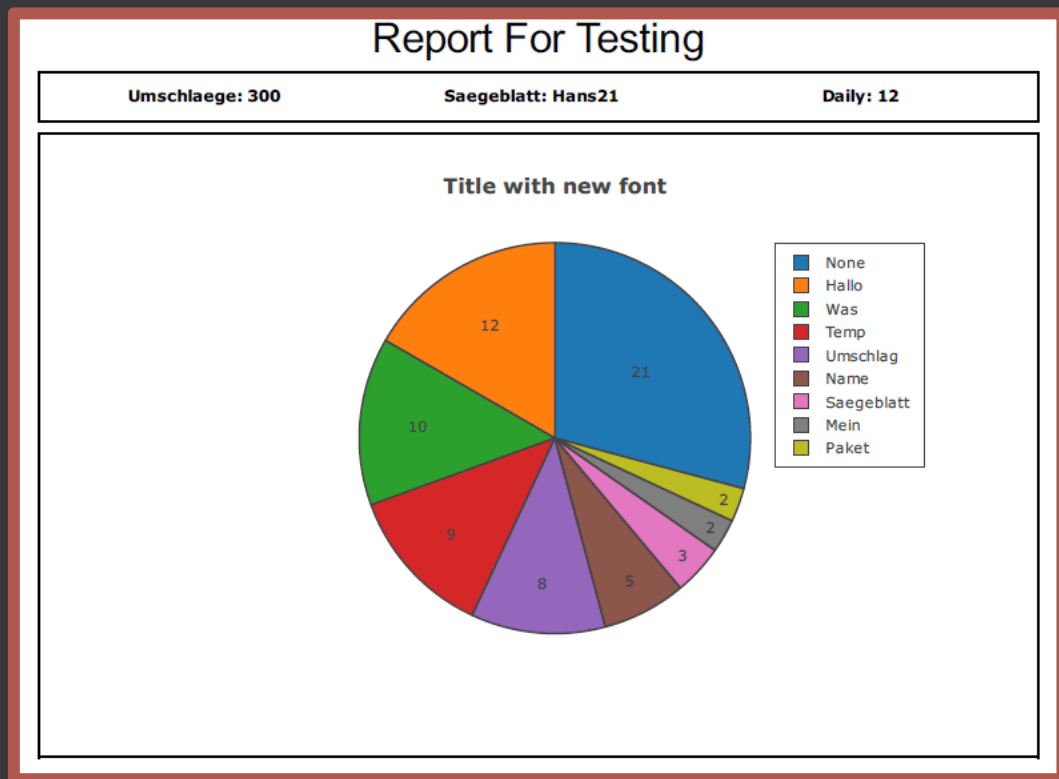


# Report Design made easy



With this week's Senseforce Rocket update 1.5.6, besides many improvements and bugfixes, the Senseforce Report Designer was released in its version 1.0. Compared to the already available alpha version, the following improvements are available now:

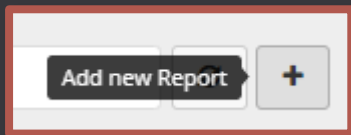
- More elaborate chart appearance
- Option for grouping chart elements
- Option for adding border and background colors to chart groups
- Option for having multicolumn report elements
- Drag & Drop chart elements
- Scalable report element
- Image report elements
- Page number
- Setting font size and font weight of title and axis title
- Using script settings for decimal places
- Optimized widget import usability
- Added option to add page breaks
- Report element alignment setting
- Separate filter for any report element
- Improved filtering workflow
- Report scheduling and automatic report sending



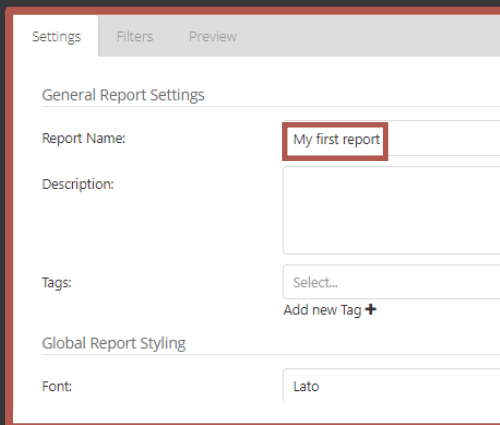
# Step by step

Simply follow the below easy steps to create your first report. The guide also highlights limitations and pitfalls of the Report Designer.  
(The guide assumes, that the Widgets used for the report are already available)

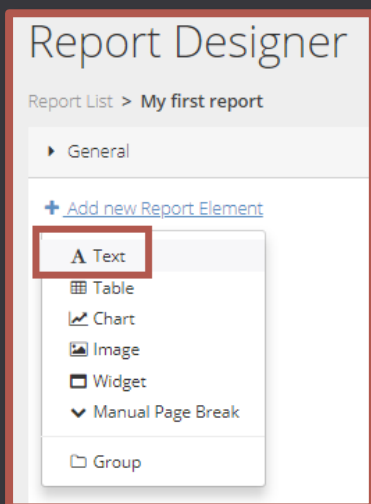
1. Create a new report by clicking “+” in top right corner



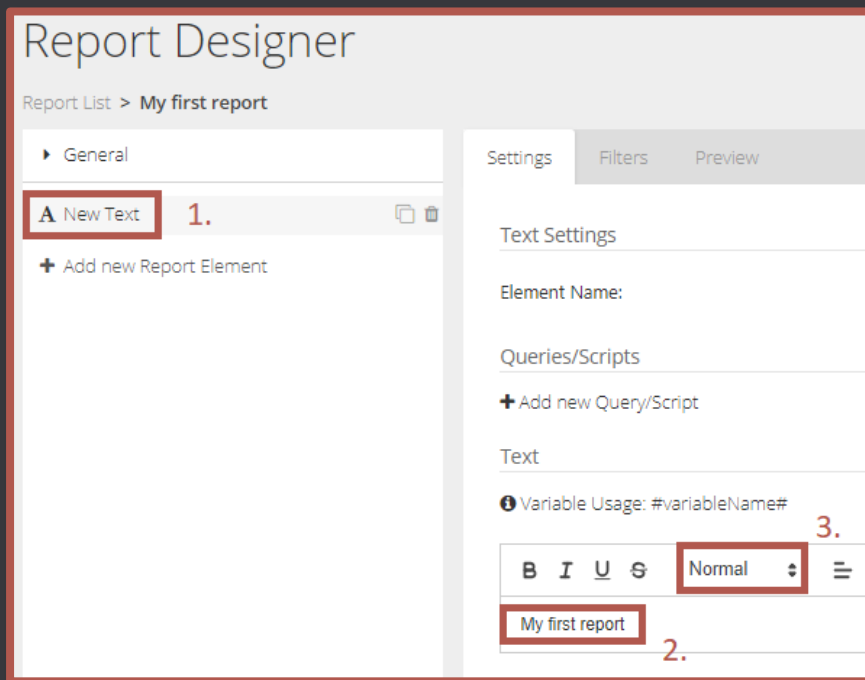
2. Set a name for your report

A screenshot of the 'Settings' tab in the Report Designer. The 'General Report Settings' section is visible. The 'Report Name' field is highlighted with a red box and contains the text 'My first report'. Other fields include 'Description', 'Tags' (with a 'Select...' dropdown and an 'Add new Tag +' button), and 'Global Report Styling' (with a 'Font' dropdown set to 'Lato'). The 'Filters' and 'Preview' tabs are also visible at the top.

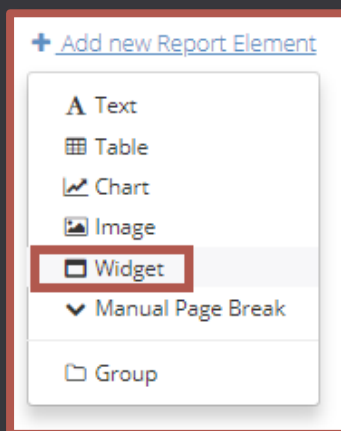
3. Add a header element by clicking “Add new Report Element” -> “Text”



- Click on the newly created element and set a headline for your report in the "Text"-section. Set the text-size to Huge.

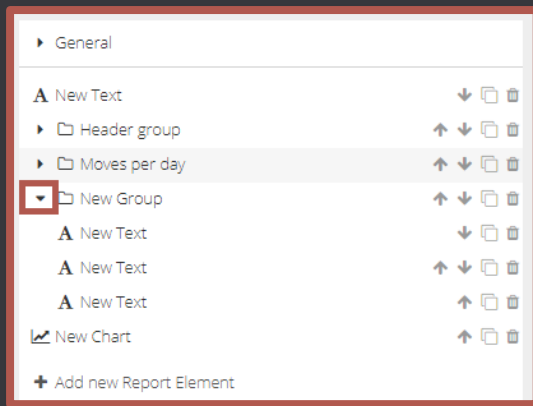


- Import your first widget by clicking "Add new Report Element" -> Widget. Select your widget from the well-known widget-catalogue.



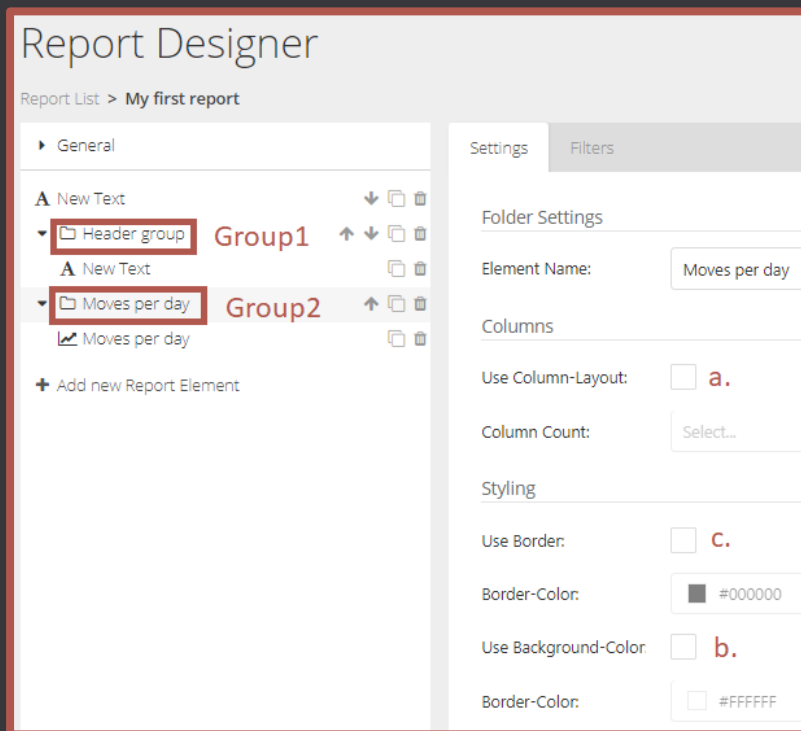
All widgets are imported as a "Group". Groups are a powerful tool to control the layout of your report.

By the way, groups can be easily drag & dropped to rearrange your report structure. Furthermore, collapse and expand groups to have more groomed report overview, by clicking on the collapse/expand symbol at the group element.

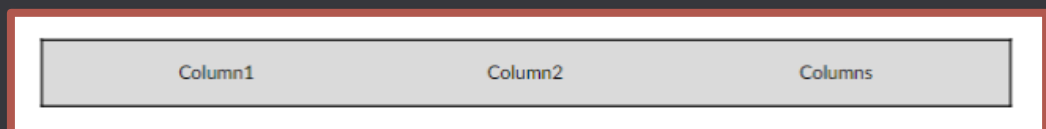


The following options are available for groups:

- Change the report column layouts. Utilize up to 4 columns per group.
- Set group background color
- Draw a border around your group



Result:



- (Optional): The widget importer also imports the widget headline as text element (if a headline is set). Sometimes, you want to delete this separate headline by clicking the recycle-bin icon next to the element.

7. Repeat step 5 for every widget to import
8. (Optional): Instead of importing widgets, you may also simply create your report by adding Text, Chart, Image or Table-elements by clicking on "Add new Report Element".

The settings-dialog for Text, Chart, Image and Table-elements are very similar to the settings-dialog of the Senseforce widget editor. Start by adding an Analytics Query or script as Data Source, continue by adding x-axis and y-axis and conclude with styling options.

Settings Filters Preview

Chart Settings

Element Name: New Chart

Chart Title:

Title Font Size: Large

Chart Type: Line Chart

Has Row-Limit: OFF

Show Legend: ON

Use Static Height: OFF

Data Source

Query Type: ☒ AnalyticsQuery ☐ Script

Query/Script: Select... 1.

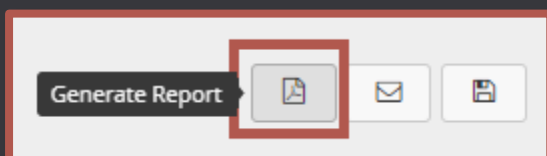
Use Grouping Column: OFF

X-Axis Column: Select... 2.

Series

+ Add new Series 3.

9. Press "Generate Report" on the top right corner to create your report preview



10. Add filters to your elements. Like in the Dashboarding tool, the Report Designer allows to set filter for report elements and underlying analytics queries. You are able to:
  - Import one widget several times and set different filters for each of them.
  - Have the same filter flexibility as for dashboards

## How to add filters?

- Open the "Filters" – tab
- Select the element you want to filter on the left-side elements pane (Please select a specific element to filter but not a group)
- Add a new filter by clicking "Add new Filter". Select the filter type like for Dashboard filters (Date filters for time based filtering, Text filters for filtering for texts and things)
- (Optional): Change the name of the filter by clicking on the filter name string
- Activate the filter by clicking on the filter header (blue filters are selected)
- Checkmark the columns you want to filter displayed in the "Filter Mappings" section. The Filter Mappings section provides all possible filtering options. In bold display, the name of the Analytics query is stated, the grey shaded area displays the column of the query and the text next to the checkmark displays the default filter
- Select the filter operator (like in Dashboard filters)

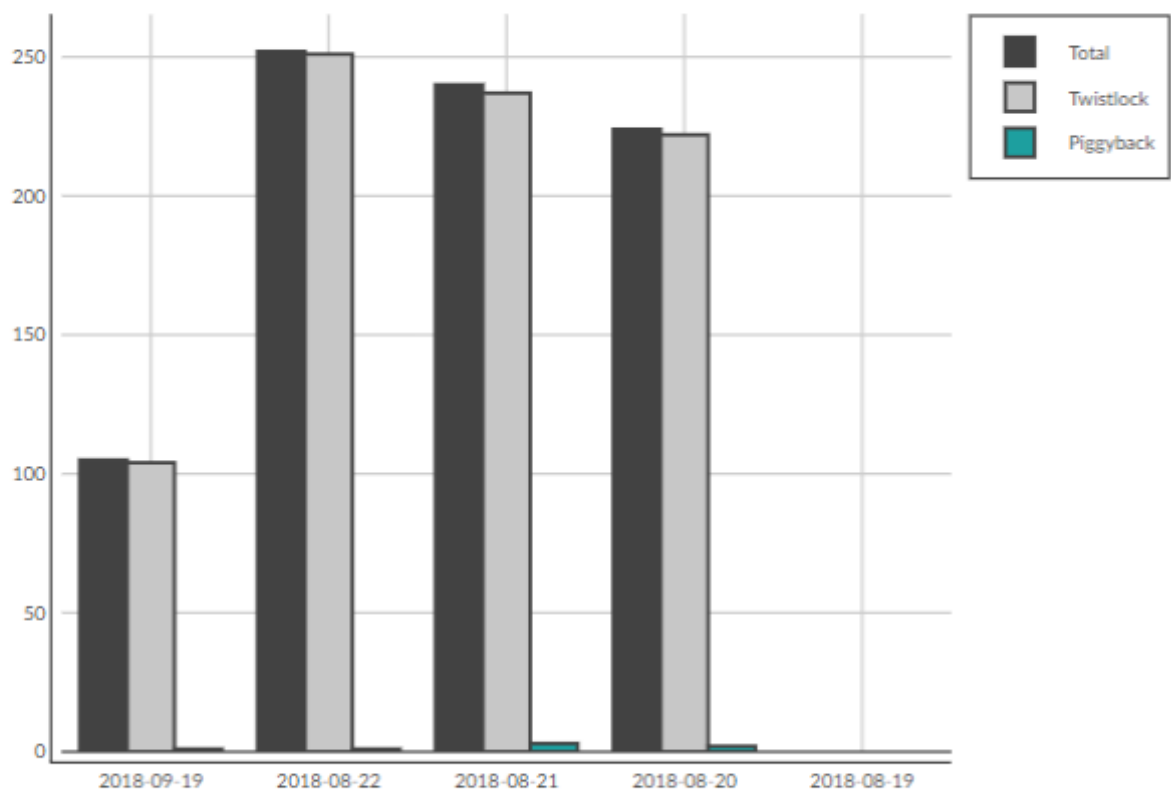
The screenshot illustrates the 'report' interface with the 'Filters' tab selected (a.). On the left, the 'General' pane shows a list of report elements, including 'New Text', 'Header group', 'Moves per day', and 'New Group'. The 'Moves per day' element is selected (b.). The main area displays the 'Filters' tab, where a new filter 'New string-Filter' (d.) has been added. The filter is active (e.), and its operator is set to 'None' (g.). The 'Filter Mappings' section on the right shows the 'moves per day' query with a mapping for 'Thing(S7Data)' using the 'Like( Wolfurt% )' operator (f.). A button to 'Add new Filter' (c.) is located at the bottom.

# Final result

## My first report

This report illustrates the performance for two machineries for the last week. If questions arise, please come back to [andreas.nigg@senseforce.io](mailto:andreas.nigg@senseforce.io) (<mailto:andreas.nigg@senseforce.io>)

### Moves per day



Moves: 234

Operating hours today: 21.2

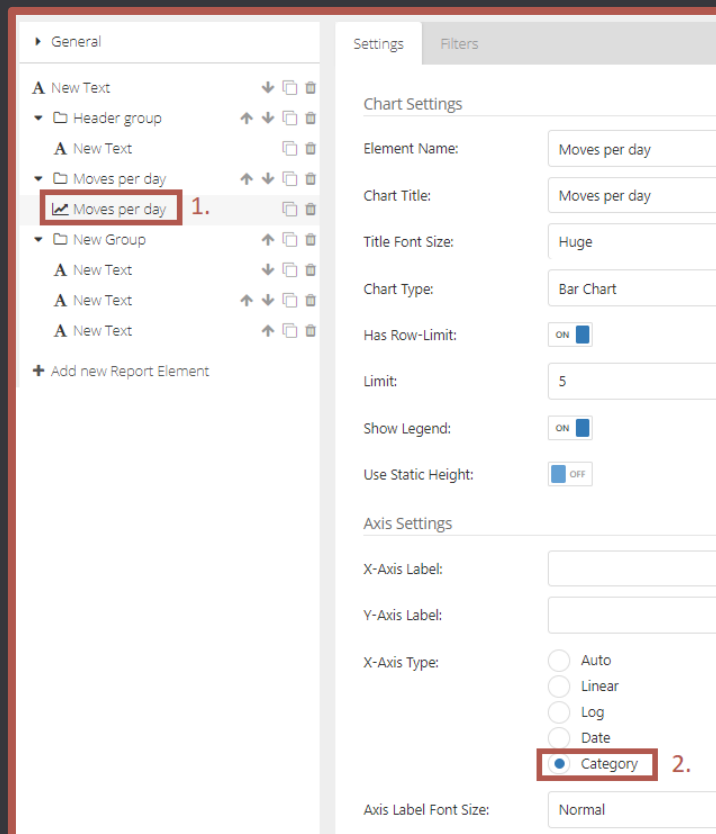
Productivity: 0.78



# FAQ

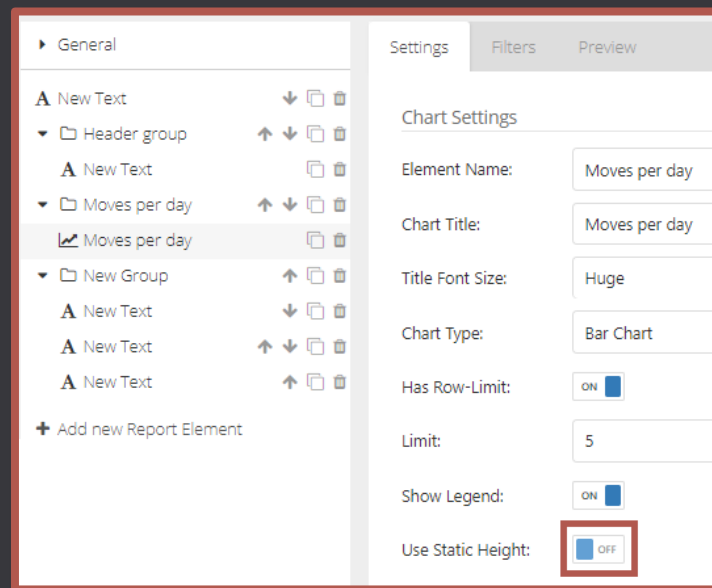
The above section illustrated what the Senseforce report designer is capable of doing - the below section reveals, what might be limited and where you might start looking if something looks not as expected.

- My chart elements' x-axis looks weird: If your x-axis is a timestamp axis, our report designer tries to optimize the look and feel of the chart for timeseries data. For seldom cases, the results are not as expected.  
Workaround: On the report elements pane click on the report element which does not look as expected and click "Category" as X-Axis Type



- I'm importing a widget, but I don't see the Data source: You need read permissions for the widget as well as the underlying queries and scripts to create a report. You don't need explicit permissions to schedule reports, but you need it for report creation.

- My chart/image is too high/wide: Use the Toggle-button “Use Static Height” for defining the height of an element.



- Multicolumn widgets with column-span settings: If you import widgets with for example 4 columns and 2 rows, but the second row is spanned over two or more columns, the widget import algorithm struggles to create the column-span. Simply drag & drop the according element out of the “Group” to circumvent this problem.
- I can’t see any filtering options: Make sure to select a report element AND a filter. Then the filtering options should appear. If still no options are available, make sure that the underlying analytics queries have filters attached to the columns you need to filter (like for Dashboard filters)