ProviewR

OPEN SOURCE PROCESS CONTROL

Release Notes V5.8

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Upgrading to ProviewR V5.8.0

This document describes new functions i ProviewR V5.8.0, and how to upgrade a project from V5.7.0 to V5.8.0.

New functions

Graphs from scripts in rt_xtt

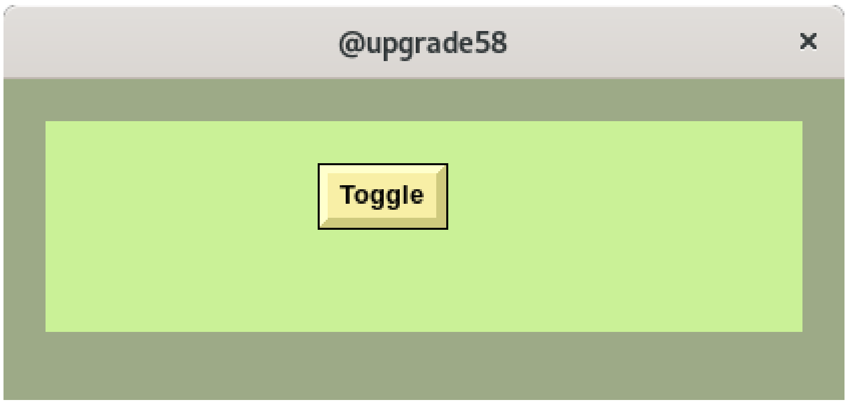
Instead of drawing a graph in the Ge editor, it is now possible to to write a ge script instead. The script can call Ge script functions to draw graphical elements in the graph, but also xtt script functions. This makes it possible to get information from the database and adapt the graph to the current state.

The script graph is opened as an ordinary graph but the graph name is replaced by the script name preceded by a ‘@’, eg ‘open graph @myscript’. Scripts are by default read from $pwr_exe or $pwrp_exe, and for any other location the path should be added, eg ‘open graph @”$pwrp_login/myscript”’.

Example

A simple script that draws a rectangle and a push button

```
main()
  int id;
  float x1;
  float y1;
  float x2;
  float y2;
  float width;
  float height;

  SetDraw(0);
  SetBackgroundColor(eDrawType_Color66);

  # Draw rectangle
  x1 = 1;
  y1 = 1;
  width = 18;
  height = 5;
  id = CreateRectangle(x1, y1, width, height);
  SetObjectFillColor(id, eDrawType_Color74);
  SetObjectFill(id, 1);
  SetObjectBorder(id, 0);

  # Draw pushbutton
  x1 = 7.5;
  y1 = 2;
  x2 = 10.5;
  y2 = 3.5;
  id = CreateObject("pwr_buttontogglecenter", x1, y1, x2, y2);
  SetObjectAttribute(id, "Text", "Toggle");
  SetObjectAttribute(id, "ToggleDig.Attribute", "H1-
Dv1.ActualValue##Boolean");

  # Set graph size
  SetGraphAttribute("x1", 20.0);
  SetGraphAttribute("y1", 7.0);

  SetDraw(1);
endmain
```



New Ge script functions

BuildGraph()

Build the current graph, i e copy the graph to $pwrp_exe.

ClearAll()

Remote all objects in the graph.

CreateArc()

Create an Arc object.

CreateAxis()

Create an Axis object.

CreateAxisArc()

Create an AxisArc object.

CreateBar()

Create a bar object.

CreateBarArc()

Create a BarArc object.

CreateDsTrend()

Create a DsTrend object.

CreateDsTrendCurve()

Create a DsTrendCurve object.

CreateFastCurve()

Create a DsFastCurve object.

CreateImage()

Create an Image object.

CreateObject()

Create a subgraph object.

CreatePie()

Create a Pie object.

CreatePolyLine()

Create a PolyLine object.

CreateRectangle()

Create a rectangle object.

CreateRectRounded()

Create a rounded rectangle object.

CreateSevHist()

Create a SevHist curve object.

CreateText()

Create a text object.

CreateTrend()

Create a trend object.

CreateXYCurve()

Create an XYCurve object.

DashInsert()

Insert an object into a dashboard cell.

GetGraphName()

Get name of the current graph.

OpenGraph()

Open a graph.

PolyLineAdd()

Add a segment to a polyline.

RotateSelected()

Rotate selected objects.

SaveGraph()

Save the current graph.

SetBackgroundColor()

Set background color.

SetSelectTextBold()

Set bold text on selected objects.

SetSelectTextFont()

Set font on selected objects.

Other script functions

tstlog_open()

Open a test log file.

tstlog_close()

Close a test log file.

tstlog_log()

Print a message to a test log file.

tstlog_vlog()

Print a formated message to a test log file.

getmsg()

Get text for status variable.

tzset()

Set time zone.

sort()

Sort a string array in alphabetical order, or a float or integer array in numerical order.

sin()

Sine function.

cos()

Cosine function.

ODD()

Check if a value is odd.

EVEN()

Check is a value is even.

MAX()

Return the largest of two values.

MIN()

Return the smallest of two values.

Script arrays with dynamic size

A dynamic array is declared without size, eg

```
float darray[];
```

It’s created with zero size and can be incremented by a call to arraypush(). The function arraysize() will return the current size of the array.

arrayclear()

Clear the content of a dynamic array and set size to zero.

arraypush()

Add an element to the back of a dynamic array.

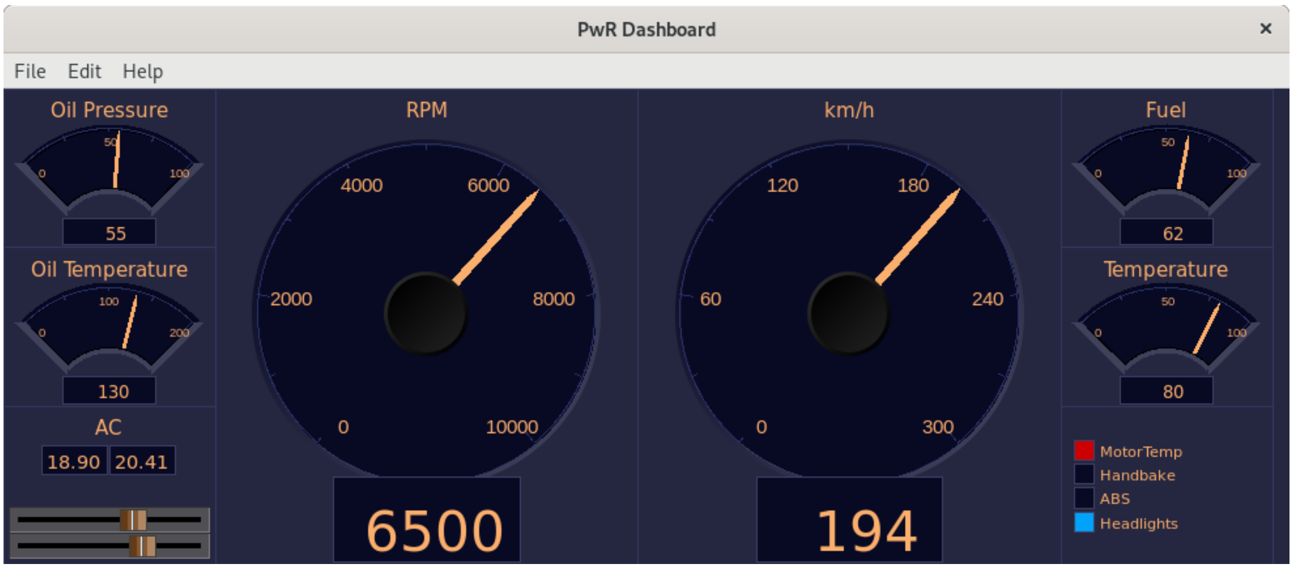
arraysize()

Returns the current size of a dynamic array.

Python3

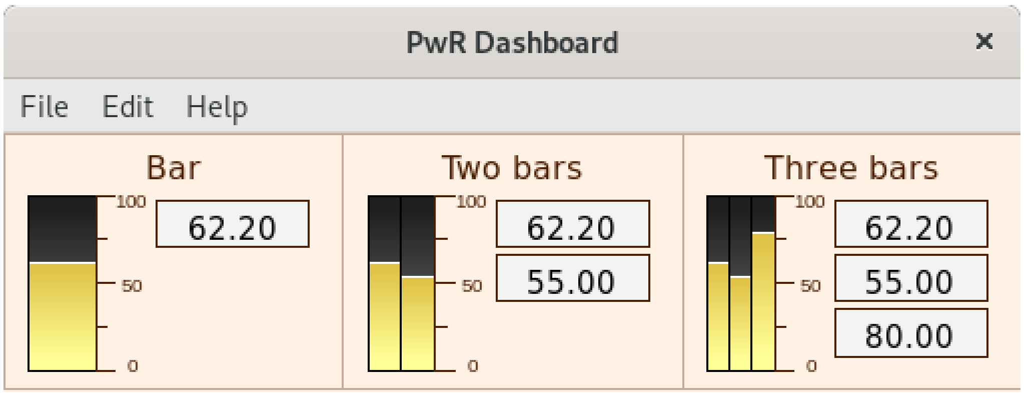
The Python interface is ported to Python3. It’s cannot be executed with Python2 any more.

Dashboard

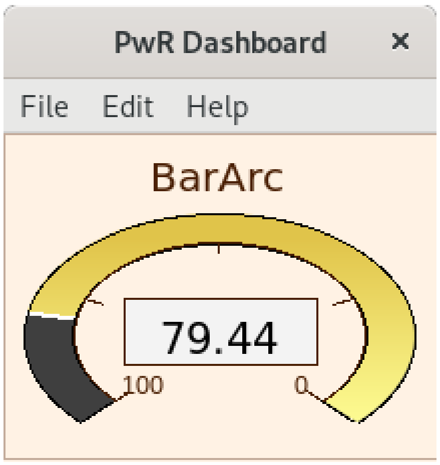


Dashboard cells

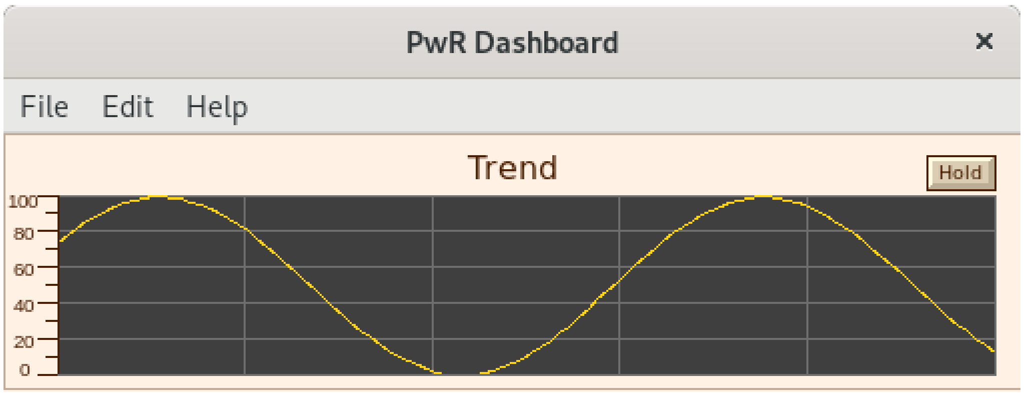
Bar



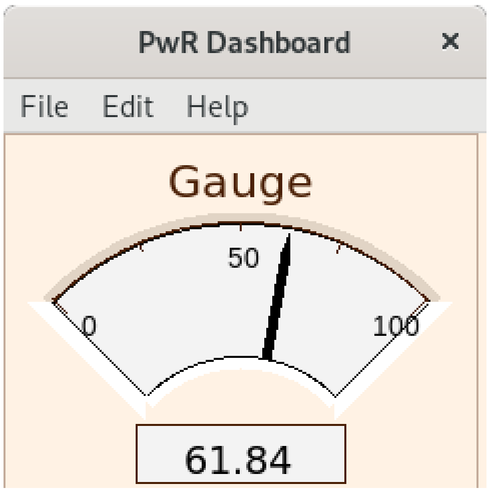
BarArc



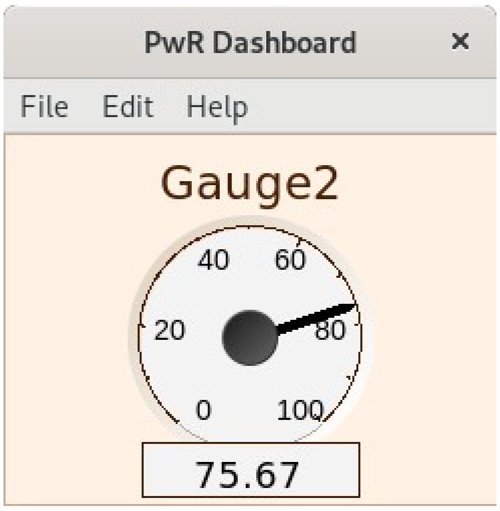
Trend



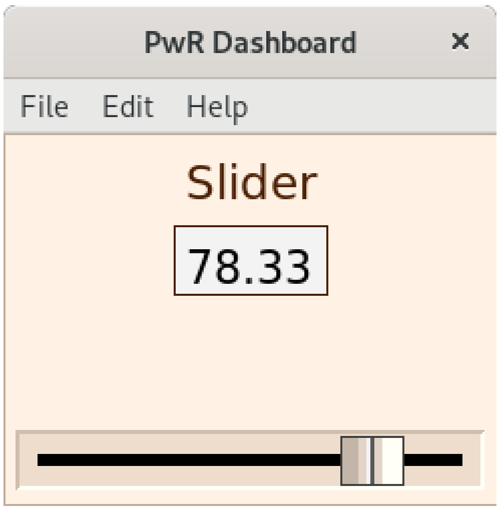
Gauge



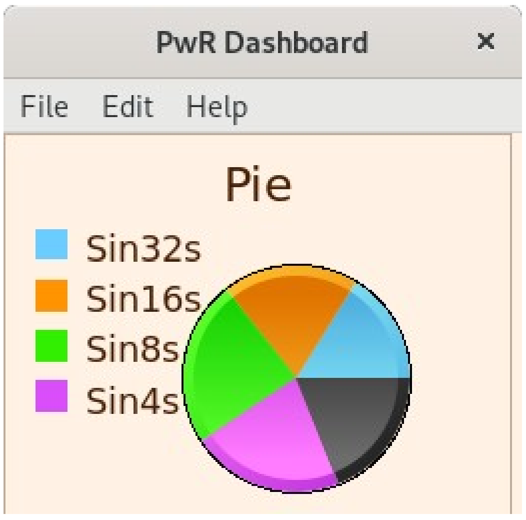
Gauge2



Slider



Pie



Start runtime as another node

The -n option to rt_ini makes it possible to start a runtime environment that is configured for another node on the current node. The Qcom bus id though has to be the same.

```
> rt_ini -n pwrtest01a
```

will start the node pwrtest01a on the current node.

It is also possible to redirect qcom connections to other nodes with the alias statement in pwrp_alias.dat.

```
alias pwrtest01b steel-arrow 10.255.0.98
```

will redirect the connection to pwrtest01b to the node steel-arrow with ip address 10.255.0.98.

Graphic objects for DsTrend, DsTrendCurve and SevHist

New graphic objects in Ge to display curves from DsTrend, DsTrendCurve and SevHist objects in Ge graphs.

The objects are found under Analog map in the Ge palette.

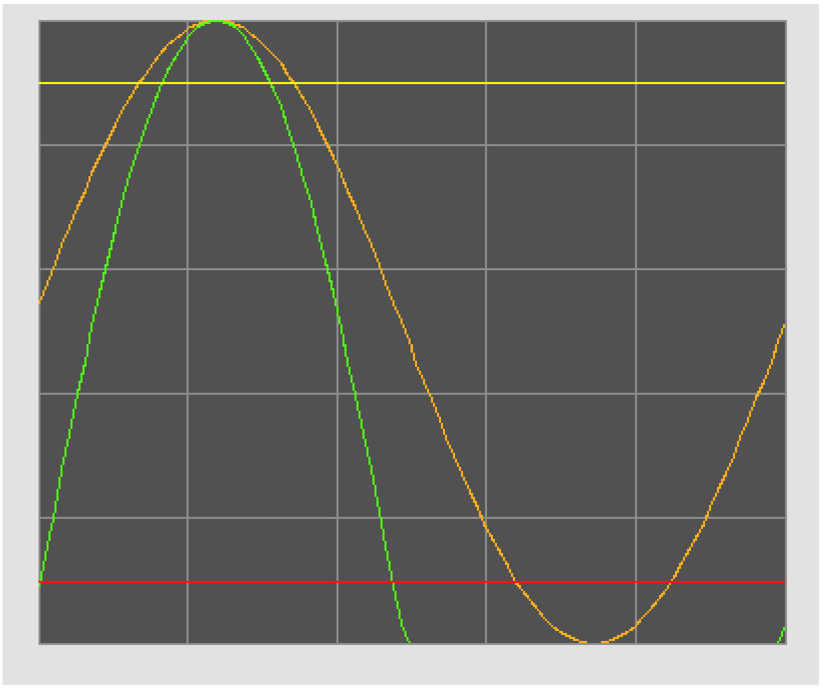


Fig DsTrend curve displayed in a Ge graph

New Types and Classes

Todo

Modified Classes

Todo

Upgrade procedure

The upgrading has to be done from any V5.7. If the project has a lower version, the upgrade has to be performed stepwise following the schema

V2.1 -> V2.7b -> V3.3 -> V3.4b -> V4.0.0 -> V4.1.3 ->V4.2.0->V4.5.0->V4.6.0->V4.7.0->V4.8.6->(V5.0.0)->V5.1.0->V5.2.0->V5.3->V5.4->V5.5->V5.6->V5.7->V5.8

Enter the administrator and change the version of the project to V5.8.0. Save and close the administrator.

Enter the directory volume and save.

I you have any class volumes, enter the class editor and build the volume.

Enter the configurator for each root volume and activate 'Function/Update Classes' and build.