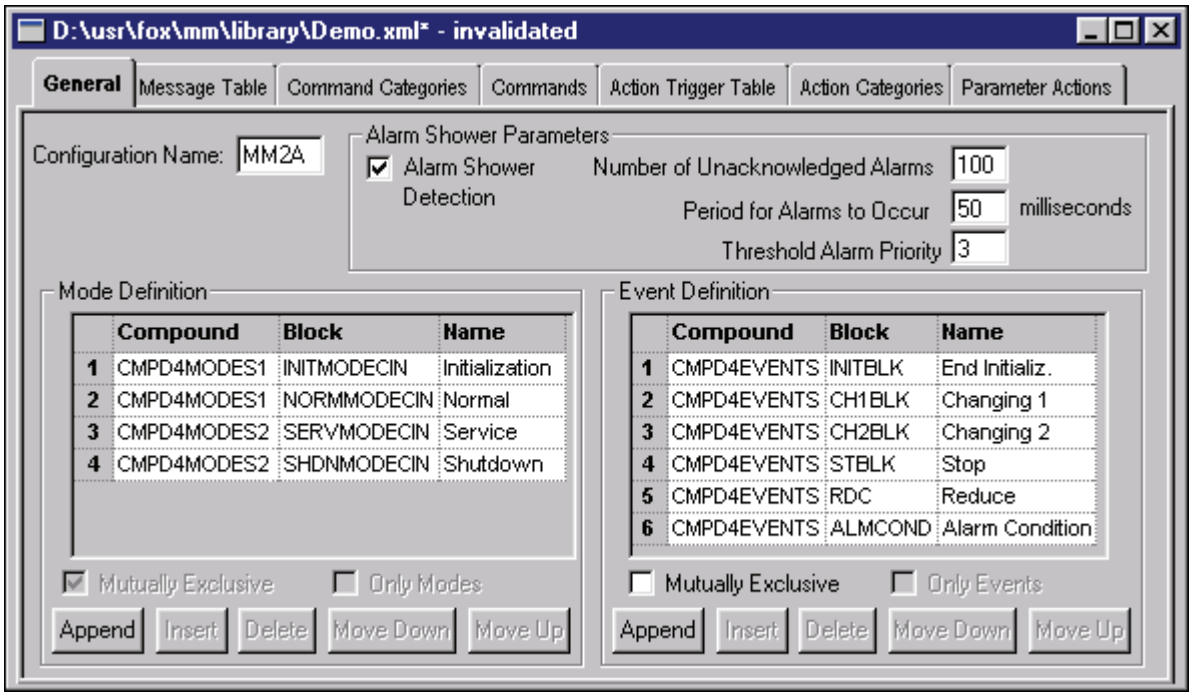
I/A Series® Software

PSS 21S-8A6 B3

Message Manager



Message Manager transmits process alarms and event messages throughout the I/A Series® system. A built-in configurator allows you to manipulate the system's response to alarms and process changes.

FEATURES

Key features of the Message Manager software are:

- A central routing mechanism for transmitting process alarms and event messages throughout the I/A Series system
- Highly reliable alarm message delivery to historian archives, printers, workstations, or the I/A Series Alarm Manager
- A built-in configurator for configuring actions that occur automatically in response to an alarm and actions that occur in response to changes of process modes and events
- Ability to start programs automatically in response to the receipt of an alarm
- Ability to reprioritize alarms automatically and adjust control parameter values in response to changes in the process state
- Protection against an "alarm shower" by forwarding only the higher priority alarms to their destinations
- Reduction in CP alarm processing load when sending alarms to multiple destinations.

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OVERVIEW

The Message Manager software package (MM), provided with I/A Series software, supplies the I/A Series system with a central routing mechanism for transmitting process alarms and event messages. Message Manager software is optional, but using MM in your system allows for the configuration and automation of the system's response to alarms and event messages, in addition to providing highly reliable message delivery to the correct destination.

The control blocks running in your process are the primary source of alarm information sent to the Message Manager. You can use any of the I/A Series control configurators, for example, ICC, IACC, IEE, to specify the control block parameters needed by MM. These parameters include alarm limits and descriptions, as well as conditions under which an alarm will be reprioritized, inhibited, or disabled.

The Message Manager application receives and manages process alarms and event messages, and forwards them to a variety of interfaces, which can include workstations, historians, or printers. Message Manager also forwards messages to the Alarm Management subsystem (AMS), which handles the graphical user interface and alarm annunciation by way of multiple configurable alarm displays and annunciator horns.

REDUNDANCY

Message Manager software supports redundancy to provide protection from the loss of data during a single point-of-failure. The two redundant Message Manager partners synchronize data and device connections at startup, and during normal operation, each MM processes identical information. However, only the "active" MM delivers messages to the configured devices (for example, to an Alarm Manager). If the active redundant MM fails, switchover to the passive redundant partner takes place automatically with no loss of data. A redundant configuration is highly recommended for all Message Manager systems.

CAUTION

The redundant MM configuration is highly recommended to avoid loss of data and loss of message routing functionality throughout the system.

Message Manager Configurator

The Message Manager software has a built-in configuration tool. The Message Manager Configurator (MMC) allows you to define multiple sets of alarm and message management tasks from one multi-tabbed window. There are two types of operations that you can set up in the MMC:

- Actions that occur as a response to a single alarm and
- Actions that occur as a response to changes of modes and events.

Responding to Alarms

Specific programs can be configured to execute automatically whenever the MM receives an alarm or event notification from the control processor. Programs that can be executed automatically include broadcasting a voice message (for example, from a WAV or MP3 file), sending a message to an E-mail address or an intranet site, or printing the message to a system printer. Using the Commands, Command Categories, and Message Table pages, you can configure:

- A message table containing process alarm messages and their assigned aliases and command categories
- Command categories, which are groups of alarms that execute the same behavior with respect to parameter actions and the execution of external commands
- Commands that are executed on the occurrence of alarm messages, which can include executing a voice message command.

You can also configure Message Manager so that alarms with lower priorities are discarded if an alarm shower (or alarm burst) is detected. Alarm shower detection is useful in reducing operator overload if a major plant upset occurs, where many alarms are generated in a very short period of time.

If more than the specified number of unacknowledged alarm messages are received within a configured period of time, Message Manager will start discarding the appropriate messages at the start of the next time period.

Responding to Mode Changes and Events

Specific actions can also be configured to occur automatically in response to changes of process modes or events. When your process changes its mode (for example, enters the “Shutdown” state) or when a specific event occurs (for example, a boiler is heated), you may want to adjust specific parameter values every time this change in mode or this event occurs. Using this feature of Message Manager, you can configure alarms to be reprioritized, inhibited, or disabled automatically upon detection of a mode change or event occurrence.

Using the Action Trigger Table, Action Categories and Parameter Actions Tables in the MMC, you can configure:

- Action triggers, assigning action categories to blocks
- Parameter actions, including reprioritization, disablement, and inhibition on block and alarm level, and mode and event matrices of parameter actions (Figure 1).

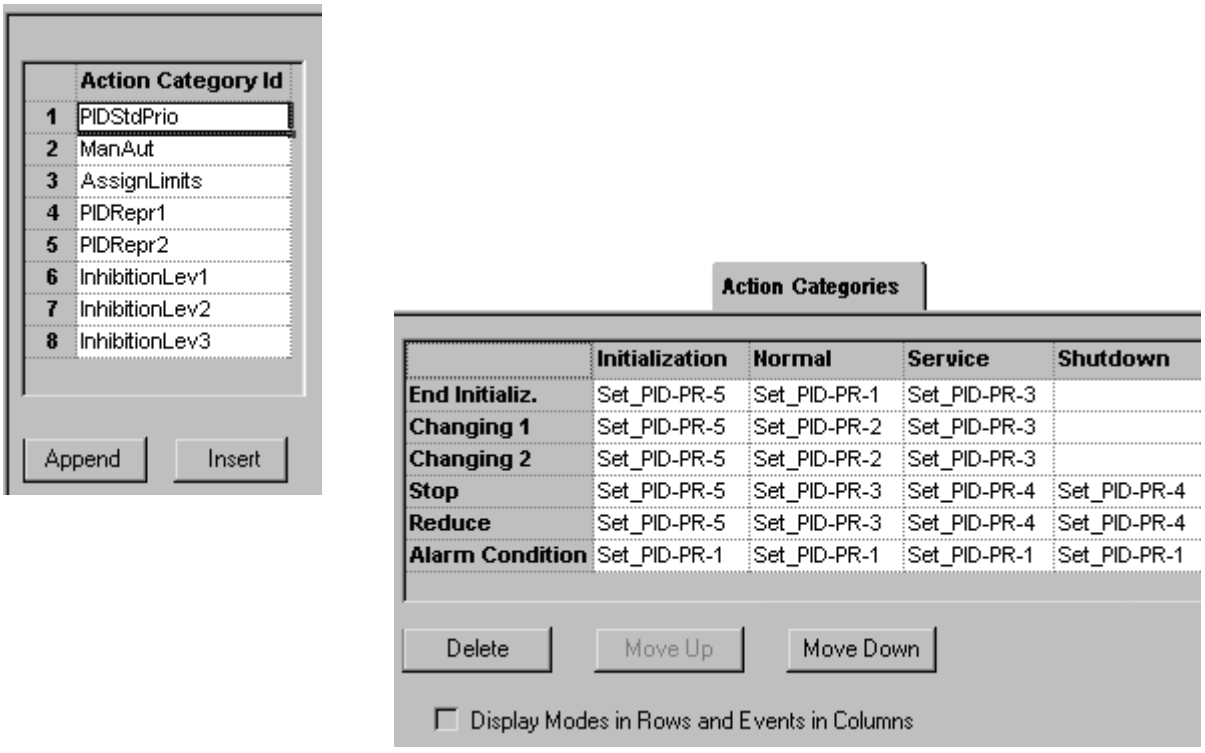

Figure 1. Alarm Reprioritization Using Message Manager Software

SYSTEM REQUIREMENTS

Hardware

The Message Manager software package is installed on a Windows-based I/A Series workstation or server running V8.2 or later software.

Software

The following software must be present on the target workstation or server:

- Windows® XP operating system or
- Windows Server 2003 operating system
- I/A Series V8.2 or later software.

Access to the following software is required:

- FoxAPI™ or AIM*API™ software
- ICCAPI™ software.

AIM*Historian™ software is optional; this software package is required if you want to archive messages and alarms in AIM*Historian archives.

You cannot use both MM and APRINT for alarm messaging services on the same Mesh system. Use either MM or APRINT services for alarm messaging.

Sizing and Performance Requirements

Message Manager should run on a dedicated workstation or server only. The workstation/server cannot run other applications.

Additionally, the redundant configuration option is highly recommended to avoid loss of data and loss of message routing functionality throughout the system.

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