User Manual for the graphomate matrix
for SAP Analytics Cloud

	Profit	Profit FC	abs		perc	
⊿ ACME	95.6k	80.9k		14.7k	0.2	
⊿ Home Office	15.9k	14.3k		1.6k	0.1	
⊿ Envelopes	0.9k	0.9k		40.0	0.0	
Central	0.5k	1.2k	-0.7k	◀◀ -0.6		
North	146.3	485.7	-339.4	◀◀ -0.7		
South	250.0	-0.8k		1.0k		1.3
⊿ Copiers	9.6k	5.9k		3.7k	0.6	
Central	4.6k	1.7k		2.9k		1.8
North	2.0k	3.5k	-1.5k	◀◀ -0.4		
South	3.0k	0.7k		2.3k		3.2 ▶▶
⊿ Art	5.4k	7.5k	-2.1k	◀◀ -0.3		
Central	3.4k	4.6k	-1.2k	◀◀ -0.3		

Version 2020.4 – as of October 2020

https://www.graphomate.com

graphomate .¡I

Table of contents

Introduction

The **graphomate matrix** is our new table component for Power BI, Tableau and SAP Analytics (Analytics Cloud (SAC) and Lumira Designer).

This allows you to easily realize IBCS-compliant tables, but also to perform various (conditional) formatting, because the graphomate matrix can be designed using its own formatting language - the so-called Cell Formatting Language (CFL). When developing the graphomate matrix, the focus was on performance, horizontal and vertical scrolling, hierarchy displays in rows and columns, and graphical visualization elements:

	Profit	Profit FC	abs		perc	
⊿ ACME	372.8k	377.0k	-4.1k		-1%	
▽ Consumer	188.7k	199.8k	-11.1k		-6%	
⊿ Corporate	123.4k	114.9k		8.5k		7%
⊿ Art	8.0k	16.0k	-8.1k		-50%	
Central	5.5k	7.3k	-1.8k		-24%	
South	2.0k	5.0k	-3.1k		-61%	
North	0.5k	3.7k	-3.2k		-87%	
⊿ Paper	2.4k	12.9k	-10.5k		-81%	
Central	1.2k	10.6k	-9.4k		-89%	
North	0.4k	1.2k	-0.8k		-67%	
South	0.8k	1.1k	-0.3k		-24%	

The graphomate matrix replaces the **graphomate tables,** which we have been offering since 2014. Although the graphomate tables offered the possibility to map IBCS requirements to a table with just a few clicks. However, our customers wanted more formatting options and better performance, especially for large tables. We intend to offer the graphomate matrix not only for the SAP Analytics Cloud (SAC) and Lumira Designer step by step but also for other SAP Analytics front-ends.
Unfortunately, the SAP Partner Interface (SDK) for SAC currently does not offer the possibility to connect data directly. This is announced for H1.2021. Currently, unfortunately, a script workaround must be worked with to transfer data from a SAC standard visualization element to the graphomate matrix.

In the following we describe the properties of the graphomate matrix as well as the possibility to set them in our user interface. This user interface is almost identical in all BI front ends - Power BI, Tableau, SAC and Lumira Designer. Formatting settings of the graphomate matrix can be stored on the graphomate server and used in other environments.

Installation

In the SAP Analytics Cloud the graphomate extensions are installed as so-called 'Custom Widget'.

The upload of the contribution.json is done as described below::

1. Choose from Main Menue / Browse / Custom Widgets
2. Use the '+'-symbol to select and store the graphomate JSON

The graphomate extensions can now be used as 'custom widget' in the Application Designer.

Quick Start

Using a graphomate matrix in an Analytic Application and data connection (workaround necessary)

Currently, SAP has not yet released the data binding via the SDK of the SAC, which is why a short script is required to bind data at runtime. Data sources in the SAC Application Designer are currently always connected with widgets. Therefore it is first necessary to connect a standard table with a data source and to execute the desired selection. Afterwards the following script text can be used in the onInitialization script to transfer the data of the standard table to the matrix.

The following script should be used:

```
graphomate_matrix_1.setResultSetFromTable(Table_1);
```

Open the graphomate property sheet (GPS)

Settings for the components are set via the graphomate property sheet (GPS). Select the graphomate matrix and go to the 3 dots next to the component. Then select "Edit Styling". The Builder Panel (red arrow) with the GPS should appear. Now configure the settings on the graphomate matrix as desired.

graphomate property sheet (GPS)

- Data Tab
- Labels Tab
- Axes Tab
- Chart Specific Tab
- Input Output Tab
- Default values

The following usage structure can be found in all graphomate extensions with the graphomate property sheet (GPS):

Search field

Use the search field to quickly find a setting (example "Title") and change it.

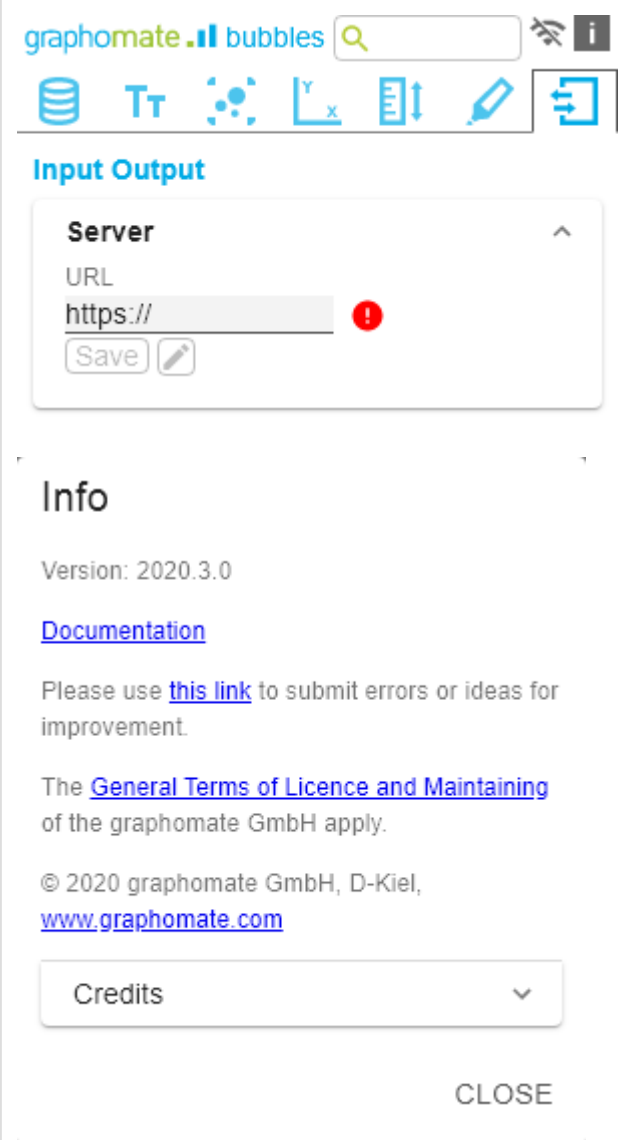**Connection to the graphomate server**

📶 active connection to graphomate server

📶 no active connection to the graphomate server

Info Tab

In the header of the GPS there is an info symbol (ℹ️). Click on the ℹ️ icon to open a tab with relevant information:

- the version number of the installed extension (important information for the support)
- link to the graphomate Support Desk
- to the general terms and conditions
- to the graphomate website and
- a list of the software libraries used (Credits)

graphomate .▮ bubbles 🔍

🗄️ Tᴛ ⦂•⦂ L̖ʏₓ ▤↕ ✏️ ⧉

Input Output

Server	⌃
URL	
https://	❗
[Save] [✏️]	

Info

Version: 2020.3.0

Documentation

Please use this link to submit errors or ideas for improvement.

The General Terms of Licence and Maintaining of the graphomate GmbH apply.

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www.graphomate.com

Credits	⌄

CLOSE

Checkboxes

An active property is indicated by a white check mark in the checkbox. To deactivate it, click on the checkbox again.

Additional Information ^
- ☑ Legend
- ☐ Tooltip

Color Picker

You can enter the color value as HEX code or click on the colored circle.

Use the Color Picker or enter color values as HEX, RGB, or HSL code. You switch between these color models using the small arrows on the right side of the color picker.

Deviations ^

Good Color
🟢 #8CB400

Bad Color
🔴 #FF0000

☐ Invert

Good Color

#8CB400

HEX

OK

Adding new elements to lists

Click on the ⊕ icon to create new elements in a list.

Removing elements from a list

Hover over the element to delete an object. The following symbol appears 🗑 . Click on the icon to delete the selected entry.

Scenario Definition ^

+

- ■ AC
- ■ PP
- ☐ BU

Import / Export
W3sic2hvcnQiOiJBQyIsI

Filter Option

In some cases, it is necessary that several settings are only applied to certain key figures, dimensions or dimensional characteristics. You can use the filter option to define the combination to which the setting is to be applied.

In the example on the left, the desired setting is only applied to the key figure "budget". This can be, for example, a certain number formatting, a scenario or a certain icon for displaying the key figure.

Filter states can be defined in the following settings of graphomate extensions:

- graphomate matrix
  - Value Format
  - Calculations/Deviations
  - Scenario Assignment
  - Bar Chart Assignment
  - Pin Chart Assignment
  - Background Bar Assignment
- graphomate bubbles
  - Value Format
- graphomate pictograms
  - Pictograms/Icon Assignment

Input mode: Field / comma separated list (csv)

Properties with the 🔳 symbol allow the definition of settings on the graphomate property sheet in two

variants. The mode can be changed by clicking on the 🔳 symbol. The following modes are available:

1. per field: The value is entered per field. After one field has been filled, another field is created automatically.
2. As a list: The entry is made as a comma-separated list.

Example: Application of the scenarios to elements of a series (see picture)

The first series contains two forecast values (FC) and two budget values (BU). The second series contains only values from the previous period (PP). You can enter the assignment of the scenarios as follows:

Variant per field for series 1: FC (field 1), FC (field 2), BU (field 3), BU (field 4)

Variant as list for series 2: PP,PP,PP,PP,

Data Tab

Calculation

Deviations

This property can be used to calculate deviations. It is a list, where each individual element represents the calculation of a new deviation member. The variances are calculated as follows:

Absolute: Minuend - Subtrahend
Percentage: (Minuend - Subtrahend) / |Subtrahend|

> Please note: At this point only the values for deviations are calculated. You have the possibility to visualize these calculated values on the tab "Chart Specific".

Deviations Pop-Up

You can create new variances using the ⊕ sign. Each configuration has the following properties:

- *New Member Key:* The unique name of the newly calculated member that is displayed in the table.
- *Type*: either *Absolute* or *Percent.* Defines whether an absolute or relative deviation is calculated.
- *Target Dimension*: The dimension in which the new, calculated deviation member should be inserted - e.g. "measures".
- *Minuend Member*: The member that is to serve as a minuend, e.g. an actual value.
- *Subtrahend Member*: The member that is to serve as subtrahend, e.g. a value from the previous year.
- *Filter* (optional): A list of filter objects. Each filter object can restrict a dimension to certain members. Only deviation data points are created that correspond to the filter conditions.
- *Description:* Short name that describes the configuration to be recognizable e.g. "abs"

Sort Configurations

Here you can sort members of dimensions. Measures are also interpreted as a dimension and can be sorted accordingly.
In future versions we will extend these options.

Sort Configurations Pop-up

You can use the ⊕ sign to create new sort orders for dimensions. Each configuration has the following properties:

- *Dimension:* A dimension the members of which should be sorted.
- *Member:* Here you can use drag and drop to sort the members of a dimension or measures.
- *Description:* Short name describing the configuration to be recognizable

Aggregation Type

The graphomate matrix calculates aggregations for displaying hierarchy nodes, if the host environment doesn't provide them.
Here you can select the type of aggregation - the default setting is "Sum".

Aggregation Node Name

At this point, a separate name can be assigned to the aggregation elements - e.g. "Sum" or Total" or also "Europe".

Sort Configuration 1

Dimension
Measures ▾

Members

gross
budget
imdb_rating
runtime
certificate
sex_and_nudity
violence_and_gore
profanity
alcohol_and_drugs
oscar_nominations
profanity small

Description (optional)

OK

Scenario Definition

This property determines the appearance of the scenarios - previously known as Data Types.
The four standard scenarios of the International Business Communication Standards are already defined, but can also be adapted.

You can create new scenarios using the ➕ sign.

Scenario Definition Pop-Up

Each scenario has the following characteristics:

- *Identifier*: A character string (such as AC) that can be used to reference the scenario - for example, in the Scenario Assignment below.
- *Color*: Here you can define the color using the color picker or enter a HEX, RGB or HSL code. You can switch these using the small arrows on the right side of the color picker.
- *Fill Type*: You can choose from the following fill patterns: *Filled,* without filling *(Empty),* hatching down (*Hatched Down*), hatching thick down (*Hatched Down Bold*), hatching up (Hatched Up), hatching thick up (*Hatched Up Bold*), and dotted *(Dotted).*
- *Shape*: Refers to the pinheads. The following shapes are available: circle *(circle),* rectangle *(rect),* rhomb *(rhomb),* wedge *(wedge),* no symbol *(none).*
- *Width*: This property is not used in the graphomate matrix.
- *Font Weight*: Choose between *normal* or *bold* font size for this scenario.

Import/Export

Copy this string to use scenarios in other graphomate components.

Scenario Definition

+

■ AC
■ PP
□ BU

Import / Export
W3sic2hvcnQiOiJBQyIsIr

■ AC

Identifier
AC

Color
● #222222

Fill Type
■ Filled

Shape
□ rect

Width
40

percent absolute

Font Weight
normal

OK

Scenario Assignment

Scenarios in Column Headers

This property ensures that the scenarios are displayed as bars below the column headers.

You can use the ✛ sign to create assignments of scenarios to dimension members.
These can also be used for bar, pin, and background bars and their axes - see the tab "Chart Specific".

Scenario Assignment Pop-Up

This property assigns scenarios to data cells.

Each configuration has the following properties:

- *Scenario Id*: The ID of the scenario to be used. A scenario ID used here, has to be defined in the scenario definition.
- *Filter*: The selected scenario is assigned for each

  dimension member that is selected here using the ✛ sign.
- *Description:* Short name describing the configuration to be recognizable.

Scenario Assignment ⌃

☑ Scenarios in Column Headers
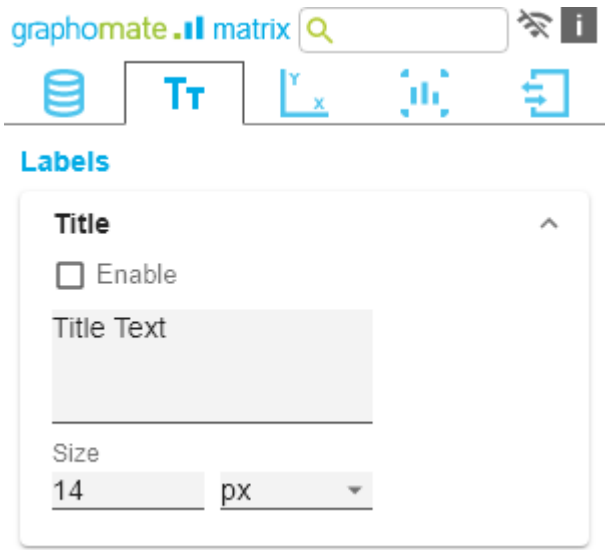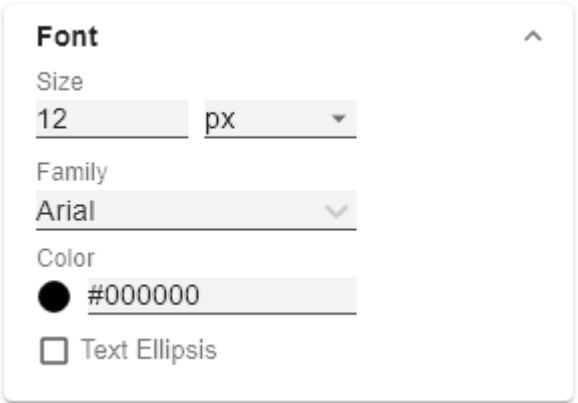
✛

no items

AC

Scenario Id
AC

Filter (optional)   ✛

no items

Description (optional)

OK

Labels Tab

Title **Title Text** Enter the title for the matrix in this field. Multiple-line texts are reproduced accordingly, i.e. the line break is adopted. **Size** Enter the size of the title's font. Select a CSS unit from the list (such as px, em),	graphomate **.II** matrix **Labels** **Title** ☐ Enable Title Text Size 14 px
Font **Size** Enter the size of the font. Select a CSS unit from the list (such as px, em), **Family** Define the global font. You can choose between *Arial, Tahoma, Lucida Console, Verdana* and *Calibri* or type in the name of a font which is installed on your system. **Color** This property defines the font color as HEX, RGB or HSL code. You can open a color picker by clicking on the colored circle and switch the color model by using the small arrows on the right. Alternatively, you can also use the color picker. **Text Ellipsis** When this option is selected, long character strings are not wrapped but abbreviated with three dots - e.g. electronic prod...	**Font** Size 12 px Family Arial Color ● #000000 ☐ Text Ellipsis
Value Format With the Value Format you define the way the values are displayed in the matrix. You can define several formats and assign them to specific columns using filtering.	

> Multiple Value Format Rules (Assignments) are prioritized in descending order, i.e. definitions that are lower in the list overwrite those above them when there filters overlap. Therefore, the generally valid format of the table should be defined at the top of this list without any further filters. Value Formats defined below, restricted by filters, overwrite the formatting defined above - "From General to Special".

Value Format Assignment

You can access the configuration by clicking on an element in the list. You define another Value Format by clicking on the ✛ symbol.

Value Format Pop-Up

Define the number format using the following options:

- *Locale:* Defines abbreviations, decimal and thousand separators for the respective language. You can choose between *en*, *de*, *fr* and *auto*. If *auto* is selected, the Locale set in the respective host application is used.
- *Format Type:* Defines the type of number output. You can choose between *number* (decimal number), *percent* (percentage) and *ordinal* (ordinal number).
- *Abbreviations:* Defines the type of abbreviations. You can choose between *mean* (abbreviation most suitable for the mean value), *min* (abbreviation most suitable for the minimum value), *max* (abbreviation most suitable for the maximum value), *auto* (best-suited abbreviation for each respective number individually), *trillion* (trillion abbreviation), *billion* (billion abbreviation), *million*, *thousand* and *none* (no abbreviation at all). With this property you can, for example, ensure that numerical values are always displayed in thousands - e.g. 0.1k or 1000k.
- *Negative Sign:* Defines how negative numbers are displayed. You can choose between *minus*, *parenthesis*, and *none* (no sign).
- *Prefix:* The input value is placed before the number.
- *Suffix:* The input value is placed after the number.
- *Thousands Separator:* Replaces the thousand separator set by the selected *locale.*
- *Decimal Separator:* Replaces the decimal separator set by the selected *locale.*
- *Total Digits:* Defines how many digits the number may consist of. *Total Digits* is prioritized over *Decimal Digits.*

- *Decimal Digits:* Defines how many decimal places of the formatted number are displayed.
- *Scaling Factor:* The value of each data point is multiplied by the entered number to scale values.
- *Zero Format:* When the checkbox is activated, any data value equal to *0* (the number zero) gets replaced by the entered value.
- *Null Format:* Any data value that equals *NULL* (no value) gets replaced by the entered value.
- *Error Format:* If a data value is undefined or the result of an arithmetic error such as dividing by 0 (zero), the data value is replaced by the entered value.
- *Rounding Method:* Defines the rounding method. You can choose between *half up* (23.5 24, -23.5 -23), *commercial* (23.5 24, -23.5 -24) and *trim* (23.5 23, -23.5 23).
- *Explicit Positive Sign:* Defines whether a positive number should always be preceded by a + (plus sign).
- *Filter (optional):* By clicking in the empty list or on the ⊕ symbol, you can define one or more dimension members for which these format settings should apply. For example, you select a measure column using the dimension "measures" and the actual measure (e.g. "gross") of the column to be formatted.
- *Description:* Short name that describes the configuration to be recognizable

Text Alignment

Specify how text content is aligned in the matrix: left-aligned (left), centered (center) and right-aligned (right).

en-US number

Locale: en-US
Format Type: number
Abbreviations: auto
Negative Sign: minus
Prefix:
Suffix:
Thousand Separator: ☐
Decimal Separator: ☐
Total Digits (approx.): ☐
Decimal Digits: 1
Scaling Factor: 1
Zero Format: ☐
Null Format:
Infinity Format: ∞
Rounding Method: commercial
☐ Explicit Positive Sign
Filter (optional): + no items
Description (optional):

OK

Measures

Dimension
Measures

Members   +

gross

OK

Scripted Formatting

CFL Rules

Learning from the usage of our first table component - the graphomate tables - we decided to offer our customers a possibility to format the graphomate matrix very individually according to their ideas. The Cell Formatting Language (CFL) let you define rules which are executed for each cell of the matrix. These rules can be used to influence the display of cells based on cell properties, data properties or matrix properties. In this way, you can create a heat map, color elements, or apply conditional formatting from the graphomate matrix with a few lines of code.

> Cell Formatting Language:
>
> The CFL is a script language for individual formatting of the graphomate matrix based on JavaScript syntax.
> It allows to read from and write various properties to the global variable *cell* via *getter* and *setter.* A complete API documentation can be found here.
>
> To simplify the programming of the CFL, we provide a web-based CFL editor from which the defined rules can be easily copied and pasted into the script body. This editor and some code templates can be found here.
>
> For all CSS properties and values that can be set in the CFL, the usual notations apply.

CFL-Pop-Up

The following properties can be defined:

- *Enabled:* This Boolean property makes it possible to (de)activate the rule.
- *Name:* A name that is used to identify the rule.
- *Script Body*: This String property contains the actual script in the CFL (Cell Formatting Language)

Scripted Formatting ⌃

CFL Rules ＋

no items

my cfl rule

☑ Enabled

Name
my cfl rule

Script Body

OK

Hierarchy Nodes

Here you control the color and font style of the hierarchy nodes in the table.

Color

Here you define the font color of the Hierarchy Nodes. The color overwrites the general font Color from the Font group. Use the Color Picker or enter color values as HEX, RGB, or HSL code. You switch between these color models using the small arrows on the right side of the color picker.

Bold

If you want hierarchy nodes to be displayed in bold, activate this property.

Italic

If hierarchy nodes should be displayed in italics, activate this property.

Indentation

Specify the size of the indentation of hierarchy nodes here. The indentation that is ultimately used is a multiple of the indentation set here and depends on the hierarchy level of the respective node. Select a CSS unit from the list (such as px, em).

Node Divider Thickness

Set the thickness of the horizontal separator lines below cells whose rows represent hierarchy nodes. All other separators can be set in the tab *Axes*.

Node Divider Color

Here you can set the color of the horizontal separator lines below cells whose rows represent hierarchy nodes. All other separators can be set in the tab *Axes.*

Node Divider

Here you can switch the visibility of horizontal separators below cells whose lines represent hierarchy nodes on or off. All other separators can be set in the tab *Axes*.

Collapsible

If the hierarchy should be expandable and collapsible, activate the *Collapsible* property.

Styling

Matrix Background Color

Determine the background color of the matrix using Color Picker or HEX, RGB or HSL code. You can switch this using the small arrows on the right side of the color picker.

Matrix Padding

This property determines the outer padding of the matrix component. Select a CSS unit (such as px, em) from the list.

Footer

Footer Text

Enter the Footer text for the matrix in this field. Multiple-line texts are reproduced accordingly, i.e. the line break is adopted.

Size

Enter the footer's font size. Select a CSS unit from the list (such as px, em),

Axes Tab

Columns

Default Width [px]

At this point, define the default value for column width in px.

Width Per Column [px]

This property allows you to set an individual width for each column of the matrix. The specification is made as a list. The indices of the list correspond to the column indices in the table. The column at position 0 corresponds to the row titles. The width is specified in pixels. For a table with one row title column, two data columns and one calculation column, a sample list would look like this: [200, 0, 0, 300].

If the value 0 is set for one or more columns, the value of the property Default Width is used for these columns.

With the csv-button you have the possibility to enter the column widths as a list of comma separated values.

Column Margins

This property sets the distance between columns, in any CSS length unit.

Supress Repeating Header

If members repeat themselves consecutivley in a column header row, this property can be used to display them only once in succession.

Header Dividers

Here you can set the visibility of the horizontal separator lines below column header cells.

Header Divider Thickness

Here you can set the thickness of the horizontal dividing lines of column header cells. Select a CSS unit from the list (such as px, em).

Header Divider Color

Here you set the color of the horizontal separator lines of column header cells as HEX, RGB or HSL code. You can switch this using the small arrows on the right side of the color picker, which can be opened by clicking on the colored circle.

graphomate .**ıl** matrix

Axes

Columns

Default Width [px]
120

Width Per Column [px] csv
200

Column Margins
0,3   em

☑ Suppress Repeating Header

☑ Header Dividers

Header Divider Thickness
0,1   em

Header Divider Color
● #000000

Rows

Supress Repeating Row Header

If members repeat themselves consecutivley in a row header column, this property can be used to display them only once in succession.

Dividers

Here you set the visibility of the horizontal separator lines below data cells and row header cells whose rows are leaves of a hierarchy. That includes all rows which are neither column headers nor hierarchy nodes.

Divider Thickness

Set the thickness of the horizontal separator lines below cells whose rows are leaves in a hierarchy. That includes all rows which are neither column headers nor hierarchy nodes. Select a CSS unit from the list (such as px, em),

Divider Color

Here you set the color of the horizontal separator lines below cells whose rows are leaves in a hierarchy. That includes all rows which are neither column headers nor hierarchy nodes. Set the color as HEX, RGB or HSL code. You switch this using the small arrows on the right side of the color picker which can be opened by clicking on the colored circle.

Initial Expand Level

Here you can set the starting drilldown state of the row hierarchy. "0" only shows the root node on the initial loading of the matrix. You need to reload the matrix or reopen your dashboard in order to see the initial expand level applied.

Alternate Row Styling

This property makes the rows of the matrix alternately white and light gray which makes it easier to perceive individual rows.

Crosstab-like Row Headers

Activate this property to split up the row header's hierarchy levels into separate columns.

Rows

☑ Suppress Repeating Row Header

☑ Dividers

Divider Thickness
0,05   em

Divider Color
⚪ #D3D3D3

Initial Expand Level
☐ _____

☐ Alternate Row Styling

☐ Crosstab-like Row Headers

Chart Specific Tab

Charts

In this tab you configure visual elements like bar or pin charts in the graphomate matrix.

Bar Chart Assignment

This property determines which data should be displayed as an In-Cell Bar Chart type instead of a number. This can be both source data and calculated measures - tab *Data*: *Calculations.* This is a list, whereby each individual list element represents an independent configuration.

Click on the ＋ sign or in the empty list to make settings for the bar charts.

Bar Chart Assignment Pop-Up

graphomate .ıl matrix

Chart Specific

Charts   ⌃

Bar Chart Assignment   ＋

no items

Pin Chart Assignments   ＋

no items

Good Color
● #8cb400

Bad Color
● #ff0000

Outlier Style
LONG SHORT

- *Labels:* determines whether the value of the cell should be displayed as a label next to the chart's bar.
- *Scenario Id for Axis*: Sets a defined scenario for the axis.
- *Scenario Id for Bar*: Sets a defined scenario for the bar. Scenarios are defined on the first tab *Data.*
- *Negative Value is Good*: To swap the meaning of negative and positive colors, activate this property.
- *Comparison Group ID*: All In-Cell-Bar Charts of a graphomate matrix with an identical Comparison Group ID - any string - are scaled in the same way. In a later release this will also be possible across multiple graphomate matrix instances.
- *Use Outlier Threshold:* Specify here whether the Outlier Thresholds should be applied to the scaling.
- *Positive Outlier Threshold*: Describes the upper limit value of the scaling. All values that are greater than this limit value are displayed as outliers and are not included in the scaling. The next lower value of the scale or total scale (if a Comparison Group is used) then determines the new maximum of the scaling.
- *Negative Outlier Threshold*: Describes the lower limit value of the scaling. All values that are smaller than this limit value are displayed as outliers and are not included in the scaling. The next larger value of the scale or total scale (if a Comparison Group is used) then determines the new minimum of the scaling.
- *Filter(optional, Pop-Up):* By clicking in the empty list or on the ⊕ symbol, you can define one or more dimension members for which the bar charts should be displayed. You could, for example, select the dimension "measures" and the member "Revenue" to display bar charts in all columns representing the measure "Revenue".
- Description: Short name that describes the configuration to be recognizable.

Pin Chart Assignment

This property determines which data should be displayed as an In-Cell Pin Chart type instead of a number. This can be both source data and calculated measures - tab *Data*: *Calculations.* This is a list, whereby each individual list element represents an independent configuration.

Click on the ⊕ sign or in the empty list to make settings for the pin charts.

Pin Chart Assignment Pop-Up

Bar Chart Assignment

☑ Labels

Scenario Id for Axis
_____

Scenario Id for Bar
_____

☐ Negative Value is Good

Comparison Group Id
_____

☐ Use Outlier Threshold

Positive Outlier Threshold
100
_____

Negative Outlier Threshold
-100
_____

Filter (optional)   +

no items

Description (optional)
_____

OK

- *Labels:* determines whether the value of the cell should be displayed as a label next to the chart`s pin.
- *Scenario Id for Axis*: Sets a defined scenario for the axis.
- *Scenario Id for Pin*: Sets a defined scenario for the pin. Scenarios are defined on the first tab *Data.*
- *Negative Value is Good*: To swap the meaning of negative and positive colors, activate this property.
- *Comparison Group ID*: All In-Cell-Pin Charts of a graphomate matrix with an identical Comparison Group ID - any string - are scaled in the same way. In a later release this will also be possible across multiple graphomate matrix instances.
- *Use Outlier Threshold:* Specify here whether the Outlier Thresholds should be applied to the scaling.
- *Positive Outlier Threshold*: Describes the upper limit value of the scaling. All values that are greater than this limit value are displayed as outliers and are not included in the scaling. The next lower value of the scale or total scale (if a Comparison Group is used) then determines the new maximum of the scaling.
- *Negative Outlier Threshold*: Describes the lower limit value of the scaling. All values that are smaller than this limit value are displayed as outliers and are not included in the scaling. The next larger value of the scale or total scale (if a Comparison Group is used) then determines the new minimum of the scaling.
- *Filter(optional, Pop-Up):* By clicking in the empty list or on the ⊕ symbol, you can define one or more dimension members for which the pin charts should be displayed. You could, for example, select the dimension "measures" and the member "Revenue" to display pin charts in all columns representing the measure "Revenue".
- Description: Short name that describes the configuration to be recognizable.

Good Color

Here you can set the color for positive connoted values by clicking on the corresponding colored circle to open the color picker.

Bad Color

Here you can set the colors for negatively connoted values by clicking on the corresponding colored circle to open the color picker.

Outlier Style

Pin Chart Assignments

☑ Labels

Scenario Id for Axis

Scenario Id for Pin

Comparison Group Id

☐ Use Outlier Threshold

Positive Outlier Threshold
100

Negative Outlier Threshold
-100

Filter (optional)   +

no items

Description (optional)

OK

Here you can select how outliers are displayed. In *SHORT* mode, the outliers are displayed as small triangles on the axis. In *LONG* mode, however, the outliers are displayed over the entire available area according to IBCS rules.

Background Bars

Background Bar Assignment

This property determines which data should be displayed as an In Cell Background Bar instead of a number. This is a list, whereby each individual list element represents an independent configuration.

Background Bar Assignment Pop-Up

- *Scenario Id*: Sets the defined scenario for the background bar. Scenarios are defined on the first tab *Data.*
- *Negative Value is Good*: To swap the meaning of negative and positive colors, activate this property.
- *Comparison Group ID*: All background bars of a graphomate matrix with an identical Comparison Group ID - any string - are scaled the same way. In a later release this will be possible across multiple graphomate matrix instances.
- *Use Outlier Threshold:* Specify here whether the Outlier Thresholds should be applied to the scaling.
- *Positive Outlier Threshold*: Describes the upper limit value of the scaling. All values that are greater than this limit value are displayed as outliers and are not included in the scaling. The next lower value of the scale or total scale (if a Comparison Group is used) then determines the new maximum of the scaling.
- *Negative Outlier Threshold*: Describes the lower limit value of the scaling. All values that are smaller than this limit value are displayed as outliers and are not included in the scaling. The next larger value of the scale or total scale (if a Comparison Group is used) then determines the new minimum of the scaling.
- *Filter(optional, Pop-Up):* By clicking in the empty list or on the ＋ symbol, you can define one or more dimension members for which the background bars should be displayed. You could, for example, select the dimension "measures" and the member "Revenue" to display pin charts in all columns representing the measure "Revenue".
- Description: Short name that describes the configuration to be recognizable.

Background Bar Good Color

Here you can set the color for positive connoted values of background bar cells by clicking on the corresponding colored circle to open the color picker.
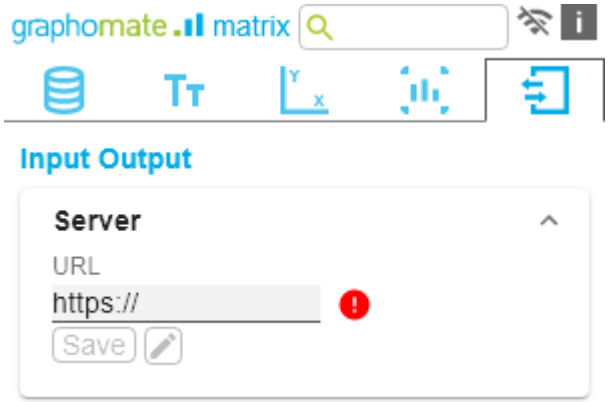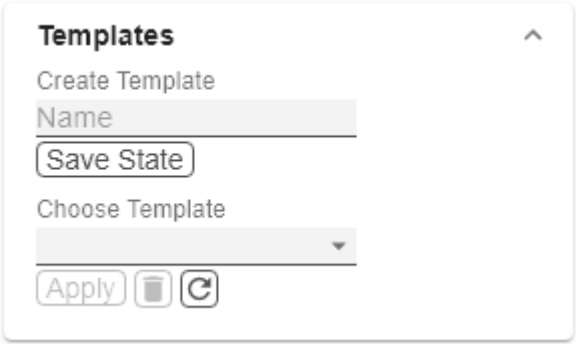
Background Bar Bad Color

Here you can set the color for negative connoted values of background bar cells by clicking on the corresponding colored circle to open the color picker.

Background Bar Negative Right To Left

If this property is active, background bars representing a negative value start at the right edge of the cell.

Input Output Tab

The functions of this tab are used to exchange templates for the graphomate matrix. Connect to the graphomate server - a free component of graphomate GmbH - to store or load a graphomate matrix template. This way you can exchange preconfigured graphomate matrix designs between BI frontends that support the graphomate server. Currently these are: Power BI, Tableau, Excel, Lumira Designer, Web Intelligence, SAP UI5, SAC.

Server Here you enter the URL of the graphomate server to which the component should connect and from which you want to save or retrieve templates. If you have entered the URL to the server, a green check mark indicates that a connection could be established. If another server is used later, the button next to the save button can be pressed and the server URL can be edited. The hyperlink *"Admin"* allows you to jump to the admin area of the graphomate server.	
Templates If the current settings are to be saved as a template, a new template name can be entered in the input field labeled *Create Template* and confirmed by clicking the *Save State* button. If the entered name complies with the naming convention, the template is saved on the server and a toast with the corresponding message is displayed in the lower part of the *graphomate property sheet*. However, if the entered name does not meet the expected naming conventions, an error message with the permitted characters is displayed accordingly. With *Choose Template* templates stored on the server can be retrieved and applied. To do this, the desired template must only be selected and the *Apply* button must be pressed. If you want to delete a template, you have to select the template in the list and press the *Delete (bin symbol)* button. If changes have been made to the templates on the server side, you have to click on the *Refresh* button. Changes should then be visible.	

Default values

Here you will find the default values of the preset Scenarios. Copy the character string and paste it back into the *Dat a* tab in the relevant *Import/Export* area.

Scenarios (AC, FC, PP, BU):
W3sic2hvcnQiOiJBQyIsImNvbG9yIjoiIzIyMjIyMiIsImZpbGx0eXBlIjoiZmlsbGVkIiwic2hhcGUiOiJyZWN0Iiwid GhpY2tuZXNzIjoxLCJiYXJ3aWR0aCI6MC40LCJwaW53aWR0aCI6MC4yNSwiZm9udHdlaWdodCI6Im5vcm 1hbCJ9LHsic2hvcnQiOiJQUCIsImNvbG9yIjoizgwODA4MCIsImZpbGx0eXBlIjoiZmlsbGVkIiwic2hhcGUiOiJ yaG9tYiIsInRoaWNrbmVzcyI6MSwiYmFyd2lkdGgiOjAuNCwicGlud2lkdGgiOjAuMjUsImZvbnR3ZWlnaHQiOi Jub3JtYWwifSx7InNob3J0IjoiQlUiLCJjb2xvciI6IiMwMDAwMDAiLCJmaWxsdHlwZSI6ImVtcHR5Iiwic2hhcGU iOiJjaXJjbGUiLCJ0aGlja25lc3MiOjEsImJhcndpZHRoIjowLjQsInBpbndpZHRoIjowLjI1LCJmb250d2VpZ2h0Ij oibm9ybWFsIn0seyJzaG9ydCI6IkZDIiwiY29sb3IiOiIjMDAwMDAwIiwiZmlsbHR5cGUiOiJoYXRjaGVkVXAiL CJzaGFwZSI6InJob21iIiwidGhpY2tuZXNzIjoxLCJiYXJ3aWR0aCI6MC40LCJwaW53aWR0aCI6MC4yNSwi Zm9udHdlaWdodCI6Im5vcm1hbCJ9XQ==

Known Issues (martix)

- The performance of the virtual scrolling technology is negatively influenced by browser extensions that react to changes in the HTML structure. We have noticed this, for example, with ad blockers or some extensions to enlarge thumbnails.

Knwon Issues (SAC)

- SAP has not yet released the data binding via the SDK of SAC, which is why a short script for data binding at runtime is required. See *Quickstart*.