



AlarmWorX64 Viewer Virtual Fields



APPLICATION NOTE

August 2014

Description: Guide to using virtual fields in AlarmWorX64 Viewer.
General Requirement: Knowledge of configuring AlarmWorX64 Viewer.

Introduction

AlarmWorX64 manages the alarm and event information of your SCADA application, both for real time as well as historical alarms and events. In particular, the ICONICS AlarmWorX64 Server generates different types of alarms when configured correctly in the AlarmWorX64 Workbench provider. Once you have configured your server, you should be able to view your alarms using the AlarmWorX64 Viewer. Apart from the information that goes along with the alarm natively, since version v10.8, you may also display your custom data in the Viewer. You can create your own text or expression and expose it as a virtual field of the alarm. Virtual fields might be used for real-time as well as historical alarms.

This application note will walk you through all the necessary steps to configure virtual fields in the AlarmWorX64 Viewer.

Defining Virtual Fields

1. Open configuration dialog of AlarmWorX64 Viewer.
2. Create your own subscription as the default subscription is read-only.
3. Edit the fields of the subscription to show *Add/Remove fields from subscription* dialog similar to Figure 1.

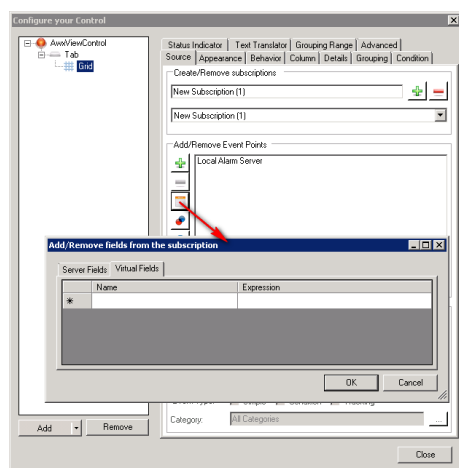


Figure 1 - Dialog for Virtual Fields Configuration

4. Click on the Virtual Fields tab.

5. Give the field a unique name and click on the expression field to show the ellipsis button which opens the Expression editor.
6. In the Expression editor you may combine any subscribed fields in order to create the desired expression. Language aliases and Global aliases can also be used.

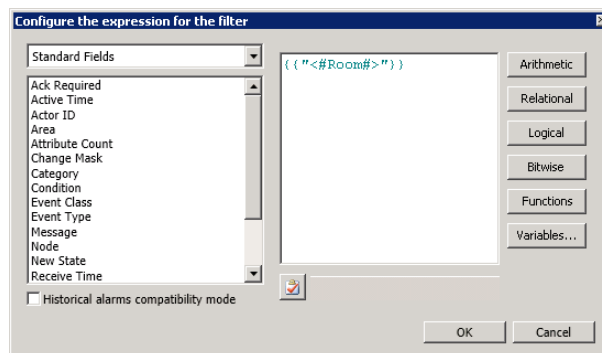


Figure 2 - Use Expression Editor to Define your Virtual Field Content

NOTE: The editor checks if the expression is valid. However if you use scripting to set the Virtual field and the expression is not valid, the error will be shown in the cell in runtime.

7. After building your expression go to the "Columns" tab and find your new field at the bottom of the list. You may rearrange its position or define the column properties such as caption and status indicator etc...

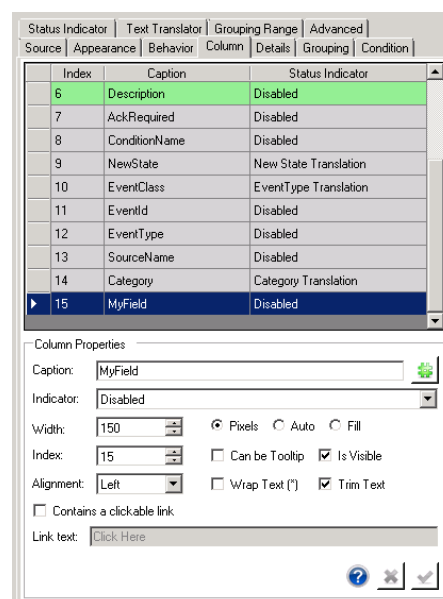


Figure 3 - Column Properties



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- When you enter runtime you can see the result of your expression in the appropriate cell.

Time / Date	Room	Unit	Value	Type	Status
8/16/2013 1:34 PM	Room1	Pressure	650	HIMI	Good
8/16/2013 1:34 PM	Room1	Pressure	600	HIMI	Good
8/16/2013 1:34 PM	Room1	Temperature	450	LOLO	Good
8/16/2013 1:34 PM	Room1	Temperature	500	Rate of Change	Good
8/16/2013 1:33 PM	Room1	Temperature	400	LO	Good
8/16/2013 1:24 PM	Room1	Alkaline Level	800	LOLO	Good
8/16/2013 1:34 PM	Room1	Arm Torque	500	HI	Good

Figure 4 - Virtual Field Value Resolved in Runtime

NOTE: The virtual field is implemented in the data layer so it is automatically available in charts, lists and also different versions of viewer such as Silverlight.

Filtering Based on Virtual Fields

- Open the Configure Alarm Filter dialog.
- Select Expression and open the Expression editor.
- In the top left dropdown menu select your subscription in order to show your Virtual field.

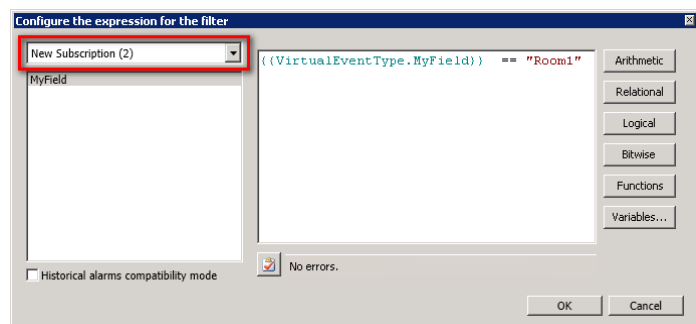


Figure 5 - Find the Field under your Subscription

- Combine the Virtual field with other fields or variables to create your desired filter.

Please also see application note entitled, "AlarmWorX64 Viewer – Commanding", where you will find helpful information about using virtual fields to send commands.