



Chart

/**

USAGE:

```
Chart(type, data, height, width, xaxis, yaxis, title, min, max, interval)
```

PARAMETERS:

type : str (one of 'circulargauge', 'column', 'multiseriescolumn', 'linear')

data : list

(optional) height : num (default: 450)

Height of chart in pixel or percent.

If value is greater or equal to 1, then value represents pixel, otherwise percent.

(optional) width : num (default: 450)

Width of chart in pixel or percent.

If value is greater or equal to 1, then value represents pixel, otherwise percent.

(optional) xaxis : str (default: 'Y-Axis')

Label for X-Axis.

(optional) yaxis : str (default: 'X-Axis')

Label for Y-Axis.

(optional) title : str (default: 'Title')

Label for chart.

(optional) min : num (default: 0)

Lower bound for Linear Gauge chart type.

(optional) max : num (default: 100)

Upper bound for Linear Gauge chart type.

(optional) interval : num (default: 10)

Major interval for axis markers.

(optional) id : str (default: nil)

ID for chart component. Used for listening for events and interactions.

VERSIONS:

1.0	2-Feb-10	robertm	initial version
1.1	4-Mar-10	steveb	code clean-up
1.2	29-Mar-10	steveb	better handling of error conditions;
1.3	16-Jul-10	steveb	fixed improper data handling for 'pie

***/

```
// GET VARIABLES FROM TEMPLATE CALL
var type = string.toLowerCase($type ?? $0 ?? 'circulargauge');
var data = $data ?? $1 ?? 67;
var height = $height ?? $2 ?? 450;
var width = $width ?? $3 ?? 450;
var xaxis = $xaxis ?? $4;
var yaxis = $yaxis ?? $5;
var title = $title ?? $6;
var min = $min ?? $7;
var max = $max ?? $8;
var interval = $interval ?? $9 ?? 10;
var id = $id ?? $10;
var error;

// TODO (steveb): validate the 'data' field
// TODO (steveb): enable/disable animation

// format settings
let settings_xml = <settings>
  <animation enabled="True"/>
</settings>;

// format axis
var axes_xml = <axes>
  <x_axis>
    <title enabled=(xaxis is not nil)>
      <text> xaxis </text>
    </title>
    <labels>
      <format> "{%Value}{numDecimals:0}" </format>
    </labels>
  </x_axis>
  <y_axis position=((type == 'bar' || type == 'multiseriesbar') ? "oppo
    <title enabled=(yaxis is not nil)>
      <text> yaxis </text>
    </title>
    <labels>
```

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        <format> "{%Value}{numDecimals:0}" </format>
    </labels>
    <scale major_interval=(interval) minor_interval=(interval / 4) mi
</y_axis>
</axes>;

// set defaults for min-max
let min = min ?? 0;
let max = max ?? 100;

// format data
var data_xml;
if((type != 'pie') && data is map) {
    let data_xml = <data>
        foreach (var series:points in data) {
            <series name=(series)>
                foreach (var p in points) {
                    foreach(var label:value in p) {
                        <point y=(value) name=(label)>
                            <tooltip enabled="true">
                                <format> "{%SeriesName} ({%Name}) - {%Val
                            </tooltip>
                        </point>
                    }
                }
            </series>
        }
    </data>;
} else if(data is list) {
    let data_xml = <data>
        <series name="Series 1">
            foreach(var d in data) {
                foreach(var label:value in d) {
                    <point y=(value) name=(label) />
                }
            }
        </series>
    </data>;
}

// CHART BUILDS
var chart;
switch (type) {

```

```

// SINGLE-SERIES COLUMN CHART, INCOMING DATA MUST BE FORMATTED AS [{label
// MULTI-SERIES COLUMN CHART, INCOMING DATA MUST BE FORMATTED AS {series1
case 'column':
case 'multiseriescolumn':
case 'bar':
case 'multiseriesbar':

    // determine layout value
    var layout;
    switch(type) {
    case 'column':
    case 'multiseriescolumn':
        let layout = "CategorizedVertical";
    case 'bar':
    case 'multiseriesbar':
        let layout = "CategorizedHorizontal";
    }

    // generate chart xml
    let chart = <anychart>
        settings_xml;
        <charts>
            <chart plot_type=(layout)>
                <data_plot_settings default_series_type="Bar" enable_3d_n
                    <bar_series group_padding="0.2" >
                        <tooltip_settings enabled="true"/>
                    </bar_series>
                </data_plot_settings>
                <chart_settings>
                    <title enabled=(title is not nil)>
                        <text> title </text>
                    </title>

                    // check if we plotting a series of data points
                    if(data is map) {
                        <legend enabled="true" position="Bottom" align="S
                            <format> "{%Icon} {%Name}" </format>
                            <title enabled="false"/>
                            <columns_separator enabled="true"/>
                            <background>
                                <inside_margin left="10" right="10"/>
                            </background>
                            <items>
                                <item source="Series"/>
                            </items>

```

```

        </legend>
    }
    axes_xml;
</chart_settings>
    data_xml;
</chart>
</charts>
</anychart>;

// MULTI-SERIES LINE CHART, INCOMING DATA MUST BE FORMATTED AS {series1:
case "line":
    let chart = <anychart>
        settings_xml;
        <charts>
            <chart plot_type="CategorizedVertical">
                <chart_settings>
                    <title enabled=(title is not nil)>
                        <text> title </text>
                    </title>
                    <legend enabled="true">
                        <title enabled="false"/>
                    </legend>
                    axes_xml;
                </chart_settings>
                <data_plot_settings default_series_type="Spline">
                    <line_series>
                        <marker_settings>
                            <marker size="8"/>
                            <states>
                                <hover>
                                    <marker size="12"/>
                                </hover>
                            </states>
                        </marker_settings>
                        <tooltip_settings enabled="True"/>
                    </line_series>
                </data_plot_settings>
                data_xml;
            </chart>
        </charts>
    </anychart>;

//3D PIE CHART, DATA VARIABLE MUST BE FORMATTED AS {name1:value1, name2:v
case 'pie':
    let chart = '<anychart>

```

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settings_xml;
<charts>
  <chart plot_type="Pie">
    <data_plot_settings enable_3d_mode="true">
      <pie_series>
        <tooltip_settings enabled="true">
          <format>
            {%Name} : {%Value}{numDecimals:0} ( {%YPer
          </format>
        </tooltip_settings>
        <label_settings enabled="true">
          <background enabled="false"/>
          <position anchor="Center" valign="Center" hal
          <font color="White">
            <effects>
              <drop_shadow enabled="true" distance=
            </effects>
          </font>
          <format>{%YPercentOfSeries}{numDecimals:0}%</
        </label_settings>
      </pie_series>
    </data_plot_settings>
    <data>
      <series name="Series 1" type="Pie">'
        .. (
          foreach (var name:y in data) {
            '<point name="' .. name .. '" y="' .. y .. "'
          }
        ) ..
      </series>
    </data>
    <chart_settings>
      <title enabled="true" padding="15">
        <text>' .. title .. '</text>
      </title>
      <legend enabled="true" position="Bottom" align="Spread
        <format>{%Icon} {%Name} - {%YValue}{numDecimals:0}
        <title enabled="false"/>
        <columns_separator enabled="false"/>
        <background>
          <inside_margin left="10" right="10"/>
        </background>
        <items>
          <item source="Points"/>
        </items>

```

```

        </legend>
    </chart_settings>
</chart>
</charts>
</anychart>';

// PYRAMID/FUNNEL CHART, DATA VARIABLE MUST BE FORMATTED AS {label1:value}
case 'pyramid':
case 'funnel':
    var ispyramid = (type == 'pyramid');
    let chart = <anychart>
        settings_xml;
    <charts>
        <chart plot_type="Funnel">
            <chart_settings>
                <title enabled=(title is not nil)>
                    <text> title </text>
                </title>
                <data_plot_background enabled="false" />
                <legend enabled="false" />
            </chart_settings>
            <data_plot_settings enable_3d_mode="true">
                <funnel_series inverted=(ispyramid) neck_height=(ispyramid)>
                    <animation enabled="true" type="Appear" show_mode="Appear">
                    <connector enabled="true" color="Black" opacity="0.5">
                    <tooltip_settings enabled="true">
                        if(ispyramid) {
                            <position anchor="CenterRight" padding="10">
                        }
                        <format> "{%Name} - {%YValue}{numDecimals:0}">
                    </tooltip_settings>
                    <label_settings enabled="true">
                        <animation enabled="true" type="Appear" show_mode="Appear">
                        if(ispyramid) {
                            <position anchor="Center" valign="Center" padding="10">
                        } else {
                            <position anchor="center" padding="50"/>
                        }
                        <format> "{%Name} - {%YValue}{numDecimals:0}">
                    </label_settings>
                    <background enabled="true">
                        <corners type="Rounded" all="3"/>
                    </background>
                    <states>
                        <hover>
                            <background>

```

```

        <border type="Solid" color="DarkC
    </background>
</hover>
<pushed>
    <background>
        <border type="Solid" color="#4949
    </background>
</pushed>
<selected_hover>
    <background>
        <border type="Solid" color="DarkC
    </background>
</selected_hover>
<selected_normal>
    <background>
        <border type="Solid" color="DarkC
    </background>
</selected_normal>
</states>
</label_settings>
<funnel_style>
    <border color="Black" opacity="0.05"/>
    <states>
        <hover>
            <fill color="%Color"/>
            <hatch_fill enabled="true" type="Perce
        </hover>
        <selected_hover>
            <fill color="%Color"/>
            <hatch_fill type="Checkerboard" color
        </selected_hover>
        <selected_normal>
            <fill color="%Color"/>
            <hatch_fill type="Checkerboard" color
        </selected_normal>
    </states>
</funnel_style>
<marker_settings enabled="true">
    <marker type="None" anchor="Center" v_align="
    <fill color="Yellow"/>
    <border color="DarkColor(Yellow)"/>
    <states>
        <hover>
            <marker type="Star5"/>
        </hover>

```



```

        <pushed>
            <marker type="Star5" size="8"/>
        </pushed>
        <selected_hover>
            <marker type="Star5" size="14"/>
        </selected_hover>
        <selected_normal>
            <marker type="Star5"/>
        </selected_normal>
    </states>
</marker_settings>
</funnel_series>
</data_plot_settings>
data_xml;
</chart>
</charts>
</anychart>;

// CIRCULAR GAUGE CHART, DATA VARIABLE MUST BE A NUMBER
case 'circulargauge':
    let chart = <anychart>
        settings_xml;
        <margin all="0"/>
        <gauges>
            <gauge>
                <chart_settings>
                    <title enabled=(title is not nil)>
                        <text> title </text>
                    </title>
                    <chart_background>
                        <border enabled="false"/>
                    </chart_background>
                </chart_settings>
                <circular name="data">
                    <axis radius="37" start_angle="85" sweep_angle="190">
                        <labels align="Outside" padding="6">
                            <format> "%Value}{numDecimals:0}" </format>
                        </labels>
                        <scale_bar>
                            <fill color="#292929"/>
                        </scale_bar>
                        <major_tickmark align="Center" length="10" padding="5">
                        <minor_tickmark enabled="false"/>
                        <color_ranges>
                            <color_range start=(min) end=(max) align="Ins

```

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        <fill type="Gradient">
            <gradient>
                <key color="Red"/>
                <key color="Yellow"/>
                <key color="Green"/>
            </gradient>
        </fill>
        <border enabled="true" color="Black" opacity="0.7"/>
    </color_range>
</color_ranges>
</axis>
<frame>
    <inner_stroke enabled="false"/>
    <outer_stroke enabled="false"/>
    <background>
        <fill type="Gradient">
            <gradient angle="45">
                <key color="#FDFDFD"/>
                <key color="#F7F3F4"/>
            </gradient>
        </fill>
        <border enabled="true" color="#A9A9A9"/>
    </background>
    <effects enabled="false"/>
</frame>
<pointers>
    <pointer value=(data) name="value">
        <label enabled="true" under_pointers="true">
            <position placement_mode="ByPoint" x="50" y="50"/>
            <format> "{%Value}{numDecimals:0}%" </format>
            <background enabled="false"/>
        </label>
        <needle_pointer_style thickness="7" point_thickness="3">
            <fill color="Rgb(230,230,230)"/>
            <border color="Black" opacity="0.7"/>
            <effects enabled="true">
                <bevel enabled="true" distance="2" shadow="true"/>
                <drop_shadow enabled="true" distance="2" opacity="0.5"/>
            </effects>
            <cap>
                <background>
                    <fill type="Gradient">
                        <gradient type="Linear" angle="45">
                            <key color="#D3D3D3"/>
                            <key color="#6F6F6F"/>
                        </gradient>
                    </fill>
                </background>
            </cap>
        </needle_pointer_style>
    </pointer>

```

```

                </gradient>
            </fill>
            <border color="Black" opacity="0.5" />
        </background>
        <effects enabled="true">
            <bevel enabled="true" distance="2" />
            <drop_shadow enabled="true" distance="2" />
        </effects>
    </cap>
</needle_pointer_style>
<animation enabled="true" start_time="0" duration="1" />
</pointer>
</pointers>
</circular>
</gauge>
</gauges>
</anychart>;

// LINEAR GAUGE, DATA VARIABLE MUST BE A NUMBER
case 'lineargauge':
    let chart = <anychart>
        settings_xml;
        <margin all="0" />
        <gauges>
            <gauge>
                <chart_settings>
                    <title>
                        <text> title </text>
                    </title>
                    <chart_background>
                        <border enabled="false" />
                    </chart_background>
                </chart_settings>
                <linear name="data">
                    <axis size="0" position="50">
                        <scale minimum=(min) maximum=(max) major_interval=(interval) />
                        <scale_bar enabled="false" />
                        <labels padding="5" />
                        <color_ranges>
                            <color_range start=(min) end=(max) align="Out">
                                <fill type="Gradient">
                                    <gradient angle="90">
                                        <key color="Red" />
                                        <key color="Yellow" />
                                        <key color="Green" />
                                    </gradient>
                                </fill>
                            </color_range>
                        </color_ranges>
                    </axis>
                </linear>
            </gauge>
        </gauges>
    </anychart>

```

```

        </gradient>
        </fill>
        <border enabled="true" type="Solid" color
</color_range>

    </color_ranges>
</axis>
<pointers>
    <pointer type="Marker" value=(data) name="value"
    <tooltip enabled="true"/>
    <marker_pointer_style align="Outside" padding
    <animation enabled="true" start_time="0" dura
    <label enabled="true">
        <position placement_mode="ByAnchor" valid
        <format> "{%Value}{numDecimals:0}%" </for
        <background enabled="false"/>
    </label>
    </pointer>
</pointers>
</linear>
</gauge>
</gauges>
</anychart>;

default:
    if(!error) {
        let error = "Invalid chart type selected (did not recognize '" ..
    }
}

// check if there was an error
if(error) {
    <p style="color: red"> error </p>
} else {
    anychart(chart, width, height, id);
}

```