spotfire.ws.im.ds.sql.BasicJDBCMetadataProvider
  </metadata-provider>
  <supports-procedures>>true</supports-procedures>
  <ping-command>Select 1</ping-command>
</jdbc-type-settings>
```

IMPORTANT NOTE: In the XML template configuration as part of the `connection-url-pattern`, it is very important to include the URL parameter `autoCommit` and set this parameter to `true`. Otherwise, Spotfire will use transactions for all the queries, even for select statements introducing unnecessary overhead that will make queries to run slower. This parameter is only available in the more recent and up to date versions of the Denodo Platform. Other parameters can also be added to the connection URL as needed.

Once the XML configuration file for the data source is ready, the `add-ds-template` command can be used to finally set up the data source. For more information about this command check the section **Reference:Commands > add-ds-template** of the Spotfire Server manual. To just add a new data source with name 'Denodo' and a configuration named 'denodo_data_source.xml' file run:

```
add-ds-template -n Denodo denodo_data_source.xml
```

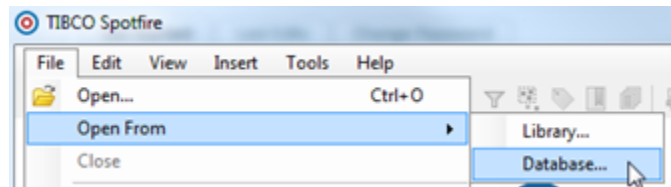
Once the data source has been added to the Spotfire Server it will be possible to access data from a Denodo Virtual DataPort database from the Spotfire Client using an Information Link.

Connecting to Denodo using the ODBC Driver

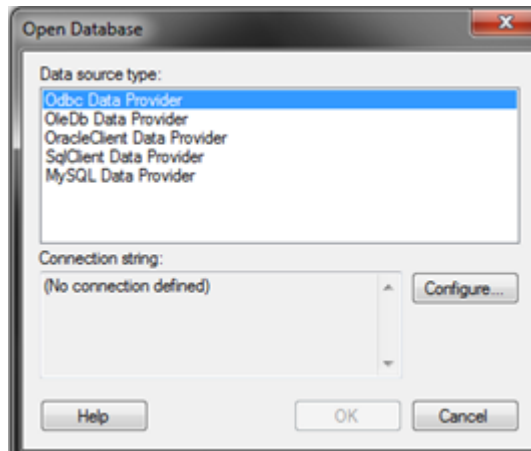
In order to connect to Denodo from Spotfire using ODBC, a DSN pointing to the Denodo Virtual DataPort server needs to be created first as explained in the Virtual DataPort Developer Guide, section [Access Through ODBC](#).

After the DSN is created, to access to it from the Spotfire Client follow these steps:

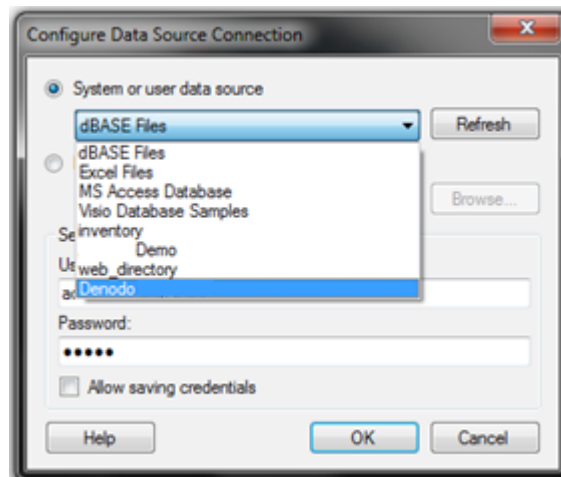
1. Go to File > Open > From Database...



2. Choose ODBC Data Provider data source type from the menu.



3. Select the Denodo DSN and provide the credentials.



4. All views in the virtual database are introspected. Select the views and fields to import (or write the SQL sentence to issue to Denodo) and provide a data source name.

