Cross Table

The handler creates the pivot table based on the source data set. When creating the table, the following criteria are met:

- A part of fields of the source data set is unchanged forming the **strings** of the pivot table.
- The values of cells of the other fields groups form the **columns** of the pivot table defining their headers.
- Data of the third group of fields is used for calculation of **measures** — aggregated values at the intersection of strings and columns of the pivot table.

▼ **Example:**

Source table:

Date	Goods	Volume of sales
05.02.2017	Wallpaper	2000
05.02.2017	Grout	300
07.02.2017	Wallpaper	2000
07.02.2017	Sealer	750
07.02.2017	Primer	400
10.02.2017	Primer	400
10.02.2017	Wallpaper	3000
11.02.2017	Sealer	250

Let's transform the source table with the following parameters: columns - *Goods*, strings - *Date*, measures - *Volume of sales*. Let's select the *Sum* aggregation function by the *Volume of sales* field.

Output data set:

Date	Sealer	Primer	Grout	Wallpaper
05.02.2017			300	2000
07.02.2017	750	400		2000
10.02.2017		400		3000
11.02.2017	250			

> Upon processing, the values of the *Goods* field were transferred to headers of the new columns, the values of the *Date* field were left in the strings, the values of the *Volume of sales* field were summed by dates.

Input

- **Input data source**: the port for connection of the input data set.

Output

- **Output data set**: the table with processed data is output to the port.

Wizard

The wizard window is divided into two areas: available fields (to the left) and selected fields (to the right).

- **Available fields** contain the input data set fields.
- **Selected fields** are divided into groups.
  - Columns.
  - Strings.
  - ∑ Measures.

The *Available fields* area always contains the *Count* synthetic field apart from the input data set fields, it can be added only to the *Measures* group. It will be calculated how many times each combination of columns and strings occurs in the source data set.

Columns

The values of these fields will be the columns headers. The fields included into this group must relate to the discrete data kind.

When using the cross table, new values can appear in the fields by which the columns were generated. The handler provides two approaches to solve this problem:

- **Sliding unique values** enable to create columns from the unique field (fields) values. When changing the source data set values, the whole structure of the resulting table will be fully reconstructed taking into account the new unique values. It is also possible to set the minimum number of the fields values from which the columns will be created. But in this case, the column with the remaining values will be left in the resulting table.

▼ **Example:**

>

Input table:

Point of sale	Goods	Amount of sales
Construction market	Wallpaper	170
Construction market	Tiles	400

Cross table with the following column: Goods
The minimum number of the unique values is set for the column = 4
With string: Point of sale
Measure: Amount of sales (Amount).

Resulting table

Point of sale	Wallpaper	Tiles	3	4
Construction-market	170	400		

If one more item of goods was added to the input data set

Point of sale	Goods	Amount of sales
Construction-market	Wallpaper	170
Construction-market	Tiles	400
Construction-market	Sealer	135

And the cross table settings are unchanged, the resulting data set will be as follows:

Point of sale	Wallpaper	Tiles	Sealer	4
Construction-market	170	400	135	

- **Group of values**: if the new values appear in the source field from the moment of the last node configuration, in this case, with the enabled *Other* checkbox, measures for such values will be aggregated in the *Other* column. The enabled *Null* checkbox displays the field data with null values in the output data set. Measures for them will be aggregated in the *Null values* column.

The lower wizard part includes the *General Columns Settings* area that has the following parameters:

- **Field caption parts separator**: it is required to select the character to separate the new fields captions when selecting several fields in the columns.
  - . (Dot).
  - | (horizontal line).
  - ->.
  - Space.

- **Sliding unique values**: the checkbox selection enables to create columns from the unique field (fields) values again. When changing the source data set values, the whole structure of the resulting table will be fully reconstructed taking into account the new values.
- **Value number limit** is used to limit the maximum count of columns in the output data set. The first n generated fields are selected if the set number of values exceeds the number of the unique values in the columns, the fictitious columns are not added.

Using ⬆ and ⬇ buttons, it is possible to change the order of fields in the group. The order of fields location has an impact on the resulting table structure.

▼ Example:

Source table:

Point of sale	Goods	Amount of sale	Date
Construction-market	Wallpaper	170	10.04.2012
Construction-market	Tiles	400	10.04.2012
Construction-market	Sealer	135	10.04.2012
Trade stand	Wallpaper	240	11.04.2012
Trade stand	Tiles	80	11.04.2012
Trade stand	Sealer	40	12.04.2012
Construction-market	Wallpaper	130	12.04.2012
Trade stand	Wallpaper	130	12.04.2012
Trade stand	Tiles	20	12.04.2012
Trade stand	Wallpaper	230	13.04.2012
Construction-market	Sealer	65	13.04.2012
Trade stand	Sealer	260	13.04.2012

Cross table with the following order of columns: *Goods*, *Point of sale*. Measure: *Amount of sales (Amount)*. And the following parameter: *Field caption parts separator*: `.`

Sealer.Trade stand	Sealer.Construction-market	Wallpaper.Trade stand	Wallpaper.Construction-market	Tiles.Trade stand	Tiles.Construction market
300	200	600	300	100	400

Cross table with the following order of columns: *Point of sale*, *Goods*. Measure: *Amount of sales (Amount)*. And the following parameter: *Field caption parts separator*: `.`

Trade stand.Sealer	Trade stand.Wallpaper	Trade stand.Tiles	Construction-market.Sealer	Construction-market.Wallpaper	Construction-market.Tiles
300	600	100	200	300	400

Strings

The cross table rows will be generated from the fields values. The similar field (fields) values will be grouped in the same manner as it is organized in the Grouping handler.

The fields order in this group has an impact on data sorting in the resulting table by these fields.

▼ **Example:**

Source table:

Point of sale	Goods	Amount of sale	Date
Construction-market	Wallpaper	170	10.04.2012
Construction-market	Tiles	400	10.04.2012
Construction-market	Sealer	135	10.04.2012
Trade stand	Wallpaper	240	11.04.2012
Trade stand	Tiles	80	11.04.2012
Trade stand	Sealer	40	12.04.2012
Construction-market	Wallpaper	130	12.04.2012
Trade stand	Wallpaper	130	12.04.2012
Trade stand	Tiles	20	12.04.2012
Trade stand	Wallpaper	230	13.04.2012
Construction-market	Sealer	65	13.04.2012
Trade stand	Sealer	260	13.04.2012

Cross table with the following order of strings: *Point of sale*, *Date*. Measure: *Amount of sales (Amount)*.

Point of sale	Date	Amount of sale
Trade stand	11.04.2012	320

Point of sale	Date	Amount of sale
Trade stand	12.04.2012	190
Trade stand	13.04.2012	490
Construction-market	10.04.2012	705
Construction-market	12.04.2012	130
Construction-market	13.04.2012	65

Measures

The fields data in this group are processed according to the aggregation functions. The obtained values are displayed at the intersection of columns and strings. By default, the *Sum* function is selected for all numerical types, whereas for others - *Count*.

To select other aggregation functions, it is required to double click on the field. When selecting several function options, each of them will be calculated in a separate column.

The order of fields does not matter in the *Measures* group.