

What's New in TIBCO Spotfire® 7.7

Software Release 7.7
October 2016

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TIBCO Documentation and Support Services

Documentation for this and other TIBCO products is available on the TIBCO Documentation site. This site is updated more frequently than any documentation that might be included with the product. To ensure that you are accessing the latest available help topics, please visit:

<https://docs.tibco.com>

TIBCO Spotfire Documentation

The following documents for this product can be found on the TIBCO Documentation site:

- *TIBCO Spotfire® Analyst Release Notes*
- *TIBCO Spotfire® Analyst User's Guide*
- *TIBCO Spotfire® Administration Manager - User's Manual*
- *TIBCO Spotfire® License Agreement*

How to Contact TIBCO Support

For comments or problems with this manual or the software it addresses, contact TIBCO Support:

- For an overview of TIBCO Support, and information about getting started with TIBCO Support, visit this site:

<http://www.tibco.com/services/support>

- If you already have a valid maintenance or support contract, visit this site:

<https://support.tibco.com>

Entry to this site requires a user name and password. If you do not have a user name, you can request one.

System requirements for Spotfire products

For information about the system requirements for Spotfire products, visit <http://support.spotfire.com/sr.asp>.

How to Join the TIBCO Community

The TIBCO Community is an online destination for TIBCO Spotfire customers, partners, and resident experts. It is a place to share and access the collective experience of the TIBCO Spotfire community. The community site offers forums, blogs, and access to a variety of resources. To register, go to the following web address.

<https://community.tibco.com/products/spotfire>

Visual analytics

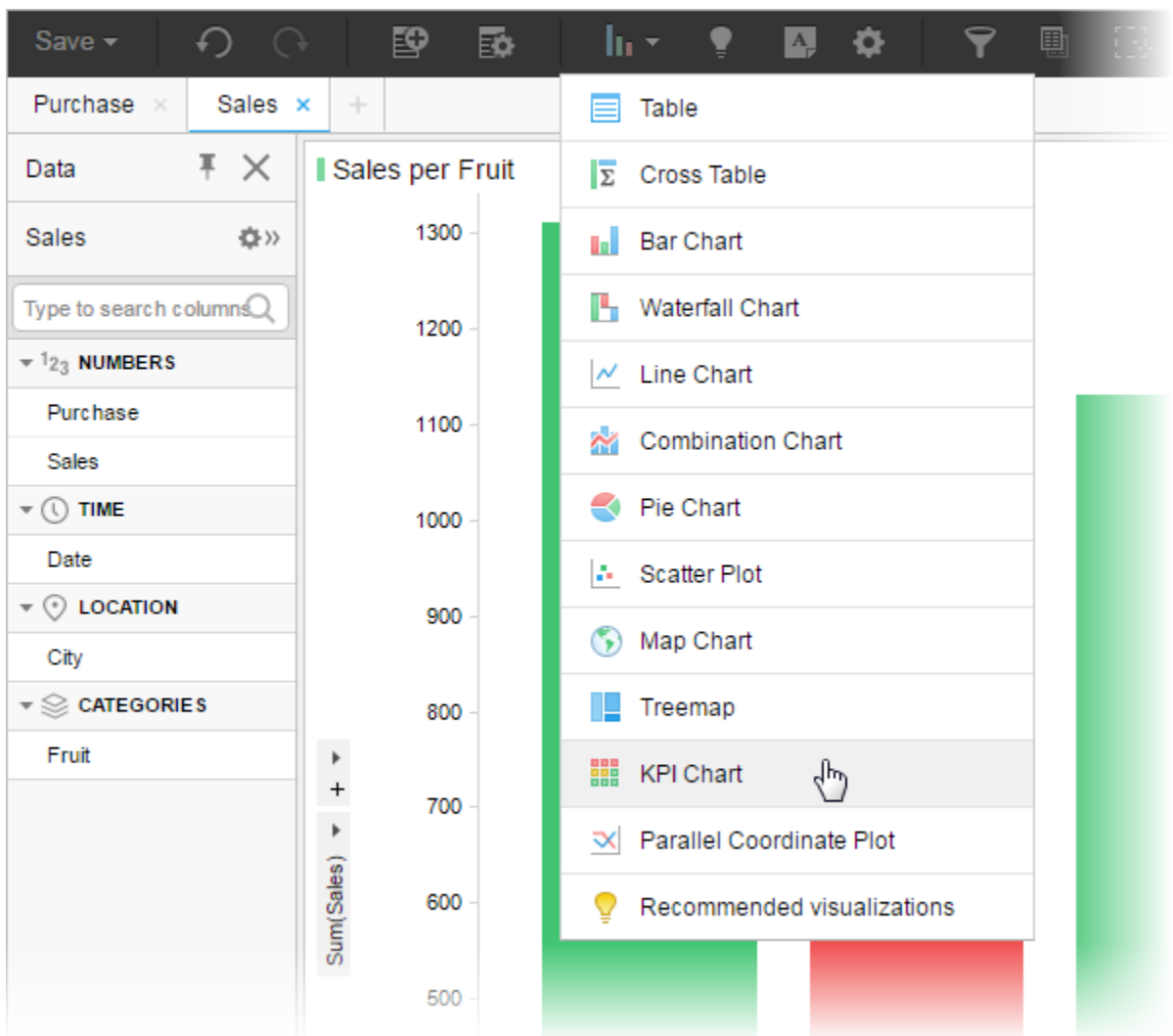
Spotfire 7.7 brings many improvements to how you can tweak and configure visualizations in your analyses. You now have even better control of the appearance and behavior of your KPI charts, tables and cross tables. Another highlight is that you can now create KPI charts in Spotfire Business Author.

KPI chart improvements

There have been several improvements to the KPI chart in Spotfire 7.7.

Create and configure KPI charts in Business Author

Business Author users can now create and configure KPI chart visualizations.



Sparklines in the KPI chart

For KPIs with data that has a time dimension, there is now an option to add a sparkline to give a visual overview of the trend of the KPI. The sparkline has an optional scale to help assessing the values over time.

Market and Individual Brand KPIs

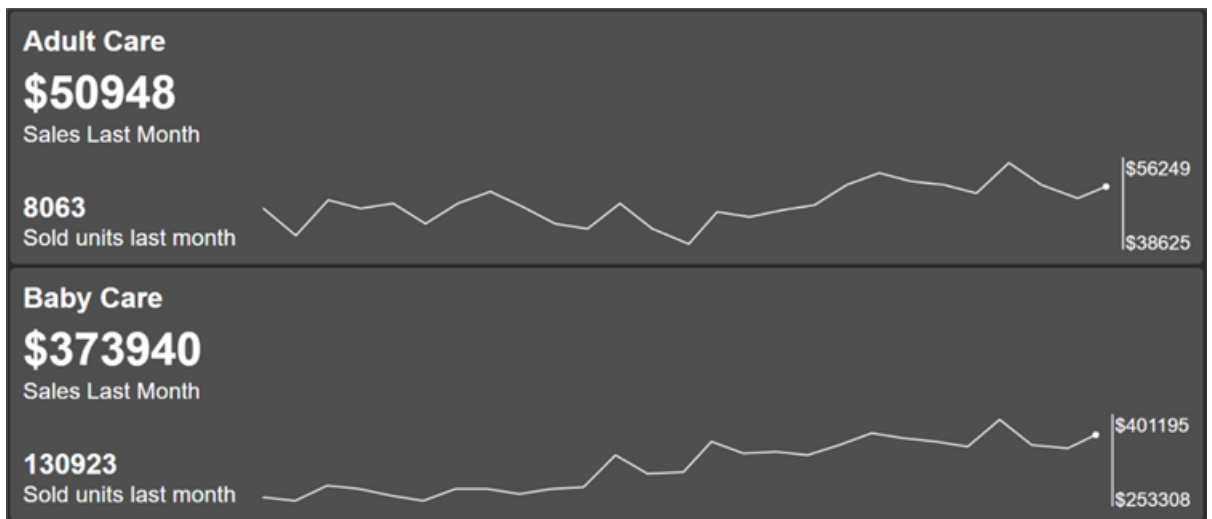


Control over desired minimum KPI tile width

The author is now able to customize the minimum desired width of the KPI tiles. The minimum width can help showing more KPIs in the available space when the data has relatively short values, or, it can help you creating really big KPI tiles for viewing at a longer distance.

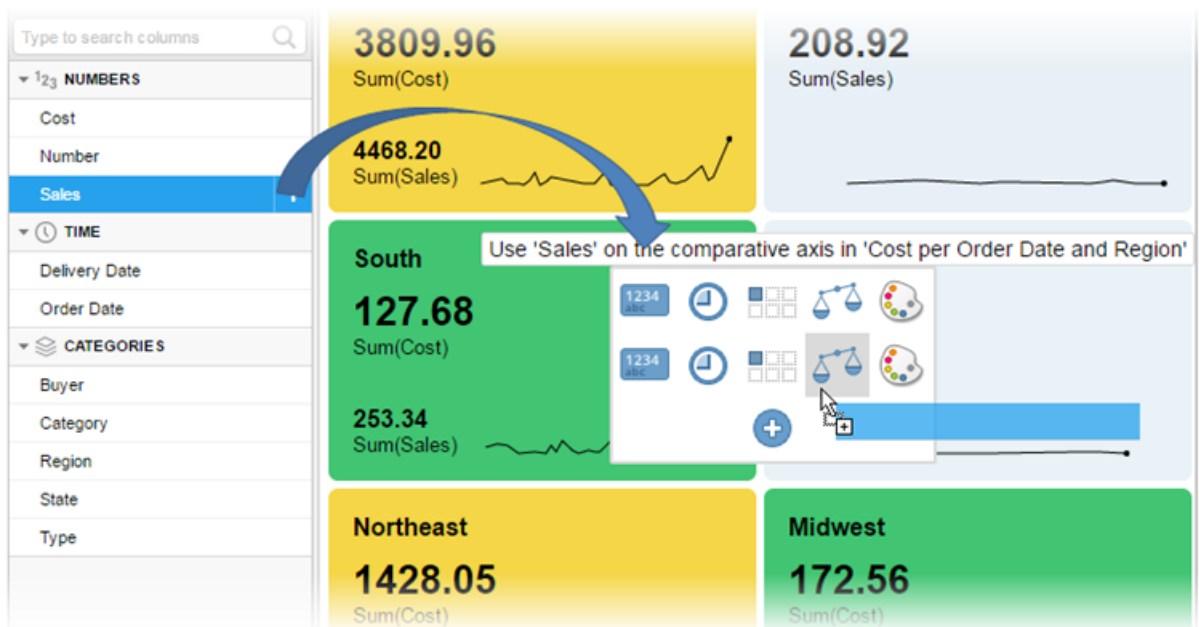
AA 17 Price	AAON 19 Price	AIR 25 Price	ALB 58 Price	ALGT 129 Price	ALK 53 Price	ALXN 192 Price	AMGN 157 Price	ANDE 61 Price	APD 130 Price	APOG 42 Price	ARO 3 Price	ASEI 53 Price	ATK 130 Price	AVAV 30 Price
AVD 11 Price	BEAV 75 Price	BIIB 318 Price	BKE 49 Price	BWA 57 Price	BYD 11 Price	CAB 48 Price	CBST 72 Price	CELG 106 Price	CENX 27 Price	CHRW 72 Price	CHS 15 Price	COL 82 Price	CUB 47 Price	CVC 19 Price
CW 70 Price	CYT 46 Price	DAL 40 Price	DAR 17 Price	DD 68 Price	DLPH 69 Price	DPS 68 Price	EBI 22 Price	EXPD 42 Price	FDX 168 Price	FF 13 Price	FINL 26 Price	FLIR 33 Price	FMC 58 Price	FWRD 48 Price
GCO 77 Price	GD 137 Price	GILD 113 Price	HBI 110 Price	HSNI 69 Price	INGR 76 Price	JCI 44 Price	JWN 71 Price	KALU 69 Price	KAMN 42 Price	KORS 78 Price	KWR 76 Price	LB 71 Price	LII 89 Price	LUV 35 Price
LYV 24 Price	MAS 22 Price	MCRI 14 Price	MNTA 11 Price	MOG... 77 Price	MON 113 Price	MW 47 Price	NEU 393 Price	NKE 92 Price	ORB 30 Price	OXM 61 Price	PCP 223 Price	PERY 20 Price	PLCE 48 Price	PNK 25 Price
PVH 115 Price	REGN 398 Price	RL 161 Price	ROST 80 Price	RRTS 23 Price	RTN 101 Price	SAM 230 Price	SCL 44 Price	SIAL 135 Price	SKYW 10 Price	SMP 40 Price	STZ 90 Price	SXT 57 Price	TDY 101 Price	TGI 64 Price

Below is an example of really large KPI tiles that can be viewed on a larger screen from a distance:



Drag-and-drop to configure the KPI chart

The KPI chart and its KPIs can now be configured using drag-and-drop, allowing for a smooth in-line authoring experience. Authoring mobile KPIs is now easier than ever.



Location analytics

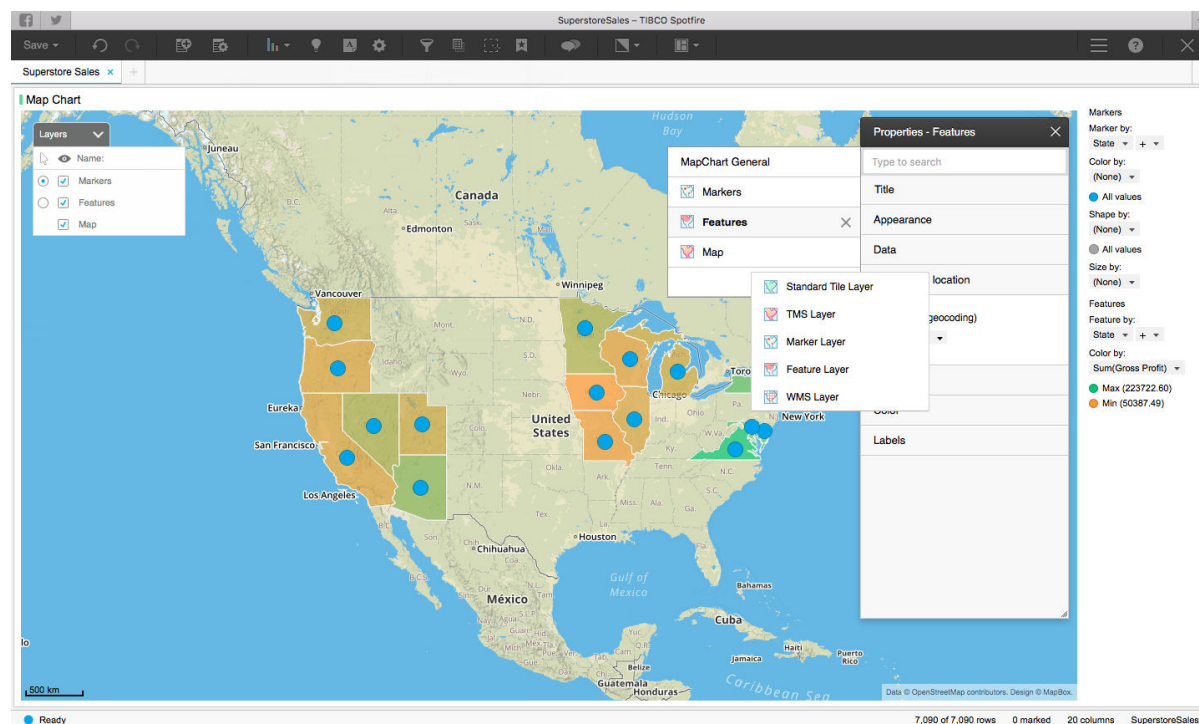
There have been several improvements to how you can work with geographical data in Spotfire 7.7.

Create multi-layer maps in Business Author

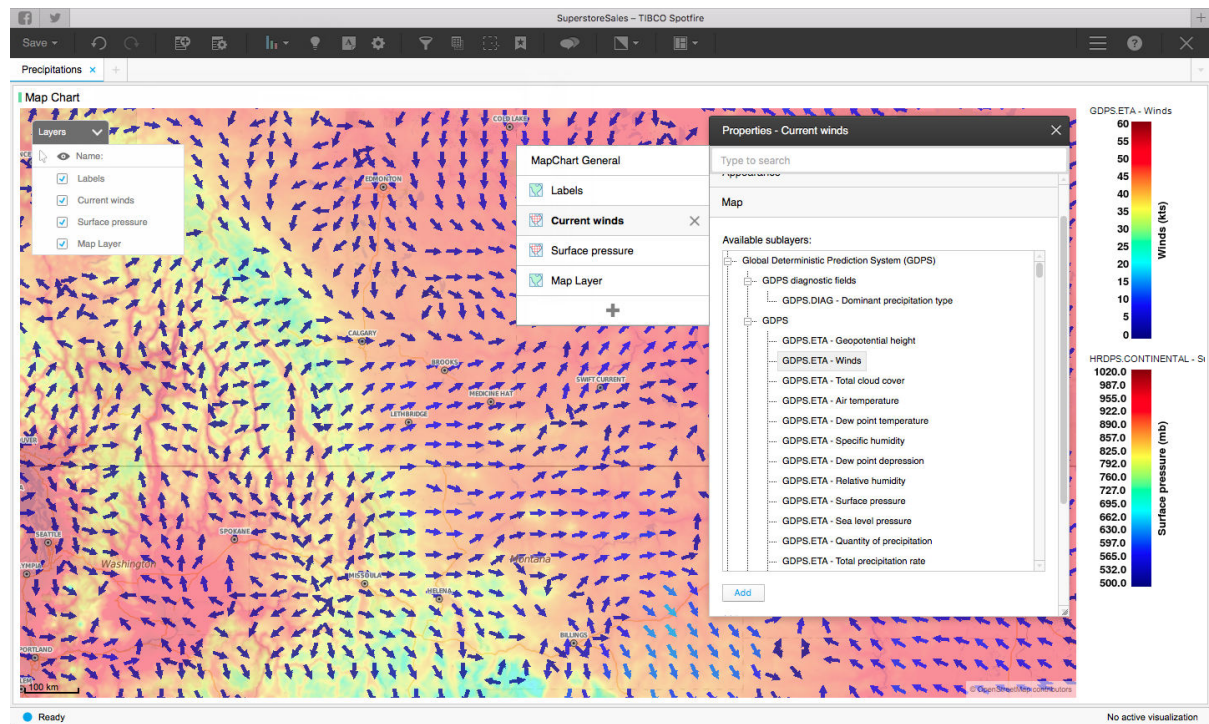
You can now create maps with multiple layers of data in Business Author and mix feature layers and marker layers to better understand geographic relations and trends. Use your favorite map from third-party providers to meet any specific needs that go beyond the out-of-the-box map background.

The new map chart properties side-panel enables you to manage general properties of map charts, as well as managing properties for different map layers, including Marker-, Feature-, TMS- and WMS layers.

Adding a new data layer to a map chart in Business Author



Adding a WMS layer in Business Author



Improved zoom visibility

Creation of geographic drill-downs is one of the great things possible when using Spotfire. With improved zoom visibility, Spotfire automatically switches between interactive layers, so you can always interact with your data.

When using the zoom visibility feature to create a geographic drill-down, the map layer displayed on the top is now automatically configured as interactive. This reduces the pain of setting the interactive layer manually each time new data layers are rendered on a map.

Improved map chart access without an internet connection

Spotfire will now show map charts even if there is no internet connection.

It is now possible to use the map chart without an internet connection. The map layer will not be displayed, but the map chart will render the data layers.

Control minimum page dimensions

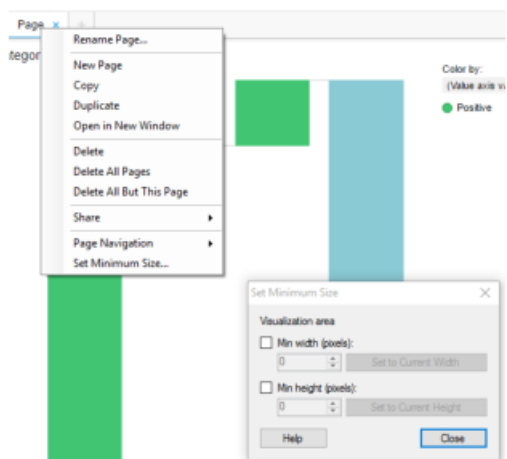
To make the user experience nicer for users with different screen sizes, authors can now control the minimum width and/or height of a page. The settings are made per page in the analysis.

This helps when designing a dashboard for consumers using different screen sizes, because the author can control the minimum size for each page, horizontally and vertically. If one consumer has a smaller screen, she will only see a part of the analysis at a time and will need to scroll to see it all, while another user, with a larger screen, can see everything at once.

This also enhances the ability to create rich mobile Spotfire applications by using pages that let users on small screens, such as phones, scroll vertically to see more visualizations than can fit into their screen, while users with larger screens can see all visualizations at once.

It also helps avoiding issues when consumers of a dashboard have smaller screens than the author – now the author can design for a certain screen size and control the experience all consumers get.

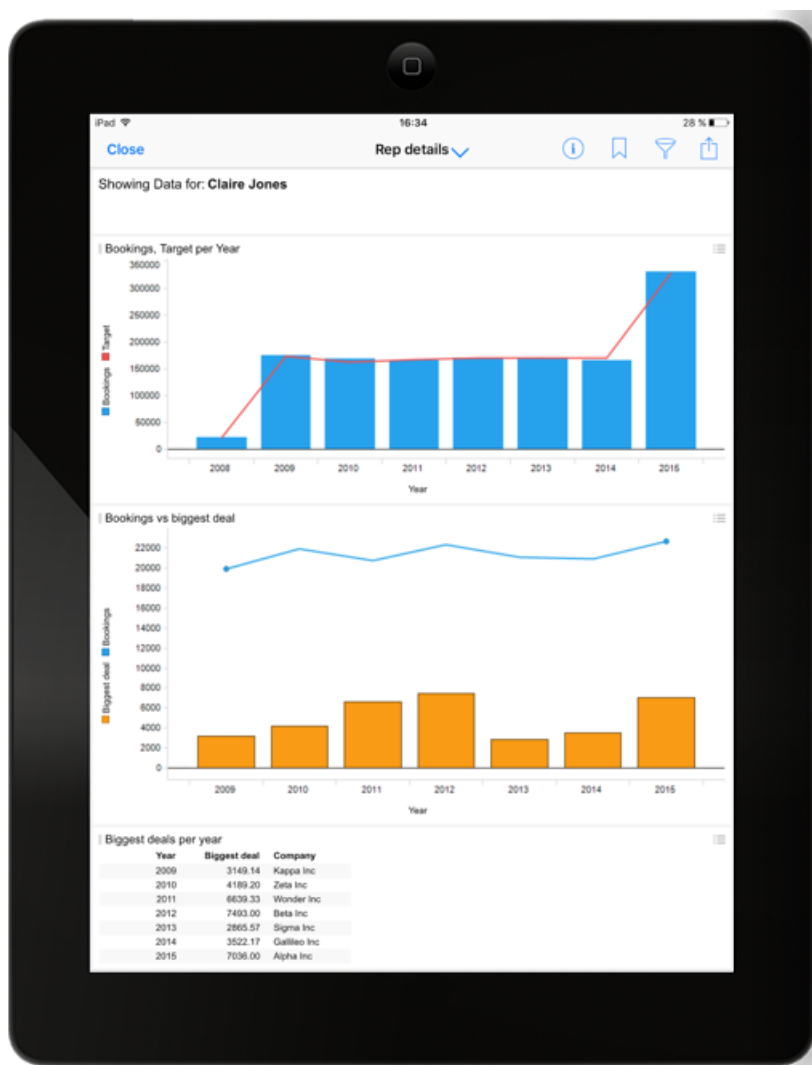
The minimum page size is easily specified by right-clicking the page tab in Spotfire Analyst:



The following image shows a tall, narrow page on a phone. The user scrolls downwards to view more visualizations.

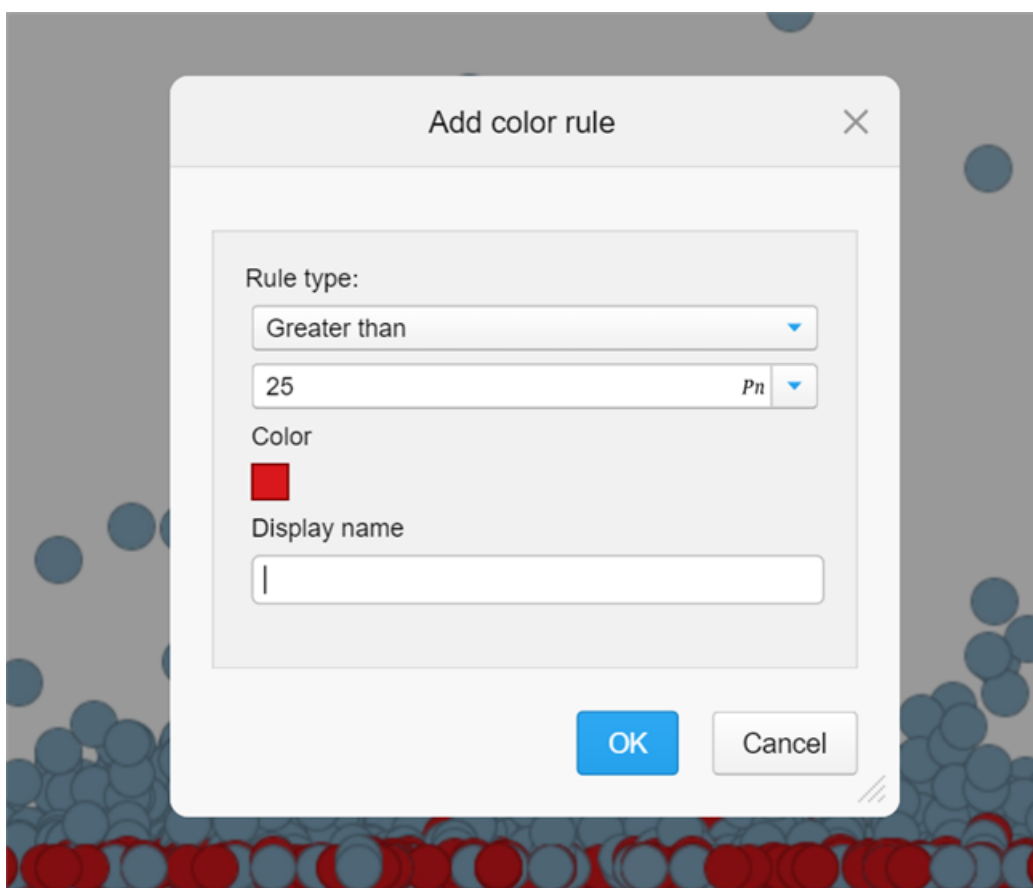


In the next image, the user has an iPad and can see more visualizations simultaneously.



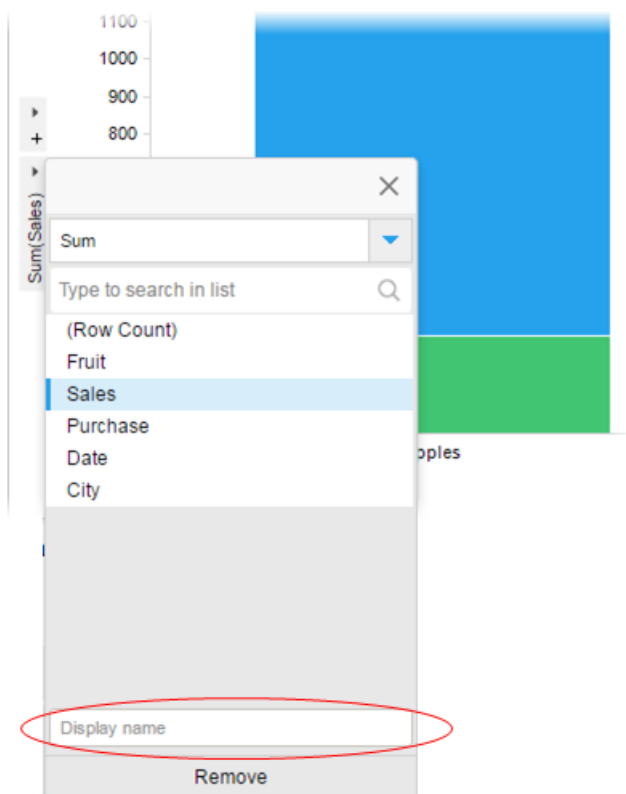
Color rules in Business Author

In Business Author, it is now possible to add color rules in the following visualizations: bar chart, line chart, cross table, waterfall chart, scatter plot, pie chart, map chart, KPI chart, parallel coordinate plot, and treemap.



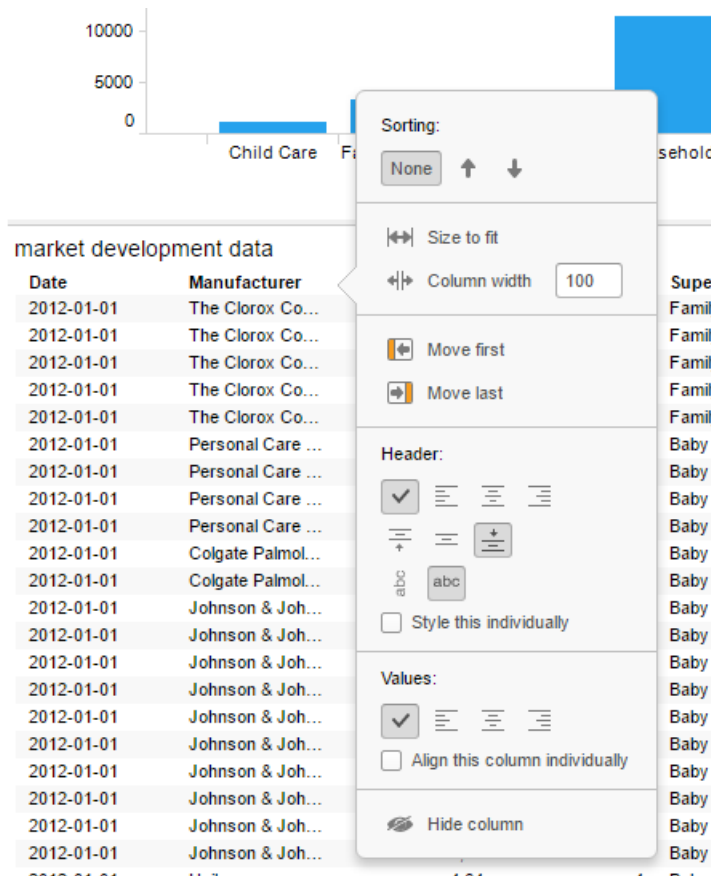
Set column display name in Business Author

It is now possible to easily set the display name for columns in Business Author. Previously, users had to use custom expressions to change the display names.



More compact and readable tables

Just like in the cross table, the table visualization now has a contextual menu that allows you to easily control header and cell alignment as well as header orientation.



Absolute sorting in cross tables

Sorting a cross table in absolute terms, as opposed to nested at the lowest level of the hierarchy, allows an analyst to easily see what the top or bottom categories are, disregarding their position in the hierarchy. This makes it easier to answer questions such as "Who are the top X best sales reps across all regions and states?" using a hierarchical cross table.

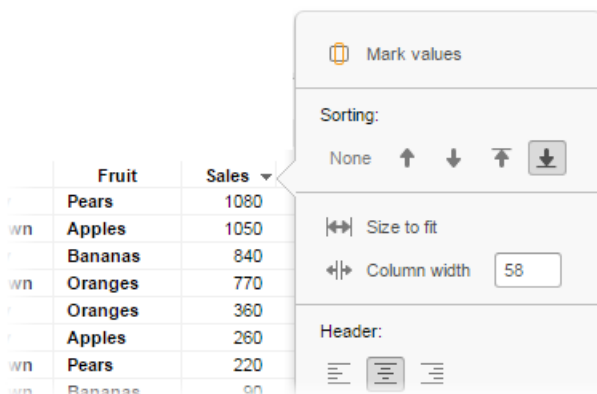
The image below shows the standard mode of sorting for a cross table: the cross table is sorted "Descending" on the "Sales" column.

City	Fruit	Sales	Purchase
Greentown	Apples	1050	615
	Oranges	770	760
	Pears	220	150
	Bananas	90	100
Redbury	Pears	1080	850
	Bananas	840	650
	Oranges	360	330
	Apples	260	200

In contrast, the following image shows the cross table values sorted in "Descending" order for the "Sales" column, but ignoring the hierarchy:

City	Fruit	Sales	Purchase
Redbury	Pears	1080	850
Greentown	Apples	1050	615
Redbury	Bananas	840	650
Greentown	Oranges	770	760
Redbury	Oranges	360	330
Redbury	Apples	260	200
Greentown	Pears	220	150
Greentown	Bananas	90	100

The sorting options are easily accessed by clicking a header column:



Configure the appearance of empty cells in a cross table

Empty cells in a cross table now have configurable appearances. In earlier versions of Spotfire, empty cell values were indicated by "-". It is now possible to leave the cells blank or to put a custom value in empty cell.

Industry	-2.45 % - 2.70 %	-81.44 % - -2.4...	14.38 % - 168....	2.72 % - 7.14 %	7.17 % - 14.38...
Aerospace & Defe...	\$136,60	\$183,09	\$222,58		
Air Freight/Couriers				\$168,20	\$72,34
Airlines	\$39,84			\$34,53	
Aluminum		\$16,60			
Apparel/Footwear	\$110,18		\$78,17		\$92,45
Apparel/Footwear ...				\$222,76	
Auto Parts: OEM	\$44,40			\$125,98	
Beverages: Alcoho...					
Beverages: Non-A...	\$67,90				
Biotechnology		\$114,07			
Cable/Satellite TV					
Chemicals: Agric...					
Chemicals: Major ...	\$67,95				
Chemicals: Specia...					
Computer Commu...		\$24,07			
Computer Periphe...	\$134,58				
Computer Process...		\$35,54			
Data Processing S...					
Department Stores	\$111,93				
Discount Stores	\$137,00				
Electric Utilities		\$41,67			
Electrical Products					
Electronic Equipm...		\$13,02			
Electronic Product...					
Finance/Rental/Le...					
Financial Conglom..		\$139,23			
Financial Publishi...					
Food Distributors					
Food Retail	\$54,63				
Food: Major Diver...	\$152,37				
Food: Meat/Fish/D...					
Food: Specialty/C...		\$103,91			
Gas Distributors					
Hotels/Resorts/Cm...		\$76,44			

Price per Market Cap Category (2), Industry and Binned Sales Growth (2) Properties

General

Data

Appearance

Column Subtotals

Formatting

Fonts

Axes

Colors

Sorting

Legend

Subsets

Show/Hide Items

Appearance

☒ Show cell borders

☒ Allow table data export in Spotfire web clients

☐ Grand total for columns

☐ Grand total for rows

Display cells with no data as:

☒ Blank

☐ Custom text

-

☒ Use separate color for marked items

Help

Close

IronPython scripting in Cloud Analyst

Spotfire Cloud users can now write and run IronPython scripts using the installed client. This enables you to create more dynamic and powerful analytic applications, and you can also automate analytic tasks.

However, scripts cannot be executed in the Spotfire Cloud web clients.

Additive trust for IronPython scripts

IronPython scripts can now contain trust for multiple users at the same time.

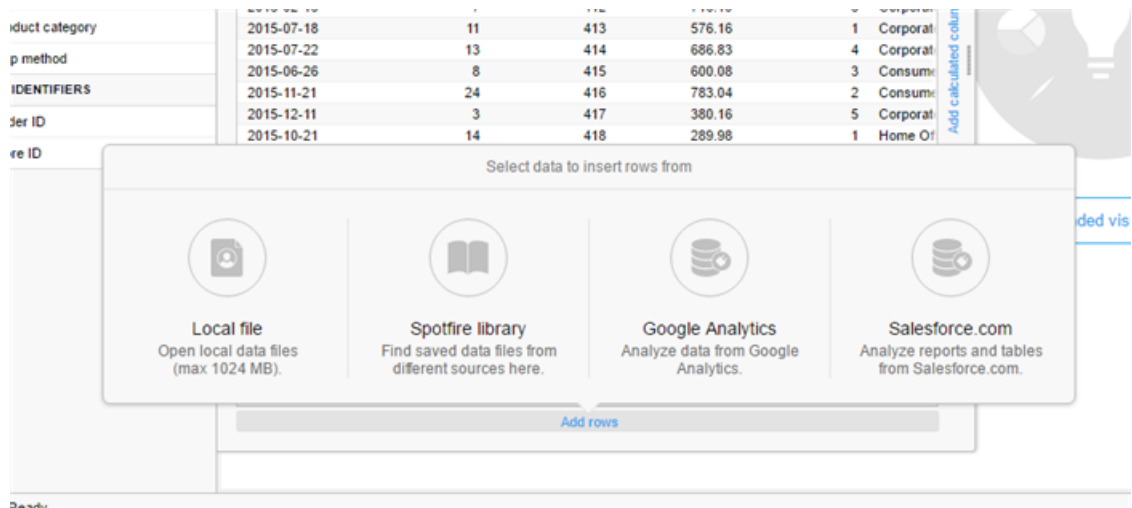
This means that DXP files containing scripts, which are stored on a shared drive, can be accessed by multiple users without requiring re-trust if the DXP file is unchanged.

Data management

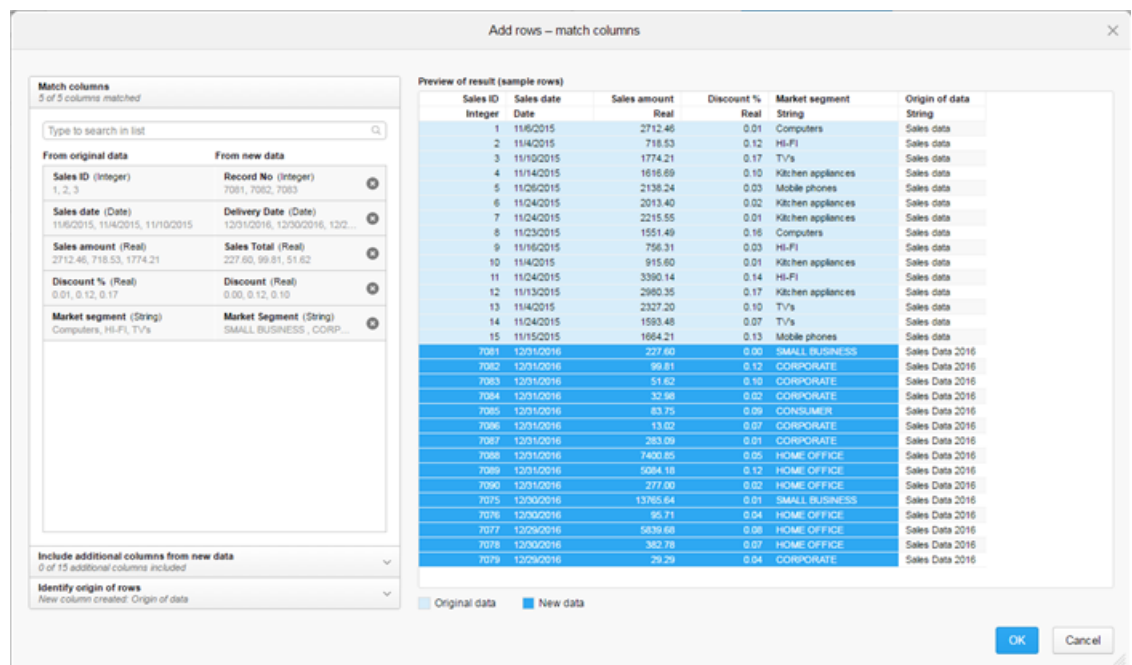
There have been several important improvements to the way you can manage your data within Spotfire. Among the many new features in Spotfire 7.7 is the ability to add rows to a data table in Spotfire Business Author, as well as the possibility to edit the settings for previously added rows in the Source view of the expanded Data panel in both Business Author and Spotfire Analyst.

Add rows in Business Author

Add more rows to existing data tables, directly in Business Author, using the Add rows feature.



The new and the existing data are visualized side-by-side in the preview. This makes it easy to configure the column matches needed. Different coloring in the preview is used to make it easy to identify existing rows, new rows and the "Origin of data"-column. An origin column is automatically added but it can be manually removed, either when adding the rows or afterwards.

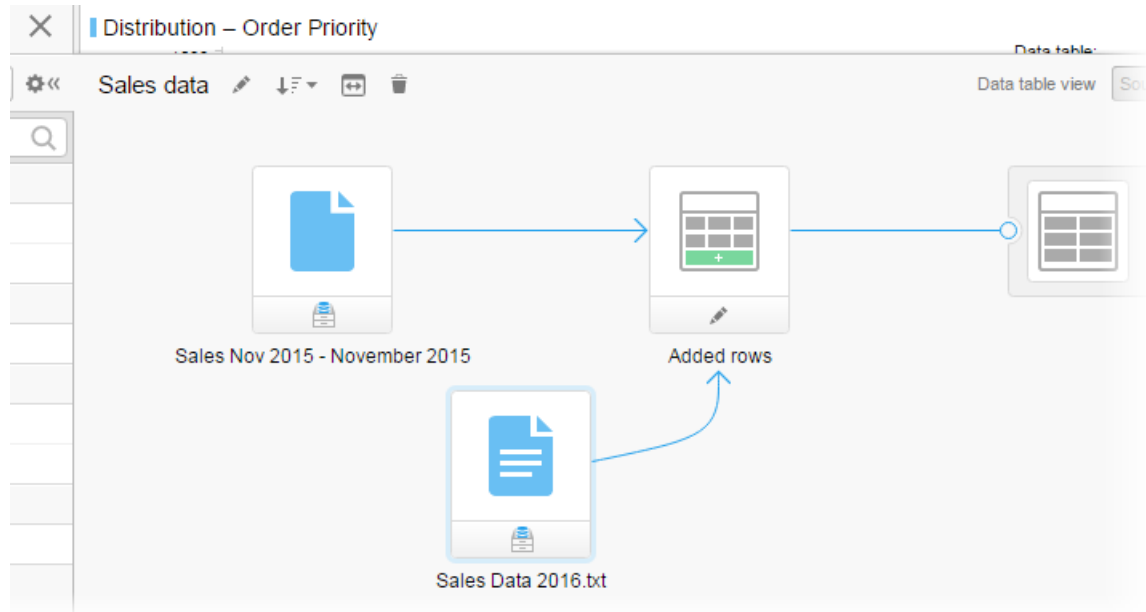


You can see an overview of previous and recent add rows operations for a data table in the source view. There, you can also [edit the settings for the added rows](#).

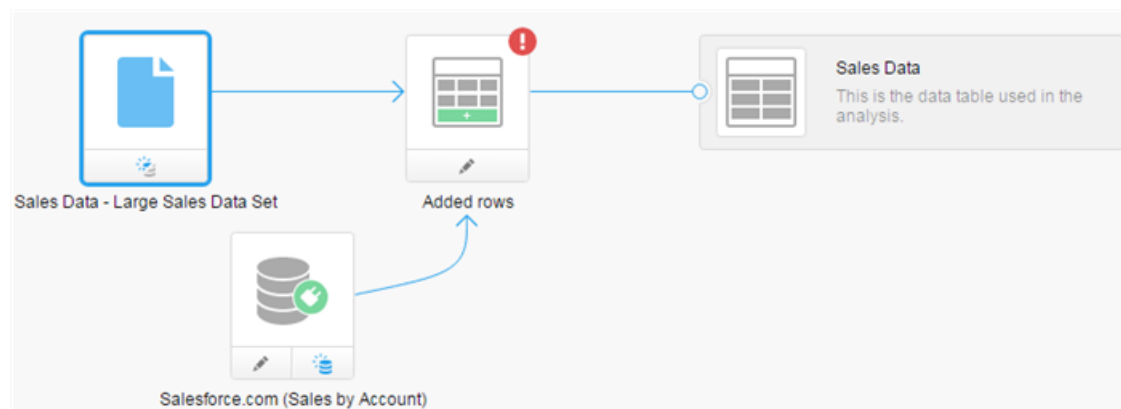
Edit add rows settings in Spotfire Analyst and Business Author

Existing add rows operations can now be edited. For example, it is now possible to adjust matching columns if the first match was not fully satisfactory.

All existing add rows operations for a data table can be viewed in the Source view of the expanded Data panel.



If a previous match has been broken, then this will be indicated in the Source view with a red exclamation mark:



Click on the icon with a pencil on the **Added rows** node to edit the settings or fix any broken matches.

TERR expression functions as aggregations

Data functions that call the TIBCO Enterprise Runtime for R engine can now be configured to aggregate data.

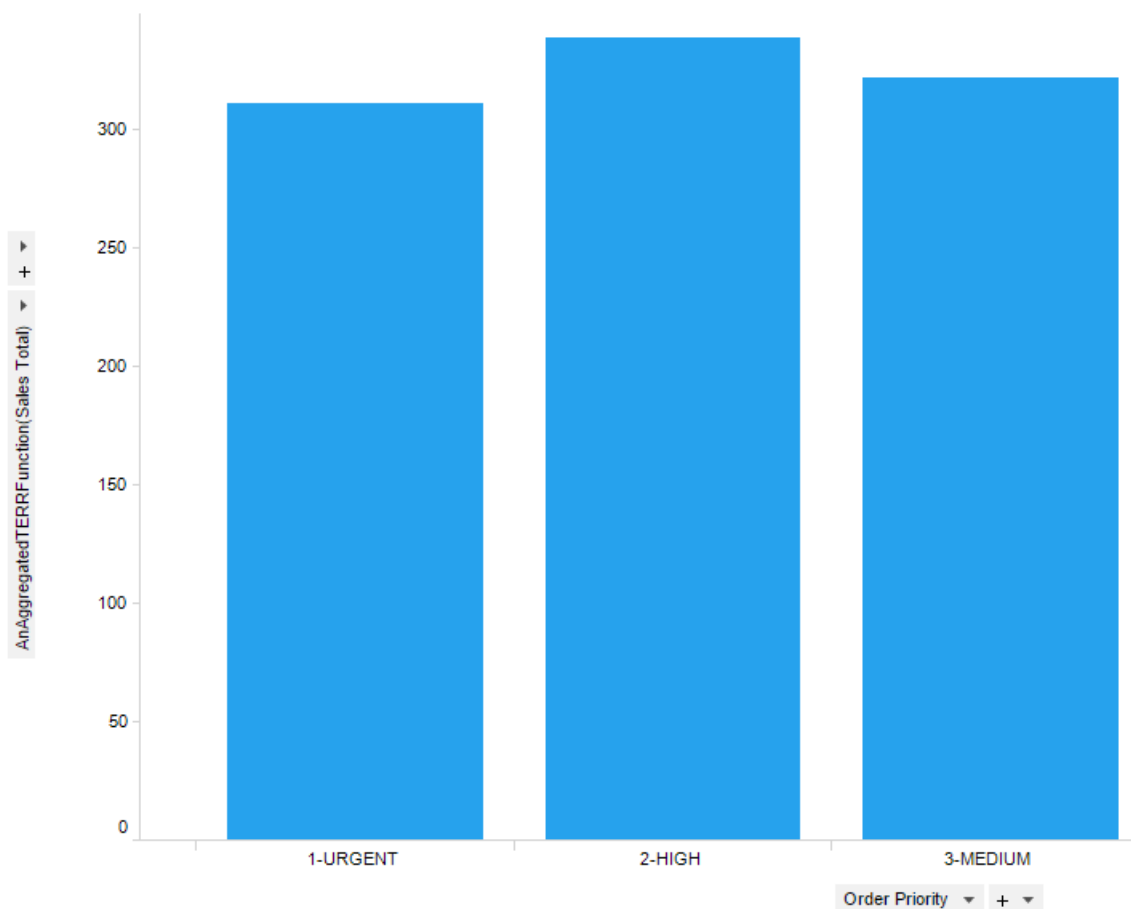
In the image below, a new expression function has been created using the new Function type "Aggregation function":

```
output <- median(input1)
```

Expression Function ✕

Name: <input type="text" value="AnAggregatedTERRFunction"/>	Function type: <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">Aggregation function ▾</div>
Description: <div style="border: 1px solid #ccc; height: 40px; margin-top: 5px;"></div>	Return type: <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">Real ▾</div>
	Category: <div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">Statistical functions ▾</div>
Script: <div style="border: 1px solid #ccc; padding: 5px; margin-top: 5px;"> <pre>1 output <- median(input1)</pre> </div>	
<div style="display: flex; justify-content: space-around;"> Help OK Cancel </div>	

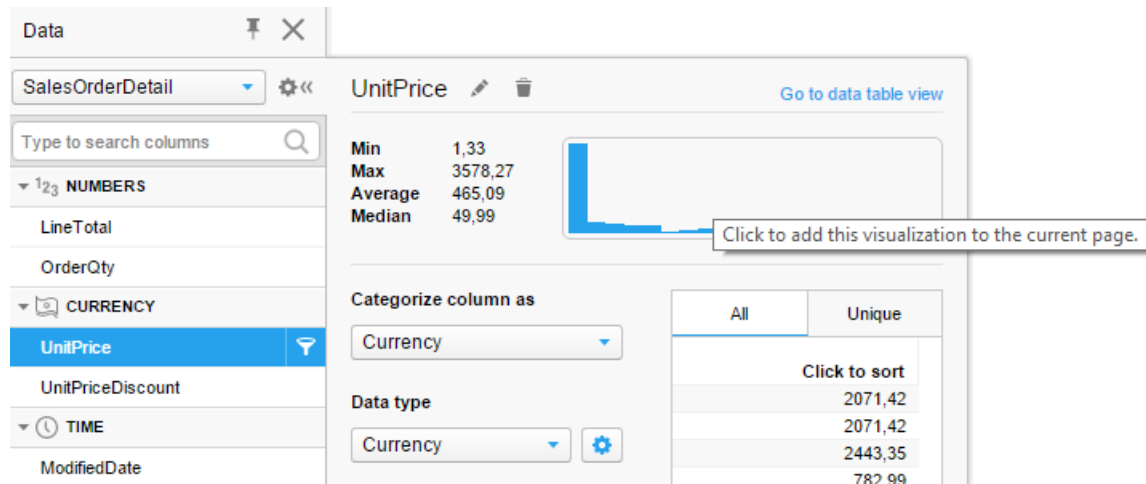
In the image below, a bar chart is using the previously defined aggregated TERR function on the Y-axis: `AnAggregatedTERRFunction([Sales Total])`



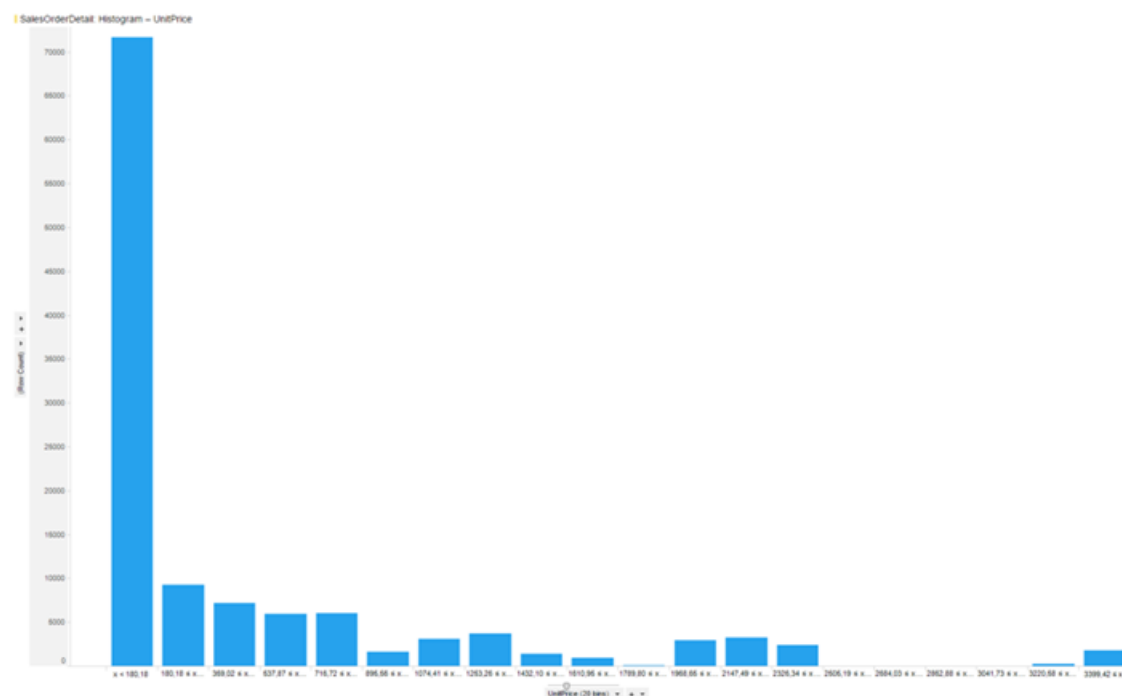
Create histograms directly from the expanded data panel

Numeric in-memory columns can now be visualized as a histogram by clicking the histogram preview in the expanded data panel.

In the image below, the UnitPrice column's histogram is viewed. Click the histogram and a similar visualization (see below) will be added to the active page.



The image below shows the resulting visualization after the histogram preview has been added to the page.



Data connectors

Spotfire 7.7 brings several updates to data connectors. Highlights include the new Attivio connector. There are also improvements to the SAP BW connector, with new useful functionality for handling BEx queries. In Spotfire Business Author, it is now possible to edit Salesforce.com and Google Analytics data connections.

Self-service visual data discovery with full text search of Attivio data

TIBCO Spotfire now includes a data connector for Attivio. This enables business users to analyze Attivio data marts, using self-service connectivity.

New Attivio connector

TIBCO Spotfire now includes a data connector for Attivio. With this, you can access and browse data marts in Attivio, in a simple, self-service way.

Attivio text analytics

- Transforms unstructured information, analyzing and structuring content.
- A leader in the Magic Quadrant for Enterprise Search (Gartner).
- A leader in big data text analytics (Forrester).

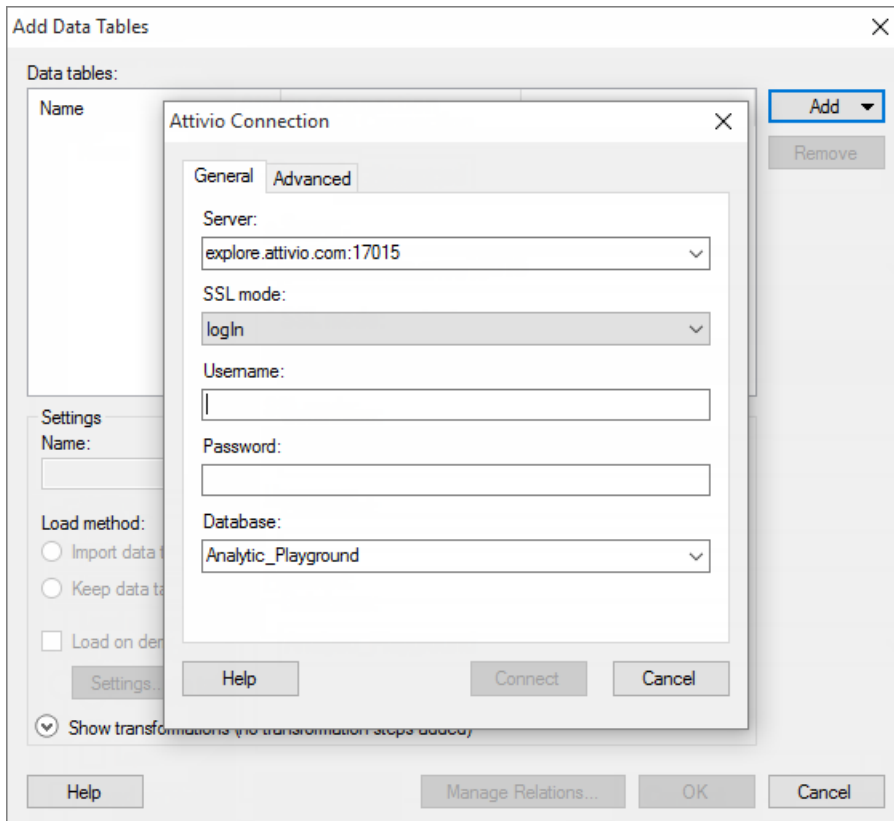
Attivio data catalog

- Attivio catalogs, identifies, and unifies information; structured data, semi-structured data, and unstructured content.
- Automatically generates data models and correlates structured data and unstructured content.
- Natural language search recommends the most relevant data for the context.

Creating a connection to Attivio

The following example shows how to load Attivio data, using the new Attivio connector.

In the image below, the Attivio connector has been selected from the Add Data Tables dialog.



The default ODBC port is 17015. The database name is the Attivio Mart name. The name that must be used can be found by completing the following steps:

- Go to explore.attivio.com and login.
- Navigate to **All Marts**.
- Click to select the desired mart.
- Click **Options** and select **Get Drivers**.
- The mart name to use is shown, together with the necessary connection details:

ODBC

Driver: PostgreSQL Unicode

Database: Analytic_Playground

Server: explore.attivio.com

Port: 17015

Note: As the number of in-database visualizations, filters, etc., increases, the live queries generated get more complex. Sometimes, the Attivio database engine will not be able to process these queries, which may prevent visualizations and filters from being rendered. If you experience this issue, try using a mix of in-database data tables and in-memory data tables, or use in-memory data tables only.

Full text search of Attivio data

With the new Attivio connector, you can use full text search to analyze Attivio data.

Full text search is a powerful and easy way analyze Attivio data that is dynamically loaded, based on the user's input.

This example shows an analysis of customer reviews, where full text search in a text area is used to filter out rows containing certain strings of text. In this case, the person using the analysis has searched for the words "fun" and "boring". Attivio has returned the rows containing these words.

Text Area
fun

MyFullTextSearchCustomQuery

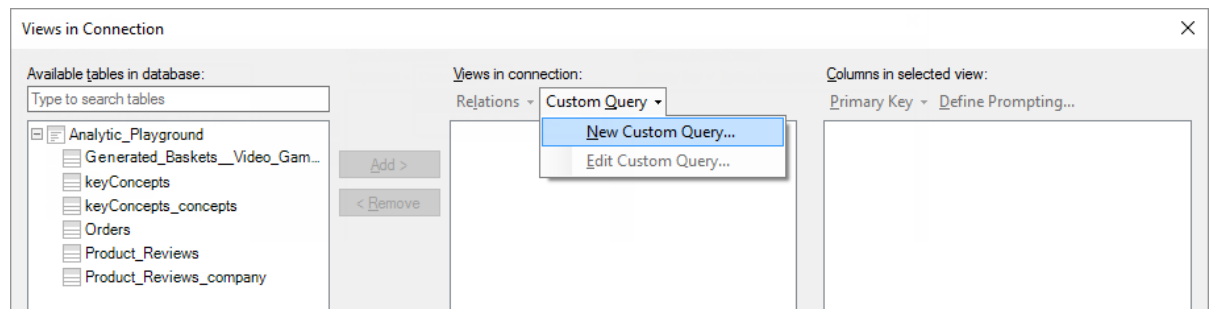
AIE_DOC_ID	AIE_DOCID	class	NegativeCoun...	publishDate	rating	reviewID	searchTerm	sentiment	sentimentscore	subclass	text	title
SKU9645431...	sonar_mart_07...	VIDEO GAME ...	0	9/28/2013 22:40	4	16309083	COVERT OPS...	pos	1.00	PLAYSTATION...	fun game, grea...	good if you like...
SKU6260965...	sonar_mart_07...	VIDEO GAME ...	0	6/25/2013 9:05	4	12185598	3DS SCRIBBL...	pos	0.95	3DS SOFTWA...	Fun game all in...	Good game for...
SKU3869572...	sonar_mart_07...	VIDEO GAME ...	0	3/8/2012 12:40	4	6737336	DS REC ROOM	pos	1.00	VALUE NDS SW	fun game but m...	fun game
SKU5744055...	sonar_mart_07...	VIDEO GAME ...	0	12/22/2012 13:09	4	9150913	NEED FOR SP...	pos	1.00	PLAYSTATION...	Fun game to pl...	Fun game for f...
SKU5743884...	sonar_mart_07...	VIDEO GAME ...	0	8/23/2013 11:22	4	14335251	NEED FOR SP...	pos	1.00	XBOX 360	fun game, just ...	Fun game
SKU5710941...	sonar_mart_07...	VIDEO GAME ...	0	8/23/2013 17:16	5	14342151	WII SKYLANDE...	pos	1.00	XBOX 360	Fun to play wit...	fun to play
SKU2846034...	sonar_mart_07...	VIDEO GAME ...	0	1/19/2013 16:50	4	9688061	UNCHARTED ...	pos	1.00	PLAYSTATION...	Fun game that ...	Adventure sho...

Text Area
boring

MyFullTextSearchCustomQuery

AIE_DOC_ID	AIE_DOCID	class	NegativeCoun...	publishDate	rating	reviewID	searchTerm	sentiment	sentimentscore	subclass	text	title
SKU3803114_1...	sonar_mart_07...	VIDEO GAME ...	1	3/30/2013 5:48	1	10657468	WII NINTEDO...	neg	1.00	WII SOFTWARE	Boring and no ...	Frustrating game
SKU858672_1...	sonar_mart_07...	VIDEO GAME ...	1	2/17/2009 23:41	1	1161404	WII POWER P...	neg	1.00	WII SOFTWARE	Boring, poor gr...	Don't waste y...
SKU4684927...	sonar_mart_07...	VIDEO GAME ...	1	3/14/2012 18:31	1	6802417	WII MARIO PA...	neg	1.00	WII SOFTWARE	Boring Boring B...	I second it...do...

Full text search analysis requires that you access data using a parameterized custom query. In the image below, the **Custom Query** drop-down list is used to define a new custom query, when setting up the Attivio data connection.



When a parameter is used to control what data will be loaded on demand, in the Add Data Tables dialog, make sure **Load on demand** is selected. In the On-Demand Settings dialog, select the parameter and click **Define Input**.

In the Define Input dialog, you can configure how the parameter will be controlled. Selecting **Property** will allow you to control the parameter with a property control in a text area, for example a full text search field.

Define Input

Selected parameter:
ship_mode (String)

Input for the selected parameter:
Values (fixed/properties/expression)

Settings

Input from:

☐ Fixed value:
No constraints Select...

☒ Property:
Select...

☐ Expression:
Edit...

Limit by:

Filtered rows:
(None)

Marked rows:
☐ ☒ Marking

☐ Number of identifiers to limit data loading to:
1

☐ Include empty values

☐ Use distinct values

Help OK Cancel

Using an AI-SQL function in a custom query with Attivio data

When creating a connection to Attivio, AI-SQL functions can be used as a part of a custom query.

Even though AI-SQL functions are not supported in general Spotfire interfaces and expressions, they can be used as a part of a custom query when creating the connection to Attivio.

In the Custom Query dialog, type or paste the custom query containing the desired AI-SQL function in the Query field.

For example:

```
select *
from Product_Reviews
where ship_mode = STARTSWITH(?text)
```

Custom Query

Query name:

Query:

```
1 select *
2 from Product_Reviews
3 where text = STARTSWITH(?text)
```

Verify

Result Columns Parameters

Parameters:

Name	Data Type	External Type	Value Type
text	String	string	Single value

New... Edit... Delete

☐ Use parameters for personalized queries (users and groups)
Parameterized custom queries need to be set up using on-demand.

Custom queries must be trusted by a Custom Query Author to work in the web clients.

Help Preview OK Cancel

If the query contains any parameters, click on the **Parameters** tab and click **New...** to define the parameters used in the query. In this example, the query contains the parameter `text`, which should be defined as a single value string. Click **Verify** to verify the query and to populate the **Result columns** tab.

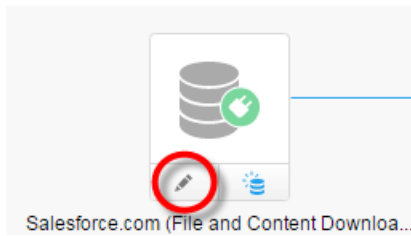
When all required parameters have been defined, click **OK** in all dialogs to load the data.

Edit Salesforce.com and Google Analytics data connections in Business Author

You can now edit Salesforce.com and Google Analytics data connections in Spotfire Business Author.

It has been possible to add data from Salesforce.com and Google Analytics directly using Spotfire Business Author since Spotfire 7.6. With Spotfire 7.7, you can also edit the Salesforce.com and Google Analytics data connections in your analysis using Spotfire Business Author. For example, you can add or remove columns, or add more tables and reports to an existing data connection. For Google Analytics data, it is possible to change the selection of metrics and dimensions as well as changing other options available in the user interface.

In the Source view, click on the edit icon to modify the connection.

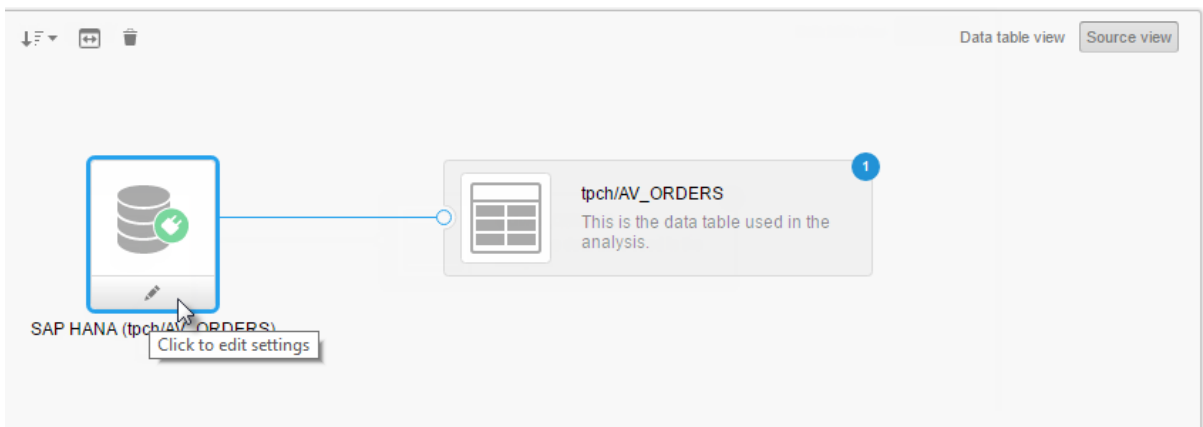


Easier to edit data connections in Spotfire Analyst

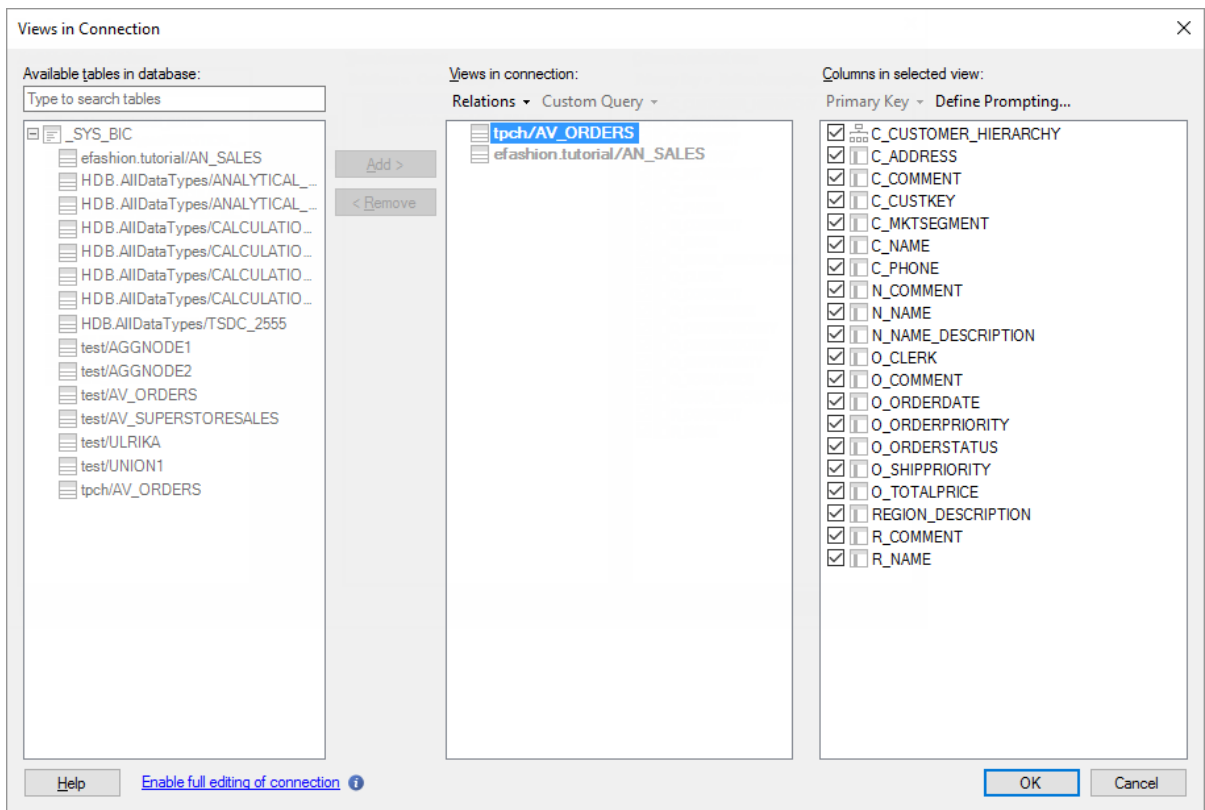
Now, fewer steps are required to update a data connection with new views. Just go to the source view in the expanded data panel and click on the edit icon for the data source of interest to modify the connection. It is no longer necessary to manually refresh the schema.

Removing a view from a data connection and the corresponding table

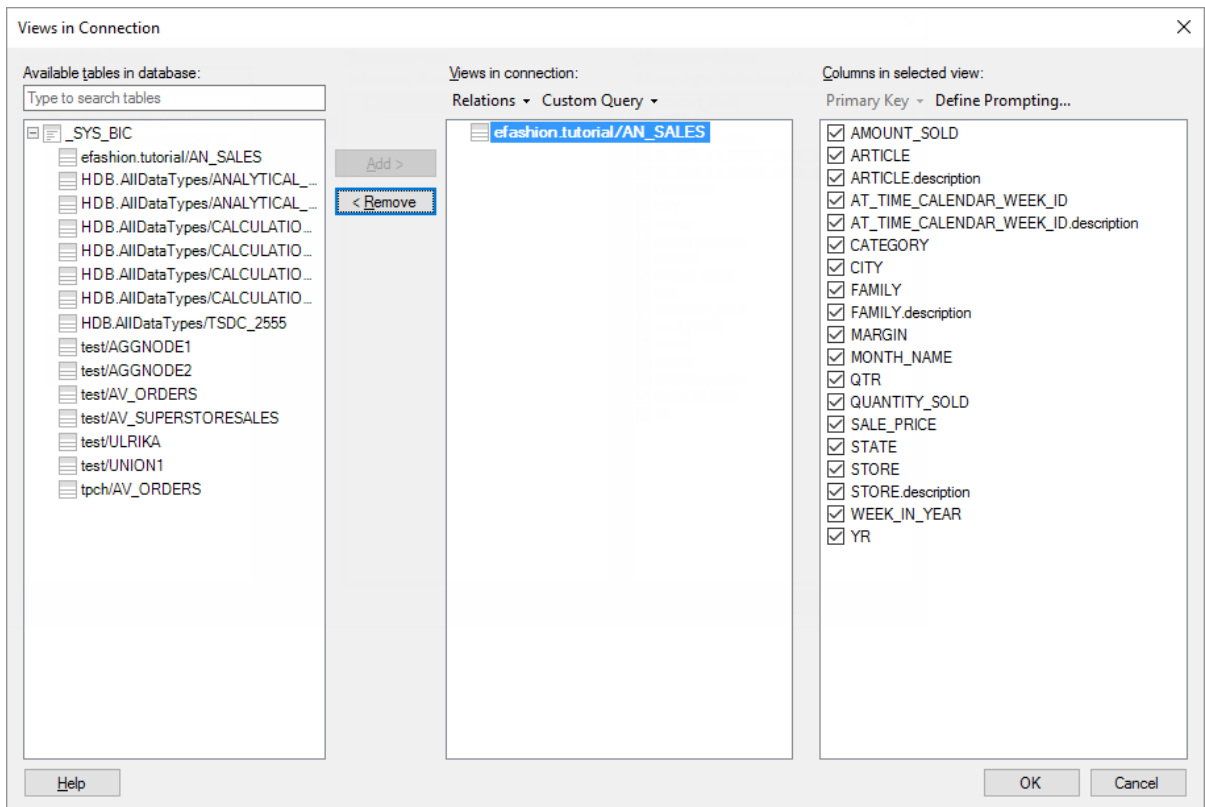
In the image below, the new access point for editing data connections is shown. In this example, the data comes from a SAP HANA connection.



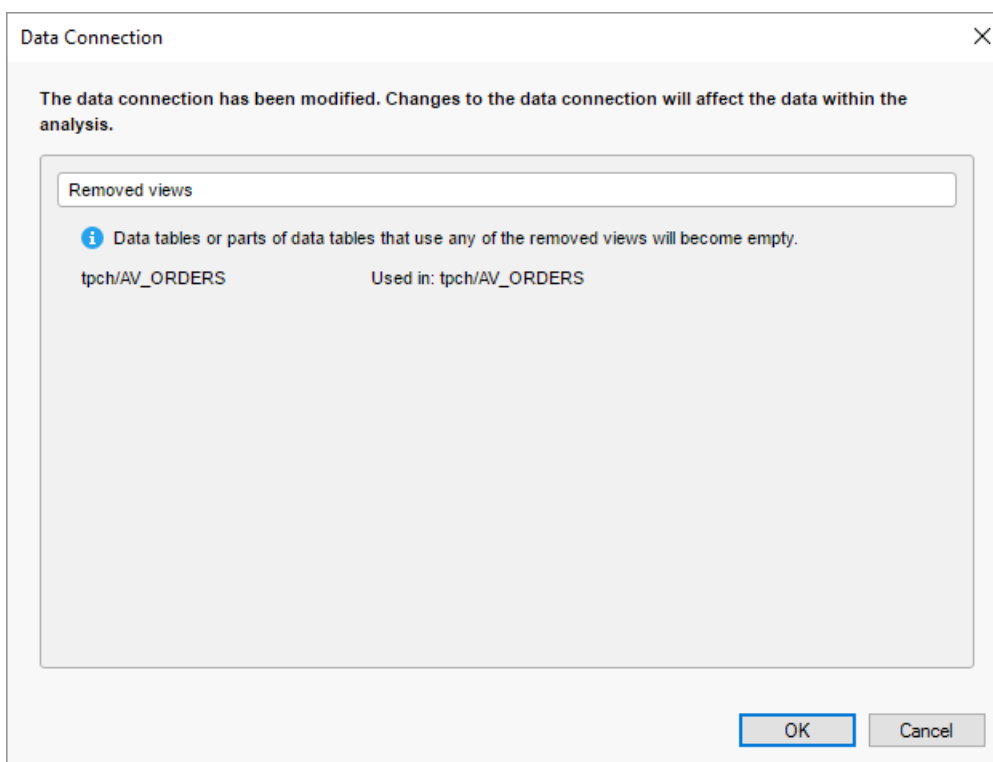
After clicking on the edit icon, the Views in Connection dialog is shown and the data connection can be edited. Note that the **Enable full editing of connection** link must be clicked if you are going to add or remove views. This link is there to prevent unintentional editing of other data tables in the connection than the one you are currently investigating in the source view.



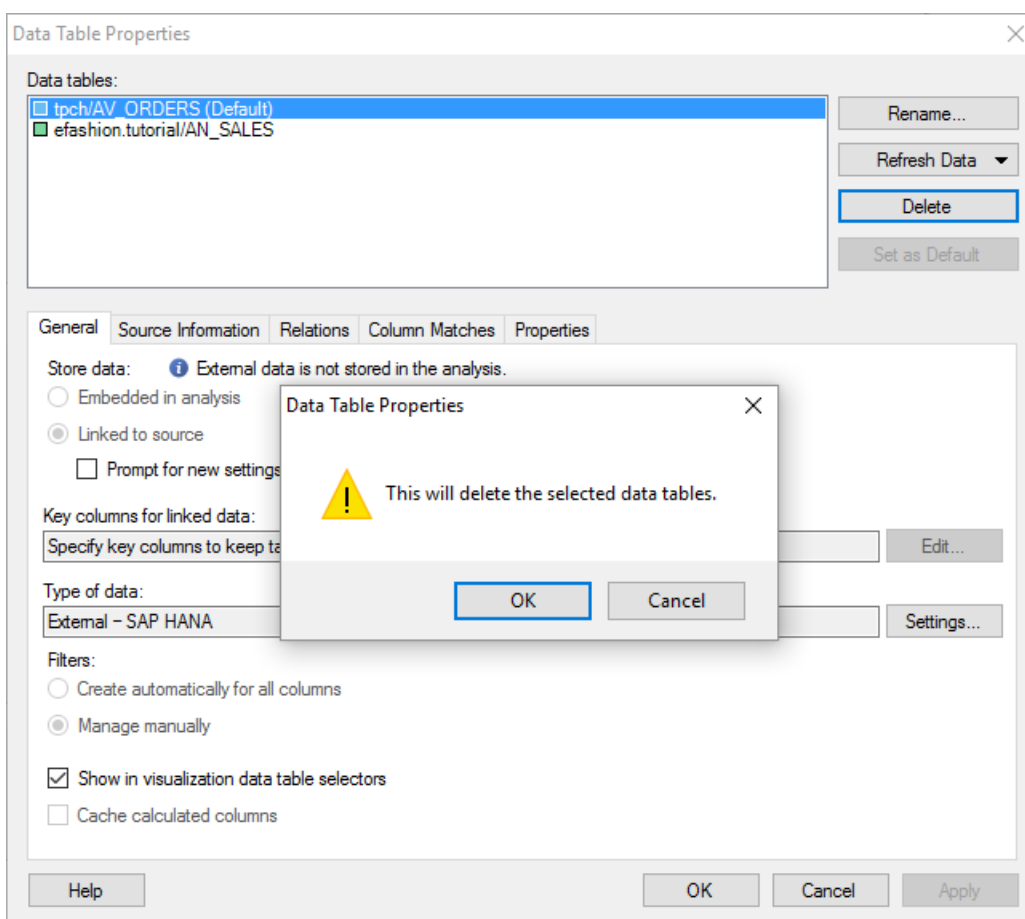
Once full editing of the connection has been enabled, the view `tpch/AV_ORDERS` can be removed from the data connection:



When you are done editing, click **OK**. The dialog displayed is new in Spotfire 7.7. You will be informed that the removal of the view `tpch/AV_ORDERS` will make the data table `tpch/AV_ORDERS` empty.

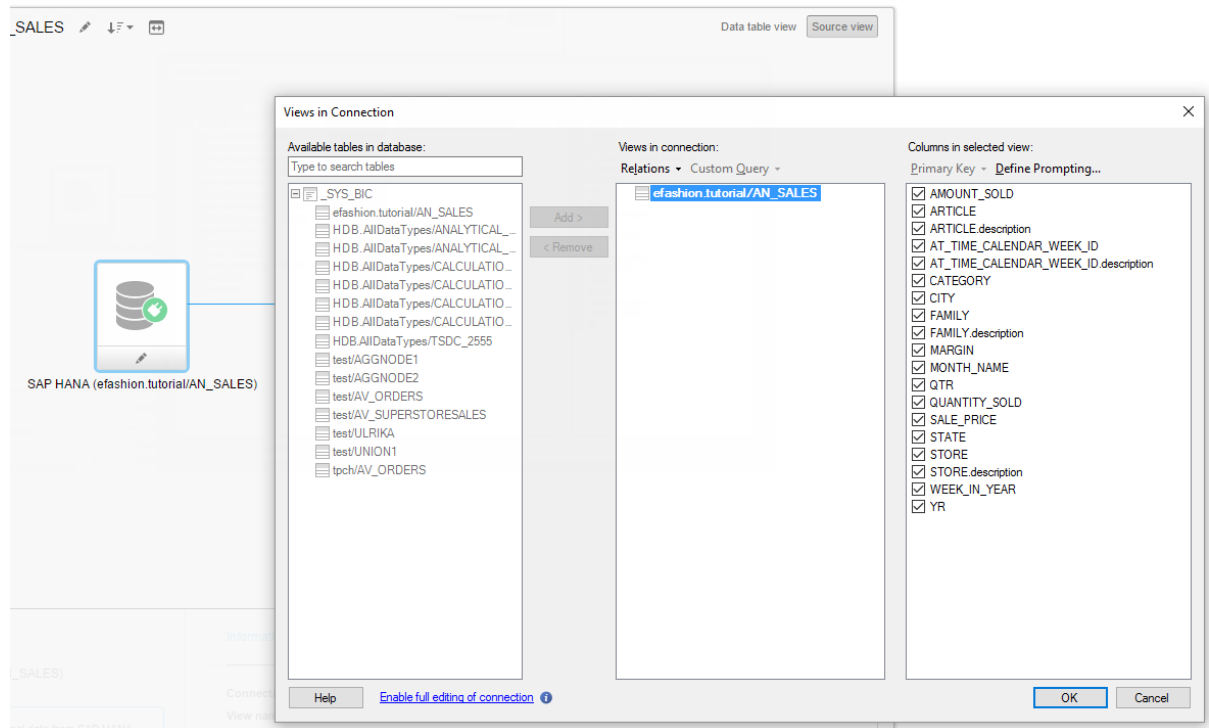


In the image below, the now empty data table is removed from the analysis using the Data Table Properties dialog.

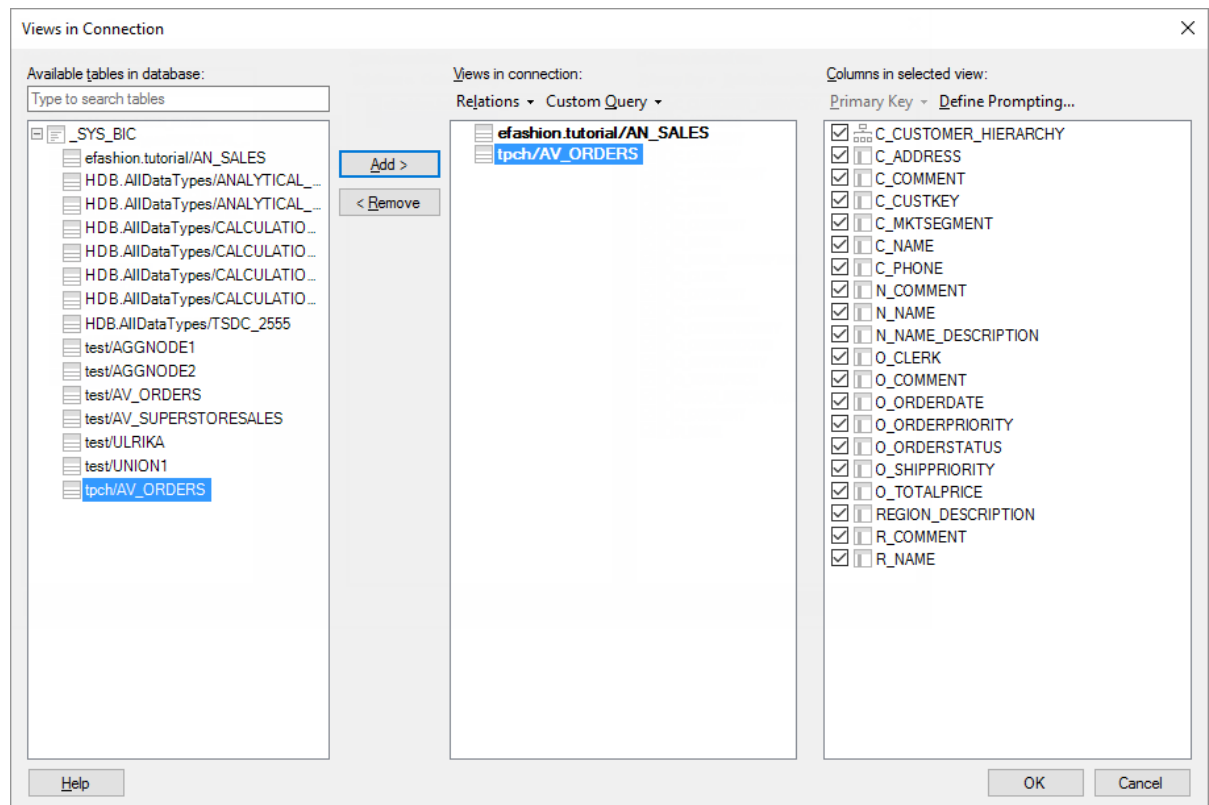


Adding a new view to an existing data connection

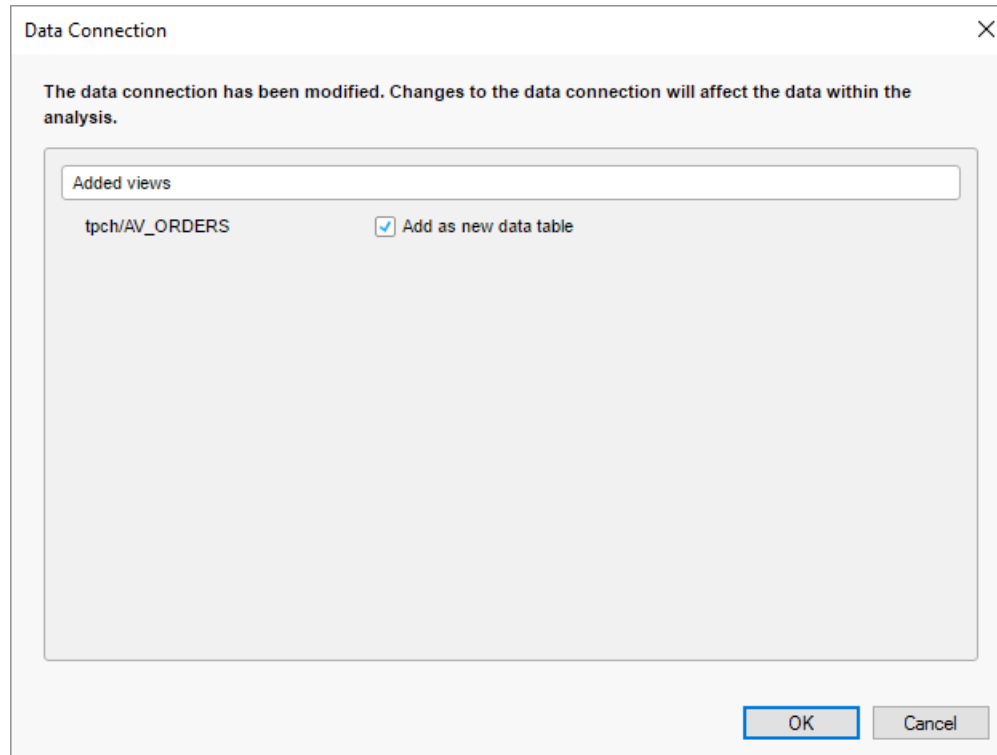
In the following example, an existing data connection is edited in order to add another view.



After clicking the **Enable full editing of connection** link the database table `tpch/AV_ORDERS` can be added as a view, in the same way as when setting up a new data connection.



After clicking **OK** you are informed that a new table will be created, based on the added view.



The result of the operation is easily confirmed in the Data panel and details about the new data table is shown in the Data table view of the expanded Data panel.

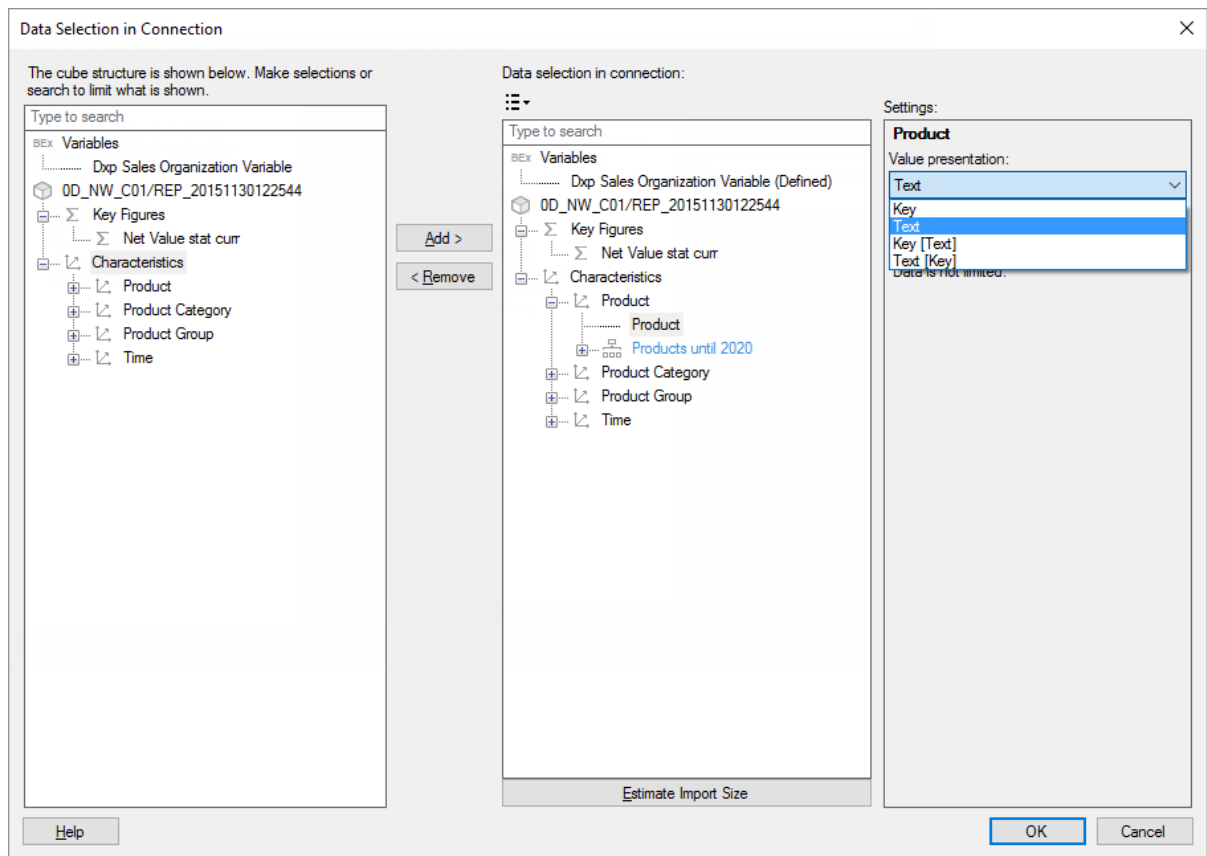
C_ADDRESS	C_COMMENT	C_CUSTKEY	C_MKTSEGMENT	C_NAME	C_PHONE	N_COMMENT	N_NAME	N_NAME_DESCRIPTION	O_CLERK
m3bCvMOHy...	pecial deposits...	76	FURNITURE	Customer#000...	10-349-718-3044	haggle, careful...	ALGERIA	ALGERIA	Clerk#0000006...
AmKUMJ2NR...	ing packages l...	128	HOUSEHOLD	Customer#000...	14-280-874-8044	y above the ca...	EGYPT	EGYPT	Clerk#0000002...
AnJ5tLj0Cr2...	even, expres...	142	AUTOMOBILE	Customer#000...	19-407-425-2584	slyly express a...	INDONESIA	INDONESIA	Clerk#0000005...
M1ET0lecuvH...	express ideas...	119	FURNITURE	Customer#000...	17-897-919-8406	l platelets, regu...	GERMANY	GERMANY	Clerk#0000002...
fpIUABXcmkC...	was furiously fl...	100	FURNITURE	Customer#000...	30-749-445-4907	ts, silent reque...	SAUDI ARABIA	SAUDI ARABIA	Clerk#0000007...
mFovluhnHp2...	fter the special...	70	FURNITURE	Customer#000...	32-828-107-2832	requests again...	RUSSIA	RUSSIA	Clerk#0000006...
ch9AeX7Fqdf...	nusual foxes! fl...	49	FURNITURE	Customer#000...	26-908-631-4424	efully alongside...	IRAN	IRAN	Clerk#0000002...
jD2zZiUmlid...	cial ideas, final...	32	BUILDING	Customer#000...	25-430-614-2194	rms, blithely bol...	MOROCCO	MOROCCO	Clerk#0000000...
Hp8GyFqGgGH...	y, accounts sle...	25	FURNITURE	Customer#000...	22-603-468-3533	ously, final, exp...	JAPAN	JAPAN	Clerk#0000004...
EU0xvmlVvOm...	thely, ruthlessl...	95	MACHINERY	Customer#000...	25-923-255-2929	rms, blithely bol...	MOROCCO	MOROCCO	Clerk#0000005...
AmKUMJ2NR...	ing packages l...	128	HOUSEHOLD	Customer#000...	14-280-874-8044	y above the ca...	EGYPT	EGYPT	Clerk#0000006...
BhSPIEWGVJ...	ing to the caref...	148	HOUSEHOLD	Customer#000...	21-562-498-6636	nic deposits bo...	IRAQ	IRAQ	Clerk#0000005...

Analyze SAP BW data as values and/or keys

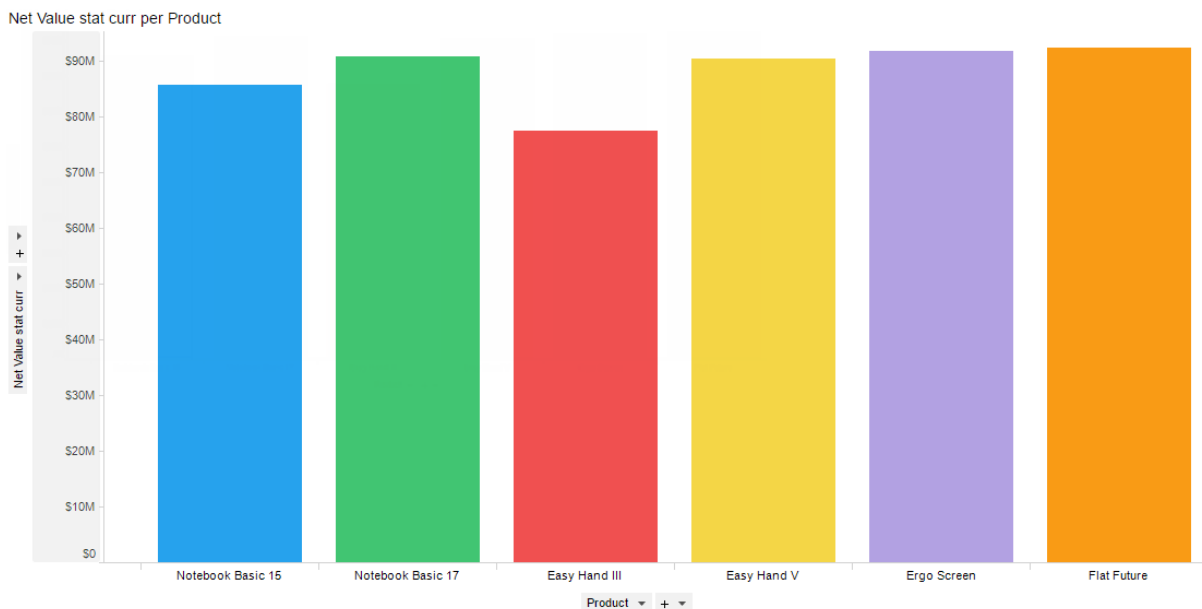
Spotfire business users and analysts can now choose how SAP BW characteristics (dimensions, categories) and attributes (values, data) should be displayed in Spotfire visualizations.

Values can be displayed as technical names (keys), as descriptions (text), or, as a combination of them both. By editing the data connection settings it is also possible to change the presentation of the values at a later stage, if needed.

In the image below, the characteristic **Product** has been added to the view. Using the **Value Presentation** drop-down, the **Product** column is configured to show values as **Text** in our analysis.



The image below shows the result with the **Value presentation** option set to **Text**.

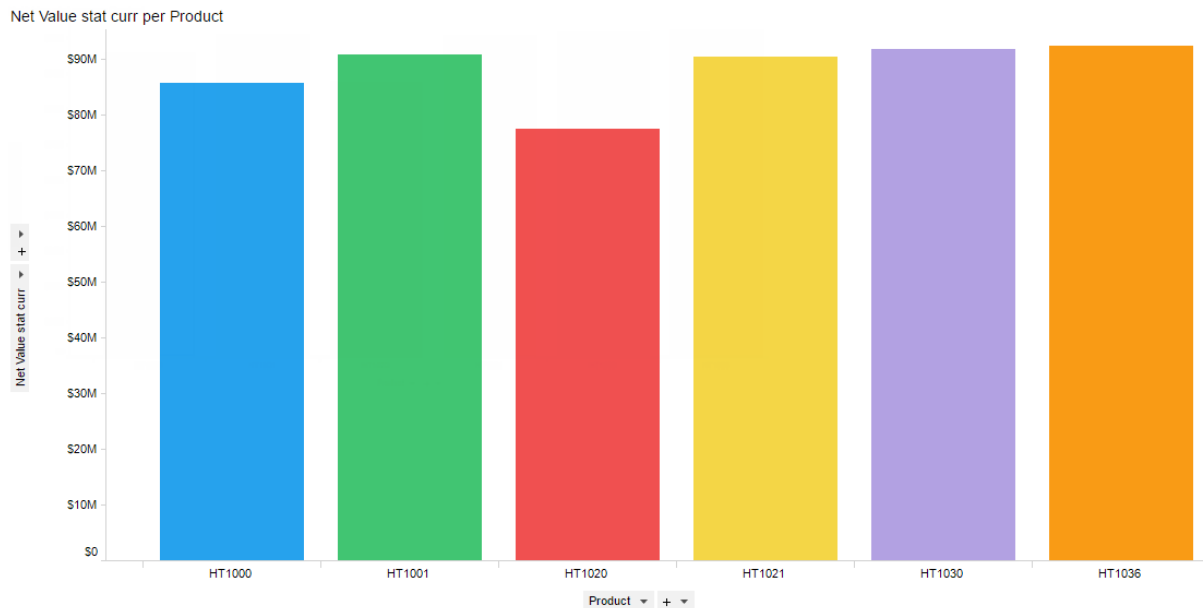


To change the **Value presentation**, navigate to **Edit > Data Connection Properties > Settings... > Edit...**

Once the dialogs are closed, Spotfire will automatically reload the visualizations so that the values are presented using the new settings.

Note: The **Value Presentation** can be specified for BEx variables, as well as characteristics. This can be done from the new Define Value dialog.

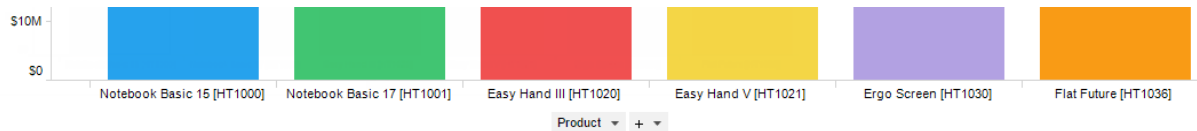
The image below shows the result with **Value presentation** set to **Key**.



The image below shows the result with **Value presentation** set to **Key [Text]**.



The image below shows the result with **Value presentation** set to **Text [Key]**.

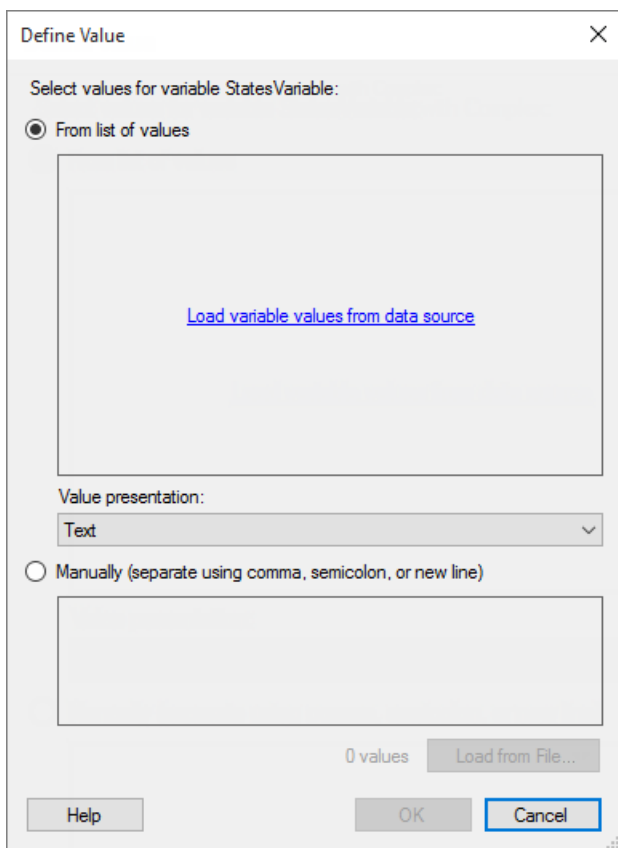


SAP BW BEx variable values from clipboard and file

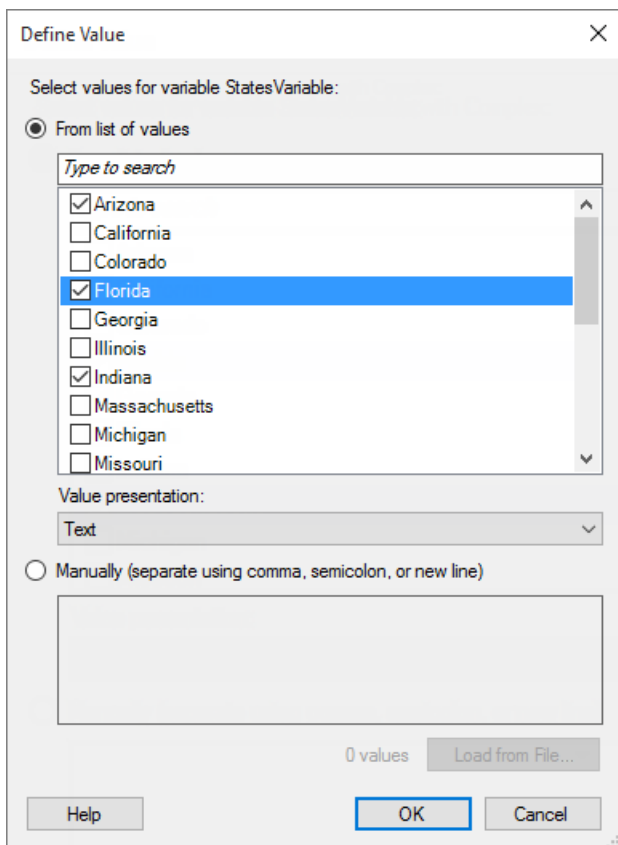
Spotfire now allows you to filter SAP BW BEx data more rapidly.

It is common that BEx query variables limit thousands to hundreds of thousands members. Until now, all these unique members were loaded from SAP BW before business users could make a selection. Spotfire now allows you to select members by simply entering them manually, pasting them from the clipboard, or, by loading values from a previously prepared text file.

The image below shows the new interface for defining BEx variable values. Loading of BEx variable values from the data source is now optional and is initiated manually. Values can also be typed or pasted manually, as well as loaded from a previously created file.



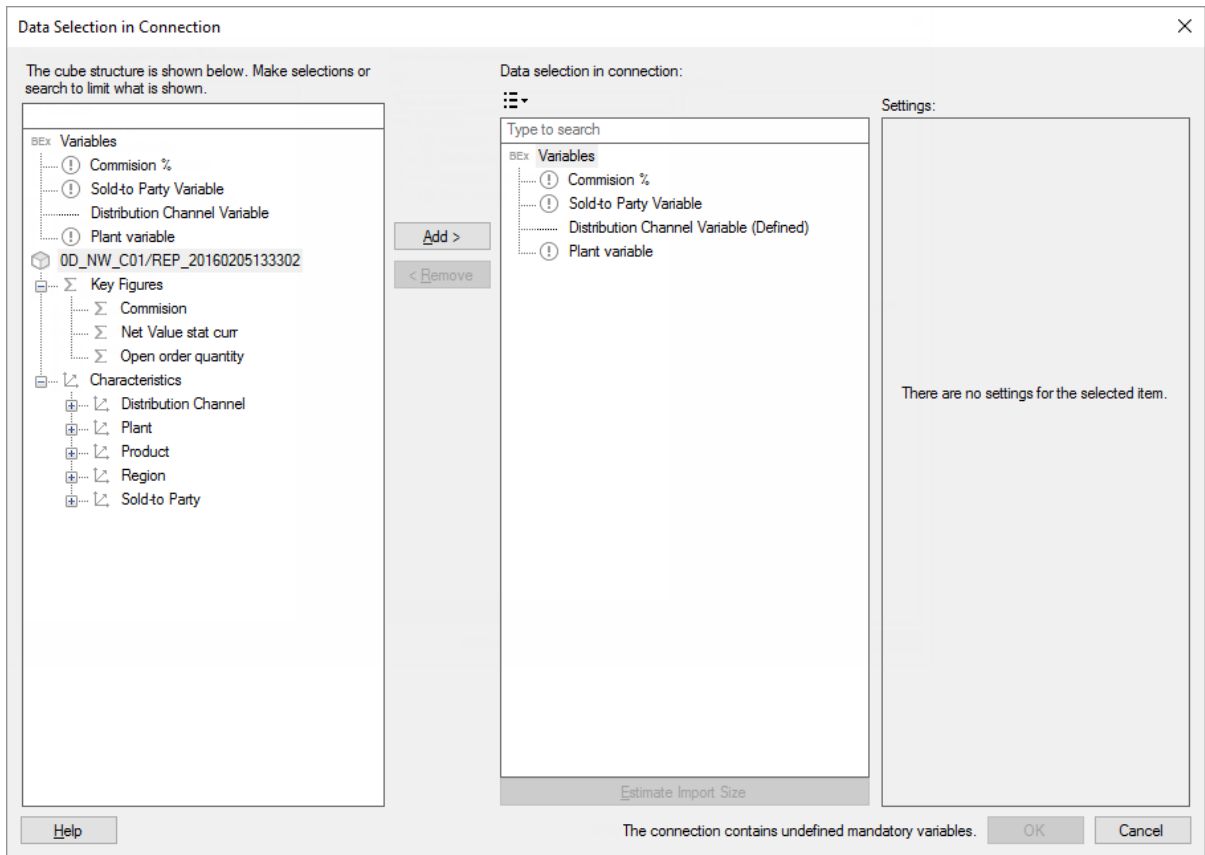
In the image below, values have been loaded from SAP BW, and three of them are selected.



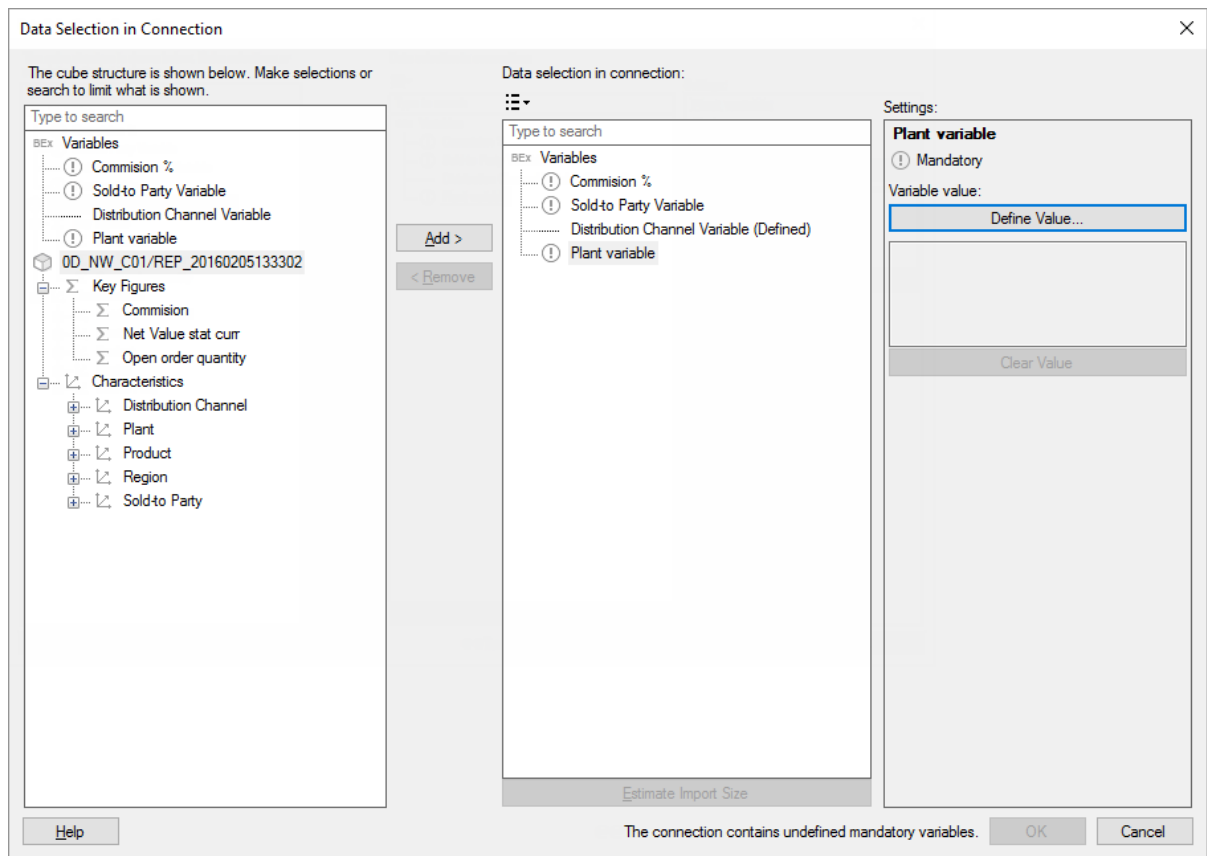
BEx variables aligned with connection settings

The BEx variable settings have been moved into the data connection, thus making it easier to get an overview of all settings.

The image below shows the updated Data Selection in Connection dialog for SAP BW data connections, when connected to a BEx query with variables (Commission %, Sold-to Party Variable, Distribution Channel Variable (Defined) and Plant variable). Spotfire has automatically added the variables of the BEx query to the **Data selection in connection** list, indicating that these variables are a mandatory part of the view we are creating.



The image below shows the new Settings pane when a BEx variable (Plant variable) has been selected.



Easier deployment of data connectors

Data connectors now come as a part of the Spotfire Analyst deployment. This saves time for administrators deploying the Spotfire Analyst client on the Spotfire Server and provides automatic deployment of data connectors.

Up until now, administrators have deployed data connectors as a separate step; as a separate .sdn package. With this new improvement, the risk of the two packages getting out of sync is reduced, and you can avoid situations where only Spotfire Analyst would be updated to a newer version and not the connectors.

Server

The TIBCO Spotfire Server has received several useful improvements in Spotfire 7.7. Administrators now have new ways of monitoring the performance of scheduled updates. There are also improvements to the resource pool workflow as well as support for OpenID.

Improved resource pool workflow

Resource pools have been simplified, making them easier to understand and manage for administrators.

Resource pools is a very powerful concept that was introduced in Spotfire 7.5. It allows administrators to separate business critical applications from experimental or local dashboards. Many customers have indicated that it has been hard to understand when and how to use them, which is why the resource pools have been simplified.

View a summary of the grouped resources, together with the status of each instance, in a single place

The screenshot shows the 'Resource pools' section of the TIBCO Spotfire interface. At the top, there's a navigation bar with 'Your network', 'Resource pools', 'Untrusted nodes', 'Activity', and 'Notifications'. Below this, a 'Resource pools' header is followed by a sub-header: 'Create dedicated pools of Web Player instances if you want to use Scheduling & Routing rules to direct Spotfire traffic.' A 'Sort by' dropdown is set to 'Name - A to Z'. A 'Create resource pool' button is highlighted in a red box in the top right corner. The main table lists resource pools: 'asia', 'europe', 'north america', 'pacific', and 'unassigned instances'. Each row shows counts for AVAILABLE, STRAINED, EXHAUSTED, DEPRECATED, and OFFLINE states, along with '+' and '-' icons for adding or removing instances.

Resource Pool	AVAILABLE	STRAINED	EXHAUSTED	DEPRECATED	OFFLINE
asia	0	3	0	0	0
europe	0	3	0	0	0
north america	0	1	0	0	1
pacific	0	1	0	0	0
unassigned instances	0	4	0	0	0

Create a resource pool and add multiple instances in one step

The screenshot shows the 'Create new resource pool' dialog box. It has a 'Name of resource pool' field with 'Global' entered. Below this is a 'Select instances to add to pool' section showing '3 instance(s) selected'. A table lists the selected instances with columns for Instance name, Status, Service, Host, and Deployment area. The 'Create' button is highlighted in a red box.

Instance name	Status	Service	Host	Deployment area
<input checked="" type="checkbox"/> [36234ec3]	Strained	9ccbfee5-2d23-41b9-b496-57534559...	sf-naw2k864-35.na.tibco.com	Production222
<input checked="" type="checkbox"/> [8bb37353]	Strained	9ccbfee5-2d23-41b9-b496-57534559...	sf-naw2k864-35.na.tibco.com	Production222
<input checked="" type="checkbox"/> Germany [b4aeed5a]	Strained	9ccbfee5-2d23-41b9-b496-57534559...	sf-naw2k864-35.na.tibco.com	Production222
<input type="checkbox"/> South America [2385493b]	Strained	9ccbfee5-2d23-41b9-b496-57534559...	sf-naw2k864-35.na.tibco.com	Production222

View the instances based on their state

Resource pools

Create dedicated pools of Web Player instances if you want to use Scheduling & Routing rules to direct Spotfire traffic.

Sort by: Name - A to Z

Resource pool	AVAILABLE	STRAINED	EXHAUSTED	DEPRECATED	OFFLINE	+	-
asia	0	3	0	0	0	+	-
europa	0	3	0	0	0	+	-
global	0	3	0	0	0	+	-

Filter by: Type to filter by text

Instance name	Service	Host	Deployment area	Version
China [36234ec3]	9ccbfee5-2d23-41b9-b496-575345590428	sf-naw2k864-35.na.tibco.com	Production222	7.7.0 ENGR 14 R139667
France [8bb37353]	9ccbfee5-2d23-41b9-b496-575345590428	sf-naw2k864-35.na.tibco.com	Production222	7.7.0 ENGR 14 R139667
Germany [b4aeed5a]	9ccbfee5-2d23-41b9-b496-575345590428	sf-naw2k864-35.na.tibco.com	Production222	7.7.0 ENGR 14 R139667

Easily remove multiple instances from a resource pool

Resource pools

Create dedicated pools of Web Player instances if you want to use Scheduling & Routing rules to direct Spotfire traffic.

Sort by: Name - A to Z

Resource pool	AVAILABLE	STRAINED	EXHAUSTED	DEPRECATED	OFFLINE	+	-
asia	0	3	0	0	0	+	-
europa	0	3	0	0	0	+	-
global	0	3	0	0	0	+	-

Remove Cancel 1 instance(s) selected

Filter by: Type to filter by text

	Instance name	Service	Host	Deployment area	Version
<input type="checkbox"/>	China [36234ec3]	9ccbfee5-2d23-41b9-b496-575345590428	sf-naw2k864-35.na.tibco.com	Production222	7.7.0 ENGR 14 R139667
<input type="checkbox"/>	France [8bb37353]	9ccbfee5-2d23-41b9-b496-575345590428	sf-naw2k864-35.na.tibco.com	Production222	7.7.0 ENGR 14 R139667
<input checked="" type="checkbox"/>	Germany [b4aeed5a]	9ccbfee5-2d23-41b9-b496-575345590428	sf-naw2k864-35.na.tibco.com	Production222	7.7.0 ENGR 14 R139667

Monitor performance of scheduled updates

As an administrator, you can now make better choices by analyzing the state of scheduled updates and determine whether or not fixes, updates, or even a deletion of a scheduled update should occur.

In Spotfire 7.7, administrators can view a matrix that outlines the following:

- Number of files successfully loaded
- Number of files loading
- Number of scheduled updates enabled
- Number of files that failed to load

A new matrix shows the administrator a summary of the routing rules

Scheduled updates
Current availability of analysis files
5 of 6 scheduled updates are active

4 of 5 Files successfully loaded

1 of 5 Files loading

6 Scheduled updates enabled
1 File failed to load

Rules
Create rules for running scheduled updates to analyses, or for routing analyses requested by certain users to specific resource pools.

Search rules

Priority	Name	Type	Details	Schedule	Resource pool	Execution
0	Pizza Hut	File	/Demo/Analysis Files/Baseball/Baseball	Everyday	System Default	(00:00:00.000)
1	McDonalds	File	/Demo/Analysis Files/Medical Performance/Medical ...	Everyday	System Default	(00:00:00.000)
2	Burger King	File	/Demo/Analysis Files/Mutual Fund Selection/Mutual ...	Everyday	System Default	2016-09-13 17:05:40 (00:00:33.723)
3	KFC	File	/Demo/Analysis Files/Sales and Marketing/Sales and...	Everyday	System Default	(00:00:00.000)
4	Starbucks	File	/Demo/Statistics/Dendrograms for Baseball	Everyday	System Default	(00:00:00.000)
5	Dunkin Donuts	File	/Demo/Analysis Files/Store Sales/Store Sales	Everyday	System Default	(00:00:00.000)
Default	Default routing rule				System Default	

Drill down and see which rules have failed by selecting the link under Files failed to load

Scheduled updates
Current availability of analysis files
5 of 6 scheduled updates are active

4 of 5 Files successfully loaded

1 of 5 Files loading

6 Scheduled updates enabled
1 File failed to load

Rules
Create rules for running scheduled updates to analyses, or for routing analyses requested by certain users to specific resource pools.

Search rules

Priority	Name	Type	Details	Schedule	Resource pool	Execution
0	Pizza Hut	File	/Demo/Analysis Files/Baseball/Baseball	Everyday	System Default	(00:00:00.000)
1	McDonalds	File	/Demo/Analysis Files/Medical Performance/Medical ...	Everyday	System Default	(00:00:00.000)
2	Burger King	File	/Demo/Analysis Files/Mutual Fund Selection/Mutual ...	Everyday	System Default	2016-09-13 17:05:40 (00:00:33.723)
3	KFC	File	/Demo/Analysis Files/Sales and Marketing/Sales and...	Everyday	System Default	(00:00:00.000)
4	Starbucks	File	/Demo/Statistics/Dendrograms for Baseball	Everyday	System Default	(00:00:00.000)
5	Dunkin Donuts	File	/Demo/Analysis Files/Store Sales/Store Sales	Everyday	System Default	(00:00:00.000)
Default	Default routing rule				System Default	

See a summary of failed items and determine what went wrong

TIBCO Spotfire® Scheduling & Routing

Activity

List of the most recent 100 events within the date range.

2016-08-30 To 2016-09-06 Refresh

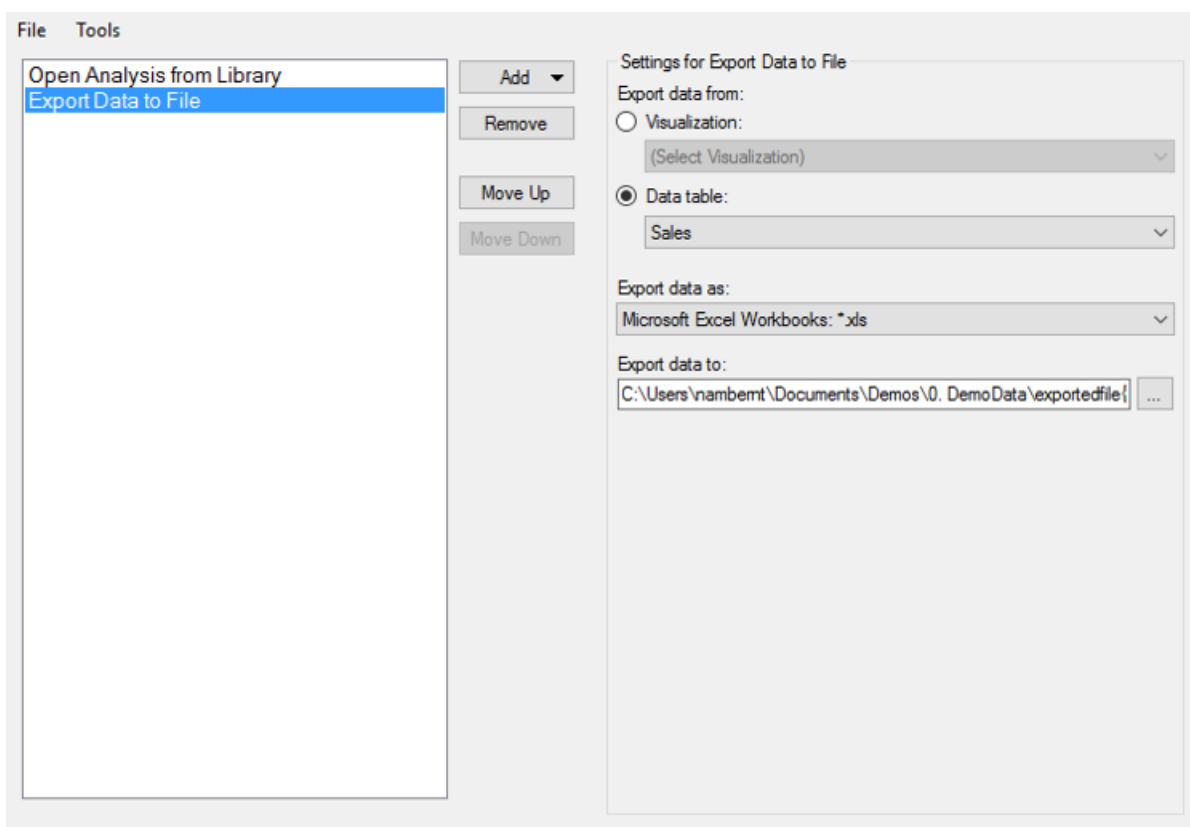
Status	Rule name	File	Start time	End time	Duration
▶ ❗	VIP (0)	MATLAB_Correlation_Cars	2016-09-06 13:47:06	2016-09-06 13:47:06	00:00:00.000
▶ ❗	Only Germany (0)	Sales and Marketing	2016-09-06 13:47:06	2016-09-06 13:47:06	00:00:00.004
▶ ❗	All Analysts (0)	Medical Performance	2016-09-06 13:47:06	2016-09-06 13:47:06	00:00:00.003
▶ ❗	Only Germany (0)	Sales and Marketing	2016-09-06 13:44:51	2016-09-06 13:44:51	00:00:00.004
▶ ❗	All Analysts (0)	Medical Performance	2016-09-06 13:44:51	2016-09-06 13:44:51	00:00:00.004
▼ ❗	Only Germany (0)	Sales and Marketing	2016-09-06 13:44:36	2016-09-06 13:44:36	00:00:00.000
Details: No web client instances available in selected resource pool(s).					
▼ ❗	All Analysts (0)	Medical Performance	2016-09-06 13:44:36	2016-09-06 13:44:36	00:00:00.003
Details: No web client instances available in selected resource pool(s).					

Spotfire Automation Services improvements

A new task, Export Data to File, has been added in Automation Services, and new features have been added to the Send Email task.

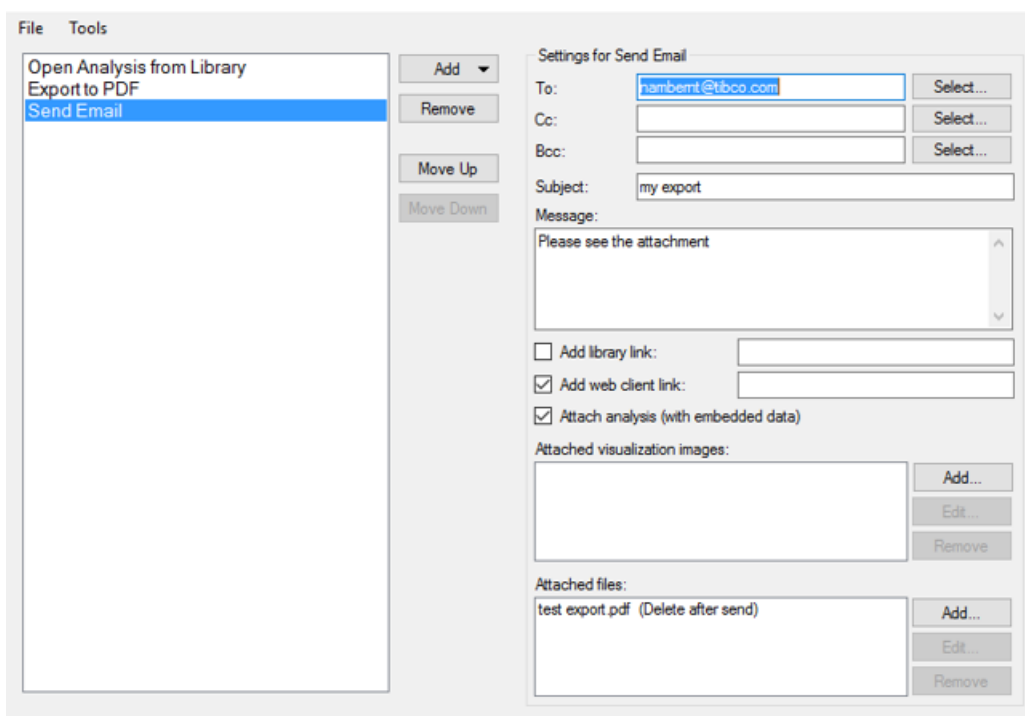
Automation Services task to save data to a file on disk

A new task, Export Data to File, allows administrators to create automated jobs that store data to a folder to a disk. Data can be stored as .sbdf, .csv, text and .xls. In combination with the Send email task, this can be used to export data.



Automation Services task to email attachments

The Automation Services task for sending emails now allows attaching files to the email. By combining this task with the export to PDF task, you can create automated jobs that export DXP files to PDF and also email the exported files to selected recipients.

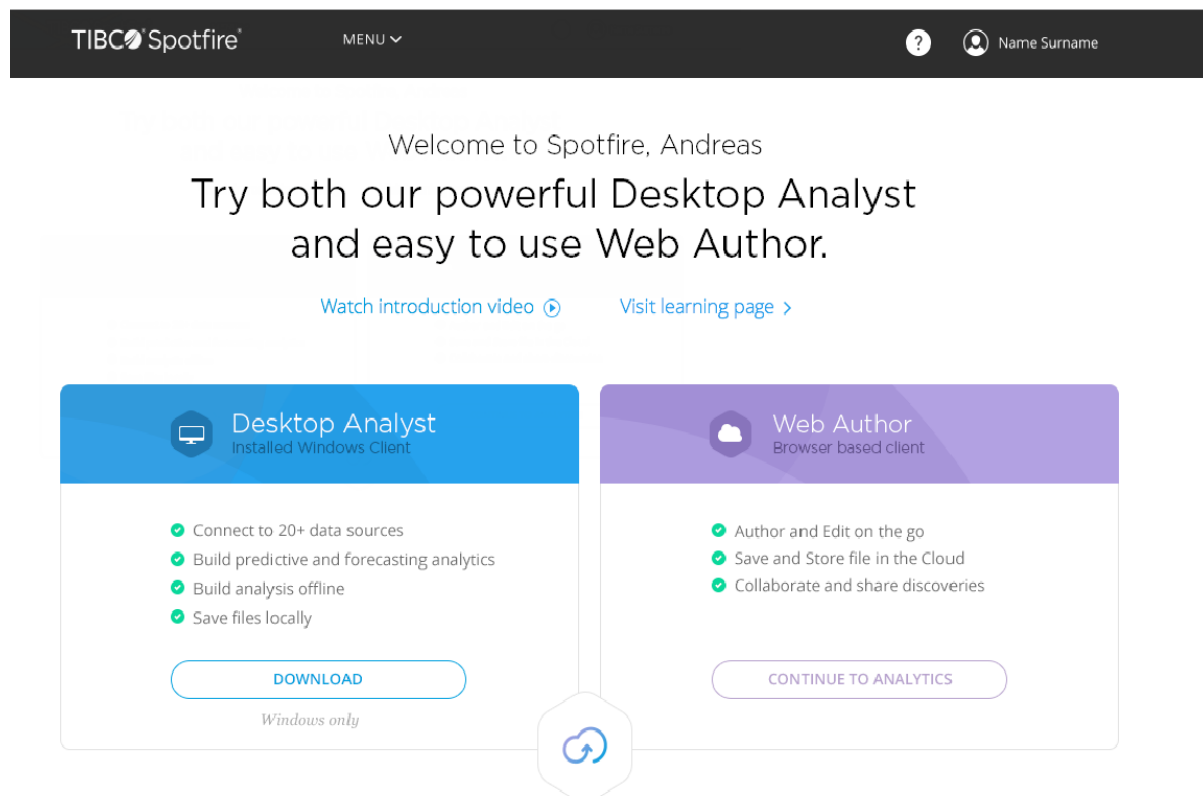


Files to be attached are taken from a folder specified in the user interface. It is possible to let Automation Services delete the attached file from disk after sending it.

Spotfire trial improvements

A new Spotfire trial welcome page is available.

The new welcome page helps users to get started and informs them about the ability to analyze and author applications using Spotfire Analyst or Spotfire Business Author.



Custom panel API for Spotfire web clients

Developers can now add custom panels to the Spotfire web client.