AlertWorX
Alert Notification for Email and SMS

APPLICATION NOTE

October 2015

Description: Guide to using and configuring AlertWorX.
General Requirement: General understanding of GENESIS64, OPC Alarms and Events, and necessary hardware.

Introduction

AlertWorX is a new feature for version 10.90 that can enhance ICONICS products by providing notifications via email and SMS. You can configure AlertWorX in Workbench Desktop.

AlertWorX subscribes to OPC Alarm and Event servers, and can send emails and SMS messages triggered by commands, the alarm server, or UA data. AlertWorX also provides reporting via GenEvents and integrates with all ICONICS applications.

AlertWorX is not designed to replace AlarmWorX Multimedia. It is designed to provide an easy-to-use centralized configuration for those who are only interested in sending emails and SMS messages.

In this Application Note, we will walk you through how to configure an email or SMS node, and how to trigger AlertWorX nodes through commanding, alarms, or OPC UA data.

What is the difference between AlarmWorX Multimedia and AlertWorX?

AlertWorX provides notifications via email (using a SMTP server) and SMS. It uses a centralized configuration, and supports multiple data sources. It has built-in support for triggering notifications through commanding, and is configured through Workbench for Desktop. AlertWorX cannot be used to acknowledge alarms, only to send out alerts that an alarm has occurred.

AlarmWorX Multimedia can send notifications through email, SMS (text messages), phone, marquee, popup, or the sound agent. It has an escalation engine (AlertWorX does not), and built-in scheduling. It also generates an event log (the Server Journal Log) without separate configuration, and is configured through Workbench Classic. AlarmWorX Multimedia can be used to acknowledge alarms.

Configuring an Email Node

To configure an email node, open the Workbench for Desktop. Expand your Project, then Alarms and Notifications → AlertWorX → Configurations → Email.

Right-click on Email, and select Add Email Node. Fill out the Hardware and Data section with your email hardware settings – AlertWorX can send emails through SMTP servers. The Alarm Subscription is connected to the local AlarmWorX Server by default (@ICONICS.AlarmSvr.1.Server), but you can change this subscription or add a new subscription as needed.

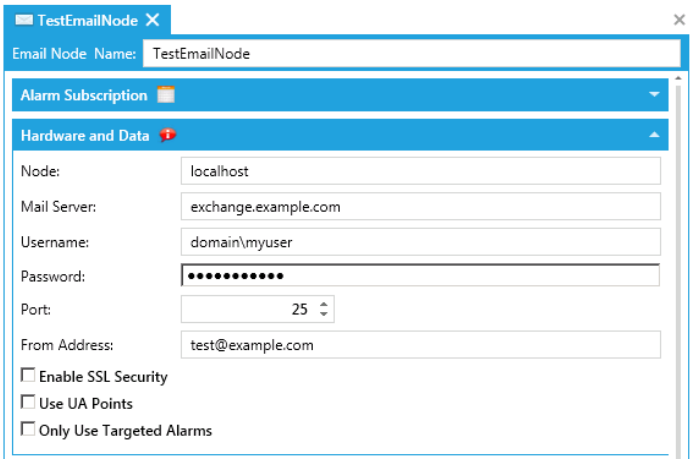

Figure 1 - Example Email Settings

In the Notification Message section you can either configure and use a template, or fill in the notification settings manually. Make sure to Apply your changes.

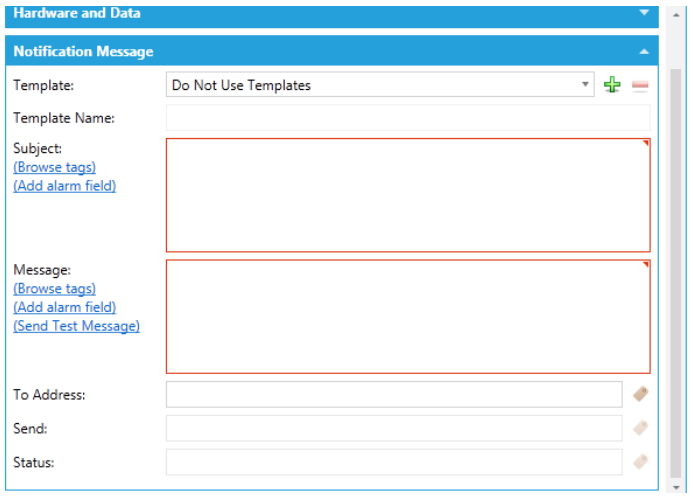

Figure 2 - Example Email Settings

For information on using AlertWorX with Gmail, see the Help files.

Configuring a SMS/Text Node

To configure a SMS/Text node, open the Workbench for Desktop. Expand your Project, then Alarms and Notifications → AlertWorX → Configurations →SMS/Text.

Right-click on SMS/Text, and select Add SMS/Text Node. Fill in your local SMS modem information, including the Device name, the Pin, and the Baud Rate. Make sure that the Baud Rate you enter here matches the configuration of your modem.

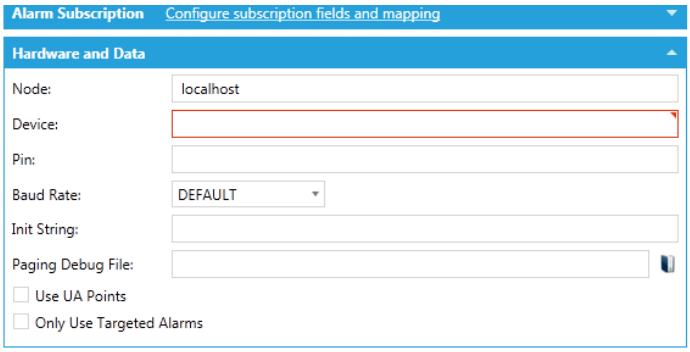

Figure 3 - Example SMS/Text Settings

In the Notification Message section you can either configure and use a template, or fill in the notification settings manually. Make sure to Apply your changes.

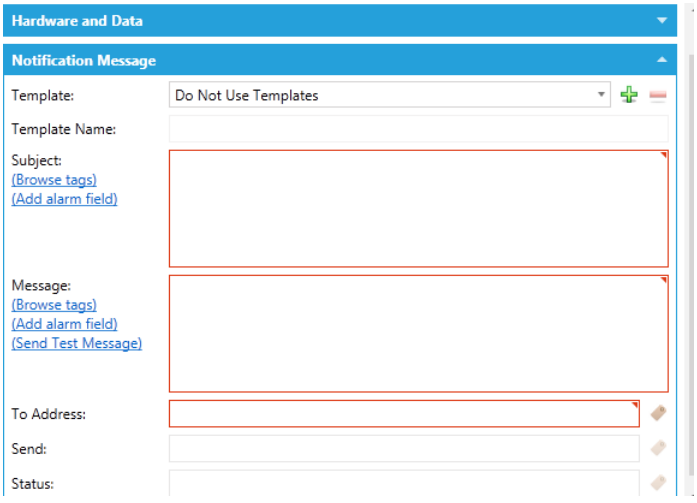

Figure 4 - Example SMS/Text Settings

Triggering AlertWorX Notifications

AlertWorX supports three types of input communication: Commands, FrameWorX Alarm Communication, and OPC UA data. Commanding supports a simple-to-configure trigger that is easy to tie to various ICONICS products. This makes it simple to trigger Alert actions from a GraphWorX64 push-button, a right-click in the AssetWorX tree view, or a right-click menu item in the alarm viewer.

Alternatively, AlertworX can trigger based on the contents of received alarm or event messages. This is configured via the standard real time subscription available in the ICONICS alarm viewer. One use of this method could be to handle notification of high importance alarm or event messages.

The final input communication method supported is OPC UA data. AlertWorX can be set up to read destination, subject and message data from OPC UA string data points. In addition, AlertWorX will trigger based on the value of the send UA point and report the result to the Status of the result in the OPC UA stats value. The expected use of UA triggers is to dynamically change information processed or as part of batch updates.

Commanding

Commanding can be used in many ICONICS applications. The two commands that relate to AlertWorX are "Send Alert Email" and "Send Alert Page". For each command you need to configure the destination (either an email address or a phone number), a subject line, and a message.

If you are entering a phone number as the destination for a SMS/Text message, do not include any special characters, only numbers.

Other ways to trigger Alerts

In the "Hardware and Data" section of an Email Node or a SMS/Text Node, you have three available checkboxes as shown in Figure 5. The checkboxes are "Enable SSL Security", "Use UA Points", and "Only Use Targeted Alarms".

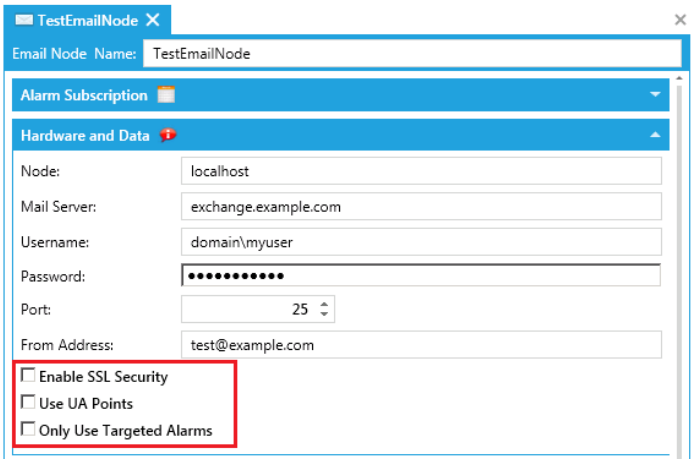

Figure 5 - Checkboxes in Hardware and Data section

If none of these boxes are checked, then any alarm that comes in through the subscription would trigger an alert.
If you check the "Use UA Points" checkbox, then the alert will also trigger based on whatever tag you put in the "Send" field. When the value of the tag in the "Send" field changes from 0 to 1, then the alert will trigger. When the alert sends, it will also include the value of any tags in the Subject or Message fields.

In addition to triggering the alert based on the tag in the "Send" field, if you have "Use UA Points" checked, then any UA tags in the Subject or Message fields will resolve to their values in the alert. Note that if there is any text in the field in addition to the tag, then the tag will not resolve, it will just show the tag path as a string. The tag must be the only text in the Subject or Message field in order to resolve to its current value.

If you check the "Only Use Targeted Alarms" checkbox, then the alert will only send out for alarms that are flagged in the AlarmWorX Server. To flag an alarm in the AlarmWorX Server, use the keyword "Email" or "Page" immediately followed by either an email address or the pager number, respectively. See the examples in Figure 6. Make sure to not include any special characters like colons or dashes in the field, and do not put anything else in that field – only the alert flag.

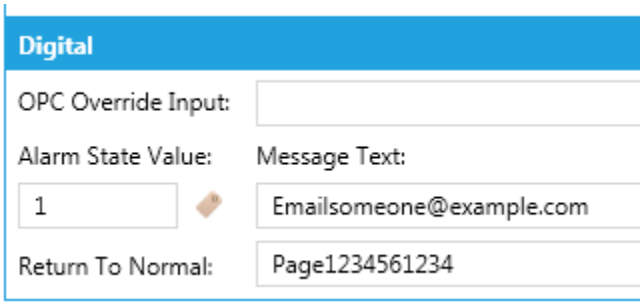

Figure 6 - Example of a flagged alarm