Chart

```
/***
    USAGE:

    Chart(type, data, height, width, xaxis, yaxis, title, min, max, inte

    PARAMETERS:

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

    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, 

    (optional) width : num (default: 450)
        Width of chart in pixel or percent.
        If value is greater or equal to 1, then value represents pixel, 

    (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 intera

    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 inproper data handling for 'pi

***/

// GET VARIABLES FROM TEMPLATE CALL
var type = string.tolower($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') ? "opp
        <title enabled=(yaxis is not nil)>
            <text> yaxis </text>
        </title>
        <labels>
```

```
            <format> "{%Value}{numDecimals:0}" </format>
        </labels>
        <scale major_interval=(interval) minor_interval=(interval / 4) m
    </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}) - {%Va
                            </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 [{labe
// MULTI-SERIES COLUMN CHART, INCOMING DATA MUST BE FORMATTED AS {series
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_m
                    <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:
case 'pie':
    let chart = '<anychart>
```

```
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} ({%YPe
                    </format>
                </tooltip_settings>
                <label_settings enabled="true">
                    <background enabled="false"/>
                    <position anchor="Center" valign="Center" ha
                    <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="Sprea
                <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:valu
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=(ispy
                        <animation enabled="true" type="Appear" show_mod
                        <connector enabled="true" color="Black" opacity=
                        <tooltip_settings enabled="true">
                            if(ispyramid) {
                                <position anchor="CenterRight" padding="
                            }
                            <format> "{%Name} - {%YValue}{numDecimals:0}
                        </tooltip_settings>
                        <label_settings enabled="true">
                            <animation enabled="true" type="Appear" show_
                            if(ispyramid) {
                                <position anchor="Center" valign="Center
                            } else {
                                <position anchor="center" padding="50"/>
                            }
                            <format> "{%Name} - {%YValue}{numDecimals:0}
                            <background enabled="true">
                                <corners type="Rounded" all="3"/>
                            </background>
                            <states>
                                <hover>
                                    <background>
```

```
                    <border type="Solid" color="Dark
                </background>
            </hover>
            <pushed>
                <background>
                    <border type="Solid" color="#494
                </background>
            </pushed>
            <selected_hover>
                <background>
                    <border type="Solid" color="Dark
                </background>
            </selected_hover>
            <selected_normal>
                <background>
                    <border type="Solid" color="Dark
                </background>
            </selected_normal>
        </states>
    </label_settings>
    <funnel_style>
        <border color="Black" opacity="0.05"/>
        <states>
            <hover>
                <fill color="%Color"/>
                <hatch_fill enabled="true" type="Per
            </hover>
            <selected_hover>
                <fill color="%Color"/>
                <hatch_fill type="Checkerboard" colo
            </selected_hover>
            <selected_normal>
                <fill color="%Color"/>
                <hatch_fill type="Checkerboard" colo
            </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" paddi
                            <minor_tickmark enabled="false"/>
                            <color_ranges>
                                <color_range start=(min) end=(max) align="In
```

```
                <fill type="Gradient">
                    <gradient>
                        <key color="Red"/>
                        <key color="Yellow"/>
                        <key color="Green"/>
                    </gradient>
                </fill>
                <border enabled="true" color="Black" opa
            </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
                <format> "{%Value}{numDecimals:0}%" </fo
                <background enabled="false"/>
            </label>
            <needle_pointer_style thickness="7" point_th
                <fill color="Rgb(230,230,230)"/>
                <border color="Black" opacity="0.7"/>
                <effects enabled="true">
                    <bevel enabled="true" distance="2" sl
                    <drop_shadow enabled="true" distance=
                </effects>
                <cap>
                    <background>
                        <fill type="Gradient">
                            <gradient type="Linear" angl
                                <key color="#D3D3D3"/>
                                <key color="#6F6F6F"/>
```

```
                                        </gradient>
                                    </fill>
                                    <border color="Black" opacity="0
                                </background>
                                <effects enabled="true">
                                    <bevel enabled="true" distance="
                                    <drop_shadow enabled="true" dista
                                </effects>
                            </cap>
                        </needle_pointer_style>
                        <animation enabled="true" start_time="0" dura
                    </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
                        <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>
                                <border enabled="true" type="Solid" colo
                            </color_range>

                        </color_ranges>
                    </axis>
                    <pointers>
                        <pointer type="Marker" value=(data) name="value"
                            <tooltip enabled="true"/>
                            <marker_pointer_style align="Outside" paddin
                            <animation enabled="true" start_time="0" dura
                            <label enabled="true">
                                <position placement_mode="ByAnchor" valig
                                <format> "{%Value}{numDecimals:0}%" </fo
                                <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);
}
```