Connecting Spotfire® to Data Sources with Information Designer
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Spotfire® Information Designer

Information Designer is the tool used to manage access and connections to JDBC data sources. Information Links are created within the Information Designer.

- Information Links are methods to communicate with a database and retrieve a specific set of data, which is then loaded directly into Spotfire.

- Information Links can include limiting options, aggregation methods, data transformations and filtering options to help control the size and specificity of the data set.

- Filters can be static or prompted.
Requirements

- License options must be granted
- To set up a data source, the database must accept JDBC connections.
- A good knowledge of the underlying database structure is required
Opening Information Designer

Spotfire

Recent Analyses  Recent Data  Add Data  Samples

Open File
Files of type DXP, SSBDF, TXT, XLSX, CSV, etc.

Open from Library
Analyses, Information links and data connections.

Add Data Tables
Data tables from multiple sources.

Add Data Connection
Cisco Information Server, Microsoft SQL Server, OData, Teradata, Other.
The Interface

Create Information Link

Create Elements
- Column
- Multiple Columns
- Filter
- Procedure

Create Join

Setup Data Source
Setting up a data source

Data sources are the connections to the database. They are used to create the elements later used as columns, filters, procedures and joins.
Creating Data Elements

- Columns allow you to apply aggregations, filtering and grouping
- Multiple columns can be mapped quickly but do not allow the Column options
Filters allow removal of data prior to loading based on the expression set. Remember to insert the condition in the expression field using the given column alias.
Procedures

- Using Information Designer you select pre-made database procedures and configure these to be accessible in information links. These information links are available to the TIBCO Spotfire users to retrieve or manipulate data.
- Parameters are variable values that must be set or passed to the information link when loaded. These values can change but are required when loading data. These can be defined in the Expression’s fields.
- Parameters are defined following the next syntax: “?ParameterName”. Later, they will appear in the Parameters section after clicking Refresh.
Procedures can accept input parameters and used to create Information Links

- Select Procedure of Type Query

- Provide the default value for the input parameter, either hardcoded or as a parameter indicated by “?”
Tip: Using the Procedure of Type Query

- There is a big advantage in using the ‘Procedure’ from Spotfire Information Designer for creating Information Links to load data into Spotfire Data Table. The Procedure of Type Query returns the data set with the columns specified in Stored Procedure (in SQL server database) / Stored Function (in Oracle database) code into the data table in a Spotfire analysis.

- If there are any changes needed to the table columns, joins..etc, the procedure / function code changes can be modified in the database. With the usage of Procedure element, the new columns and modified old columns in the dataset will be automatically loaded into the Spotfire data table via the information links. This approach will eliminate explicit changes to be made to Spotfire Information Model elements and provide easy maintenance of Spotfire IM elements.
Create Information Links from Elements

- Choose the desired Elements, click on Add and order the columns.
- Click on OpenData to review the data in Spotfire
Filter Types

- Value Filters

- Range Filters

This filtering option can be set from the Information Link Tab. The difference between this Filter Option and the Filter Element is that the latter can be used regardless of the columns mapped in the Information Link, whereas the Filter Option must be set using an available column from the Elements box of the Information Link Tab.
Prompts

A prompt is a dialog window where the user can choose to limit the amount of data to be loaded from the Information Link and can be changed each time the data loads.

- Values
- Range
- Single Selection
- Multi Selection
SQL Button – allows you to manually edit the SQL

When using the Information Designer to create an Information Link, a SQL is being written according to the settings selected.
Sometimes when creating Information Links, columns from more than one table must be used. In those cases to create a useful Information Link, a join between the tables is needed. The join relates the tables by matching data in columns that identify rows uniquely, e.g. primary key columns.
Open and load Information from a Spotfire Session
Data loaded
Common issues and troubleshooting

• The most likely cause of the “Validation unsuccessful” Information link message is that the Data Source is not running.
• Invalid SQL: Test your SQL in the source database first to make sure it is valid
• Join Columns issue: Columns used have been modified or dropped in the source database
• For more information about executed SQL queries performed when an information link is executed check the SQL Log file in the Spotfire server
Questions? Thank you for your time!

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