ALARM GROUP WITH MESSAGES
NEW FOR FMS 5.3.0
SETUP AND CONFIGURATION

Contents

Intent

The purpose of this document is to detail the setup and use of the new Alarm Group with Messages introduced in FMS 5.3.0.

Overview

Each driver in FMS has several of their own messages; however the ability to alarm on specific messages did not exist. In FMS 5.3.0 we enhanced the Alarm Groups to also have the ability to contain messages.

Although it is not explicitly defined, there are three different types of Alarm Groups with Messages: System and Driver Alarm Groups. There exists two System Alarm Groups that are pre-defined and these three Alarm Groups can neither be created nor deleted.
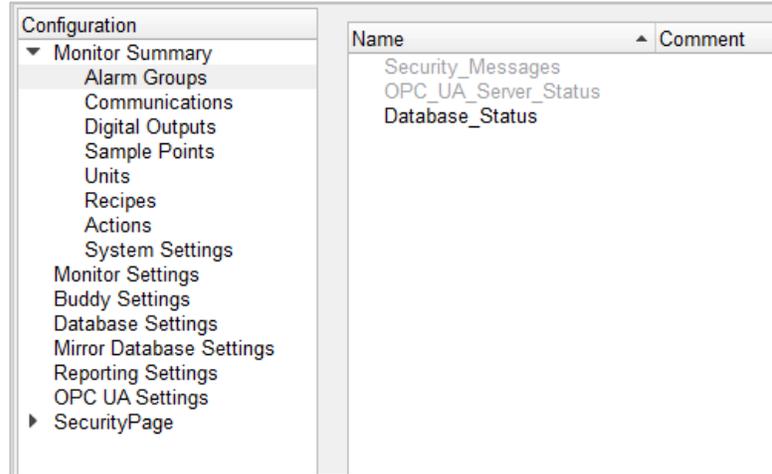
- The first, "**Database_Status**," keeps track of the Main and Mirror databases' state. By default this Alarm Group is enabled.

- The second, "**Security_Messages**," keeps track of all of the messages related to security. By default this is disabled. The user can choose to enable/disable, as well as change which messages are enabled and need acknowledgement. System Alarm Groups cannot contain Sample Points or sub-Alarm Groups.

- The third, "**OPC_UA_Server_Status**," keeps track of all the messages related to OPC UA Server. By default this is disabled.

The second type of Alarm Groups is Driver Alarm Groups. These are user defined and can contain Sample Points, Messages, and sub-Alarm Groups (including System Alarm Groups). These Alarm Groups will contain messages that come from drivers such as flow failures, laser scatter alert, recovery messages, etc.

Setup and Configuration

Setup and configuration is the same for both Pharmaceutical and Semiconductor (Standard) mode.

Upon the first configuration save of a new Monitor installation, the three System Alarm Groups (Security_Messages, OPC_UA_Server_Status, and Database_Status) will automatically be created. These Alarm Groups can be enabled or disabled, but they cannot be deleted.

Upon going to the Properties of the Alarm Group, the messages can be configured. There are three columns to configuring messages: Message Type, Enable Acknowledge, and Level.

- The text in the Message Type column is the message that the Alarm Group can capture and the check box to the left of the message is whether the message is enabled or disabled in the Alarm Group. The Alarm Group will ignore and not display any messages that are disabled.

- The second column, Enable Acknowledge, contains a single check box. It is only possible to enable this when the message is enabled. The Enable Acknowledge will automatically uncheck whenever its message is disabled. If it is enabled, it will generate a needs acknowledgement for the Alarm Group whenever the message is captured.

- The last column, Level, is the state of the message: Comment, Ok, Warning, Alarm, and Failure.

Driver Alarm Group with Messages

The Driver Alarm Groups can contain Sample Points, sub-Alarm Groups, and Messages. Notice that all three windows are enabled in the Alarm Group Properties window.

Messages will only appear for Sample Points that are part of the Alarm Group. Upon selecting a Sample Point, if the Sample Point type is not already in the Alarm Group, the messages related to the Sample Point will automatically populate in the messages table. Initially all messages will be disabled and the messages will be collapsed.
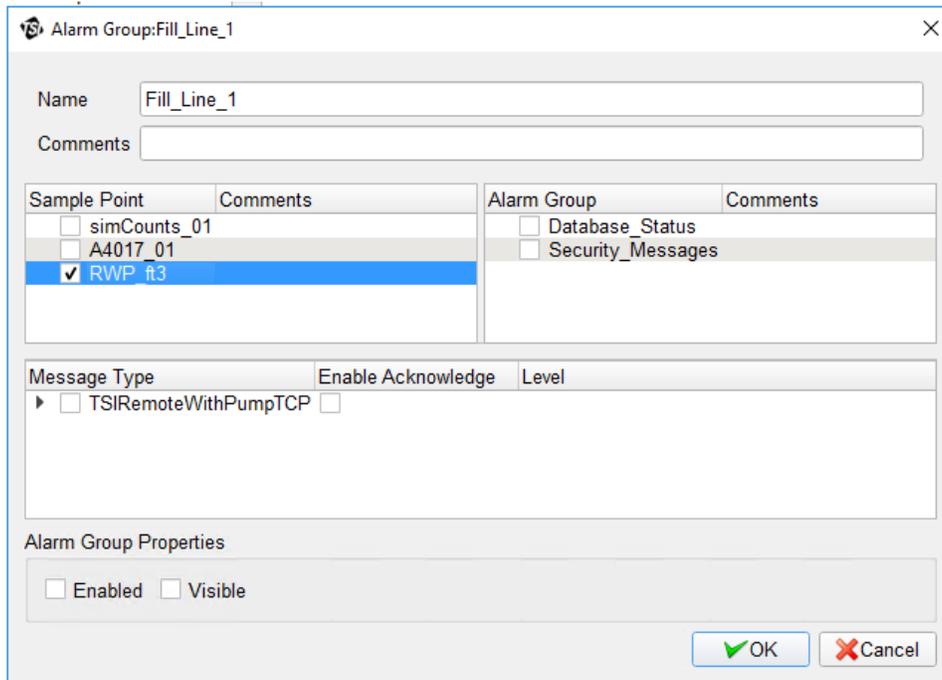
Checking the message box on the top-most level will enable all messages for the Sample Point driver type. Expand the Sample Point driver type message to display all messages for the driver. You can then pick and choose which messages will be enabled for the Alarm Group.
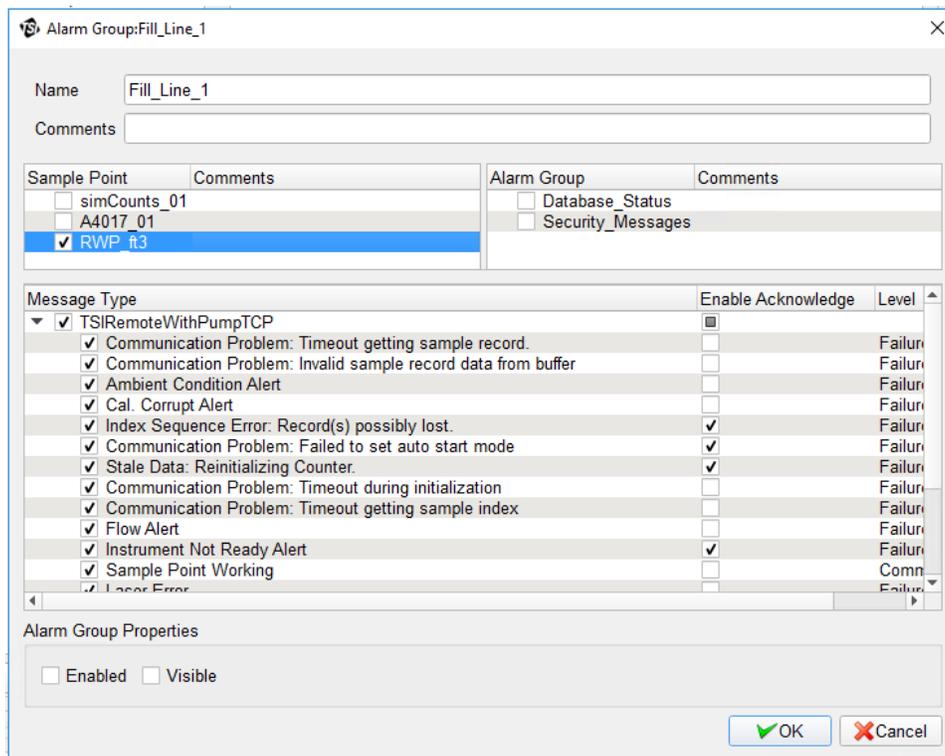
Alarm Groups will only appear in the status window if the "**Visible**" option is enabled in the Alarm Group.

Alarm Group with Messages Configuration File

Each Alarm Group with Messages has its own configuration file. The configuration file can be found in C:/FMS5/Node/AlarmGroups/*name-of-node*/*name-of-Alarm-Group*. Upon the first creation, or any configuration change of the Alarm Group, a backup copy of the configuration will be made in the backup directory located in the same folder as the configuration files.

Alarm Group with Messages Status Window

In Pharma mode, the Alarm Group Status window is automatically displayed when the Status page is selected.

Right-clicking on an Alarm Group does not do anything. Left-click on the Alarm Group to bring up its individual status window. In this view there can up to three windows: Sample Points list, sub-Alarm Groups list, and Message. These windows will only be displayed if there is something configured for them in the Alarm Group. In other words, if no sub-Alarm Groups are enabled for the Alarm Group, the sub-Alarm Group's window will not appear.
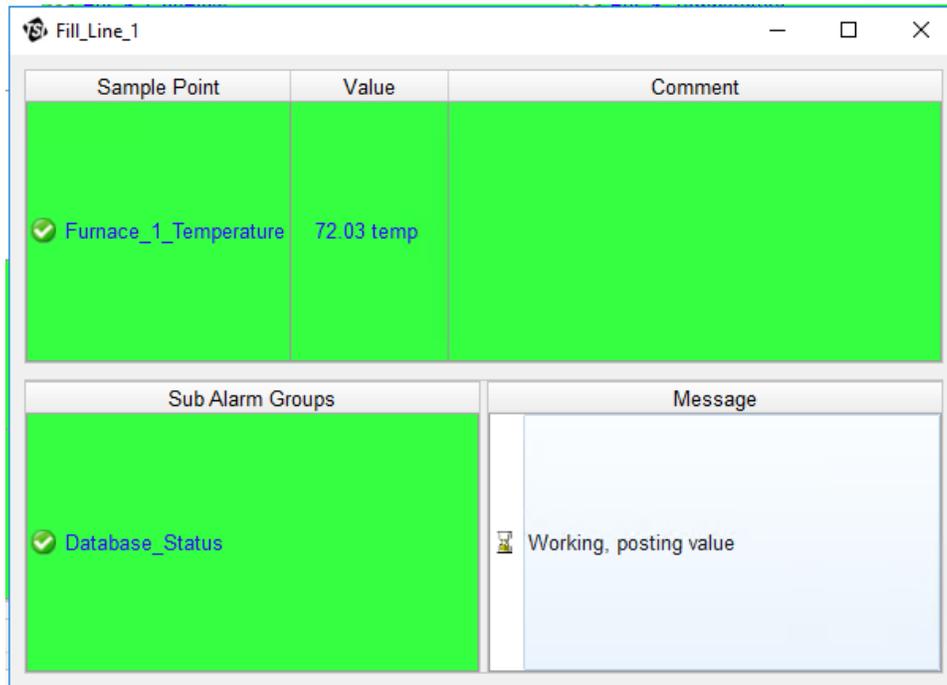
Left clicking on a sub-Alarm Group will bring up that Alarm Group's status window. Right clicking on a Sample Point or in the Message window will bring up a wagon wheel menu in which a time frame can be selected to open an inspect window. If a need acknowledgement is pending, the ack selection will appear on the wagon wheel. The Alarm Group's state is the highest state of its components.
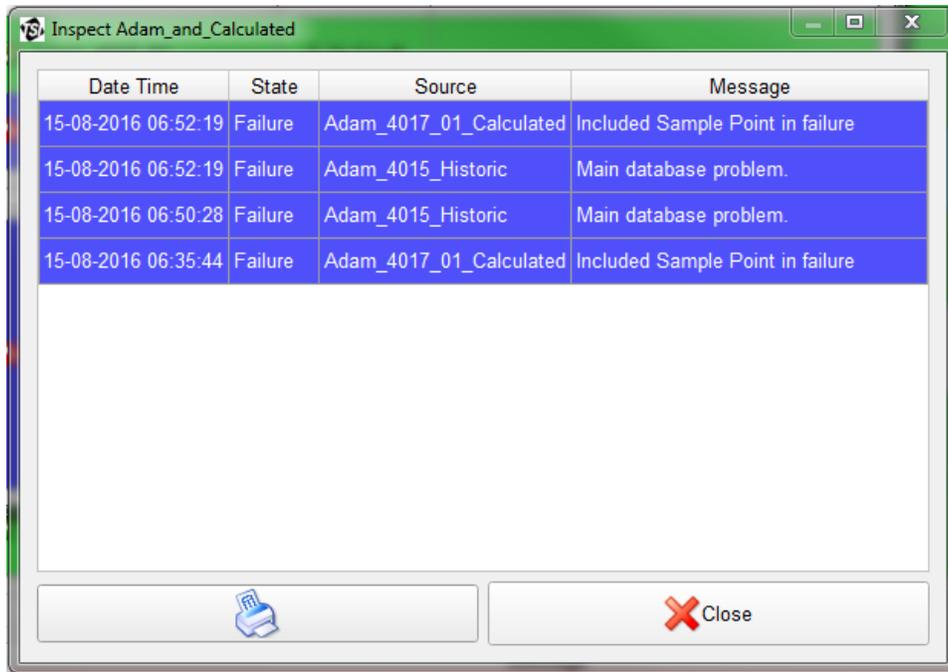
Client Options, Changing Layout

By default the individual Alarm Group's status window is in a form layout (see example screen shots above). This can be changed to a vertical layout in **Client Options → User Settings → Status Settings**.
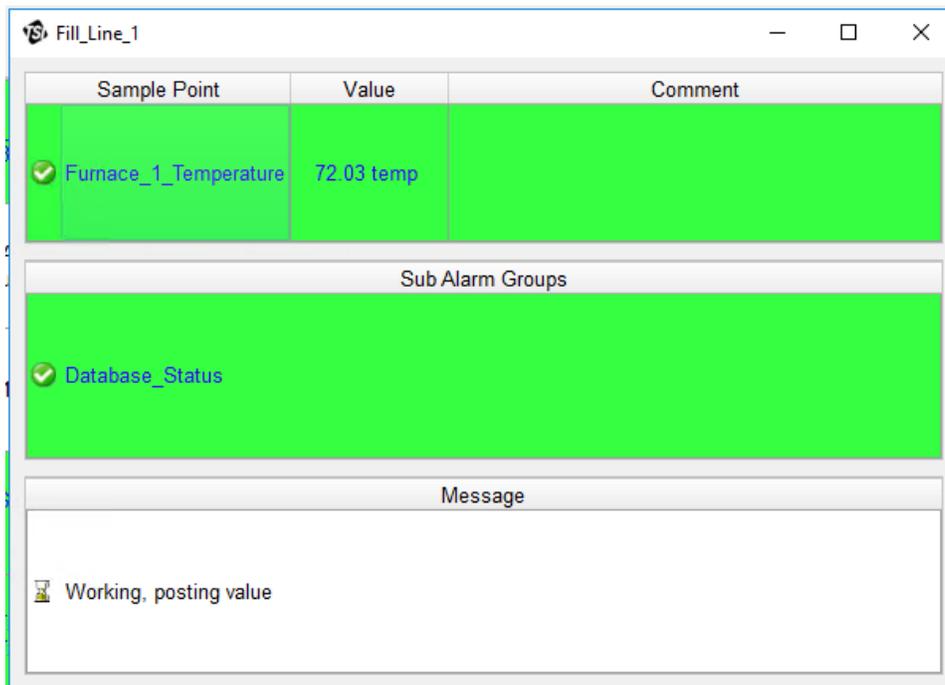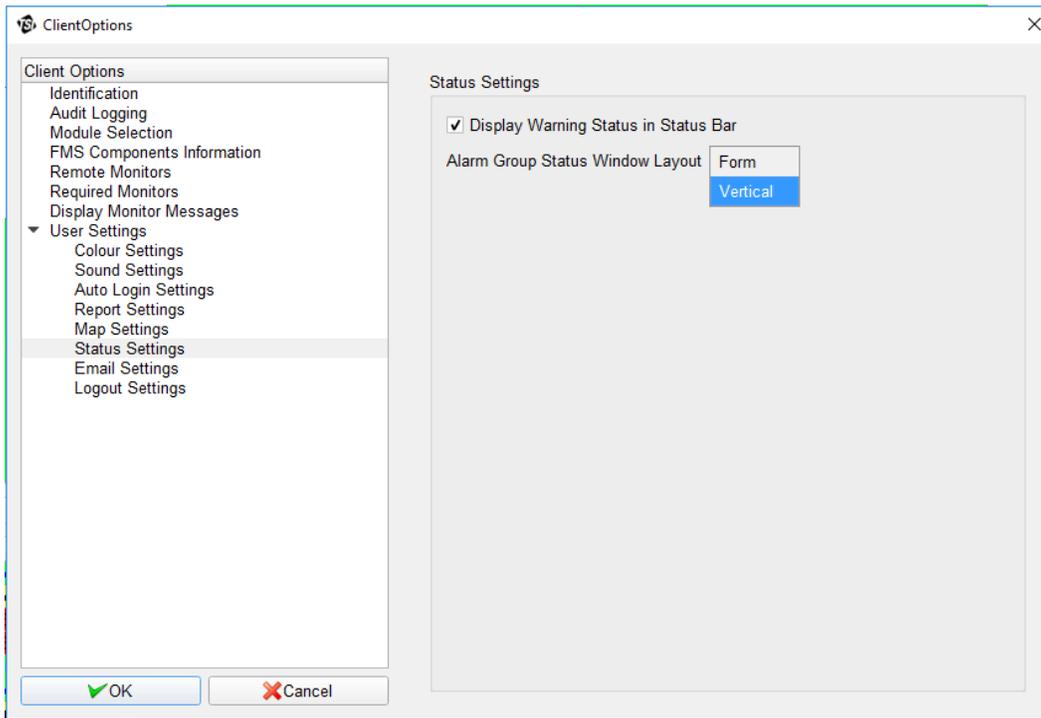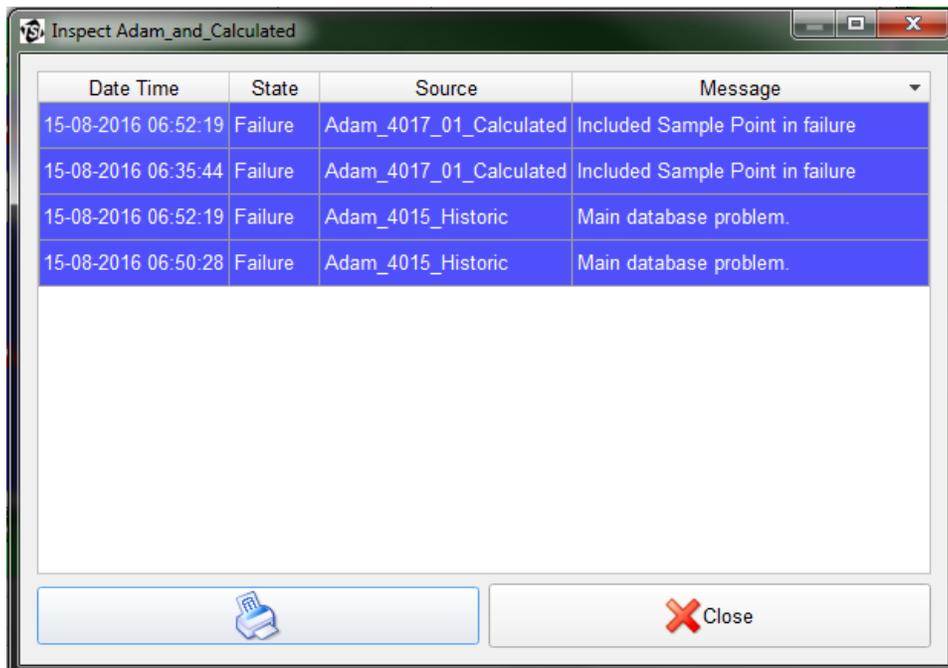

Example of vertical layout Alarm Group

The columns in the inspect window of Alarm Group Messages can be sorted. Click on the column header to sort the messages as desired.

Inspect window default sorting by Date Time column

Inspect window sort by Message column

Logs and Messages in Reports

Alarm Group Message tables can be included in reports. The Alarm Group Message and Log tables have been moved to their own page in report configuration. Select the **Logs and Messages...** button in a report configuration to open the new window.

There are two sections in this page, the Alarm Group Messages and Logs. You can choose to enable or disable any combination of these to be included or excluded in a report.

For Alarm Group Messages, highlight which Alarm Group Messages are to be included in the report and move them to the "**Include**" list by pressing the "**>**" button.

The table can be sorted by changing the "**Order Log By**" drop-down field.

You can also perform wild card filtering on the table. Wild card characters are denoted with either "%" or "*" characters and are comma separated. Hover over the text field for tooltip help.

In the screenshot below, the Alarm Group Messages tables will only contain messages whose source matches either "**temperature1**," all sources that begin with "**humidity**," and all sources that contains the word "line."

Order Log By and Filter Log By can be done separately for both Alarm Group Messages and Log Tables.

Helpful Hints

Buddy

- If using a Buddy system, whenever configuration files are copied from the main system to the buddy system, remember that the Alarm Group configuration files must also be copied over. The Alarm Group node folder must match the node name. For example, node name is node1 and its buddy node is node1Buddy. On the main system the Alarm Group files are in: C:/FMS5/Node/AlarmGroups/Node1/. When copying files to the buddy computer, rename the folder to C:/FMS5/Node/AlarmGroups/Node1Buddy/.

Miscellaneous

- Alarm Groups will only display messages that pertain to its own Sample Points. An Alarm Group will not display messages for any of its sub-Alarm Groups.

- It is highly recommended to always have all recovery messages enabled. These messages are typically Comment or Ok level. If recovery messages are not enabled but failure messages are, when the failure message is generated the Alarm Group will go into the appropriate state. However, because the recovery message is not enabled, the Alarm Group will never go out of failure even when the Sample Point is not in failure anymore.

- The individual Alarm Groups Status window and the Status page Alarm Groups list routines are separate. It could be that they will not update at the same time. Typically they will update within a few seconds of each other; however, behavior has been observed on rare occasions that it can take up to 30 seconds for them to be synced. Any digital output tied to the Alarm Group will not trigger until the list of Alarm Groups Status window is updated.

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