Reference Guide
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OpenEnterprise Expression Editor Reference Guide (V2.83)

Remote Automation Solutions

Website: www.EmersonProcess.com/Remote

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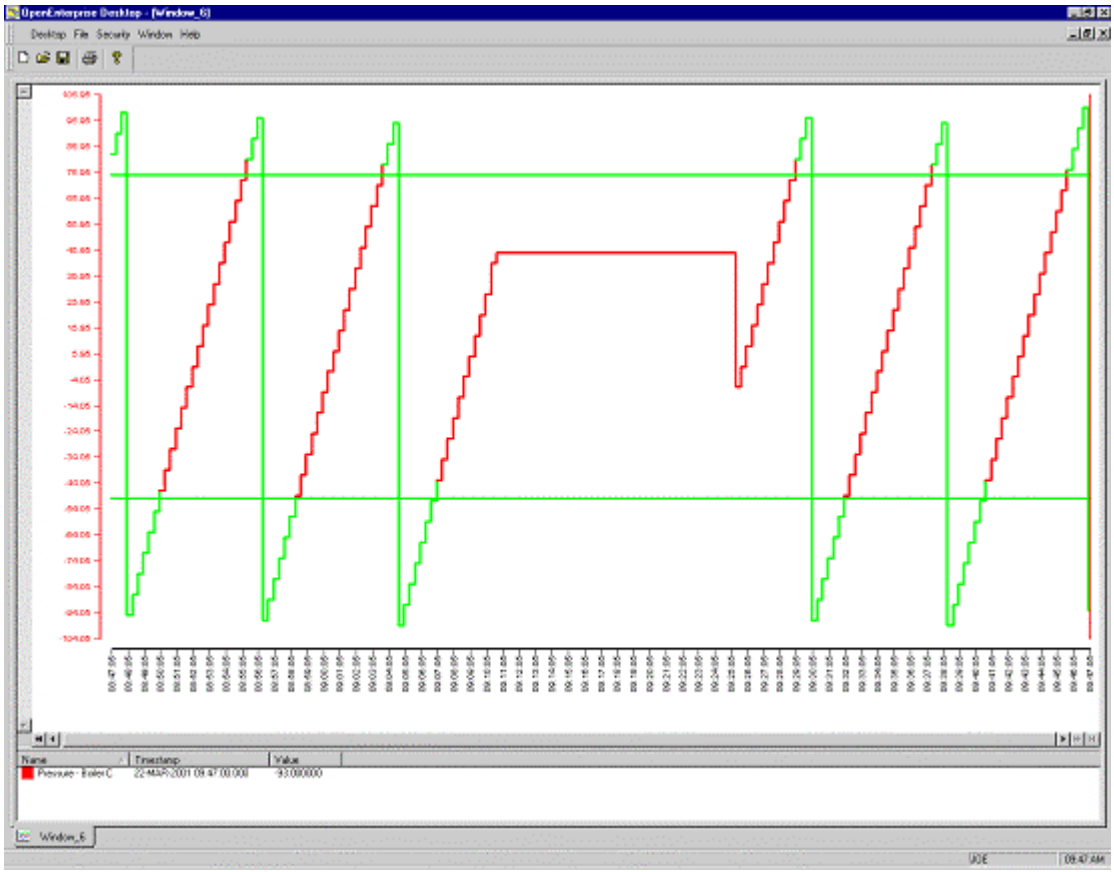
1 Expression Editor

The Expression editor allows the user to configure conditions to an OPC tag. As the conditions are built up using a graphical interface, an 'expression' is created.

In programming terms, a typical expression could have the meaning - "If the value of the OPC tag is greater than X then this property equals Y, if the value of the OPC tag equals A then this property equals B, else this property equals C". Simply, then, by selecting a tag and attaching conditions to it, an 'expression' is built.

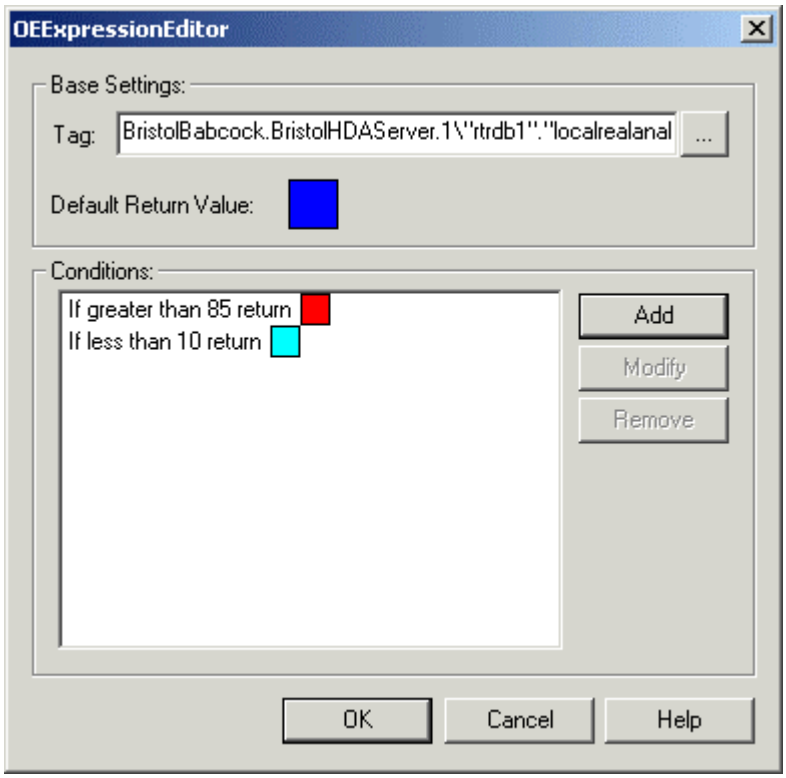
Currently, the only OpenEnterprise component that makes use of the Expression editor is the Trend View. The Trend View uses expressions to control the colour of a pen's line and markers (see the example below).

In the display below, the pen and the marker are drawn in green while the value is greater than 75 or while the value is less than -50, otherwise they default to red.



1.1 Expression Editor

This dialog enables you to configure Expressions which will control the color of the Pen depending on its value.



1.1.1 Tag

This edit box contains the OPC/HDA tag that describes the expressions data source. Tags can be entered manually, dragged and dropped from other applications or obtained from the OE Tag Browser by clicking on the browser button to the right of this edit box.

For an example of how to drag-drop a realtime tag into a field see the Drag Drop Realtime Tag into Data Source Field topic.

For an example of how to drop a historical tag into this field see the Drag Drop a Historical Tag into a Field topic.

Alias Support

OE Expressions may contain aliases in either the tag edit box or the comparison value edit box. Aliases enable tags to be passed dynamically, based on user selection from one OE Component to another. More information on passing aliases as parameters between OE Components may be found in the OE Menus help file.

1.1.2 Default Return Value

If none of the conditions are true then the returned value of the expression will be this value, which is the colour property of the selected Pen. Selection of the colour square will open a colour selector, which enables the user to change the default colour.

1.1.3 Conditions List Box

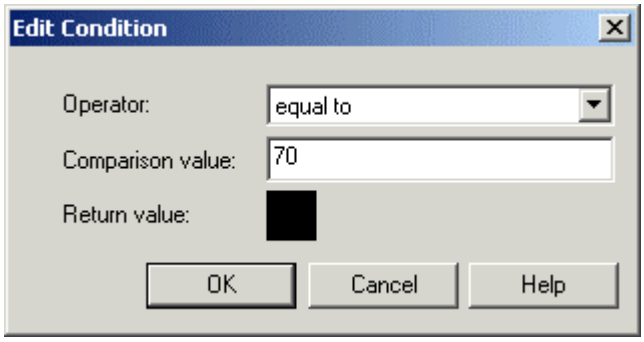
This list box details the conditions that are attached to the expression. The conditions are evaluated in the order they appear going from top to bottom. This list box allows the user to change the order of the conditions (and hence the order of precedence) by dragging and dropping each condition to a new location in the list.

1.1.4 Remove Condition

Removes the currently selected condition from the Conditions List.

1.2 Edit Condition

This dialog enables you to configure the condition, value and returned Pen color for an Expression.



1.2.1 Condition Operator

This list provides a selection of conditions or operators for the expression. The conditions available are:-

- Equal to;
- Greater than;
- Greater than or equal to;
- Less than;
- Less than or equal to;
- Not equal to.

1.2.2 Comparison Value

This should be typed into the Comparison value field. It is the value that the Expression Editor will use to compare the current value of the tag in the Tag field using the Condition Operator.

1.2.3 Return Value

If the coloured button is selected, a colour selection dialog is opened, and the user may choose a different Return Value colour.

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Engineered and supported by:

Remote Automation Solutions,

Blackpole Road, Worcester, WR3 8YB, UK

Registered office: Meridian East, Leicester, LE19 1UX

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VAT Reg No. GB 705 353 652

Emerson Process Management
Remote Automation Solutions
1100 Buckingham St
Watertown, CT 06795
T 1 (860) 945 2200
F 1 (860) 945 2278
www.EmersonProcess.com/Remote
binfo@EmersonProcess.com

Emerson Process Management
Remote Automation Solutions
Blackpole Road
Worcester, WR3 8YB
T 44 (0) 1905 856848
F 44 (0) 1905 856930
www.EmersonProcess.com/Remote
oedsupport@EmersonProcess.com

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