

```
+++ title = "Histogram" description = "Histogram visualization" keywords = ["grafana", "docs", "bar chart", "panel",  
"barchart"] aliases = ["/docs/grafana/latest/features/panels/histogram/",  
"/docs/grafana/latest/panels/visualizations/histogram/"] weight = 605 +++
```

Histogram

The histogram visualization calculates the distribution of values and presents them as a bar chart. The Y-axis and the height of each bar represent the count of values that fall into each bracket while the X-axis represents the value range.

```
{{< figure src="/static/img/docs/histogram-panel/histogram-example-v8-0.png" max-width="625px" caption="Bar  
chart example" >}}
```

Supported data formats

Histogram visualization supports time series and any table results with one or more numerical fields.

Display options

Use the following options to refine your visualization.

Bucket size

The size of the buckets. Leave this empty for automatic bucket sizing (~10% of the full range).

Bucket offset

If the first bucket should not start at zero. A non-zero offset has the effect of shifting the aggregation window. For example, 5-sized buckets that are 0-5, 5-10, 10-15 with a default 0 offset would become 2-7, 7-12, 12-17 with an offset of 2; offsets of 0, 5, or 10, in this case, would effectively do nothing. Typically, this option would be used with an explicitly defined bucket size rather than automatic. For this setting to affect, the offset amount should be greater than 0 and less than the bucket size; values outside this range will have the same effect as values within this range.

Combine series

This will merge all series and fields into a combined histogram.

Line width

Controls line width of the bars.

Fill opacity

Controls the fill opacity bars.

Gradient mode

Set the mode of the gradient fill. Fill gradient is based on the line color. To change the color, use the standard [color scheme]({{< relref "../panels/working-with-panels/apply-color-to-series.md" >}}) field option.

Gradient display is influenced by the **Fill opacity** setting.

None

No gradient fill. This is the default setting.

Opacity

Transparency of the gradient is calculated based on the values on the Y-axis. The opacity of the fill is increasing with the values on the Y-axis.

Hue

Gradient color is generated based on the hue of the line color.

{{< docs/shared "visualizations/tooltip-mode.md" >}}

{{< docs/shared "visualizations/legend-mode.md" >}}

Legend calculations

Choose a [standard calculations]({{< relref "../panels/reference-calculation-types.md">}}) to show in the legend. You can select more than one.